Sunday PM
0001
May 28, 2017

CSC 2017
0025
Monday AM
May 29, 2017

10:00  Coffee Break

10:20  0008 High Throughput Materials Synthesis and Characterization Using Bipolar Electrochemistry and Local Droplet Electrochemical Measurements
Byers JC* <Université du Québec à Montréal>

11:00  0009 Electrochemical Nanoimprint Directly in Semiconductors
Zhan D* <Xiamen University, China>, Zhang J, Zhang L, Geng L

11:20  End of Session

AN2  104D

Analytical Separations: Fundamentals, Proof of Principle and Practical Applications
Organizer(s) - Sergey Krylov, Karen Waldron
Chair(s) - Karen Waldron, Ashley Newbigging

08:00  0010 Metabolomic Profiling with Chemometric Analyses for Authentication of Botanical Products and Phytochemical Discovery
Brown PN* <BC Institute of Technology>

08:30  0011 Detection of a Mitochondrial Disorder via Rapid Isothermal and Exponential Signal Amplification
Newbigging AM <University of Alberta>, Zhang H, Le XC

11:20  End of Session

AN5  202C

Emerging Applications of Biological and Chemical Sensors with Real Samples
Organizer(s) - Kagan Kerman, Ulrich Krull, Michael Thompson
Chair(s) - Kagan Kerman, Michael Thompson, Ulrich Krull

08:00  0018 Biospired Materials for Biosensors
Hall EAH* <University of Cambridge, UK>, Chun Y, Chen S, Tsao N

08:40  0019 Rapid Diagnostics to Combat Antimicrobial Resistance
Bachmann TT* <University of Edinburgh, UK>

09:20  0020 On the Physical Chemistry of Biosensor and Medical Device Fouling in Biological Fluids
Thompson M* <University of Toronto>, Sheikh S, Pawlowska NM, Blaszakowski C, Fedorov K

09:40  0021 Multifunctional Nanoparticles by Decoration: Addressing the Rigs of Bioassays Done Using Real Samples
Sedighi A, Rolo P, Al-Qaysi O* <University of Toronto at Mississauga>, Krull UJ

10:00  Coffee Break

10:20  0022 A Microfluidic Platform with pH Imaging for Chemical and Hydrodynamic Stimulation of Intact Oral Biofilms
Asselin J, Gashti MP, Barbeau J, Boudreau J, Greener J* <Université Laval>

10:40  0023 Self-assembled N-heterocyclic Carbene Monolayers on Gold as a Tunable Platform for Designing Biosensor Surfaces
Simon MR, Munro K, Hao H, Cruden CM, Horton JH

11:00  0024 Towards a Colorimetric, Electrical and SERS Triple Transducer for the Detection and Identification of Chemical Warfare Agents
Clarke J*<, Wang S*<DRDC Suffield Research Centre>

11:20  End of Session

BM1  202D

Bionanomaterials
Organizer(s) - John Honek, Hanadi Sleiman
Chair(s) - John Honek, Hanadi Sleiman, Jan Rainey

08:00  0025 Externally Actuated Injectable, Anisotropic Cellulose Nanocrystal Nanocomposite Hydrogels
De France KJ* <McMaster University>, Yager KG, Chan KJW, Cranston ED, Hoare T
10:00 0056 The VSEPR and LCP Models of Molecular Structure and Geometry. In celebration of McMaster University’s Professor R.J. Gillespie’s Many Contributions to Canadian Chemistry *Robinson EA <University of Toronto at Mississauga>

10:40 0057 Element of Discovery: Growth of an Outreach Program Freeman TK <University of British Columbia>

11:00 0058 Emotions and the Bench - A Litmus Test for Chemistry Duc M <Institut National de la Recherche Scientifique>

11:20 End of Session

Environment

EN4 206A

Arctic Chemistry and Biogeochemistry
Organizer(s) - Jen Murphy, Fei Wang
Chair(s) - Feiyou Wang

08:00 0059 The NETCARe Project: Studying the Relationships between Aerosol Particles and Climate in Remote Canadian Environments *Abbott JPD <University of Toronto>

08:20 0060 The Canadian Arctic GEOTRACES Program: Biogeochemical and Tracer Study of a Rapidly Changing Arctic Ocean Francois R <University of British Columbia>

08:40 0061 Arctic Atmospheric and Interfacial Chemistry in a Changing Climate: Impacts on Oxidation, Ice Nucleation and Biogeochemistry Arya PA <McGill University>, Rangel-Alvarez R, Nazemko Y, Mortazavi R

09:00 0062 Cryo-reactions and Arctic Marine Cryospheric Chemistry *Wang F <University of Manitoba>

09:20 0063 Snowpack Molecular Halogen Production in the Springtime Arctic *Pratt KA <University of Michigan, USA>, Raso ARW, Custard KD, Wang S, McNamara S, Thanekar S, Wei D, Shepson PB, Fuentes JD


10:00 Coffee Break

10:20 0065 Snowpack Emissions of Cl2 and its Fate in the Arctic Boundary Layer: A Modeling Study Wang SY <University of Michigan, USA>, Raso ARW, Thanekar S, McNamara SM, Shepson PB, Wei DD, Fuentes JD, Pratt KA

10:40 0066 Observations of a Bromine Explosion Event Coincident with the Arrival of Arctic Haze in the Canadian High Arctic Bogner K <University of Toronto>, Zhao X, Strong K, Hayes PL, Tremblay S, Chan RY-W

11:00 0067 Estimating Regional Scale Methane Flux and Budgets Using CARVE Aircraft Measurements over Alaska *Chang R <Dalhousie University>, Hartley S, Commane R, Lindas J, Sweeney C, Henderson J, Mountain M, Steiner N, McDonald K, Dinardo S, Miller C, Wofsy S

11:20 End of Session

Inorganic Chemistry

IN2 206D

Transition Metal Derivatives of Non-innocent Ligands
Organizer(s) - Ulrich Fekl, Datong Song
Chair(s) - Datong Song, Tim Storr

08:00 0074 Cycloaddition and C-C Bond-forming Chemistry with Iron and Cobalt Catalysts with Redox-active Ligands Kennedy CR, Schmidt VA, *Chink PJ <Princeton University, USA>

08:40 0075 Asset or Achilles Heel? The Role of the Pendent Base in [Ru(Cp)2(P2N2)(CO)(MeCN)]PF6, Catalysts *Blacquiere JM <Western University>

09:00 0076 Electronic Structure and Reactivity of Complexes Involving Diminosequinone Radicals Thomas F <Université Grenoble Alpes, France>, Leconte N, Moutet J, Hersamcmukh C, Clarke RM, Philouze C, Luneau D, Storr T

09:20 0077 Spin-crossover in a Pseudo-tetrahedral Bis(Formazanate) Iron Complex Travieso-Puente R, Broekman JOP, Chang M-C, Milocco F, De Vries F, Demeshko S, Meyer F, *Otten E <University of Groningen, The Netherlands>

09:40 0078 Electronic Structures of Bimetallic Bis-ligand Radical Salen Systems Clarke RM <Simon Fraser University>, Jeen T, *Storr T

10:00 Coffee Break

10:20 0079 Photolytic Reactivity of Organometallic Chromium Bipyridine Complexes Olafsen BE, Crescenzio GV, Moisey LP, *Smith KM <University of British Columbia>

10:40 0080 Redox Reactions of Pd Complexes Containing a Pincer-type Redox-active Ligand *Hicks RG <University of Victoria>, Sanz CA

11:00 Redox Versatility of Hydroxylamine and Arylnitroso upon Metal Complexation Ottenwaelder X <Concordia University>

11:20 End of Session

IN4 206B

Main Group Transformations and Catalysis - joint with the Royal Society of Chemistry and OR
Organizer(s) - Cathy Crudden, Douglas Stephan
Chair(s) - Douglas Stephan, Zach Heiden
08:00 0082 Exploring New Reactivity of Hypercoordinated Organotin Compounds in Lewis Acid Catalysis  Fillion E <University of Waterloo>

08:20 0083 Establishing ‘ROH’ Tolerance in FLP Chemistry: Moisture Tolerance and Carboxyl Reduction in TM-free Hydrogenation Catalysis Scott DJ, Ashley AE <Imperial College London, UK>

08:40 0084 Developing Frustrated Lewis Pair Chemistry and Related Reactions Erker G <Universität Münster, Germany>

09:20 0085 The Electrophilic Aromatic Substitution Approach to C-H Silylation and C-H Borylation Oestreich M <Technische Universität Berlin, Germany>

10:00 Coffee Break

10:20 0086 Single Electron Transfer in Frustrated Lewis Pairs Liu L <University of Toronto>, Cao L, Shao Y, Stephan D

10:40 0087 Catalytic Cyclization Reactions Using Lewis Acidic Boranes Melen RL <Cardiff University, UK>, Wilkins LC, Soltani Y

11:00 0088 Bi[C,F3]2, Catalyzed Selective Chlorination of Hydrosilanes Dobrovetsky R <Tel Aviv University, Israel>

11:20 End of Session

IN6 107 Crystalline and Semi-crystalline Molecular-Based Materials - joint with MT
Organizer(s) - Kathryn Preuss, Dmitriy Soldatov Chair(s) - Kathryn Preuss

08:00 0089 Tunning the Local Symmetry of Lanthanide Single-ion Magnets Harriman KLM <University of Ottawa>, Murugesu M

08:20 0090 Photomobility and Molecular Orientation in Azomaterials Pellerin C <Université de Montréal>, Laventure A, Vapaavuori J, Sabat RG, Lebel O

08:40 0091 Crystal Engineering Molecules MacGillivray LR <University of Iowa, USA>, Sinnwell MA

09:00 0092 Effects of Small Structure Changes and Intermolecular Interactions on Luminescence Properties Reber C <Université de Montréal>, Poitier S, Bélanger-Desmarais N

09:20 0093 Supramolecular Chemistry of Iso-chalcogenazole N-oxides Ho PC, Vargas-Baca I <McMaster University>

09:40 0094 Optically Switching Charge and Energy Transfer Processes: Molecules to Devices Frank NL <University of Victoria>, Kurimoto A

10:00 Coffee Break

10:20 0095 From Lanthanide Single-molecule Magnets to Catalytic Sb-H Dehydrocoupling Layfield RA <University of Manchester, UK>

11:00 0096 Crystal Engineering with Mechanically Interlocked Molecules Zhu K, Cuckovic MD, Liang Y, Baggi G, Loeb SJ <University of Windsor>

11:20 End of Session

Macromolecular Science and Engineering

MS2 202A Polymers with Biological and Medicinal Applications
Organizer(s) - Elizabeth Gillies, Todd Hoare Chair(s) - Elizabeth Gillies, Todd Hoare

08:00 0097 Water-soluble, Monodisperse Cylindrical Block Copolymer Micelles for Applications in Nanomedicine He Y <University of Bristol, UK>, Nazemi A, Manners I

08:20 0098 Development of Fiber-reinforced Adhesive Patches to Promote Bone Healing Arsenault M <KTH Royal Institute of Technology, Sweden>, Granskog V, Garcia-Gallego S, Mesa Antunez P, Malkoch M

08:40 0099 Polyglycerol as a Versatile Platform for Macromolecular Therapeutics and Bioconjugation Kizhakedathu J <University of British Columbia>

09:20 0100 Heterotetlethic Single Chain Polymer Nanoparticles for Theranostic Applications Baj J <University of British Columbia>, Alfarai W, Hudson ZM

09:40 0101 Polyglyoxylate: A New Class of Multi-Responsive Material for Drug Delivery Purpose Fan B <University of Western Ontario>, Gillies ER

10:00 Coffee Break

10:20 0102 Strategic Biomimicry in Biomaterial Design Cosgriff-Hernandez EM <Texas A&M University, USA>

11:00 0103 Nanocomposite Gelatin-CNC Hydrogels for Three-dimensional Cell Culture Prince E <University of Toronto>, Li Y, Kumachev E

11:20 End of Session

Macromolecules Containing Metal and Inorganic Elements
Organizer(s) - Daniel Foucher, Xiaosong Wang Chair(s) - Daniel Foucher, Xiaosong Wang

08:00 0104 Ring-opening Polymerization and Self-assembly Routes to New Inorganic Materials Manners I <University of Bristol, UK>


09:00 0106 Cooperative Self-assembly of Metal-containing Discrete e-Conjugated Systems Rest C, Stepanenko V, Sampredo A, Fernandez G <Universität Münster, Germany>

09:20 0107 Synthesis and Self-assembly of Metal Carbonyl (Macro)molecules Wang XS <University of Waterloo>

09:40 0108 Pushpull Alternating and Hypercoordinate Asymmetrical Architectures for Light and Moisture Stable Polystannanes Foucher DA <Ryerson University>, Pau J, Khan A

10:00 Coffee Break


10:40 0110 Ferrocene Functionalized Polymeric Liquid for the Fabrication of Redox-polymer/EC-graphite Nanocomposites Skrypnik V <Université de Montréal>, Rochefort D

11:00 0111 Biomimetic Metalloporphyrin Supramolecular Assembly for Cancer Imaging and Therapy Zheng G <University of Toronto; Princess Margaret Cancer Centre>

11:20 End of Session

Materials Chemistry

MT5 201D Metal and Covalent Organic Frameworks
Organizer(s) - Muralee Murugesu Chair(s) - Muralee Murugesu

08:20 0113 Crystalline Transformations of Nonporous Materials
Brunet G
<University of Ottawa>, Korobkov I, Safin DA, 'Murugesu M, Jover J, Ruiz E

08:40 0114 A New β-Cyclodextrin Metal-Organic Framework Exhibiting Guest Uptake
Ahmad TI, Rossman RS, Shepherd HJ, 'Blight BA <University of Kent, UK; University of New Brunswick>

09:00 0115 Metal Organic Frameworks as Quantum Materials
Mason JA, Herm ZR, Reed DA, Xiao J, Vaidhyanathan R, Gelfand BS
<University of New Brunswick>, Worcester Polytechnic Institute, USA

09:40 0116 Monocristalline Polymeric Networks
Wuest JD <Université de Montréal>, Beaudoin D, Levasseur-Grenon Q, Maris T

10:00 Coffee Break

10:20 0117 Gas Separations in Metal-organic Frameworks
Mcdonald TM, Bloch ED, Mason JA, Hem MR, Reed DA, Xiao DJ, Keliz BK, Kapelewski MT, Gonzales MI, Bachman JE, Siegelman RL, Darago LE, Long JR <University of California - Berkeley, USA; Lawrence Berkeley National Laboratory, USA>

11:00 0118 MOFs for Carbon Capture
Shimizu GKH <University of Calgary>, Lin JB, Mah RK, Dawson KW, Akhtar F, Vaidhyathanathan R, Gelfand BS

11:20 End of Session

Dye Chemistry
Organizer(s) - Holger Eichhorn, Greg Welch
Chair(s) - S Holger Eichhorn

08:00 0119 Developing Theory-driven Approaches to Design Organic Semiconducting Materials
'Risko C <University of Kentucky, USA>

08:40 0120 Multicolored Electrochromic Phosphophiles
Reus C, Stolar M, 'Baumgartner T <University of Calgary>

09:00 0121 Multifunctional Boron Diffuse Formazanate Dyes
Barbn SM, Novoa S, Bender D, Buddingh J, 'Gilroy JB <University of Western Ontario>

09:20 0122 Synthesis and Manipulation of BODIPYs
'Thompson A <Dalhousie University>

09:40 0123 Organoboron Acceptors: Functionalized Conjugated Materials
'Jaekle F <Rutgers University, USA>

10:00 Coffee Break

'Lebel O <Royal Military College of Canada>, Sabat RG, Nunzi JM

10:40 0125 Anthracene as a PAH Building Block: Optical, Electrochemical and Bioelectrical Properties
'Morin JF <Université Laval>, Desroches M, Boisvenue-Lavoie J, Casado J

11:00 0126 Controlled Synthesis of Conjugated Polymers
'Seferos DS <University of Toronto>

11:20 End of Session

MT8 206E
Optics in Soft Materials
Organizer(s) - Christopher Barrett, Ian Burgess, Kalaichelvi (Kalai) Saravanamuttu Chair(s) - Kalaichelvi Saravanamuttu

08:00 0127 Designing Analytical Equipment for Isolated Environments
'Burgess JB <Validere>

08:20 0128 A Large Deformation Theory Coupling Photo-chemical Reaction and Electrochemistry for Light-responsive Polyelectrolyte Gels
'Hu Y <University of Illinois at Urbana-Champaign, USA>, 'dehghanydahaj M

08:40 0129 Immobilized Liquids as Optically Transparent Antifoil Surfaces in Medicine
'Howell C <University of Maine, USA; Wyss Institute for Biologically Inspired Engineering, Harvard University, USA>, Sunny S, Sofi R, Alzenberg J

09:00 0130 Enhancing Human Color Vision by Breaking Binocular Redundancy
'Kats MA <University of Wisconsin - Madison, USA>, Gundlach BS

09:40 0131 Watching Paint Dry by Thin Film Interferometry
'Saunders JE, Sanders C, Chen H, Barnes JA, 'Loock H-P <Queen's University>

10:00 Coffee Break

'Andrews DL <University of East Anglia, UK>

11:00 0133 Hosting Chemical Reactions in Optical Vortices
'Mahmod F <McMaster University>, Herrera Cortés OA, Arzola AV, Volke-Sepúlveda K, 'Saravanamuttu K

11:20 End of Session

Organic Chemistry

08:00 0141 Mechanistic and Structural Studies of Faerocin MK, a Type Ia Bacteriocin
Chiorean S <University of Alberta>, van Belkum MJ, Towle KM, 'Vederas JC

08:20 0142 Genetically-encoded Chemically-modified Peptides
'Berda R <University of Alberta>
Recent Advances in the Generation, Utilization and Understanding of Radicals - joint with IN
Organizer(s) - Bas de Bruin, Jean-Philip Lumb
Chair(s) - Jean-Philip Lumb
08:00 0154 Catalysis in Single Electron Steps **Gansäuer A** <Universität Bonn, Germany>

08:40 0155 Reactions of Photogenerated Open-shell Organic Intermediates **Yoon TP** <University of Wisconsin-Madison, USA>

09:20 0156 Catalytic Amination Using High-spin Persistent Radicals **Betley T** <Harvard University, USA>

10:00 Coffee Break


10:40 0158 Are Radicals Involved in Base Metal Catalyzed Asymmetric Alkene Hydrogenation? **Zhong A**, Palmer WN, **Chirik PJ** <Princeton University, USA>

11:20 End of Session

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**Physical, Theoretical and Computational Chemistry**

**PT1 203A**

Advances in Solid State NMR: Inorganic Materials, Biological Solids and Theoretical Methods
Organizer(s) - Robert Schurko, Simon Sharpe
Chair(s) - Simon Sharpe

08:00 0159 Disorder and Flexibility: Are MOFs More Like Proteins than Catalysts? **Reimer J** <University of California, - Berkeley, USA>

08:40 0160 Multinuclear Solid-state NMR Investigation of the Mechanosomal Chemistry of a Zeolitic Imidazolate Framework **O'Keefe CA** <University of Windsor>, Gemus J, Mottillo C, Friscic T, **Schurko RW**

09:00 0161 Unraveling the Adsorption Behaviour of Gas Molecules in Metal-organic Frameworks by Solid-state NMR Spectroscopy **Huang Y** <University of Western Ontario>, Lucier BG, Zhang Y, Chen S, Desveaux B, Wu B, Lu Y

09:20 0162 NMR Crystallography of Monovalent Cation Exchanged Silicon-rich Zeolites **Sklanek S** <Czech Academy of Sciences, Czech Republic>, Dedecek J

09:40 0163 Combining Ex Situ 21Na Solid-state NMR and DFT to Study Cathode Materials for Sodium Ion Batteries **Smiley DL**, Carlier D, **Goward G** <McMaster University>

10:00 Coffee Break

10:20 0164 Enhancing the Sensitivity of Solid-state NMR Experiments on Unreactive Nuclei with Proton Detection and Fast MAS **Venkatesh A**, Hanrahan MP, Ryan M, **Rossini AJ** <Iowa State University, USA; US DOE Ames Laboratory, USA>

10:40 0165 Effect of Electron Configuration on Unpaired Spin Distribution in Metal Acetylacetonate Complexes: A Theoretical and Experimental NMR Study **Levin K** <University of Manitoba>, Kroeker S

11:00 0166 Indirect Nuclear Spin-spin Coupling Between Quadrupolar Nuclei: An Intriguing Probe of Dynamics, Symmetry, and Bond Order in the Solid State **Wong YTA**, **Bryce DL** <University of Ottawa>

11:20 End of Session

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**Electron Localization and Delocalization: Theory, Measures, and Applications in Chemistry**

**PT2 201F**

Organizer(s) - Cherif F Matta
Chair(s) - Paul Popelier, Cherif F Matta

08:00 0167 Domain Averaged Paired Kohout M <Max Planck Institute for Chemical Physics of Solids, Germany>

08:40 0168 The Chemistry and Physics of Electron Transfer: Electron Localization and Delocalization in the Single-particle Picture **Bevan KH** <McGill University>

09:00 0169 Model Systems for Delocalisation Errors in Density-functional Theory **Johnson ER** <Dalhousie University>, Dale SG, Otero-de-la-Roza A

09:40 0170 Efficient Solid-state QTAIM Delocalization Indices in the Critic2 Program **Otero de la Roza A** <University of British Columbia>, Johnson E, Luaña Cabal V, Martín Pendás A

10:00 Coffee Break
### Monday AM 0171

**08:00 0173** The Birth of Salt Crystals: Insights from Molecular Dynamics Simulations

**08:40 0174** Modeling, Coarse-graining and Self-assembly of Inverse Patchy Colloids

**09:20 0175** Water Patterning in Aqueous Ionic Droplets: A Computational Investigation of its OH Stretch Signature in Vibrational Spectra of Sulfate-water Clusters

**09:40 0176** Diffusion in Quasi-one Dimensional Channels: A Small System Isobaric-isothermal (n, p, T) Transition State Theory for Hopping Times

**10:20 Coffee Break**

**10:40 0179** Quantum Coherence in Light-harvesting Energy Transfer and Sunlight Excitation

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### Monday PM 0198

**11:00 0190** Self-assembly of N-heterocyclic Carbenes on Gold for Water Oxidation Catalysis

**11:20 End of Session**

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### PT3 203C

**Interactions of Charged Species in Droplets and Bulk**

**Organizer(s)** - Styliani Consta

**Chair(s)** - Styliani Consta

**08:00 0177** Cells

**08:40 0178** Polymer Electrolyte Membranes for Fuel Processes

**09:20 0179** Positive Muon as a Probe of Electron Localization: From Hydrothermal Conditions to Nanostructures

**11:00 0172** End of Session

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### PT8 203D

**Quantum Coherence and Dynamics in BiologicalProcesses**

**Organizer(s)** - Paul Brumer

**Chair(s)** - Paul Brumer

**08:00 0179** Quantum Coherence in Light-harvesting Energy Transfer and Sunlight Excitation

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### CSC 2017

**08:40 0180** Vibrationally Enhanced Ultrafast Excitation Energy Transfer with Competing Channels

**09:20 0181** Investigating the Origin of Coherent Dynamics in Photosynthetic Bacterial Reaction Centers

**09:40 0182** Localized Operator Partitioning Method for Electronic Energy Transfer

**10:00 Coffee Break**

**10:20 0183** Is Vibrational Coherence Required for Optimizing Photosomertization Quantum Yields?

**11:00 0184** Classical Beats: A Classical Framework for Multidimensional Spectroscopy

**11:20 End of Session**

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### SS1 206F

**Self-assembly at Surfaces**

**Chair(s)** - Jillian Buriaik, Mark McDermott

**08:00 0185** Making and Modifying Gold Surfaces: The Role of Surfactants in CVD and ALD

**08:40 0186** Self-assembled Plasmonic Nanostructures

**09:20 0187** Diazonium Derived vs. Thiol Derived Molecular Layers on Gold Surfaces: Structure and Stability

**09:40 0188** Potential-controlled Substitution of Mercaptohexanol Monolayers with Thiol-modified DNA

**10:00 Coffee Break**

**10:20 0189** Supramolecular Control of Interfacial Structure in Organic Semiconductors
16:40 0199  |  Rotating Disc Voltammetry of Organic Fuels at Pt and PtRu Catalyst Layers  
*Pickup PG  <Memorial University of Newfoundland>, Sayadi A

17:00 0200  |  Photo-enhanced Electrooxidation of Methanol: Decoupling the Roles of Pt and TiO2  
*Easton EB  <University of Ontario Institute of Technology>, Odetola C, Trevani LN

17:20 0201  |  Electrochemical Deposition and Characterization of Chalcogenides Semiconductors for Use in Solar Cells  
Tapley A  <Western University>, Swick K, Ding Z

18:00 End of Session

AN2  |  104D

Analytical Separations: Fundamentals, Proof of Principle and Practical Applications
Organizer(s) - Sergey Krylov, Karen Waldron  
Chair(s) - Kevin Thurbide, Christopher Harrison

13:40 0203  |  The Impact of High-throughput Bottom-up Proteomics on Fundamental Separation Science: Peptide Retention/Migration Modeling in RPLC, HILIC, CZE  
*Krokhin OV  <University of Manitoba>, Spicer V

14:00 0204  |  Simultaneous Analysis of Enzyme Structure and Activity by Kinetic CE-MS  
Mironov GG, Clouthier CM, Akbar A, Keillor JW,  
*Berezovski MV  <University of Ottawa>

14:20 0205  |  Comprehensive Two-dimensional Gas Chromatography for the Trace Analysis of Environmental Contaminants: Thermal- and Balve-based Approaches  
Boswell H  <University of Waterloo>, Edwards M, Gorecki T

14:40 0206  |  How to Make LC Method Development and Peptide Mapping Simpler  
Pashmi J  <Thermo Fisher Scientific>

15:00 0207  |  Improving Prohibited Blood Transfusion Detection via Capillary Electrophoresis  
Harrison CR  <San Diego State University, USA>, Torres J, Kingphuang T, Apostol SA, Yun S

Nori de Macedo A, Hudecki P, Mathiaparanam S, Saol M, Macri J,  
*Britz-Mckibbin P  <McMaster University>

15:40 Coffee Break

16:00 0209  |  Idiosyncrasies of Ultrafast Chiral and Achiral Separations: From Sub-minute to Sub-second Separations  
Wahab MF  <University of Texas, USA>, Armstrong DW

16:20 0210  |  Reverse Fill/Flush Flow Modulation for the Routine Application of GC×GC to Real-world Analyses  
Edwards M  <SepSolve Analytical, UK>, McGregor L, Bukowski N, Spadafora N

16:40 0211  |  A pH Tunable Water Stationary Phase for Supercritical Fluid and Gas Chromatography  
Thurbide KB  <University of Calgary>, Scott AF, Darko E

17:00 0212  |  Applications of Hyphenated CMC Techniques in TCMs Development  
Wang SC  <Xi’an Jiaotong University, China>, He LC

17:40 0214  |  Image Processing and Analysis System for Development and Use of Free Flow Electrophoresis Chips  
Kochmann S  <York University>, Krylov SN

18:00 End of Session

AN5  |  202C

Emerging Applications of Biological and Chemical Sensors with Real Samples
Organizer(s) - Kagan Kerman, Ulrich Krull, Michael Thompson  
Chair(s) - Michael Thompson, Ulrich Krull

13:40 0215  |  Ultrasensitive Molecular Analysis Using Nanostructured Microelectrodes  
Kelley SO  <University of Toronto>

14:20 0216  |  Electrochemical Sensing of Nitric Oxide Release from Cardiac and Cancer Cells  
Liu ZG  <Lakehead University>, Govindhan M, Khafer N, Chen A

14:40 0217  |  Enzyme-based Electrochemical Sensors for the Sensitive Detection of Organophosphorus Pesticides  
Pillai RG  <National Research Council Canada>, Jemere AB, Chan NWC

15:20 0219  |  A Modular Flow-through Platform for Spectroelectrochemical Analysis  
Noyhouzer T, Snowden M, Tefashe UM,  
*Mauzeroll J  <McGill University>

15:40 Coffee Break

16:00 0220  |  Diagnostic Challenges in ICU Medicine - the Endotoxin Story  
Romaschin AD  <University of Toronto>

16:40 0221  |  Detection of Lyphosphatic Acid in Serum; Towards Cost Effective Detection of Ovarian Cancer  
De La Froner BJ  <University of Toronto>, Thompson M

17:00 0222  |  An Electrochemical Clamp Assay for Direct, Rapid Analysis of Circulating Tumour Nucleic Acids in Serum  
Das J  <University of Toronto>, Ivanov I, Sargent EH, Kelley SO

17:20 0223  |  Detection of Circulating microRNA and cfDNA for Diagnosis and Prognosis of Tumor  
Ye BC, Yin BC  <East China University and Technology, China>

17:40 End of Session

Biological and Medicinal Chemistry

BM1  |  202D

Bionanomaterials
Organizer(s) - John Honek, Hanadi Sleiman  
Chair(s) - Hanadi Sleiman, Jan Rainey

13:40 0224  |  Nanomaterials from DNA Hybrids and Supercharged Polypeptides for Biomedicine  
Herrmann A  <University of Groningen, The Netherlands>

14:20 0225  |  Nanosafety and Toxicity Assessment of Nanomaterial by Using Spontaneous Beating Cardiomyocytes and AFM  
Zou S  <National Research Council Canada>

14:40 0226  |  UV Photopolymerizable Starch Nanoparticle (SNP) Network Hydrogels for Biomedical Applications  
Macher MJ  <McMaster University>, McInnis CL, Smeets NM, Hoare TR

15:00 0227  |  Gadolinium-based Nanoparticles as Contrast Vascular Agents for Micro-computed Tomography  
Crue C  <Robarts Research Institute; Western University>, Holdsworth DW, Drangova M, Gillies ER

15:20 0228  |  Synthesis of Covalently Linked Photoluminescent Magnetic Magnetite Nanoparticle-silica Nanocrystal Hybrids for Biological Imaging  

15:40 Coffee Break
16:00 0229 Spider Wrapping Silk Protein Engineering and Fibre Spinning Xu L, Weatherbee-Martin N, Tremblay M-L, Sarker M, Orrell KE, Liu X-Q, Rainey JK <Dalhousie University>

16:40 0230 Quantifying the Biological Fate of Nanosilver 1Kennedy DC <National Research Council Canada>

17:00 2601 Novel Uses of Phosphinic Acid-based Inhibitors Liu Y, Soni A, Tanner ME <University of British Columbia>

17:20 0241 Coupling Hemoglobin to Produce Blood Substitutes That Avoid Known Problems Kluger R <University of Toronto>, Singh S, Wang A, Dubinsky I

17:40 End of Session

BM4 201E

Bio-inorganic Chemistry - joint with IN
Organizer(s) - Bernie Kraatz, Deborah Zamble
Chair(s) - Bernie Kraatz

13:40 Clara Benson Award Lecture

14:00 0242 Hemoglobin-A Conformationally Gated Nanobioreactor that Synergizes O2 and NO Binding to Match O2 Delivery with Metabolic Demand English AM <Concordia University>, Shadrina MS, Pesherhe GH

14:20 0243 Light-driven P450 Biocatalysts for Selective C-H Functionalization Cheruzel L <San Jose State University, USA>

14:40 0244 Sensitivity and Pharmacokinetics: Key Elements for the Design of Gd-free MRI Contrast Agents Based on Mn-Porphyrin Zhang X-A <University of Toronto at Scarborough>

15:00 0245 Insights into the Catalytic Mechanism of Arrensite Oxidase George GN <University of Saskatchewan>, Warelow TP, Pushie MJ, Cotelesage JHJ, Santini JM

15:20 0246 The Bloodstream as a Critical Site to Gain Insight into the Origin of Metal-related Diseases Galler J <University of Calgary>, Gibson MA, Sarpong-Kumankomah S, Sagmeister P, North AE

15:40 Coffee Break

16:00 0247 Interactions of Biomolecules and Bacteria with Titanium at the Mineral Microbe Frontier Valentine AM <Temple University, USA>

16:40 0248 Binding Constants for Copper and Zinc Binding to Metallothionein: Solving Very Complicated Problems Using ESIF Mass Spectrometry Hartwig A

17:00 0249 Reflections on Guanine Quadruplexes Petijean A <Queen's University>

17:20 0250 Synthesis, Characterisation and Quadruplex DNA Binding Properties of Benzophenone Schiff Base Complexes Pham SQT <University of Wollongong, Australia>, Davis K, Yu H, Willis AC, Ralph SF

17:40 End of Session

BM5 201C

Medicinal Chemistry - joint with OR
Organizer(s) - Donald Weaver
Chair(s) - Donald Weaver

13:40 Bernard Belleau Award Lecture

14:00 0251 Targeted Covalent Inhibition of Tissue Transglutaminase in Cancer Stem Cells Keilor JW <University of Ottawa>

14:20 0252 Design and Development of STAT SH2 Domain Inhibitors Tin G <University of Toronto>, Park J, Ball D, Cumarsawamy A, De Araujo E, Gunning P

14:40 0253 Computationally-aided Design and Synthesis of Dual Covalent Inhibitors for the Treatment of Cancer Plescia J <McGill University>, De Cesco S, Marieau G, Moiessier N

15:00 0254 The Development of Simple Molecules Displaying Anti-inflammatory, Anti-metastatic and Anticancer Activities Bérubé G <Université du Québec à Trois-Rivières>, Cloutier S, Leclerc M-F, Hamelin-Morissette J, Giroard J, Boulanger V, Ramla D, Belgorosky D, Eljâm AM, Reyes-Moreno C

15:20 0255 Computer-aided Design, Synthesis and Biological Evaluation of New Dual Covalent Inhibitors as Cancer Therapeutics Jammamode N <McGill University>, De Cesco S, Moiessier N

15:40 Coffee Break

16:00 0256 Synthesis of Sityl Lewis' Analogues for Treatment of Inflammatory Related Diseases Belouin AV <Institut de Recherches Cliniques de Montreal>, Simard R, Gillard L, Calosso M, Beauregard J, Maharsy W, Prévote M, Nemer M, Guindon Y

16:20 0257 Highly Selective Imaging Agents for Human Glucocerebrosidase Activity in Lysosomes of Live Cells Enables Development of a High Throughput Screening for Glucocerebrosidase Modulators Vodaclo DJ <Simon Fraser University>, Gros C, Deen M, Shan X, Shen DL, Yadav AK

16:40 0258 Discovery of Small Molecule Dual Inhibitors of Both Aj and Tau Oligomerization for the Treatment of AD Reed MA <Trentivis Corporation>
<table>
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<th>Time</th>
<th>Session</th>
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<th>Organizer(s)</th>
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<tbody>
<tr>
<td>17:00</td>
<td>0259</td>
<td>Quinazoline Scaffolds as Pharmacological Tools to Study Amyloid Aggregation</td>
<td>&quot;Nekkar Rao P &lt;University of Waterloo&gt;, Mohamed T, Shakeri A</td>
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<tr>
<td>17:20</td>
<td>0260</td>
<td>Does Substitution of BMAA for Serine Alter the Conformational Dynamics of the Amyloid Beta Peptide of Alzheimer’s Disease?</td>
<td>&quot;Rauth A &lt;University of Calgary&gt;</td>
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<td>17:40</td>
<td>End of Session</td>
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**CE5 205D**

**Guided-inquiry Learning in Chemistry**

Organizer(s) - Jennifer Duis
Chair(s) - Jennifer Duis

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<th>Time</th>
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<tbody>
<tr>
<td>14:00</td>
<td>0261</td>
<td>Boss Quality Documents</td>
<td>&quot;Linkletter BA &lt;University of Prince Edward Island&gt;</td>
</tr>
<tr>
<td>14:20</td>
<td>0262</td>
<td>Student Choice of Traditional vs Guided Inquiry Buffer Experiment</td>
<td>Sheppard MA &lt;Saint Mary's University&gt;</td>
</tr>
<tr>
<td>14:40</td>
<td>0263</td>
<td>Do Students Truly Understand What it Means to &quot;Do Science&quot;?</td>
<td>&quot;Boechler AM &lt;Canadian Light Source&gt;, Walker T, Muir D, Blyth RIR</td>
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<tr>
<td>15:00</td>
<td>0264</td>
<td>Process Oriented Guided Inquiry Learning - What Is It, and Does It Work?</td>
<td>Lewis JE &lt;University of South Florida, USA&gt;</td>
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<td>15:40</td>
<td>End of Session</td>
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**CE7 205D**

**Instrumental Analysis in Chemistry Education**

Organizer(s) - Guillaume Bussiere
Chair(s) - Guillaume Bussiere

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<tr>
<td>16:00</td>
<td>0265</td>
<td>Student - centered Design and Construction of &quot;Home - built&quot; Instrumentation in the Instrumental Analysis Curriculum</td>
<td>&quot;Sykes D &lt;Pennsylvania State University, USA&gt;</td>
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<tr>
<td>16:40</td>
<td>0266</td>
<td>Teaching Instrumental Techniques in an Art + Chemistry Class</td>
<td>&quot;Vitha MF &lt;Drake University, USA&gt;, Lyons ME</td>
</tr>
<tr>
<td>17:00</td>
<td>0267</td>
<td>Vacuum Science in the Undergraduate Laboratory: How Far Can We Go?</td>
<td>&quot;Bussière G &lt;University of British Columbia&gt;</td>
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<td>17:20</td>
<td>End of Session</td>
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**Environment**

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<th>Time</th>
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<tr>
<td>14:00</td>
<td>0269</td>
<td>Frequent Formation and Growth of Ultrafine Particles in the Summertime Arctic Marine Environment</td>
<td>&quot;Collins DB &lt;University of Toronto&gt;, Burkart J, Chang RY-W, Boyer M, Lizotte M, Levasseur M, Abbatt JPD</td>
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<tr>
<td>15:00</td>
<td>0271</td>
<td>Role of Aerosols in Understanding Contaminants of the Arctic De Vera J</td>
<td>&quot;&lt;University of Toronto&gt;, Chandel P, Steffen A, Landing W, Bergquist B</td>
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<tr>
<td>15:40</td>
<td>0272</td>
<td>Chemical Characterization of Atmospheric Particulate Matter within the Prudhoe Bay Oilfields, Alaska</td>
<td>&quot;Gunsch M &lt;University of Michigan, USA&gt;, Kripes R, Moffett C, Watson T, Sheesley R, Pratt K</td>
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<tr>
<td>16:00</td>
<td>0274</td>
<td>Factors Influencing the Distribution of Climate-active Trace Gases in the Canadian Arctic Ocean</td>
<td>&quot;&lt;Tortell PD &lt;University of British Columbia&gt;, Capelle DW, Damm E, Zimmermann S, Williams WJ, Vagle S</td>
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<td>16:20</td>
<td>0275</td>
<td>Methylmercury in Arctic Seawater: In Situ Production vs Long-range Advection</td>
<td>&quot;Wang K &lt;University of Manitoba&gt;, Munson K, Wang F</td>
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**EN4 206A**

**Arctic Chemistry and Biogeochemistry**

Organizer(s) - Jen Murphy, Fei Wang
Chair(s) - Jennifer Murphy

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<tr>
<td>14:20</td>
<td>0277</td>
<td>Emerging Technologies in an Art + Chemistry Class</td>
<td>&quot;Boechler AM &lt;Canadian Light Source&gt;, Walker T, Muir D, Blyth RIR</td>
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<td>14:40</td>
<td>0278</td>
<td>Profiling Marine Copper Ligands in the Arctic using Immobilized Metal-&lt;Target Pharmaceuticals in Wastewaters Using High Resolution Mass Spectrometry</td>
<td>&quot;Ross ARS &lt;Fisheries and Oceans Canada&gt;, Nixon RL</td>
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<td>14:40</td>
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**EN5 205A**

**From Molecular Structure to Global Processes: The Role of Analytical Environmental Chemistry - joint with AN**

Organizer(s) - Eric Reiner, Andre Simpson
Chair(s) - Andre Simpson

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<tr>
<td>14:00</td>
<td>0280</td>
<td>Gas Chromatography-atmospheric Pressure (Photo)Ionization Mass Spectrometry: Enabling Non-targeted, Ultratrace Detection of Environmental Toxica</td>
<td>&quot;&lt;Young CJ &lt;Memorial University of Newfoundland&gt;, Di Lorenzo RA</td>
</tr>
<tr>
<td>14:40</td>
<td>0281</td>
<td>Molecular Characterization of Light-absorbing Aerosol Organic Matter</td>
<td>&quot;&lt;Young CJ &lt;Memorial University of Newfoundland&gt;, Di Lorenzo RA</td>
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<tr>
<td>15:00</td>
<td>0282</td>
<td>The Roles of Natural Non-protein Amino Acids in Ecosystems, Food Webs</td>
<td>&quot;&lt;Much SJ &lt;University of British Columbia&gt;</td>
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<tr>
<td>15:20</td>
<td>0283</td>
<td>Trace Detection of Nitric Acid by Passive Sampling in Remote Environments</td>
<td>&quot;&lt;Ziegler SE, VandenBoer TC &lt;Memorial University of Newfoundland&gt;</td>
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<td>15:40</td>
<td>End of Session</td>
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**EN6 206B**

**Dissolved Organic Ligands in the Canadian Arctic Archipelago**

Gao Z, Gueguen C

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<tr>
<td>16:00</td>
<td>0284</td>
<td>Evaluating the o-DGT Passive Sampler as a Screening Tool for Non-target Pharmaceuticals in Wastewaters Using High Resolution Mass Spectrometry</td>
<td>&quot;&lt;Challis JK &lt;University of Manitoba&gt;, Ortiz X, Helm P, Wong CS</td>
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<tr>
<td>16:20</td>
<td>0285</td>
<td>Cutting out the Middle Man Molecular Imprinted Polymers with DESI-MS/MS for Environmental Analysis</td>
<td>&quot;&lt;Bottaro CS &lt;Memorial University of Newfoundland&gt;, Egli SN, Gauthier JR, Hijazi HY</td>
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<tr>
<td>16:40</td>
<td>0286</td>
<td>Simultaneous Measurement of Pharmaceuticals and their Phase II Conjugates in Wastewaters</td>
<td>&quot;&lt;Wong CS &lt;University of Winnipeg, University of Manitoba&gt;, Brown AK</td>
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</table>
17:00 0287 The Use of 2D GC-HR/TOF-MS for the Analysis of Dilbit
Schreckenbach SA, University of Manitoba, Halldorson T, Bestvater L, Binkley J, Byer J, Tomy GT

Nguyen T, Trent University, Mangal V, Guéguen C

17:40 End of Session

ICP-MS: Industrial Chemistry

Poster Session
From 17:40 until 19:30

0289 Nanofiber Coating of PVDF Nanocomposite Membrane for Performance Improvement in Desalination by Membrane Distillation
Efome JE, University of Ottawa, Rana D, Matsuura T, Lan CQ

0290 A New Process for the Production of Bio-jet Fuel Precursors from Common Carbohydrate Sources, Using CO2 as a Green Catalyst
Sanger M, MacEwan University, Lee R, Jessop P, Champagne P

0291 Enzymatic Treatment of Thiazole Derivatives with Soybean Peroxidase (SBP)
Mashadi N, University of Windsor, Taylor KE, Biswas N

0292 Influence of Lignite Fly Ash on the Degradation of Alkanolamine Solutions Used in Post-combustion Carbon Capture
Rothwell JR, University of Regina, Giannaris S, Murphy RS

0293 Application of a Read-across Approach to Address Data Gaps in Human Health Screening Level Risk Assessments and the Chemicals Management Plan
Cebrowski PH, Health Canada, Kulkarni S, Gagné M

0294 Chemical Composition and Upgrading Technology of Heavy Oil
Lin A-G, Zhang YM, Petrochemical Research Institute, China, Xue P, Liu JM

0295 Catalytic Membrane Reactor for CO2 Conversion into Renewable Natural Gas
Currie R, University of Waterloo, Simakov D

0296 Magnetochemical Determining the Average Phase Composition of Fe-SiO2 Macroscopic Objects
Kochemirovsky VA, Laser Chemistry LLC, Tishin AM, Spichkin YI, Malyshew AY, Kuzmin AG, Tumkin II, Malgin MA

0297 Miscanthus Biomass for the Sustainable Fractionation of Ethanol-water Mixtures
Wilson LD, University of Saskatchewan, Debahadi L, Mahanania M

0298 Calibration of a New Microcalorimeter to Measure Precise Heat Capacities of Solutions over a Wide Range of Temperatures
Alkhatteeb FL, University of Calgary, Marriott RA

0299 Mechanoenzymatic Breakdown of Cellulose: Conducting Enzymatic Reactions in Solid State
Hammerer F, McGill University, Lofts L-A, Do L, Nickels C, Auclair K, Friscic T

0300 Reactions Involving Alcohol-based Fracturing Additives with Implications on Delayed H2S Production
Marrugo-Hernandez JJ, University of Calgary, Marriott RA

0301 Online Reaction Monitoring Using Benchtop NMR
Araneda JF, Nanalysis Corp, Riegel SD

0302 Nanomaterial Production Using Supercritical Fluids
Charpentier PA, University of Western Ontario, Lups-L-A, Do L, Nickels C, Auclair K, Friscic T

Inorganic Chemistry

IN2 206D

Transition Metal Derivatives of Non-innocent Ligands
Organizer(s) - Ulrich Fekl, Datong Song Chair(s) - Johanna Blacquiere, Dmitri Goussiev

13:40 0303 An Azanido Bis(Thiolate) Pincer: Non-innocent Ligands and Metalloligands
Heyduk AF, University of California - Irvine, USA, Rosenkoetter KE, Wojnar MK

14:20 0304 Redox-active Early Transition-metal and f-Block Phthalocyanines
Leznoff DB, Simon Fraser University

14:40 0305 Coordination Complexes of Polytopic Diarylaminophenyl Redox-active Ligands
Lemaire MT, Brock University, Bonanno NM, Lough AJ, Poddutoori PK

15:00 Stem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture Room 206B

15:40 Coffee Break

16:00 0306 Ancillary Ligand Based Reactivity in bis(Phosphino)Silyl Metal Complexes
Turculet L, Dalhousie University

16:20 0307 Unsymmetrical Iron P-NH-P' Catalysts for the Asymmetric Pressure Hydrogenation of Aryl Ketones
Smith SAM, University of Toronto, Lagaditis PO, Lüpe A, Lough AJ, Morris RH

16:40 0308 Non-innocence in Dithiolenes and in Aarylazo Ligands: Two-electron versus Radical Reactivity
Fekl U, University of Toronto

17:00 0309 Electronic Structure and Reactivity of Oxidized Metal Phenoixides
Storr T, Simon Fraser University, Clarke RM, Herasymchuk K

17:20 0310 Consequences of Reduction of [Ru(NO)(por)(Cl)] Complexes (por = Octaethylporphyrin and tetra-p-C6H4X, X = CH3, CH2, H, Cl) in THF
Shaw MJ, Southern Illinois University, USA, Zink JR, Abucayon EG, Richter-Addo GB

17:40 0311 Main Group Compounds in Very Low Oxidation States Supported by Diminopyridine Platform
Nikonov GI, Brock University

18:00 End of Session

IN4 206B

Main Group Transformations and Catalysis - joint with the Royal Society of Chemistry and OR
Organizer(s) - Cathy Crudden, Douglas Stephan Chair(s) - Cathy Crudden, Rebecca Melen

13:40 0312 Designing Main Group Systems for Small Molecule Activation and Functionalization
Aldridge S, University of Oxford, UK, Prochenko A, Rit A

14:20 0313 Beyond Oxidation States: Using X-ray Spectroscopy to Determine the Chemical States of Novel Gallium Compounds
Bourque JL, Western University, SWCSR, Yang L, Biesinger MC, McLeod JA, Liu L, Baines KM

14:40 0314 Group 13 Radicals via Chelating Redox Active Ligands
Bamford KL, University of Toronto, Longobardi LE, Liu L, Grimm S, Stephan DW

15:00 Stem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture

15:40 Coffee Break
16:20 0347 Synthesis and Properties of Tetracrylophosphonium Polymers *Smith RC <Clemson University, USA>, Wan W, Yang X, Bedford MS, Conrad CA

16:40 0348 Phosphorus-containing as a Tool for the Production of Metal-containing Polymers Rabiee Kenaree A, *Gilroy JB <University of Western Ontario>

17:00 0349 Post-polymerization Functionalization of Phosphine-ene Polymer Networks Beland VA <University of Western Ontario>, Harrison TD, *Ragogna PJ

17:20 0350 Post-polymerization Functionalization of Polyphosphinoboranes Chitnis SS <University of Bristol, UK>, Knights AW, *Manners I

17:40 End of Session

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**Materials Chemistry**

**MT5**

**201D**

**MT6**

**201B**

**Dye Chemistry**

Organizer(s) - Holger Eichhorn, Greg Welch

Chair(s) - Greg Welch


14:20 0361 New Tricks for One of the Oldest Dogs: Indigo as a Template for New Chromophores and Ligands *Hicks RG <University of Victoria>, Hong HJ, Conover C

14:40 0362 Polymer Semiconductors Based on some Dyes from Field Effect Transistors *Li Y <University of Waterloo>, Deng Y, Guo C, Guo L, Li X, Wang J, He Y, Quinn J

15:00 0363 Unusual Structural Effects in Near-IR Emissive Polyyheterocyclic Aromatics *Perepichka DF <McGill University>

15:20 0364 Grain Boundaries Limit the Stability of Charge Transport through Perylene-diimide Thin Films *Weitz RT <Ludwig Maximilians Universität, Germany>

15:40 Coffee Break

16:00 0365 Design and Synthesis of Polycyclic Aromatic Hydrocarbons: Controlling Self-assembly and Photophysical Properties *Maly KE <Wilfrid Laurier University>

16:20 0366 Derivatization of New Donor/Acceptor-functionalized Conjugated Systems from Pentacene-5,7,12,14-tetraone *Zhao Y <Memorial University of Newfoundland>, *Younes EA

17:00 0367 Reingning in Pt(II) Blue Emitters: Full Steric Constraint *Wang X, *Wang S <Queen's University>

17:40 End of Session
0453 Synthesis of Carboxylated Dithiafulvene and Tetraethylfulvene Vinlogues as Redox-active Ligands Adows H <Memorial University of Newfoundland>, Zhao Y
0454 Integrating DNA Nanotechnology with Gold Nanomaterials Luo X <McGill University>, Chidchob P, Edwardson TGW, *Seinman HF
0455 Radical labelled Au Nanoparticles; Synthesis and Surface Modification Alsahel A <University of Windsor>, *Rawson JM
0456 A Cu(I)-based Turn-on Luminescence Sensor for Volatile Thioethers Varju BR <Simon Fraser University>, Ovens JS, *Leznoff DB
0457 Synthetic Routes to Silicone-modified Soybean Oil Copolymers Gale CB <McMaster University>, Chin BA, *Brook MA
0458 Investigating CO2, CO and C2D4 Dynamics in the - Zinc Formate and M2(BDC)2(DABCO) MOFs via Solid-state NMR Wu B <Western University>, Lucier BEG, *Huang Y
0461 Doping across the Periodic Table: Loading Metals within MIL-121 Chen SS <University of Western Ontario>, Luo W, Lucier BEG, Masih D, Chan H, Terskikh V, Workentin MS, Rohani S, Sham TK, *Huang YN
0463 Thioindigo Derivatives as Photoswitchable Hydrogen Bond Acceptor Arrays Davoud F <Western University>, *Wisn WA
0464 Retoxing Light with Chemistry: Interactions of Self-trapped Beams in Photosensitive Media Morim DR <McMaster University>, Shastin A, Bevern D, Aizenberg J, Vargas-Baca I, *Saranammuttu K
0465 A Survey of Hydrogen Bond Donor Arrays Paired with Photoswitchable Acceptor Arrays Plezier J <Western University>, *Wisn WA
0467 Quaternized Cellulose Hydrogels as Sorbent Materials and Pickering Emulsion Stabilizing Agents Udodok IA, Wilson LD <University of Saskatchewan>, Headley JV
0468 Application of Metal-phthalocyanine and Metal-porphyrin Complexes as Molecular Inks for Dip Pen Nanolithography (DPN) on 4-Pyridinopropanol Silicon Modified Surfaces Alavi SA <Shahid Beheshti University, Iran>, *Safari N
0469 Investigation of Factors Affecting Surface Modification of Cellulose Nanocrystals with Diazonium Cations Jankovic NC <University of Alberta>, Du R, *McdMott MT, Ayanci C
0471 Processable Bulk Supramolecular Polymer from an Organometallic Small Molecule Building Block Lanigan N <University of Waterloo>, Assoud A, *Wang X
0472 Nanoparticle Chains as Electrochemical Sensors and Electrodes Pu L <University of Waterloo>, Baig M, *Maheshwari V
0473 Measuring the Mechanical Properties of Nanocellulose Using Amplitude Modulated Frequency Modulated Atomic Force Microscopy Marway HS <McMaster University>, *Cransston ED
0474 Multilayered Elastic lamellar Substrates for Improved Stretchable Electronics Schlingman K <University of Windsor>, *Camichell TB
0476 Surface Functionalization for Precise Control of Single Walled Carbon Nanotube Deposition Kulak MR <University of Waterloo>, Selmiani S, *Schipper DJ
0480 Rapid Microwave Synthesis of New Thiocarboxyphenyl Diimide-based Materials Pahtavanlu P <University of Toronto>, *Sferos DS
0481 Maximizing Filler Particle Loading in Dental Resin Composites Wang RL <Université de Montréal>, Habib E, *Zhu XX
0483 Synthesis and Characterization of Nanoscale Lanthanide-based Electrocatalysts Tahmasebi S <Queen’s University>, *Jenkiewicz G, Baranton S, Coutanceau C
0484 Multifunctional Upconversion Nanoparticles as 800 nm Triggered PDT/PTT Therapeutic Agents Hu YH <University of Waterloo>, Honck JH, *Lu QBL
0485 Waveguide Encoded Intersecting (WIDE) Lattices: Planar Polymer Films with Enhanced Fields of View and Multiple Imaging Functionality Lin H <McMaster University>, Hosein ID, Benicasa KA, *Saranammuttu K
0487 Facile Controlled Preparation of Multifunctional Core-shell Magnetic Nanoparticles by Thiol-ene Click Reactions, and Potential Use in Microfluidic Separations Chen X <York University>, Pietro W, Organ M
0489 Bimodal Imaging Probes Using Carbon Dots Macairain JR <Concordia University>, *Naccache R
0490 Ag@Au Nanoparticles Surported on Carbon Fibers: Fancil Fabrecation and their High Performance for Ethanol Electrooxidation Wang CQ <University of Toronto>, *Goh C
0491 Stabilization of Self-assembled Nanostructures through Metal Coordination MacTaggart MR <Royal Military College of Canada>, *Malarit-Jugroot C
0531 Noble Metal-doped Semiconductors: Alternative Photocatalysts for Organic Transformations  
Hainer A <University of Ottawa>, MArina N, Lanterna AE, *Scialaono JC

0533 TiO2 Nanoparticles Size Effects on Porphyrin and Ruthenium Dye-sensitized Solar Cells Conversion Efficiency  
*Safari N <Shahid Beheshti University, Iran>, *Tahay P

0534 Development of Novel Nanostructured Materials for Energy and Environmental Sustainability  
Amaranatha Reddy D <Pusan National University, Republic of Korea>, Park H, Ma R, Hong S, Praveen Kumar D, *Kyu Kim T

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**Organic Chemistry**

**OR1 206C**

**New Frontiers in Peptide Science - joint with BM**  
Organizer(s) - William Lubell, David Perrin, Andrei Yudin  
Chair(s) - David Perrin

13:40 0535 Design and Development of a Traceless-multicomponent Reaction on Solid Support for Peptide Fragment Ligation and Macrocyclization  
*Biron E <Université Laval>, Jobin S, Majeau A, Gailindo SM, Vezina-Dawod S, Liang X

14:20 0927 "Cyclic Azapeptide Synthesis by A'-Macrocyclization"  

15:00 0537 Searching for Selective Catalytic Reactions in Complex Molecular Environments  
Miller SJ <Yale University, USA>

15:40 Coffee Break

16:00 0538 Bicyclic Octapeptide α-Amanitin: A Novel Approach towards the Total Synthesis  
Matinkhoo K <University of British Columbia>, *Perrin DM

16:20 0539 Oxadiazole Grafts in Peptide Macrocycles  
Appavoo S <University of Toronto>, *Yudin AK

16:40 IntelliSyn Pharma Research Excellence Award Lecture

16:40 0540 Supramolecular and Peptidic Tools for Probing Epigenetic Methylation Pathways  
Hof F <University of Victoria>

17:20 0541 Peptide Compression for Cell and Oral Bioavailability  
Fairlie DP <University of Queensland, Australia>

18:00 End of Session

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**OR8 202B**

**Recent Advances in the Generation, Utilization and Understanding of Radicals - joint with IN**  
Organizer(s) - Bas de Bruin, Jean-Philip Lumb  
Chair(s) - Jean-Philip Lumb

13:40 0549 Radical Cascade Reactions by Electron Catalysis  
Studer A <Westfälische Wilhelms-Universität, Germany>

14:20 0550 Radicals Enable Charge Transport in Metal-organic Frameworks  
Dinca M <Massachusetts Institute of Technology, USA>, Sheberla D, Campbell MG, Dou JH

15:00 0551 Free Radicals in Commercial Oxidation of p-Xylene to Terephthalic Acid  
Adamian VA <BP Petrochemicals, USA>

15:40 Coffee Break

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**PT1 203A**

**Advances in Solid State NMR: Inorganic Materials, Biological Solids and Theoretical Methods**  
Organizer(s) - Robert Schurko, Simon Sharpe  
Chair(s) - Robert Schurko

13:40 0555 The Relationship of Glass Structure to its Optical Performance  
Zwaniger JW <Dalhousie University>

14:20 0556 Multinuclear NMR Study of Molybdenum Incorporation in Aluminoborophosphate Glasses  
Kroeker S <University of Manitoba>, Krishnamurthy A

14:40 0557 Quantifying Disproportionation in Pharmaceutical Formulations with 31Cl Solid-state NMR  
Hirsh DA <University of Windsor>, Su Y, Nie H, Stueber D, *Schurko RW

15:00 0558 Phosphorus and Nitrogen Centers in Doped Graphene and CNTs Analyzed through Solid-state NMR  
MacIntosh AR <McMaster University>, Jiang G, Zamani P, Song Z, Chen Z, Sun AX, *Goward GR

15:20 0559 Intramolecular Hydrogen Bonding and Isotope Effects on Magnetic Shielding in Solids: Is There a Relationship Between Hydrogen-bond Strength and Isotopic Shifts?  
Ha M, *Wasylishen RE <University of Alberta>, Bernard GM, Wu Q, Michaelis VK, Terskikh V

15:40 Coffee Break

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**CSC 2017**

16:00 0552 The Quest for Stable Oxyallyl Derivatives - Air-persistent Radical Cations  
Regnier V, Planet Y, Molton F, Philouze C, *Martin D <Université Grenoble-Alpes, France>

16:20 0553 Proton-coupled Electron Transfer in Organic Synthesis  
*Knowles R <Princeton University, USA>

17:00 0554 Radical Relay Strategies for Selective C-H Oxidation  
Stahl SS <University of Wisconsin-Madison, USA>

17:40 End of Session

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**Physical, Theoretical and Computational Chemistry**

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16:40 0561 The Interaction of Antimicrobial Peptides with Intact Bacteria from a H Solid-state NMR Perspective  
*Marcotte I <Université du Québec à Montréal>, Laadhari M, Arnold AA, Separovic F

17:20 0562 NMR Studies of Elastic Biomaterials Formed by Elastin-like Polypeptides  
*Sharpe S <Hospital for Sick Children; University of Toronto>, Reichheld SE, Mužnieks LD, Chao T-Y, Liu C

17:40 0563 Structure and Dynamics of Extracellular Loops in Human Aquaporin-1  

18:00 End of Session

PT2  201F
Electron Localization and Delocalization: Theory, Measures, and Applications in Chemistry  
Organizer(s) - Cherif F Matta

13:40 0564 The Physical Basis for the Transferability of Functional Groups  
*Ayers PW <McMaster University>, Fias S, Heidar-Zadeh F, Geerkings P

14:20 0565 Electron Localization/Delocalization Matrices (LDMs) and the Electron-density-weighted Connectivity Matrices of a Large Molecule from Fragments: The Challenging Case of a Finite Graphene Nanoribbon  
*Massa L <City University of New York, USA>, Timm M, Huang L, *Matta CF

14:40 0566 Localization-delocalization Matrices (LDM): A Source for Electron Density Based Descriptors for Use in Physical and Biological Modeling  
*Cook RL <TDA Research, Inc, USA>, Matta CF

15:20 0567 Spectroscopic Effects of Electron Delocalization on Iron Nitosyl (FeNO)2 (S=3/2) Complexes  
Rodriguez JH <Purdue University, USA>

15:40 Coffee Break

16:00 0568 New Smart Reagents in Chemistry Oriented Electric Fields  
Shai K <Hebrew University of Jerusalem, Israel>

16:40 0569 Spin Density Delocalization in Metal Complexes  
*Cortés-Guzmán F <Instituto de Química UNAM, Mexico>, Ramírez-Palma D, García-Ramos JC, Ramírez-Palma L, González-Arzaluz L

17:20 0570 Disentangling the Contribution of the Covalent Component of Hydrogen Bonding to the Properties of Liquid Water  
Shi Y <McGill University>, *Khaliullin RZ

17:40 End of Session

PT6  203C
Statistical Mechanics of Soft Matter  
Organizer(s) - Jeremy Schofield

13:40 0571 Regulation of Membrane Protein Integration and Expression  
*Miller TF <California Institute of Technology, USA>

14:20 0572 Statistical Mechanics of Small-molecule Drug Design  
*Chodera JD <Sloan Kettering Institute, USA>

15:00 0573 Thermodynamics of Coarse-grained Models  
*Nold WG <Penn State University, USA>

15:40 Coffee Break

16:00 0574 Design Principles of Molecular Motors: Efficiently Burning Energy to Achieve Directed Motion  
*Brown AI, *Sivak DA <Simon Fraser University>

16:40 0575 Rare Fluctuations and Response of Materials Driven out of Equilibrium  
*Limmer DT <University of California - Berkeley, USA>

17:20 0576 Collective Dynamics of Self-propelled Janus Motor  
*Huang M-J <University of Toronto>, Schofield J, Kapral R

17:40 End of Session

PT8  203D
Quantum Coherence and Dynamics in Biological Processes  
Organizer(s) - Paul Brumer

13:40 0577 Quantum Coherent Dynamics of Incoherent Light-induced Photoreactions: From Model Systems to cis-trans Photosomerization of Retinal  
*Scherbul TV <University of Nevada, USA>

14:20 0578 Chirality and the Electrons’ Spin: Their Role in Biology  
*Naaman R <Weizmann Institute, Israel>

15:00 0579 Avian Magnetoreception: A Quantum Compass Needle  
*Hore PJ <University of Oxford, UK>

15:40 Coffee Break

16:00 0580 Nonadiabatic Dynamics of Photoinduced Proton-coupled Electron Transfer in Solution and Photoreceptor Proteins  
*Hammes-Schiffer S <University of Illinois at Urbana-Champaign, USA>

16:40 0581 On the Role of Electronic Coherences in Biological Electron Transfers  
*de la Lande A <CNRS-Université Paris Sud, France>, Mangaud E, Cailliez F, Firmino T, Desoutter-Lecomte M, Meier C, Narth C

17:20 0582 Interfering Resonances in the Coherent Control of Radiationless Processes  
*Lavigne C <University of Toronto>, *Brumer P

17:40 End of Session

PTP  Hall C
Poster Session  
From 17:40 until 19:30

0583 Acidic Group-induced Nitration Mechanism of Trimethanolethane with Nitronium  

0584 Plasmonic Tungsten Oxide Nanowires for Visible-light-enhanced Chemical Reactions  
*Xue C <Nanyang Technological University, Singapore>, Lou Z

0585 A Two-point Complete Basis Set Limit Method for Accurate Computation of Molecular Energies  
*Shao S-F, Huang Y-J <National Taichung University of Education, Taiwan>, Chang J-L

0586 Tunneling to Hopping Crossover in Thermopower of the DNA Molecular Junctions  
*Korol R <University of Toronto>, Kilgour M, *Segal D

0587 Systematic Studies of Electronic Structures and MCD Spectra of Synthetic Oxoamidiniums, Dioxobacteriochlorins, and Dioxo-rhodobacteriochlorins  
*Nevonen D <University of Manitoba>, Kaesemann E, Li R, Bruckner C, *Nemykin V

0588 Theoretical Study on Adsorption and Decomposition of Methanol on Ru-Pt Decorated Boron-doped Graphene Surface  
*Damte J <National Taiwan University of Science and Technology, Taiwan>, Lyu S-L, Jiang J-C

0589 Computing the Properties of Large Molecules from Atoms-in-Molecules (AIM) Densities  
*Awdaw I <Memorial University of Newfoundland>, Warburton P, Poirier R

0590 Understanding Skin Impermeability: Structure Characterization and Permeability Measurements  
Lafleur M <Université de Montréal>, Paz Ramos A

0591 Determination of an Efficient Method for Computation of the Thermal Corrections to Free Energy Calculations of Polymorphs  
*Beeler CM <Dalhousie University>, LeBlanc LM, *Johnson ER

0592 The Determination of Stable Chromium(III) Chloride Water Complexes  
*Beeler CM <Saint Mary’s University>, *Pye C
0632  Analyzing TEM-1 Conformational Dynamics and Regions of Allotropy by TRUES-HDX-MS  Knox R  University of Toronto, Centre for Research in Mass Spectrometry, Wilson DJ

0633  Observing Conical Intersections in Photochromic Molecules via Ultrafast Electron Diffraction  Krawczek K  University of Western Ontario, Max Planck Institute for the Structure and Dynamics of Matter, Germany, Lu C, Murphy S, Miller RJD

0634  Collective Phenomena of Chemically Self-propelled Pinned Sphere-dimer Rotors  Robertson B  University of Toronto, Stark H, Kapral R

0635  Phospholipid-based Model Membrane System for Hydrogen-deuterium Exchange Mass Spectrometry of Membrane Proteins  Szymkowicz L  York University, Deng B, Wilson DJ

0636  Surprising Membrane Penetration by the Yeast a-factor Pheromone Regulates Cognate Receptor Quaternary Structure in the Cell  Paprocki JD  University of Wisconsin-Milwaukee, USA, Stoneman MR, Biener G, Yokoi K, Cruz JC, Shevade A, Hristova K, Kuchin S, Raicu V

0637  Ligand Receptor Interaction Dynamics: 19F NMR Studies of G protein Coupled Receptors  Orazietti AP  University of Toronto, Ye L, Pandey A, Hasabnis A, Barth P, Prosser RS

0638  Fixed-target Sample Delivery Method for Serial Crystallography at Synchrotrons and XFELs  Oghbaey S  University of Toronto, Sarracini A, Ginn HM, Pare-Labrosse O, Kau A, Mueller-Werkmeister HM, Ernst O, Miller RJD

0639  Developing Biosynthetic Isotope Labelling Strategies to Prove Allosteric Mechanisms ofGPCR Signalling  Pandey A  University of Toronto at Mississauga, University of Toronto, Ye L, Ernst OP, Prosser RS

0640  Modeling of Radiolytic Production of Oxidants Relevant to Corrosion of a Used Fuel Container in Deep Geologic Repository Environments  Morco RP  University of Western Ontario, Joseph JM, Hall DS, Shoesmith DW, Wren JC

0641  Functional Reconstitution of the Adenosine A2A Receptor in Native Lipid Membranes via Maleic Acid Co-polymers  Huang SK  University of Toronto, Lyda B, Sunahara RK, Prosser RS


0643  Biologically Relevant Sulfide-Sulfoxide- and Sulfone-aromatic Interactions in the Gas Phase and Bulk Water  Orabi EA  Concordia University, English AM

0644  Laser Selective Control of Chemistry Revisited  Daoud H  University of Toronto, Izmaylov A, Dwayne Miller RJ

0645  How Do Non-covalent Complexes Dissoctate in Droplets?  Sharawy M  University of Western Ontario, Consta S


0647  Ultrafast Dynamics of Hydrogenase Active Site Models Studied with 2D-IR Spectroscopy  Eckert PA  University of Michigan, USA, Kubarych KJ


0649  The Local Schrödinger Equation Method Combined with Molecular Sparse Grids to Solve the Electronic Schrödinger Equation  Anderson JSM  RIKEN Advanced Institute for Computational Science, Japan, Nakashima H, Nakatsuji H, Ayers PW

0650  Theoretical Study of the Laplacian ofthe Spin Density in Metal Complexes  Ramirez-Palma D  Universidad Nacional Autonoma de Mexico, Mexico, Cortés-Guzmán F

0651  Probing Prostate Cancer-derived Exosomes With Surface-enhanced Raman Spectroscopy  Kaufman L  University of Western Ontario, Lagugne-Labarthet F, Dayarathna T, Leong H

0652  Optimization of New Geminol and Coupled Cluster Wavefunctions Designed for Strong Correlation Richer M  McMaster University, Miranda-Quintana RA, Kim TD, Ayers PW

0653  Fatty Acid Analysis at High Magnetic Fields by 1H NMR  Fischer MB, Kirby CW  Agriculture and Agri-Food Canada, University of Prince Edward Island

0654  The Acquisition of 1H Solid-State NMR Spectra With Frequency-swept Pulsed  Foster LDL  University of Windsor, Weinberg SL, Schurko RW

0655  A Computational and Kinetic Study of the retro-Diels-Alder Reactions of 4-(4-furfurylfuryl) Alcohol/Maleimide Constructs as Tunable End-caps for Self-immolative Materials  Taimoory SMD  University of Windsor, Fayoumi R, Nasri S, Trant JF

0656  In Search of a Reliable and Efficient Method for Evaluating Core Electron Binding Energies for Large Molecules  Oakley MS  University of Alberta, Koubukowski M

0657  Comparison of Tip and Substrate Metals for Gap-mode Tip-enhanced Raman Spectroscopy  McRae D  Western University, Jeon K, Lagugne-Labarthet F

0658  Structures and Energies of M[1,1,8,8-Tetramethyl[8](2,1,1)]Teropyrenophane] (M=Li, Na, K, Rh, Cs) Studied by Mass Spectrometric and Computational Methods  Chen Y  Memorial University of Newfoundland, Bodwell GJ, Fridgen TD

0659  Transition State Search and Geometry Optimization  Yang XD  McMaster University, Ayers PW

0660  Reactions of Small Molecules on Cationic Rhodium Nanoclusters  Carr PPJ  University of Waterloo, Lecours MJ, Devlugt I, Shepherdson E, Chow T, Hopkins WS

0661  Characterizing Humulone Content in Beer  Zhang Q  University of Waterloo, Walker S, Campbell JL, Innocente S, Hopkins WS

0662  Structural Dynamics of Photocatalytic Water Oxidation  Wentzell JS  University of Toronto, Sung M, Morris R, Miller RJD

0663  Multinuclear Solid-state NMR Spectroscopy of Halide Salt Cocrystals  Vojvodin CS  University of Windsor, Hirsh DA, Huskic I, Frisic T, Schurko RW

0664  Computational and Experimental Analysis on Reaction Kinetics of Phenyl-1-naphthylamine Oxidation Process in Hexadecane  Yang Y  Carleton University, Miller R


0666  Periodic Excitation of Phonon Polaritons in Boron Nitride Nanotubes  Phillips CA  University of Toronto, Gilburd L, Walker GC

0667  Pro-chiral Pre-ordering around the Anchoring Motley in Chiral Transfer Complexes  Groves MN  California State University, USA, Aarhus University, Denmark, Dong Y, Lemay J-C, McBreen P, Hammer B

0668  Influence of Boron Loading on Structure in SiBA Polymers Investigated via Solid State NMR  Foran G  McMaster University, Macphail B, Brook MA, Goward GR
0669 Development of Broadband Two-color Two-dimensional Electronic Spectroscopy for Studies of Photosynthetic Charge Separation
Sechrist R <University of Michigan, USA>, Dzurget J, Song Y, Policht V, Ogilvie JP

0670 The Catalytic Ring Opening Mechanism of Glucosamine-6-phosphate Synthase
DeWolfe TM <University of Windsor>, Gauld JW

0671 A Solid-state NMR Study of Hydrolyzed Active Pharmaceutical Ingredients
Veinberg N <University of Windsor>, Hirsh DA, Schurko RW

0672 The Role of Conformational Dynamics in Differing Activity and Substrate Specificity amongst Isozymes of Glutathione S-Transferase
Fairman A <York University>, Kipp T, Brosseau P, Kambhampati P

0673 Electron Delocalization and Implications for Gain in CdSe/CdS Quantum Dots-in-rods
Sonnichsen C <McGill University>, Kipp T, Brosseau P, Wilson D

0674 Nano-engineered Materials Containing Polyvinylidene Fluoride) for Vacuum Membrane Distillation (VMD): Fundamental and Application
Chen Z, Rana D <University of Ottawa>, Matsuura T, Yang Y, Meng D, Lan CQ

0675 Preparation of Protein Samples for Time-resolved Structural Dynamics Studies
Besaw JE <University of Toronto>, Ernst OP, Miller RJD

0676 High-power, Femtosecond Laser Source at 1um for Ultrafast Science
Manchee CPK <University of Toronto>, Miller RJD

0677 Anomalous Halogen Bonding between Cl, and Br, Guests with Hydrogen Bonding Lone Pairs of Oxygen in Clathrate Hydrates
Dureckova H <University of Ottawa>, Woo TK, Alavi S

0678 Nanoscale Spectroscopy and Simulations of Phospholipid Bilayers and Amyloid-beta Oligomers
Allpour E <University of Toronto>, Walker GC

0679 Shaped Pulse Design with Optimal Control Theory for the Acquisition of Ultra-wideline Solid-state NMR Spectra
Lindquist AW <University of Windsor>, Foster LDD, Schurko RW

0680 Amorphous Solid Water: a Model System to Study Elementary Heterogeneous Atmospheric (Photo)chemical Processes on Ice and their Dynamics
Ayotte P <University of Sherbrooke>, Marchand P, Marcotte G, Pronovost S

0681 A Solid-state NMR Study of Fluoxetine Hydrochloride Co-crystals
Peach AA <University of Windsor>, Hirsh DA, Schurko RW

0682 Theoretical Study of Reactions Mediated by Ternary Cu(I) Complexes
Ramirez-Palma D <University Nacional Autónoma de México, Mexico>, Ramus JC, Ruiz Azuara L, Cortés-Guzmán F

0683 Photocatalyzed Charge Transfer Reaction Rates of PSHT-PCBM Dimers: A Theoretical Study
Rodriquez JI <Instituto Politécnico Nacional, Edificio 9, México>, Martínez JP, Goetz AW, Trujillo-González DE, Castillo-Alvarado FL

0684 Robust Atomic Charges from Information Theory
Heidar-Zadeh F <McMaster University; Ghent University, Belgium>, Verstraeten T, Bultink P, Ayers PW

0685 QTAIM Derivation for 2-Component Hamiltonians and Impact on Atomic Properties
Anderson JSM <RIKEN Advanced Institute for Computational Science, Japan>, Rodrigue JI, Ayers PW

0686 Empirical Charge Models for Fast and Accurate Modeling of Guest-host Interactions in Aluminosilicate Zeolites
Demene C <University of Ottawa>, Woo TK

0687 Chemical Reactivity of 2D Molybdenum Carbide Tan D, Fortin CA <Université Laval>, Zeng Y, Zhang X, Dong Y, McBreen P

0688 Study of Photoinduced Geometrical Changes in Bisphenanthroline Copper(II) Complexes
Gutiérrez-Argazul L <Universidad Nacional Autónoma de México, Mexico>, Ramirez-Palma D, Peon J, Cortés-Guzmán F

0689 Identifying Vibrionic Coupling and Coherence in Chromoporph with a Polarization Controlled Two-dimensional Electronic Spectroscopy
Maret E <University of Michigan, USA>, Song Y, Policht V, Berg B, Ogilvie J

0690 Kinetic Workflow Effectively Reduces Alloteric Effects in Epitope Mapping by Time-resolved Hydrogen Deuterium Exchange Mass Spectrometry
Deng B <York University>, Zhu S, Macklin AM, Xu J, Lento C, Wilson DJ

0691 Nonlinear Behavior in the Bromate - 3,5-Diaminobenzoic Acid Reaction
Tang A <University of Windsor>, Wang J

0692 Preservation of Bulk Hydration Dynamics in Concentrated Aqueous Polyethylene Glycol Solutions Studied by Two-dimensional Infrared Spectroscopy
Daley KR <University of Michigan, USA>, Kubarych KJ

0693 Optical Properties of Arrays of Plasmonic Nanoarrowheads: An Alternative to Nanoprisms
Wallace GQ <Western University>, Foy HC, Laguigne-Labarthe F

0694 Using Molecular Dynamics Simulations to Understand the Mutagenicity of Hydantoin DNA Lesions
Hussain HB <University of Lethbridge>, Wetmore SD

0695 Nonlinear Dynamics During the Electro-oxidation of Hydroxymethanesulfinate on Platinum and Gold Electrodes
Beil JG <University of Windsor>, Wang J

0696 1P MAS NMR Spectroscopy Study of Gold-phosphine Complexes
Ha M <University of Alberta>, Hughton B, Bernard GM, Michaelis VK

0697 Magnetic Studies of Magnetotactic Bacteria with X-ray Magnetic Circular Dichroism and Optical Microscopy
Le Nagard L <McMaster University>, Hitchcock AP, Fradin C, Zhu X

0698 Tunability of Hyperbolic Phonon Polariotons in Hexagonal Boron Nitride for Photonic-electronic Device Applications
Kim KS <University of Toronto>, Trajanoski D, Ho K, Gilburt L, Mali A, de Beer S, Walker GC

0699 Quantitative Raman and Ab Initio Investigation of Uranyl Sulfate Complexation and Liquid-liquid Phase Separation Under Hydrothermal Conditions
Alcorn C <University of Guelpgh>, Cox J, Applegarth L, Tremaine P

0700 Performance of Metal Organic Frameworks for Landfill Gas Separation by Simulations
Collins SP <University of Ottawa>, Woo TK

0701 High Capacity Silicon Electrodes from a Multi-nuclear-solid-state-NMR Standpoint
Freytag AI <McMaster University>, Pauric AD, Harris KJ, Goward GR

0702 Two-dimensional Electronic Stark Spectroscopy
Berg B <University of Michigan, USA>, Loukianov A, Niedringhaus A, Pan J, Senlik SS, Ogilvie JP

0703 Development of pH and Thermosensitive Nanoparticles Using Metal-enhanced Fluorescence and FRET
Fontaine N <Université Laval>, Asselin J, Bouchard M, Boudreau D

0704 Effects of Nucleophile and Nucleobase Activation on the Deglycosylation of RNA Nucleosides
Felske LR <University of Lethbridge>, Lenz SP, Wetmore SD

0705 The Structures and Properties of Proton-bound Dimer of Phenylalanine with Serine
Fu W <University of Waterloo>, Tran Y, Huang D, Campbell L, Hopkins WS

0706 Advanced Kinase Drug Discovery: Computational Prediction of Cysteine pKa in Protein Kinases
Awonoor-Williams E <Memorial University of Newfoundland>, Rowley CN
0707 Dynamics of Rhodium Dime Carboxyl Complexes Using Ultrafast Multidimensional Spectroscopy. Michocki LB, *Kubarych KJ (University of Michigan, USA), **Kubarych KJ

0708 Interfacial Hydration in Micelles and Spanning Water Network in Proteins. Roy VP, *University of Michigan, USA, **Kubarych KJ

0709 Cyclopeptide Structure Characterization by NMR and Molecular Dynamics Simulations. Sánchez-Díaz G (McMaster University; University of Havana, Cuba), Pérez CS


0712 Theoretical Study of Copper Catalyzed Coupling Reaction between Vinyl Iodides and Carbamates. Ladouceur F, *Université du Québec à Trois-Rivières, *Daoust B


0714 Towards Systematic (High Throughput) Quantum Chemical Studies of Microbial and Animal Photoresponsive Proteins. Olivucci M, *University of Siena, Italy

0715 Computational Study of the Criegee Intermediate through Ozonolysis Reaction. Almatameh MH, Elayan IA, Ahmad Z

0716 Experimental and Computational Studies of Paramagnetic Compounds. Dai YD, *Queen's University, Wu GW

0717 C*O and C*Co Quadrupole Central Transition NMR Studies in Solution. Shen JS, *Queen's University, Wu GW

0532 Topologically Correct Formalism for On-the-fly Non-adiabatic Quantum Dynamics. Joubert-Doriol L, *University of Toronto Scarborough; University of Toronto, Sivasubramaniam J, Ryabinin IG, *Izmaylov AF

Surface Science

SSP 206F Self-assembly at Surfaces
0740 Odds or Evens? Using Electrochemical Surface Plasmon Resonance to Detect Differences in Redox-induced Molecular Reorientations in Odd and Even Chain Ferrocenyalkanethiolate Monolayers Feng Y<Universtité de Montréal>, Badia A

0741 Characterization of Alamethicin (Alm) as a Model of Ion Channel Forming Peptides Imbedded into a Phospholipid Bilayer Abbasi F<University of Guelph>, Lipkowski J

0742 Structural and Mechanical Properties of Palm Oil in the Presence of Air and Sugar Devgan H<ryerson University>, Rousseau D

0743 Ru@Pt Nanoparticles as a Catalyst for Ethanol Oxidation in Fuel Cells Hoang A<University of Calgary>, El Sawy E, Ketabi S, Birss V

0744 Electron Microscopy of Thiols Monolayers Martens I<University of British Columbia>, Fischer E, Bizzotto D

0745 Discovery of New Mixed-metal Electrocatalysts for CO₂ Reduction He J<University of British Columbia>, Dettellbach KE, Berlinguette CP

0746 Low-temperature Methanol Dehydration to Dimethyl Ether over Various Small-pore Zeolites Masih D<University of Western Ontario>, Rohani S, Kondo JN, Batmaz MV

0747 Synthesis of Porous Nickel Oxide with Enhanced Electrochemical Specific Capacitance Amiri M<Lakehead University>, Konda SK, Chen A


0749 The Role of Pyridine Derivatives in the Formation of Anisotropic Gold Nanoparticles Burgess IJ<University of Saskatchewan>, Simon S, Clarke O

0750 Pt-Mn/C and Pt-Cu/C Catalysts for Methanol Oxidation Cavallari VJ<University of Ontario Institute of Technology>, Zamanzad Ghavidel MR, Easton EB

0751 The Behaviour of Anodes and Cathodes on Corroding Copper Surfaces Dajekt R<University of Western Ontario>, Noël JJ, Qin Z, Zagidulin D, Ramamurthy S, Shoesmith DW

0752 Tuning Mechanical Properties of Nanoparticle Monolayer Membranes via Ligand Phase Control and Defect Distribution Meli MV<Mount Allison University>, Raveendran A

0753 N-heterocyclic Carbenes with Extended π-Conjugated Backbones for Metal Surface Modification McLeod JF<Queen's University>, Singh I, Smith C, Narouz M, Nazemi A, Cuddeen CM

0754 Effects of pH, Temperature and Radiation on Corrosion and Oxide Formation on Pure Nickel Karimihaghghi R<University of Western Ontario>, Momeni M, Wren JC

0755 Evaluation of Pure Liquids and Bitumen Capillary Flow into Surface Treated Microchannels Keshmiri K<University of Alberta>, Huang H, Nazemifard D

0756 Hydration Phenomena at Biopolymer Interfaces Wilson LD<University of Saskatchewan>, Karoyo Abdalla H, Dehabadi Leila

0757 The Effect of Different Anions on the Corrosion of Copper Naghizadeh M<University of Western Ontario>, Jean AM, Momeni M, Joseph J, Whittaker G, Wren JC

0758 Comparing Electrochemical and Electroless Methods for the Selective Surface Modification of the 111 Surface on a SAM Modified Gold Bead Electrode Fisher E, Leung K, Bizzotto D<University of British Columbia>

0759 Surface Analysis of Steel Corrosion Influenced by Sulphide in Near-neutral Alkaline Environments Goldman M<University of Western Ontario>, Biesinger M, Noll J, Shoesmith D

0760 Amine Quantification of Surface-functionalized Silica Nanoparticles Sun Y<National Research Council Canada; University of Ottawa>, Kunc F, Balhara V, Jakubek ZJ, Lopinski G, Johnston L

0761 Polarization Behaviour and Stability of Platinum Electro catalysts in Acidic Media Tahmasebi S<Queen's University>, Hossain MA, Jerkiewicz G

0762 Octahedral Palladium Nanoparticles as Exceptional Hosts for Electrochemically Adsorbed and Absorbed Hydrogen Jerkiewicz G<Queen's University>, Zalineeva A, Baranton S, Coutanceau C

0763 Impedance and IR Studies of Alamethicin Ion-channels in the Tethered Bilayer Lipid Membrane Su ZF<University of Guelph>, Shodiev M, Schwan AL, Lipkowski J

0764 Potentiodynamic Polarisation Curves (PDP): To Fit or Not to Fit Stephens L, Perry SC, Mauzeroll J<McGill University>

0765 Electrochemical Sensing at Single Molecule Interface Long Y-East China University of Science and Technology, China

08:20 0765 Redox reactions in < 20 nm Thick Electrochemical Cells James D, Bayat A, Supur M, Smith S, McCready R<University of Western Ontario>

08:20 0763 From Tool Construction to Analytical Chemistry Ding ZF<University of Western Ontario>


08:20 0769 In-situ Observation and Analysis on Electrochemical Processes Using Transmission Electron Microscopy Yang J<McMaster University>, Andrei CM, Bolton GA, Soleymani L

08:20 0770 Dynamic Modelling of Surface Oxide Growth and Reduction at Platinum Barody HA<Simon Fraser University>, Jerkiewicz G, Ekerling MH

10:00 Coffee Break

10:20 W.A.E. McBryde Medal Lecture

10:20 0767 From Tool Construction to Analytical Chemistry Ding ZF<University of Western Ontario>


11:00 0769 In-situ Observation and Analysis on Electrochemical Processes Using Transmission Electron Microscopy Yang J<McMaster University>, Andrei CM, Bolton GA, Soleymani L

11:40 0770 Dynamic Modelling of Surface Oxide Growth and Reduction at Platinum Barody HA<Simon Fraser University>, Jerkiewicz G, Ekerling MH

12:00 End of Session

AN1 205C

Analytical Chemistry

08:00 0762 Analytical and Physical Electrochemistry of Materials - joint with MT, PT
Organizer(s) - Zhifeng Ding, Byron Gates, James Kariuki, Chair(s) - Zhifeng Ding, Byron Gates

08:00 0762 Octahedral Palladium Nanoparticles as Exceptional Hosts for Electrochemically Adsorbed and Absorbed Hydrogen Jerkiewicz G<Queen's University>, Zalineeva A, Baranton S, Coutanceau C

08:00 0771 Discovery of Organic Halogenated-nitrogenous Disinfection Byproducts Using Complementary Mass Spectrometry Techniques Jiang P<University of Alberta>, Huang G, Li X-F
08:00 0772 Selection of Aptamers Using Quantum Dot-assisted Capillary Electrophoresis SELEX *Guthrie JW <Eastern Michigan University, USA>, Rousseau CR, Brito M, Ritchey JL

08:40 0773 Intuitively Counterintuitive: Non-orthogonal Free Flow Electrophoresis Kochmann S <York University>, Wu XZ, Agostino FJ, *Krylov SN

09:00 0774 Immobilized Enzyme Microreactor Development and Optimization as Evaluated by Capillary Electrophoretic Peptide Mapping *Ghaforifar G <University of the Fraser Valley>, Waldron KC

09:20 0775 A Novel Mixed-mode Stationary Phase Based on Bile Acid Oligomers as Invertible Amphiphilic Pockets for Liquid Chromatography *Dionne-Dumont V <Université de Montréal>, Zhang M, Lévaray N, Zhu XX, *Waldron KC

09:40 0776 Enhanced Fluidity or Subcritical Liquid Chromatographic Separations - A Green Method for the Separation of Polar Compounds *Olesik SV <Ohio State University, USA>, Beres M, Beilke M, Bennett R

10:00 0777 A Capillary Electrophoresis-indirect UV Method for the Analysis of Sweat Bicarbonate from Screen-positive Cystic Fibrosis Infants Mathiapanaranam S <McMaster University>, Chan T, Macedo AN, Hill S, *Britz-McKibbin P

10:40 0778 Study of Resveratrol-Beta-lactoglobulin Interaction by Affinity Capillary Electrophoresis Drayton MG, *Donkor KK <Thompson Rivers University>

11:00 0779 Hydrodynamic Control over Membrane Properties Formed in Microchannels *Nan J, Rosella E, Mantovani D, Klietz F, *Greener J <Université Laval>

11:20 0780 Optical Force Chromatography: Separating Molecules Using Mechanical Forces of Light *Chung DS <Seoul National University, Korea>

12:00 End of Session

08:00 0781 Modeling Peptide Interaction with Hydrophilic Surfaces: Peptide Retention Prediction in HILIC *Krokhin OV <University of Manitoba>, Spicer V

08:20 0782 Artifactual Protein Modifications Induced through Solvent-based Precipitation in Acetone as Revealed through Mass Spectrometry *Doucette A <Dalhousie University>, Guray M, Yalcin T

08:40 0783 Open-port Probe Sampling Interface for Mass Spectrometry *Liu C <SCiEX>, Arnold D, Covey T


09:40 0785 Smartphone Colorimetry Coupled with ESI-MS to Monitor the Oxidation of Titanocene *Penafiel J, Zijlstra H, Yeung D <University of Victoria>, *McIndoe JS

10:00 0786 Recent Advances in the Development of High-performance Chemical Isotope Labeling LC-MS for Comprehensive and Quantitative Metabolomics Li L <University of Alberta>


11:40 0789 LC-MS-based Method for Detection and Quantification of 17 Mycotoxins in Human Plasma for Exposure Monitoring Slobodchikova I, *Vuckovic D <Concordia University>

12:00 End of Session

**Biological and Medicinal Chemistry**

**BM2 201C**

**Proteins**

Organizer(s) - Jumi Shin, Drew Woolley Chair(s) - Jumi Shin

08:00 0790 Activity-based PK Probes Detect Protein-protein Interactions Desrochers GF <University of Ottawa>, Cornachia C, McKay C, *Pezacki JP

08:20 0791 Probing the Triggers for Conformational Change in the MinE Bacterial Cell Division Regulator Ayed SH, Cloutier A, McLeod L, Wu J, *Goto NK <University of Ottawa>

08:40 0792 Using Site-specific Labelling Strategies to Probe the Early Events of Protein Misfolding Pathways Kimuta JR <University of Cambridge, UK>

09:20 0793 Intrinsic Disorder in Proteins: Curie or Blessing? *Gradinaru CC <University of Toronto at Mississauga>

10:00 0794 Structure and Function of the Long Antiparallel Coiled-coil Domains from Bacterial Condensins *Oakley MG <Indiana University, USA>, Waldman VM, Li Y, Weltzel CS

11:00 0795 Solid-state NMR Provides Evidence for Small-amplitude Slow Domain Motions in a Multi-spanning Transmembrane a-helical Protein *Good DB <University of Guelph>, Pham C, Jagas J, Lewandowski JR, *Ladizhansky V

11:20 0796 Interaction of Apolipoprotein E with Amyloid-beta in the Presence of Epigallocatechin Gallate and its Derivatives Ganesh HVS <University of Toronto at Scarborough>, *Kerman K

11:40 0797 Role of Antibodies on Tau Phosphorylation and Microtubule Binding *Martic S <Oakland University, USA>

12:00 End of Session
## Tuesday AM

### 09:00 0802

**Enhanced Student Learning using 3D Visualization**  
**Abdinejad M**  
*University of Toronto at Scarborough*, *Mikhaylichenko L*

### 10:00 Coffee Break

### 10:20 0810

**Targeting Small-molecules to Treat Alzheimer's Disease**  
**Storr T**  
*Simon Fraser University*, Gomes LMF, Jones MR

### 11:00 0815

**Anticancer and Catalytic Activities of Redox-active Cu(II) Complexes of N,N and N,O Donor Ligands**  
**Walsby CJ**  
*Simon Fraser University*, Prosser KE, Stott LA, Chu AW, Warren JJ

### 12:00 End of Session

### Chemistry Education

#### CE3 205D

**Student Presentations in Chemistry Education & Outreach**
Organizer(s) - David Stone  
Chair(s) - David Stone

#### BM4 201E

**Bio-inorganic Chemistry - joint with IN**
Organizer(s) - Bernie Kraatz, Deborah Zamble  
Chair(s) - Deborah Zamble

#### 08:00 0808

**Study the Interactions of Biometals with Microtubule Binding Domain of tau Protein, Contribution to Alzheimer's Diseases**  
**Ahmadi S**  
*University of Toronto at Scarborough*, University of Toronto, Zhu S, Dutta Majumdar R, Soong R, Sharma R, Wilson D, Simpson A, Kraatz HB

#### 08:20 0809

**Understanding the Role of Heavy Toxic Metals on Single Human Bladder Cancer Cells**  
**Li MSM**  
*University of Western Ontario*, Filice FP, *Ding Z*

#### 08:40 0810

**Chloride-accelerated CuO Nanoparticle-based Fenton Chemistry for Biofilm Removal**  
**Zhang X**  
*Cape Breton University*, Wang L

#### 09:00 0811

**Dihrodium(II) Paddlewheel Complexes as Photodynamic Therapy Agents**  
**Song E**  
*Texas A&M University, USA*, *Dunbar KR*

## Wednesday AM

### 09:00 0822

**Developing Visual Aids and Resources to Support First-year Students in Learning about Buffers**  
**Gilbert B**  
*University of Calgary*, Sandblom NTa, Musgrove A

### 10:00 Coffee Break

### 10:20 0823

**Development of a Concept Test to Measure Students' Abilities to Qualitatively Rank Acid and Base Strength**  
**Zhang Y**  
*University of British Columbia*, Maxwell EJ, *Stewart JJ*

### 11:00 0826

**Students' Abilities to Reason over Large Scales - Measurement and Importance**  
**Moore M**  
*University of Guelph*, *Thomas DF*

### 12:00 End of Session
10:00 Coffee Break

10:20 0833  Sources, Transport and Disposition of Organophosphorus Esters Flame Retardants and Plasticizers in the Canadian Environment  De Silva AO  <Environment and Climate Change Canada>, Muir DCG, Smyth SA, Peart TE, Spencer C, Pickard HM, Young CJ, St. Louis V, St. Pierre K, Lehnher I

11:00 0834  Developing Methods to Determine Substituted Phenylamine Antioxidants in Environmental Matrices  Balakrishnan VK  <Environment and Climate Change Canada>, Toito JM

11:20 0835  Substituted Diphenylamine Antioxidants and Benzotriazole UV Stabilizers in Aquatic Organisms in the Great Lakes Region  Lu Z  <Environment and Climate Change Canada>, De Silva AO, Peart TE, Cook C, McGoldrick DJ, Tetreault GR, Muir DCG

11:40 0836  Assessing the Source-to-stream Transport of Benzotriazoles during Rainfall and Snowmelt in Urban and Agricultural Watersheds  Parajulee A, Lei YD, De Silva AO, Cao X, Mitchell CPJ, Wania F  <University of Toronto at Scarborough>

12:00 End of Session

EN5 205A

From Molecular Structure to Global Processes: The Role of Analytical Environmental Chemistry - joint with AN
Organizer(s) - Eric Reiner, Andre Simpson
Chair(s) - Eric Reiner

08:40 0837  Environmental Applications of On-line Mass Spectrometry  Richards LC, Davey NG, Duncan KD, Feehan JF, Gill CG, Krogh ET  <University of Victoria>

09:00 0838  Impact of Analytical Chemistry on the World's Stage: Hexahromocycloaddoene and the United Nations Stockholm Convention  Tomy GT  <University of Manitoba>

09:20 0839  Advances in Permeation Passive Sampling of VOCs  Górecki T  <University of Waterloo>, Salim F, Ioannidis M, Goli O

09:40 0840  Environmental Forensics: Advances in Analytical Chemistry  O'Sullivan G  <Mount Royal University>

10:00 Coffee Break

10:20 0841  New Developments Towards Field Deployment of SPME, NT and TFME Technologies  Pawlisynek J  <University of Waterloo>, Grandy J


11:00 0843  Direct, On-line Mass Spectrometry of Small Samples and Complicated Matrices: Recent Progress and Applications  Vandergrift GW, Borden SA  <Vancouver Island University; University of Victoria>, Duncan KD, Krogh ET, Gill CG

11:20 0844  The Great Lakes: A Laboratory to Explore the Impact of Persistent Organic Pollutants  Brindle ID  <Brock University>, Marvin CH

12:00 End of Session

Industrial Chemistry

IC1 202D

Sustaining Business Development in the Chemical Sector
Organizer(s) - Joe Sabol
Chair(s) - Joe Sabol

08:00 0845  ACS Division of Small Chemical Businesses: Opportunities and Benefits  Sabol JE  <American Chemical Society, USA>

08:40 0846  Essential Business Development Practices for Early Stage Companies  Bosley BD  <Boron Specialties, LLC>, Bosley BR

09:20 0847  Forensic Chemistry: Dealing with a False Positive in a Drugs of Abuse Case  Manuta DM  <Manuta Chemical Consulting, Inc., USA>

10:00 Coffee Break

10:20 0848  Raising Capital and Going Public: Leveraging your IP to Build Value and Grow your Business  Lainson D, Pan J  <Smart & Biggar/Fethersonhaugh

11:00 0849  Replacing the "Rest of the Barrel" with Renewable Hydrocarbons  Yoshi CH  <Advonex International Corporation>

11:40 0850  Panel Discussion: Technical and Business Resources for Entrepreneurs  Sabol JE  <American Chemical Society, USA>, Bosley B, Joshi C, Liasond D, Manuta D

12:00 End of Session

IC2 202B

Chemistry-based Entrepreneurs, Ecosystem, and Case Study
Organizer(s) - Pam Banks
Chair(s) - Pam Banks

08:00 0851  Invention into Innovation  Barter P  <Entrepreneur in Residence RIC Centre>

08:40 0852  Exploring Funding Opportunities: Ontario Centres of Excellence  Lukkarila J  <Ontario Centres of Excellence>

09:20 0853  Academic to Entrepreneurship - The CHAR Technologies Story  White A  <University of Toronto>

10:00 Coffee Break

10:20 0854  Panel Discussion - Important Components for a Successful Chemistry Startup  Barter P  <RIC Centre>, Krull U, Speakman S, Folkins P, Barron J

11:40 End of Session

Inorganic Chemistry

IN2 206D

Transition Metal Derivatives of Non-innocent Ligands
Organizer(s) - Ulrich Fekl, Datong Song
Chair(s) - Laura Turculet, Ulrich Fekl

08:00 0855  Redox Activity of Carbene Ligands; Convergent and Divergent Radical-type Pathways of 'Carbene Radicals’ de Bruin B  <University of Amsterdam, The Netherlands>

08:40 0856  Generation and Reactions of Metal Complexes with Highly Reactive Open-shell P-ligands  Streubel R  <University of Bonn, Germany>

09:00 0857  Group 10 Metal Hydride Complexes Supported by New Silyl Pincer Ligations: Synthesis, Characterization and Catalytic Activity  Murphy LJ  <Dalhousie University>, Turculet L

09:20 0858  Phenanthridine-containing Pincer-like Amido Complexes of Late Transition Metals: Targeting Chemical and Electronic Non-innocence By Extending Conjugation in Aromatic N-heterocyclic Ligands  Herbert DE  <University of Manitoba; Manitoba Institute for Materials>, Mandapati P, Braun JD, Giesbrecht PK, Davis RL

09:40 0859  Nickel p-Complexes: A Dewar-Chat-Duncanson Minefield  Kennaelli P  <University of British Columbia>

10:00 Coffee Break

10:20 0860  Progress in Coordination and Redox Chemistry of the cis-Nindigo Ligand  Hofsmommer DT  <University of Victoria>, Hicks RG
11:20 0892 Controlled-release Oral Dosage forms Fabricated by 3D Printing Cantin-Savoie I, Claverie J Bolduc OR, Claverie J

11:40 0893 Polymeric Biomaterials inspired from Biomacromolecular Interactions for Applications in Cell Culture, Retinal Drug Delivery and Septic Blood Filtration. Wylie RG, Mcmaster University, Huynh V, Nijisue D, Lambert C

12:00 End of Session

MS4 203C

Stimuli-responsive Polymers and Polymer Gels
Organizer(s) - Michael Serpe Chair(s) - Michael Serpe

08:00 0894 Multiple Shape Memory Polymers Based on Natural Compounds Wang K, Universite de Montreal, Jia YG, Strandman S, Zhu XX

08:20 0895 A Tough, Recoverable, Self-healing and 3D Printable Hydrogel. Li L, Nanyang Technological University, Singapore, Liu S

08:40 0896 Hydrogels with Thermoresponsive Mechanical Properties Guo H, Mussault C, Marcellan A, Houdet D, Sanson N, SoMatter, Universite Laval; ESPCI-Paris, UPMC Univ Paris, France

09:00 0897 Highly Deformable pH-Responsive Hydrogels Enabled by the Development of Porous Microstructures. Li, Joung, Kozinski, Hwang DK, Ryerson University, St. Michael's Hospital

09:20 0898 Rapidly Switchable Self-trapped Beams and their Long-range Interactions vs. a Sprioxyran-functionalized Hydrogel. Morin DR, McMaster University, Shastri A, Tran A, Mahmood F, Aizenberg J, Saravanamuttu K

09:40 0899 Supramolecular Shape Memory Hydrogels: A New Bridge between Stimuli-responsive Polymers and Supramolecular Chemistry. Chen T, Chinese Academy of Sciences, China

10:00 Coffee Break

10:20 0900 Oligonucleoside Crosslinked Polymer Composites as Stimuli-responsive Hydrogels. Shaver MP, University of Edinburgh, UK, Hands PJ W, Ferrier D, Langford G

11:00 0901 Dynamic Protein Hydrogels Based on Mutually Exclusive Proteins Kong N, Fu L, Li H, University of British Columbia

11:20 0902 Intrinsically Self-healable Polymeric Networks Utilizing Dynamic Chemistries. Oh JK, Concordia University

11:40 0903 Stimuli-responsive Polymers for High-flux Oil/Water Separation Filters. Liu G, Queen’s University, Wang ZJ

12:00 End of Session

MT3 206E

Emerging Materials Researchers
Organizer(s) - Todd Sutherland Chair(s) - Todd Sutherland

08:20 0904 Emerging Porous Materials for Sensing and Separations. Katz MJ, Memorial University of Newfoundland

08:40 0905 Photocatalytic Phosphoalginogen-Titania Dyad Stolar M, University of Calgary, Heyne B, Baumgartner T

09:00 0906 Unusual BN Heterocycles Derived from Formazanate Ligands. Barbon SM, University of Western Ontario, Gilroy JB


09:40 0908 Charge Carrier Generation in Photonic Hybrid Photovoltaic Films of Poly(3-hexylthiphene)/TiO2 Inverse Opals. Chen JIL, University of Toronto, Tulsiram N, Kerr K

10:00 Coffee Break


10:40 0910 From Closed-shell to Open-shell Biradical: Mechanochemical Breaking of a π-bond. Desroches M, Universite Laval; CERMA, CQMF, Boisenua-Lavoie J, Morin JF

11:00 0911 Solid-state Chemistry for Cleaner and More Efficient Materials Synthesis and Discovery. Friscic T, McGill University

11:20 Award for Research Excellence in Materials Chemistry Lecture

11:20 0912 Group 14 Nanomaterials: Complex Systems with Fast Potential. Veinot JGG, University of Alberta

12:00 End of Session

MT5 201D

Metal and Covalent Organic Frameworks
Organizer(s) - Muralee Murugesu Chair(s) - Michael Katz

08:00 0913 Understanding the Structural Stability and Enhanced CO2 Storage of SIFSIX-3-Zn under High Pressures via Vibrational Spectroscopy and X-ray Diffraction. Jiang S, University of Western Ontario, Huang Y, Song Y


09:00 0916 Large Scale Screening of the Optimized Parasitic Energy of CO2 Capture of Experimentally Characterized Metal Organic Frameworks. Collins SP, University of Ottawa, Woo TK

09:20 0917 Made-to-order Metal-organic Frameworks for the Energy-intensive Separations and Gas Storage. Eddaudou M, King Abdullah University of Science and Technology, Saudi Arabia

10:00 Coffee Break

10:20 0918 Crystal Engineering of Hybrid Ultramicroporous Materials. Zaworotko MJ, University of Limerick, Ireland


12:00 End of Session

Organic Chemistry

OR1 206C

New Frontiers in Peptide Science - Joint with BM
Organizer(s) - William Lubell, David Perrin, Andrei Yudin Chair(s) - William Lubell
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker(s)</th>
<th>Affiliation(s)</th>
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<tbody>
<tr>
<td>08:00</td>
<td>0922</td>
<td>Resolution of rac-α-allylalanine via Continuous Preferential Crystallization (CPC)</td>
<td>Patel A &lt;University of British Columbia&gt;, Hein JE</td>
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<td>08:20</td>
<td>0923</td>
<td>Stapled Peptides that Stabilize the Hyaluronan Binding Domains of the Receptor for Hyaluronan Mediated Motility (RHAMM)</td>
<td>Rodrigues E &lt;Western University; London Region Cancer Program&gt;, Peart T, Ma J, Toleg C, Turley E, Lyut LG</td>
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<td>08:40</td>
<td>0924</td>
<td>Targeting the Prostaglandin F₂α Receptor to Delay Preterm Birth</td>
<td>Mohammadpour F &lt;Université de Montréal&gt;, Lubell WD</td>
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<td>09:00</td>
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<td>Silica Grafted Basic Amino Acids as Efficient Catalysts for Chemical Fixation of Carbon Dioxide into Cyclic Carbonates under Metal-free and Halide-free Conditions</td>
<td>Heidari Y &lt;Isfahan University of Technology, Iran&gt;, Hajipour AR, Kozehgary GL</td>
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<td>09:20</td>
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<td>Boroscan - An Enabling Technology for Discovery of Boron-containing Therapeutics</td>
<td>Yudin AK &lt;University of Toronto&gt;</td>
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<td>10:00</td>
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<td>Coffee Break</td>
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<td>10:20</td>
<td>2398</td>
<td>MW Lecture on Late Breaking Peptide Developments</td>
<td>Perrin DM &lt;University of British Columbia&gt;</td>
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<td>10:40</td>
<td>0928</td>
<td>The Development of Cyclic Peptides as RHAMM Mimics for Blocking Inflammation</td>
<td>Hauser-Kawaguichi A &lt;Western University&gt;, Peart T, Toleg C, Turley E, Lyut LG</td>
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<td>11:00</td>
<td>0929</td>
<td>Impact of Homochirality on Peptide Self-assembly</td>
<td>Basak S &lt;University of Toronto at Scarborough&gt;, Kraatz B</td>
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<td>08:40</td>
<td>0933</td>
<td>Catalytic Undirected Intermolecular C-H Functionalization of Arenes with 3-Diazotoluene-2,4-dione: Synthesis of 3-Aryl Tetronic Acids and Pulvinic Acids</td>
<td>Pansare SV &lt;Memorial University of Newfoundland&gt;, Manchoju A</td>
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<td>09:00</td>
<td>0934</td>
<td>Chemoenzymatic Dihydroxylation in the Synthesis of Natural Products. Approach to (-)-Tetrodotoxin</td>
<td>Rycek L &lt;Brock University&gt;, Trant JF, Froese J, Murphy B, Hudlicky T</td>
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<tr>
<td>09:20</td>
<td>0935</td>
<td>The Canadian Front in Synthetic Organic Chemistry. A Mari usaque ad Mare (D’un ocean a l’autre)</td>
<td>Snieckus V &lt;Queen’s University&gt;</td>
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<td>10:00</td>
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<td>Coffee Break</td>
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<td>10:20</td>
<td>0936</td>
<td>The total synthesis of Pnomolides G and H and their structural revisions</td>
<td>McNulty J &lt;McMaster University&gt;, McLeod D</td>
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<td>10:40</td>
<td>0937</td>
<td>Ley-Griffith Oxidation (TPAP): Selectivity Modulation, Mechanistic Understanding, and New Directions</td>
<td>Williams CM &lt;University of Queensland, Australia&gt;</td>
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<td>11:20</td>
<td>0938</td>
<td>Synthetic Studies on Heterocyclic Natural Products</td>
<td>Ciufolini MA &lt;University of British Columbia&gt;</td>
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<td>08:00</td>
<td>0939</td>
<td>C-H Activation at High Valent Nickel</td>
<td>Chong E &lt;University of Michigan, USA&gt;, Sanford MS</td>
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<td>08:20</td>
<td>0940</td>
<td>Copper-catalyzed Vinylation of Nitrogenated Species</td>
<td>Daoust B &lt;UQTR&gt;, Gagnon A, Ricard S, Casault P, Gilbert N, Ladouceur F</td>
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<td>08:40</td>
<td>0941</td>
<td>C-H Functionalization Applied to the Efficient Synthesis and Elaboration of Heterocycles</td>
<td>Ellman JA &lt;Yale University, USA&gt;</td>
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<td>09:00</td>
<td>0942</td>
<td>New Classes of Transition Metal Catalyzed Bond Forming Reactions Powered by CO</td>
<td>Arndtsen BA &lt;McGill University&gt;</td>
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<td>10:00</td>
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<td>Coffee Break</td>
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<td>10:20</td>
<td>0943</td>
<td>A Novel Pd-Catalyzed “Asymmetric C-N Coupling” for the Manufacture of Elbaniv/Razaviir</td>
<td>Yin J &lt;Merk &amp; Co., Inc., USA&gt;</td>
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<td>11:00</td>
<td>0944</td>
<td>Pd-DalPhos/Nickel-catalysed C-N Cross-coupling Catalysis: Reaction Development and Mechanistic Investigations</td>
<td>Lavioe CM &lt;Dalhousie University&gt;, MacQueen PM, Johnson E, Stradiotto M</td>
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<td>11:20</td>
<td>0945</td>
<td>The Direct Radical Functionalization of Alcohols Using Cobalt Photocatalysis</td>
<td>Martin DBC &lt;University of California - Riverside, USA&gt;, Chambers DR, Sodagar E</td>
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<td>11:40</td>
<td>0946</td>
<td>Toward an Enantioselective Intramolecular C-H Alkenylation of Cyclopropane Derivatives</td>
<td>Charette AB &lt;Université de Montréal&gt;, Ladd CL</td>
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<td>08:00</td>
<td>0947</td>
<td>20Ph Solid-state NMR Studies of Lead Tetrel Bonds</td>
<td>&lt;University of Ottawa&gt;, Errulat D, Frost JM, Bryce DL</td>
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<td>08:20</td>
<td>0948</td>
<td>Studies of Surfaces of Energy Related Materials by Dynamic Nuclear Polarization Solid-state NMR</td>
<td>Perras FA, Kobayashi T, Pruski M &lt;Ames Laboratory, USA; Iowa State University, USA&gt;</td>
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<td>09:00</td>
<td>0949</td>
<td>Solid-state NMR Spectroscopy of Nanoporous Materials</td>
<td>Michaelis VK &lt;University of Alberta&gt;, Hughton B, Ha M</td>
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<td>09:20</td>
<td>0950</td>
<td>Multinuclear Solid-state NMR for the Structural Characterization of Mixed-linker Frameworks</td>
<td>Gemus JE &lt;University of Windsor&gt;, O'Keefe CA, Frisic T, Schurko RW</td>
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<td>09:40</td>
<td>0951</td>
<td>NMR Crystallography of Zeolites How Far Can We Go without Diffraction Data?</td>
<td>Brouwer DH &lt;Redeemer University College&gt;</td>
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<td>Coffee Break</td>
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<td>10:20</td>
<td>0952</td>
<td>Hydrogen Bonding Energy, Molecular Motion, and Solid-state ¹7O NMR</td>
<td>Wu G &lt;Queen’s University&gt;</td>
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<td>08:00</td>
<td>PT2</td>
<td>201F Electron Localization and Delocalization: Theory, Measures, and Applications in Chemistry</td>
<td>Organizer(s) - Cherif F Matta Chair(s) - Khash Ghandi, Fernando Cortés-Guzmán</td>
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<td>11:00</td>
<td>0954</td>
<td>Making the Pieces Add Up: Progress in Fragment-based NMR Chemical Shift Prediction for Molecular Crystals</td>
<td>Beran G, University of California - Riverside, USA</td>
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<td>0955 Coffee Break</td>
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<td>10:00</td>
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<td>0958 Orbital Entanglement Measures for Localized and Delocalized Orbitals</td>
<td>Reihér M, ETH Zurich</td>
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<td>11:00</td>
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<td>0959 New Insights into Molecular Interactions Using Concepts of Quantum Information Theory</td>
<td>Tencic P, Niclaus Copernicus University in Torun, Poland</td>
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<td>11:40</td>
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<td>0960 Electrophilicity: A Grand-canonical View</td>
<td>Miranda-Quintana RA, University of Havana, Cuba; McMaster University, Ayers PW</td>
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<td>12:00</td>
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<td>10:00</td>
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<td>0963 Insights from Mixed Quantum-classical Simulations of Vibrational Energy Transport in a Model Polypeptide</td>
<td>Freedman H</td>
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<td>10:20</td>
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<td>0964 Path Integral Methods for Nonadiabatic Dynamics: Quantum Transitions from Classical Trajectories</td>
<td>Ananth N, Cornell University, USA</td>
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<td>11:00</td>
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<td>0965 Spectroscopic Signatures of Nonadiabatic Molecular Dynamics</td>
<td>Schuurman MS, National Research Council Canada, University of Ottawa, Macdonell RJ</td>
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<td>11:40</td>
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<td>0966 Chemical Control of Nonadiabatic Dynamics: Cyano-substituted Butadiene</td>
<td>Macdonell RJ, University of Ottawa, Schuurman MS</td>
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<td>12:00</td>
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<td>10:00</td>
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<td>0967 One-particle Many-body Green’s Function Theory: Algebraic Recursive Definitions, Linked-diagram Theorem, Inreducible-diagram Theorem, and General-order Algorithms</td>
<td>Ayers, University of Illinois at Urbana-Champaign, USA, Doran AE, Knowles PJ, Ortiz JV</td>
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<td>11:00</td>
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<td>0968 Regional DMET—Efficient and Accurate Single-fragment Embedding of Wave Functions in Kohn-Sham DFT</td>
<td>Knizia G, Pennsylvania State University, USA</td>
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<td>11:40</td>
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<td>0969 Rigorous Quantum Embedding Using Green’s Functions</td>
<td>Zgid D, University of Michigan, USA</td>
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<td>12:00</td>
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<td>0970 Time-dependent Multi-reference Perturbation Theory with Density Matrix Renormalization Group for Large Active-space Problems</td>
<td>Sokolov, California Institute of Technology, USA, Chan GK-L</td>
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<td>10:00</td>
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<td>0971 Excited State Variational Principles and Self-relaxing Linear Response</td>
<td>Zhao L, Eötvös University, Hungary, Margóczy A, Földvári D</td>
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<td>10:20</td>
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<td>0972 Model Wavefunctions for Variational Treatment of Strongly-correlated Systems</td>
<td>Johnson PA, Université Laval</td>
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<td>11:00</td>
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<td>0973 Strongly Orthogonal Geminals and the Multiple Bond Dissociation Problem</td>
<td>Szabados Á, Eötvös University, Hungary, Margóczy A, Földvári D</td>
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<td>12:00</td>
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<td>11:00</td>
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<td>201F Electronic Structure Theory</td>
<td>Organizer(s) - Paul Ayers, Marcel Nooijen, Viktor Staroverov Chair(s) - Paul W Ayers</td>
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<td>12:00</td>
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<td>10:00</td>
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<td>201D Carbon Nanomaterials for Nanofluidic and Membrane Applications</td>
<td>Tang XS, University of Waterloo</td>
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<td>10:00</td>
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<td>201E Electron Beam Lithography Guided Self-assembly of Organosilanes from the Vapor Phase</td>
<td>Fetterly, University of Alberta, Buriak J</td>
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<td>10:00</td>
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<td>201F Nanoparticles by Design: The Surface Chemistry of Superparamagnetic Iron Oxide Nanoparticles</td>
<td>Kopyrny KV, Cross SN, McGill University, Blum AS</td>
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<td>12:00</td>
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<td>10:00</td>
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<td>201B Surface Science in Honour of Peter Norton</td>
<td>Organizer(s) - François Lagugné-Labarthet Chair(s) - François Lagugné-Labarthet/Alex Brolo</td>
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<tr>
<td>08:00</td>
<td></td>
<td>0979 50 Years in Surface Science: A Personal Perspective for my Golden Anniversary in Canada</td>
<td>Norton PR, Western University</td>
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<td>08:40</td>
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<td>0980 Hydrodynamic Effects on Bacterial Biofilms at the Bio-interface Using a Microfluidic Electrochemical Cell</td>
<td>Zarabadi MP, Paquet-Mercier F, Charette SJ, Greener J, Université Laval</td>
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<td>09:00</td>
<td></td>
<td>0981 Composite Sorbents for Water-based thermally-driven Sorption</td>
<td>Bahrami M, Simon Fraser University, Université de Laval</td>
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## Tuesday AM 0982 May 30, 2017

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<th>Title</th>
<th>Chair(s)</th>
<th>Organizer(s)</th>
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<tr>
<td>09:20</td>
<td>0982</td>
<td>The Key Role of Available Sites in the Activity and Kinetics of Adsorbed Species</td>
<td>Strobil JR, Harrington DA</td>
<td>University of Victoria</td>
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<td>09:40</td>
<td>0983</td>
<td>Slipping and Sliding: Using Simulations to Understand Friction</td>
<td>Mosey NJ</td>
<td>Queen's University</td>
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<td>10:00</td>
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<td>Coffee Break</td>
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<td>10:20</td>
<td>0984</td>
<td>(Electro-)Chemistry, (Electro-)Catalysis and Stability of (Bi-)Metallic Nanostructures</td>
<td>Behm RJ</td>
<td>University of California, Germany, &gt;</td>
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<td>10:40</td>
<td>0985</td>
<td>The Mechanism of Hydrogen Absorption into Titanium and Its Alloys</td>
<td>Shoesmith DW</td>
<td>Western University</td>
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<td>11:00</td>
<td>0986</td>
<td>Tilted or Flat? The Formation of Carbene-based Self-assembled Monolayers on Copper</td>
<td>Horton JH</td>
<td>University of Victoria</td>
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<td>11:20</td>
<td>0987</td>
<td>Chemical Events at Single Sites on Reactive Surfaces</td>
<td>McBreen PH</td>
<td>Université Laval</td>
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<td>12:00</td>
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## Tuesday PM 1009 May 30, 2017

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<tr>
<td>14:00</td>
<td>1001</td>
<td>Characterizing Glycosidically-bound Sensory Precursors in Smoke-exposed Vitis vinifera Berries</td>
<td>Noestheden M</td>
<td>University of British Columbia, Supra Research and Development</td>
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<tr>
<td>14:20</td>
<td>1002</td>
<td>Microchemical Surface Characterization of Metal/Metalloid Oxide Nanoparticles in Aqueous Suspension by Capillary Electrophoresis</td>
<td>Lai EPC</td>
<td>Carleton University</td>
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<tr>
<td>14:40</td>
<td>1003</td>
<td>Fitronectin Aptamer Selection by Capillary Electrophoresis and Next Generation Sequencing</td>
<td>Colyer CL</td>
<td>Wake Forest University, USA</td>
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<tr>
<td>14:40</td>
<td>1004</td>
<td>Electrochemical Separation of Single Molecules Using Thermoplastic Nanocolumns</td>
<td>Soper S</td>
<td>University of Kansas, USA</td>
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<tr>
<td>15:00</td>
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<td>Coffee Break</td>
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<tr>
<td>15:20</td>
<td>AN1</td>
<td>Analytical and Physical Electrochemistry of Materials - joint with MT, PT</td>
<td>Organizer(s) - Zhifei Ding, Byron Gates, James Kanikui</td>
<td>Chair(s) - Byron Gates</td>
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<tr>
<td>15:40</td>
<td>AN2</td>
<td>Analytical Separations: Fundamentals, Proof of Principle and Practical Applications</td>
<td>Organizer(s) - Sergey Krylov, Karen Waldron, Stellena Mathiaparanam</td>
<td>Chair(s) - Karen Waldron, Stellena Mathiaparanam</td>
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<tr>
<td>16:00</td>
<td>AN3</td>
<td>Biochemical, Biophysical and Environmental Insights from Mass Spectrometry</td>
<td>Organizer(s) - Rebecca Jockusch, Derek Wilson</td>
<td>Chair(s) - Derek Wilson</td>
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**AN1 205C**

### Analytical and Physical Electrochemistry of Materials - joint with MT, PT

- **Organizer(s)**: Zhifei Ding, Byron Gates, James Kanikui
- **Chair(s)**: Byron Gates

#### 13:40 0989
- **Electrolyte Speciation and Interface Processes Governing Mg Electrodeposition and Stripping Processes in Next Generation Batteries**
- **See KA**
- **Location**: University of Illinois at Urbana, USA

#### 14:20 0990
- **First-principles Studies of the Structural Properties of Nickel Oxide/hydroxide as Oxygen Evolution Reaction Electrocatalysts**
- **Eslamidibogli M, Simon Fraser University**
- **Eikerling M, Iowa A**

#### 14:40 0991
- **Hexagonal Arrays of Cylindrical Nickel Microstructures for Improved Oxygen Evolution Reaction**
- **Paul MT, Simon Fraser University**
- **Yee BB, Bruce DR, Gates BD**

#### 15:00 0992
- **Electrochemical Modification of Nickel Electrode for Glycerol Electrocatalysis**
- **Houache MSE, University of Ottawa**
- **Cossar E, Baranova EA**

#### 15:20 0993
- **Electrochemical Study of Nickel and Cobalt Based Nanocomposites for Energy Applications**
- **Amiri M, Lakehead University**
- **Konda SK, Chen A**

### AN2 104D

#### 18:00 End of Session
13:40 1010 In-depth LC-MS/MS Analysis of Protein Oxidative Modification Exposes a Novel Signaling Mechanism: Peroxide-regulated Heme Transfer 3English AM
<Concordia University>, Kathiresan M

14:20 1011 Ion Mobility-Mass Spectrometry Reveals the Residuespecific Ligand Binding Behavior of Integral Membrane Translocator Protein (TSP0) 3Fantin SM
<University of Michigan, USA>, Niu S, Liu J, Kerr RA, Ferguson-Miller SM, 3Rutoto BT

14:40 1012 Multi-omics Investigation of Antibiotic Biosynthesis 3Simon DJ <Queen's University>, Hackl S, Bechhold A, Zechel DL, Oleschuk R

15:00 1013 Structural Dynamics of Human La: A Promiscuous RNA Binding Protein 3Brown K <York University>, Bayfield M, 3Wilson D


15:40 Coffee Break

16:00 1015 Global Occurrence of Thiotetronic Acid Antibiotics in Drinking Water: Environmental and Biochemical Insights from Mass Spectrometry
3Gabryelski W <University of Guelph>, Robinson J

16:20 1016 Risk Assessment of Smoke Exposure of Firefighters in the 2016 Fort McMurray Wildfire using GC-MS 3Mell A <McMaster University>, Cherry N, Jobst K, Britz McKibbin P

16:40 1017 Multi-residue Antibiotic Analysis of Milk using UHPLC-MS/MS with a Self-Cleaning Laminar Flow Interface and a Modified QuEChERS Method 3Qin F <PerkinElmer>, Dalmaia A

17:00 1018 MS-MS Studies of the Partitioning and Recovery of Pesticides Interacting with Soils 3Gamble HA <PerkinElmer Health Sciences, Inc>, Snow M, Gamble DS

17:20 1019 Interconversion of Protonated Imidazole Ions: Isomerization of Dehydrated Protonated Polypeptides 3Lam B, Lau JK-C, Lai C-K, 3Siu KWM <York University, University of Windsor>, Hopkinson AC

17:40 1020 Exploring New MALDI Matrices for Mass Spectrometric Tissue Imaging 3Yeung KK-C <University of Western Ontario>

18:00 End of Session

Tuesday PM 1010

BM2 201C

Proteins
Organizer(s) - Jumi Shin, Drew Woolley
Chair(s) - Drew Woolley

13:40 1021 Folding and Unfolding Dynamics of a Slipknoted Protein Probed by Single Molecule Force Spectroscopy 3He C, 3Li H <University of British Columbia>

14:20 1022 Engineering Protein Energy Landscapes Using Multistate Computational Protein Design 3Chica RA <University of Ottawa>

15:00 1023 Manipulating Cell Surface Glycans: Carbohydrate Processing Enzymes as Targets and Tools 3Kwan DH <Concordia University>


15:40 Coffee Break

16:00 1025 DAHP Hydrazone, a mN Inhibitor of DAHP Synthase that Controls Unbound Subunits: Conformations 3Heinemann M <McMaster University>, Zheng J, Wild J, Lin F, Balachandran N, 3Berti PJ

16:20 1026 Random Mutagenesis of Cytochrome P450_{1A1} (CYP101A1) and New Reactions Catalyzed by the Mutants, with 3-Chloroindole and Endosulfan 3Piettner E <Simon Fraser University>, Kammooonah S, Balaraman P, Rehman A, Prasad B, Schwaneberg U

16:40 1027 Enzymatic Synthesis of para-Hydroxycinnamic Acid Methyl Ester Using Rhodotorula glutinis Yeast Phenylalanine/Tyrosine Ammonia Lyase, and Its Potential Antibacterial Activity 3D'Cunha GB <Cape Breton University>

17:00 1028 Minimalist Protein ME47 Targets the M1c/Max:E-box DNA Network and Decreases Tumor Xenograft Growth 3Shin JA <University of Toronto>

17:40 End of Session

BM3 104A

Chemical Biology and Imaging - joint with OR
Organizer(s) - Peter Brown, Len Luyt, Mark Nitz, Chris Phenix, Santha Santhakumar
Chair(s) - Chris Phenix, Len Luyt

13:40 1029 Radiometric Chelates: The Tail Waggling the Dog in Receptor-targeted Bioconjugates for PET Imaging 3Anderson CJ <University of Pittsburgh, USA>

14:20 1030 Synthesis and Evaluation of a Bimodal Tc/Re Labelled T140 Analogue for Determining CXCR4 Expression in Prostate Cancer 3Turnbull WL <University of Western Ontario>, 3Luyt LG

14:40 1031 89Zr Production via the 89Y(p,n)89Zr Reaction Pressed Target 3Ahawhi AH <Université de Sherbrooke>, 3Tremblay S, 3Guerin B

15:00 1032 DFO-2: High Denticity DFO-based Chelator for 89Zr Radiochemistry 3Khozeimeh Sarbisheh E, Salih AK, Maghami M, Lewis JS, 3Price EW <University of Saskatchewan>

15:20 1033 A Novel 6Cu/NOTA-labeled Peptide with High Metabolic-resistance and NPY-Y1R Affinity 3Paquette M <Université de Sherbrooke>, Ait-Mohand S, Dumulon-Perrault V, Bénard F, 3Guerin B

15:40 Coffee Break

16:00 1034 Synthesis and Evaluation of a Series of Diphenyl Carbamates as Possible Cholinesterase Diagnostic Radioligands for Alzheimer's Disease 3Darvesh S, Soley J, Ingram LR, Morris AM, Macdonald IR, Kelly SJ, McConnell M, Martin E, 3Pottie IR <Mount Saint Vincent University; Saint Mary's University>


16:40 1036 Design and Synthesis of Stapled Ghrelin(1-20) Analogues Targeting GHSR-1a for Use in Cancer Diagnostics 3Lalonde TL <Western University>, Shaw GS, Shepherd TGS, 3Luyt LGL

17:00 1037 Unveiling Hidden Treasures in Biobanked Clinical Material: MS Histochemistry for Top-down Biomarker Discovery on Formalin Fixed Paraffin Embedded Tissue 3Verhaert PDEM <General Hospital St. Elisabeth, Belgium>, Porta T, Verhaert MABJ, Heeren R, Ramael M

17:20 1038 Teaching an Old Dog New Trick: Detection of Biologically Relevant Aldehydes by CEST MRI 3Suchy M <University of Ottawa; University of Ottawa Heart Institute>, Dang T, Lazurko C, 3Shuhendler AJ

17:40 End of Session

BMP Poster Session
From 17:40 until 19:30

Wednesday May 30, 2017

CSC 2017

Tuesday PM 1038

Hall C

17:40 End of Session
Tuesday PM 1079
May 30, 2017

1079. Rational Design of Altered Peptide Ligands for Treatment of Celiac Disease
Meister D, <University of Windsor>, Taimoor SM, *Trant JF

1080. Solid Phase Peptide Synthesis on a Polyamine-β-cyclodextrin Scaffold
Vurgun N, <University of Toronto>, Nitz M

1081. Development of Blood Brain Penetrable IDO Inhibitors

1082. The Next Generation of Ultrafast Electron Diffraction for Atomically Resolved Dynamics
Feng JK, <University of Toronto>, Daoud H, *Miller RJD

1083. Anticancerous and Antibacterial Properties of Alkyl-biguanides
Hébert A, <Université de Montréal>, Rowell MC, Ferbeyre G, *Schmitzer AR, Toulouse J, Pelletier J

1084. Engineering Mi3-based Constructs for Use as Nanoscale Scaffolds
Urquhart TU, <University of Waterloo>, Daub E, *Honek JF

1085. Microchip Real-time PCR Analyzer and Microchips with Lysophosphatidyl Reagents for Pathogen Detection
Slyadnev M, <Lumex Instruments Canada>, Gill S

1086. Strained Alkylene Conjugation of Azido-BF3-Azadipyromethenes
McKay SJ, <Royal College of Surgeons in Ireland, Ireland>, Wu D, *O'Shea DF

1087. 'Unlocking Nature's Catalysts through the Power of Biology' - Elucidating the Biosynthesis of Nucleocidin a Fluorinated Natural Product Produced by Streptomyces valbus
Pinkett K, <Queen's University>, Zechel DL

1088. Synthesis and Activity of Enantiopure Allylic Ethers on the Chemosensory Organ of the Ecotarantula of Honey Bees, Varroa Destructor
Pinnelli G, <Simon Fraser University>, Piettrner E, Kumar NS, Soroker V

1089. Development of Novel Scaffolds for Reversible Inhibitors of Tissue Transglutaminase
Apperley KYP, <University of Ottawa>, Brunet-Filion N, *Kellar JW

1090. The Development of New Polyoxymyxins: Synthesis and Antibacterial Properties of Dis-homolipid Polyoxymyxins
Tays Q, <University of Manitoba>, Domaloon R, Zhanel GG, *Schweitzer F

1091. Radiofluorination of Aptamers via Cysteine-cyanooquinoline Click Reaction
Suchy M, <University of Ottawa; University of Ottawa Heart Institute>, Hadizad T, Truong Y, Tayyabi E, *Shuhendler AJ

1092. Deciphering Coiled Protein Interaction
Shrestha BR, <Université de Montréal>, Libedere B, Crescenzo G, Banquy X

1093. Teaching an Old Dog Another New Trick: A Minimalist Methyl S-Methoxyanthranilate-based Fluorophores for the Identification of Biologically Relevant Carbonyl Compounds in Body Fluids
Suchy M, <University of Ottawa; University of Ottawa Heart Institute>, Lazurko C, *Shuhendler AJ

1094. Stabilizing Colloidal Drug Aggregates
Donders EN, <University of Toronto>, Ganesh AN, Shoichet BK, *Shoichet MS

1095. A Reactive Metabolite Found Its Lobster: The Monogamy between Cysteine and N-acetyl-p-benzoquinone Imine amongst Endogenous Protein Nucleophiles
Tayyabi E, <University of Ottawa>, *Shuhendler AJ


1097. Molecular Dynamics Study of the Substrate Specificity of Nucleoside Hydrolases
Lenz SP, <University of Lethbridge>, *Wetmore SD

1098. Quantifying α-MSH Peptides in Mouse Pituitary Using MALDI-FTICR Imaging
West BJ, <University of Auckland, New Zealand>, Grey AC, Mountjoy KG, Partridge A, Easterling ML, Derrick PJ

1099. A Quantum Mechanical Study of the β- and δ-Elimination Reactions Catalyzed by Biphenyl DNA Repair Enzymes in Humans and Bacteria
Sowlati Hashjin S, <University of Lethbridge>, *Wetmore S

1100. Novel Antibiotics: Treatment of Multidrug-resistant Bacteria with Selective Pyruvate Kinase Inhibitors

1101. Monitoring the Structural Change of α-Synuclein Using Circular Dichroism
Li SH, <University of Toronto at Scarborough>, *Kerman K

1102. Structure-activity Relationship of N-Cinnamoylanthranilates as TRPA1 Modulators
Chandrabalan A, <University of Hull, UK; Hull York Medical School, UK>, Boa AN, Morrice AH, *Sadofsky LR

1103. Development of PET Radiotracers for in vivo Imaging of Protonetrophin Receptors p75NTR and Sortilin
Boujemelaine M, <McGill University>, *Kostikov A

1104. Bioinorganic Ligands Designed to Chelate Cu(I) and Degrutve Radicaal Formation in Alzheimer's Disease
Opare SKA, <University of Calgary>, *Rauk A

1105. Effects of Nickel and Cobalt on Biomimetic Lipid Membranes
Umbsaar JE, Mundle RL, <University of Calgary>, *Prenner EJ

1106. Dynamic Combinatorial Chemistry for Targeting Methyl Reader Proteins
Warmerdam Z, <University of Victoria>, Milosevic N, Gignac M, *Hof F

1107. Small Molecule-based Activatable Photosensitizers
Singh K, <University of Toronto at Mississauga>, Beharry AA

1108. Increasing the Brightness of Red Fluorescent Proteins Using Rational Design
Nguyen E, <University of Ottawa>, Pandeliella AT, Damy AM, Chica RA

1109. Investigation of Peptides Exibiting Affinity Towards Advanced Materials
Kim HSD, <University of Waterloo>, *Urquhart T, Monahan T, *Honek J

1110. Investigation of the Catalysis and Inhibition of myo-Inositol Phosphate Synthase
Ramos-Figueroa JS, <University of Saskatchewan>, *Palmer DRJ

1111. Optimization and Structure Activity Relationships of a New Class of Pyruvate Kinase Inhibitors as Novel Antibiotics for the Treatment of Multidrug-resistant Bacteria

1112. Analysis of the Interaction between the Cocaine-binding Aptamer and its Ligands Using Fluorescence Spectroscopy
Shoara AA, <York University>, *Johnson PE

1113. Salt-controlled Two-site Binding of the Cocaine-binding Aptamer
Slavkovic S, <York University>, Neves MAD, *Johnson PEJ

1114. Rapid Characterization of Folding and Binding Interactions with Thermolabile Ligands by DSC
Harkness RW, <McGill University>, Slavkovic S, Johnson PE, *Mittermaier AK

1115. Tobramycin-hybrid Antibiotics
Overcome Resistance in MDR and XDR Pseudomonas aeruginosa via Membrane Perturbation and FPP Dissipation
Idowu T, <University of Manitoba>, Zhanel GG, *Schweitzer F

1116. Direct Fluorescence Monitoring of Inhibitor Binding to Dihydrolipoicinate Synthase from Campylobacter jejuni
Majdi Yazdi M, <University of Saskatchewan>, Annadi K, *Palmer DRJ
1118 Total Synthesis of Paenibacterin A, a Broad Spectrum Cyclic Lipopeptide Antibiotic
Nodem M <University of Waterloo>, 5Taylor SD
1119 Assessing the Biological Effects of Two Natural Product Alkaloids and their Synthetic Intermediates
Filip R <University of Ottawa>, Shaw T, Nishida A, Pezacki JP
1120 Determination of the Mechanism of Action of Armeniaspirole: A Gram-positive Antibiotic
Labana P <University of Ottawa>, 5Boddy CN, Dorman MH, Lafreniere M, Pezacki JP, Czarny TL, Brown ED
1121 Mechanistic Investigation of OXA-β-lactamase Inhibition by Avibactam Using 13C-NMR Spectroscopy
1122 Design, Synthesis and Evaluation of Direct FOXM1 Suppressors: Emergence of a Neglected Binding Force
Tabatabaei Dakhili SA <University of Alberta>, 5Perez Gomez, Velazquez C
1123 Structure Based Design and Investigation of Benzimidazole Scaffolds as Potential Therapeutic Leads
Yoganathan S <St. John’s University, USA>, Barasa L
1124 Integration of a Photoswitchable Moiety into siRNA Constructs as a Selective Control for Activity
Hammill M <University of Ontario Institute of Technology>, 5Isaacs-Trepanier C, 5Desaulniers J-P
1125 A Computational Study of Germination by Natural Products Found in Phyllanthus orbicularis K Extract
Monteserín Castanedo LA <University of Havana, Cuba; Mount Saint Vincent University>, 5Lamar AS, Matta CF
1126 Impact of Low Power Microwave Irradiation on Biological Systems at Constant Bulk Temperature
Mazinani SA <Brock University>, Stuart J, Yang T
1127 Low-cost Production of Small Intestine-targeted Drug Delivery Systems
CS <University of Alberta; Ingenuity Lab>, Homayun BH, 5Choi HUC, Montemagno CM
1128 Thrombin Detection Using a Novel, Internally Modified Aptamer-based Biosensor
Gray MD <University of Guelph>, Deore PS, 5Manderville RA
1129 New Steroidal 17β-HSD10 Inhibitors against Alzheimer’s Disease: D-ring Modifications, Selective Activity, and
Metabolic Stability
Boutin S <Université Laval>, 5Poirier D, Maltais R, Roy J
1130 Investigation of NSAIDs and Fenamic Acid Derivatives as Potential Agents against Alzheimer’s Disease
Macmillan JWS <Krebml Research Institute; University of Toronto>, Meek AR, 5Weaver DF
1131 Design and Synthesis of New Steroid Derivatives as Cytochrome P450 (CYP) 1B1 Inhibitors
Dutour R <CHU de Québec - Research Center; Université Laval>, Poirier D, Cortés-Beñitez F, Roy J
1132 The Molecular Basis of Amyloid Beta Remodelling from Toxic to Non-toxic Oligomers by EGCG in Alzheimer’s Disease
Ahmed R <McMaster University>, VanSchoonewen B, Ni X, Ortega J, 5Melacini G
1133 Poly lactide-based Dual-location Dual Stimuli-responsive Triblock Copolymer and its Nanoassemblies
Bawa KK <Concordia University>, 5Oh J
1134 Design and Synthesis of Highly Fluorogenic BODIPY-dimaleimide Reagents for in Vivo Protein Labeling
Chen Y, Tsao K, 5Keillor JW
1135 Development and Biological Characterization of Synthetic anti-Frizzled Antibodies as Cancer Therapeutics
Pavlovic Z <University of Toronto>, Adams J, Steinhardt Z, Angers S, Moffat J, 5Sidhu S
1136 Does the Thermodynamic Stability of Canonical Nucleosides over Non-canonical Nucleosides a Possible Driver in Early Evolution?
Monteserín Castanedo LA <University of Havana, Cuba; Mount Saint Vincent University>, 5Lamar AS, Matta CF
1137 A Convenient Late-stage Fluorination of Heterocyclic C-H Bonds Meanwell M <Simon Fraser University>, Nodwell M, Martin R, 5Britton R
1138 Kinetic Analysis of Acetone Mono oxoxygenases Supports Coenzyme Rotation at the Active Site during Catalysis
OB <University of British Columbia, >, 5Wolthers KR
1139 Secondary Metabolites and Biological Activity of the Algae Caulerpa racemosa Martinez L, 5D’Armas H <Universidad de Oriente, Venezuela; Universidad Estatal de Milagro, Ecuador>, Segnin M, Brito L, Barrios J, D’Armas M
1140 Mechanism Studies of Cyclic Lipopeptide Antibiotics Using 29F-NMR
Kraft BJ <University of Waterloo>, Palmer M, 5Taylor SD
1141 Manganese Porphyrin Dimer as an Optimized Redox Responsive MRI Contrast Agent
Tieu H <University of Toronto at Scarborough>, 5Lyu H-X, 5Zhang X-A
1142 The Contrasting Naturalities of the Enzyme-bound and Enzyme-free Breslow Intermediate: Carbamation vs Enaminy
Bielecki M <University of Toronto>, 5Kluger R
1143 Chemical Profiling of Canadian Medical Cannabis
Yang Y <University Health Network, University of Toronto>, Lewis MM, Wasilewski E, 5Kotra LP
1144 Towards the Determination of Inhibitor Specificity via the Development of a “Clickable” Probe against Tissue Transglutaminase
Reed JA <University of Ottawa>, 5Keillor JW
1145 The Use of Unnatural Amino Acids for the Design of p19 FRET Sensor Proteins
Ahmed N <University of Ottawa>, Danielson D, 5Pezacki JP
1146 The Development of New Bioconjugation Methods for Studying Cytochrome P450 Enzymes
Therien JPD <McGill University>, Cheong KJ, Scalabrini M, 5Auclair K
1147 Steps Towards Identification of Milk clotting Enzymes Extracted from a Strain of Penicillium
Heddar L <McGill University>, Ismail AA, Turnbull JL
1148 Thioesterase Biocatalyzed Trimerization/Cyclization: Access to the Cereulides
Heberlig GW <University of Ottawa>, 5Boddy CN
1149 Quantitative Target-mediated Inhibition of RCA4 Bialy RM <McMaster University>, Li Y, 5Brennan JD
1150 Structure-activity Relationship Study of a Fluorescent Chemosensor for Proximal Phosphorylated Proteins
Cabral AD <University of Toronto at Mississauga>, Kraskouskaya D, 5Gunning PT
1151 Atomic Force Microscopy of Glycogen Yu K <University of Toronto>, Sullivan M, Minassian B, 5Goh MC
1152 Substrate Specificity of Carbohydrate Esterase 4 Enzymes PpaB and IcaB - both Partially de-N-acetylated β-1,6-linked Glucosamine (PNGA) Acting Enzymes that Are Required for Biofilm Formation
Campos JE <University of Toronto, >, Ariyakumaran R, 5Nitz M
1153 Computational Investigation of the Role of Bridging Water Molecules in GNRA Oligonucleotide Tetraloop Motifs
Ambarchambal P <Concordia University>, Muchall HM, 5Peshehrbe GH
1154 Engineering Super Competitive Phosphotyrosine Binding Domains
Martyn GD <University of Toronto>, Veghjani G, 5Sidhu S
1156  Photo-control of the Antitumor Activity Using New E2 Molecular Switches
Martinez-Lopez D <Universidad de la Rioja, Spain>, Piñeiro-Hermida S, López IP, García-Iriepa C, Alfaro-Arnedo E, Campos PJ, García-Pichel J, Sampedro D

1157  Synthetic CD200/CD200R Antagonists as Potential Cancer Immunotherapeutic Zaman MM <University of Toronto>, Sidhu S

1158  Chelators for Labeling Antibody Fragments with 99mTc(CO)3+ Core: Synthesis, Characterization and Initial In Vivo Evaluation *Solomon VR <University of Saskatchewan>, Zuluaga CG, Barreto K, Geyer CR, Fonge H

1159  Defining the Role of Integrin αvβ5 in Synapse Elimination through Targeted Chemical Probes Kapras V <University of British Columbia>, Slattery W, *Menard F

1160  Bioorthogonal Approaches for Labelling, Imaging and Capture of Living Pathogenic Bacteria Sherratt AR, Strmiskova M <University of Ottawa>, *Pezacki JP

1161  Stimuli-responsive Bonds Sensitive towards Oxidative Stress Zare F <Institut National de la Recherche Scientifique>, Potenza A, Leroux J, *Gauthier MA

1162  Understanding the Biological Activity of Vitamin E: Synthesis and Reactivity of Tocopherol and Tocotrienol Quinones Krueger N <Brock University>, Atkinson J

1163  GPCR Activation by Small Molecule Ligands Pichugin D <University of Toronto at Mississauga>, Ye L, Huang K, *Prosser SR

1164  The Effect of Glassy Film Topography and Surface Chemistry on Macrophage Function Luu H <McMaster University>, Makarem S, Levin D, Boyle J, Bowdish DME, Moran-Miralb JM

1165  Cage-like Proteins as Bioink Components for 3D Bioprinting *Honek JF, Delgado AD <University of Waterloo>, Nguyen LNM

1166  Medicinal Chemistry of Medicinal Cannabis Lewis MM <University Health Network>, Wasilewski E, *Kotra LP

1167  Molecular Basis of Dysregulation Inhibited by Disease-related Mutations of Protein Kinase A Swanson PL <McMaster University>, Tu A, *Melacini G


1169  Novel Isoxazolo Derivatives Targeting Immune Thrombocytopenia Garrick R <University of Toronto>, Burke-Murphy E, *Branch D, *Kotra L

1170  Making Synthetic Antagonists for the IL23 Signal Transduction Pathway Wellalppli D <University of Toronto>, *Sachdev SS

1171  Bioactive Compounds Isolated of Medical Plants Used to Functional Food *Echavarria AP <Universidad Estatal de Milagro, Ecuador>, D’Armas H, Matute NL

1172  Computational Insights into the Catalytic Mechanism of GatA: An MD and QM/MM study Meister P <University of Windsor>, *Gauld JW

1173  Clustering of CD22 Receptors on B Cells Using Synthetic Glycoconjugates Tran H <University of Alberta>, Daskhan G, Motyka B, West L, *Cairo C

1174  In Vitro Selection of DNAzyme Probes Activated by Legionella pneumophila Gopinathbiria S <McMaster University>, *Gu J, *Li Y

1175  Optimization and Application of Slow-Proton-Exchange (SPE) NMR pH Sensor Correa R <University of Toronto; University of Toronto at Scarborough>, Perruchoud L, *Zhang X-A

1176  Comparison of the Temperature Dependent Imino Exchange Rates for the Free and Ligand-bound Cocaine-Binding Aptamer Churzer Z <York University>, Hunter H, Neves M, *Johnson P

1177  Understanding the Interaction of Gelatin/Pluronic/DNA System with Model Antioxidant Status of Live Cells Using Synthetic Glycoconjugates *Koebel A <University of Toronto>, Wasilewski E, *Kotra LP

1178  Synthesis and Evaluation of Methylphosphonate Inhibitors of GlcNAc de-N-Acytetylation *Honek JF, Delgado AD <University of Waterloo>, Nguyen LNM

1179  Influence of Nucleotide Modifications on the Parallel-stranded Adenosine Duplex Copp W <Concordia University; Groupe de recherche axé sur la structure des protéines>, Denison A, Xie J, Licznier C, Noronha A, Safae N, Gehring K, *Wilds C

1180  Investigating NOS-CaM Binding Interactions Using Surface Plasmon Resonance Lape JE <University of Waterloo>, *Guillaume JG

1181  A Highly Sensitive Fluorogenic Tocopherol Analogue for Monitoring the Antioxidant Status of Live Cells Greene LE <McGill University>, Lincoln R, *Cosa G

1182  Characterization of microRNA Cluster Role in the Regulation of Inmate Immunity Ahmed N <University of Ottawa>, Singaravelu R, Quan C, *Pezacki JP

1183  Dissecting the Molecular Basis of Nr2p21 Interaction Karunatilleke NC <University of Toronto>, Brickenden A, *Choy W-Y

1184  The Design and Development of a Fluorescent Substrate for Live Cell Imaging of Glucocerebrosidase Activity Deen M <Simon Fraser University>, Gros C, Cecioni S, Xiaoyang S, Shen D, Bennet J, *Vocadlo D

1185  Fluorophore Labeled Peptides for Improved Diagnostics of Crystal Arthropathies Lee J <University of Calgary>, Perez JB, MacCallum JL, *Derksen DJ

1186  Development of Small Molecule PET Tracers Targeting GHS-R1a for the Imaging of Prostate Cancer Hou J <London Regional Cancer Program; Lawson Health Research Institute>, Kovaca M, *Luyt L

1187  Investigation of a Putative Lanthipeptide and Halogenase from Pseudalteromonas flavipulchra Paudel YP <Queen’s University>, *Ross AC

1188  Discovery of D-arginine Mimetics as Inhibitors of Protein Arginine Deiminases (PADs) *Koebel A <University of Toronto>, Vandenberg LP

1189  In Vivo Total Biosynthesis of Complex, Bacterial Sialic Acid Analogues Using Genetically Engineered Escherichia coli Hassan MI <University of Ottawa>, Lundgren BR, Chaumun M, *Boddy CN, Clark B, Whitfield D, Schoenhofen IC


1191  Deciphering the Reactivity of Hydrazono Probes with the Human Proteome Shaw TA <University of Ottawa>, Powdlir MH, Ozcokil D, Sherratt AR, *Pezacki JP, Beauchemin AM

1192  Subdomain IB is a Thermodynamically Favourable but Kinetically Unfavourable Drug Binding Site of Human Serum Albumin (HSA) Liu H <University of Toronto; University of Toronto at Scarborough>, Cheng W, *Zhang X-A

Tuesday PM 1233
May 30, 2017

1233 Nutritional Intervention Modulates Lactate to Pyruvate Ratio in Human Sweat during Exercise
Guevara DR, Seneca College, Ngan SY, Layo A, Griffin B, Donald E, Merante F

1234 Modification at the Penam C6-position for the Inhibition of Carbapenem-hydrolyzing Class D β-lactamases (CHDLs) in Gram-negative Bacteria
Dena P, University of New Hampshire, USA, Boudreau M

1235 Synthesis of Small Molecule, Sulfated N-arylaldonamides for the Cryopreservation of Human Hematopoietic Stem and Progenitor Cells
Charlton TA, University of Ottawa, Adam MK, Jahan S, Pineault N, Ben NN

1236 Synthesis and Evaluation of [15(E)JET901 as a PET Radiotracer Candidate for In Vivo Imaging of p75 Neurotrophin Receptor
Rochon PL, McGill University, Boudjemline M, Kostikov A

1237 A Chimeric Nucleoside - Phenylazo Derivative as an Intrinsic Nucleoside Quencher
Martin-Chan T, El Samman A, Wilfrid Laurier University, Koebel A, Melacini

1238 Novel Non-covalent Inhibitors of Protein Arginine Deiminases (PADs) as Potential Treatments for Multiple Sclerosis (MS)
Curiel Tejeda EJ, Bello AM, Rice K, *$, University of South Florida, USA, University of Florida, USA

1239 In Vitro Selection of Fluorogenic RNA-cleaving DNazymes at High Basicity
Zakaria S, McMaster University, Zhu W, Li Y

1240 Evaluating the Role of Hydride Tuning in Phosphite Dehydrogenase Catalysis
Howe GW, University of Illinois at Urbana-Champaign, USA, van der Donk WA

1241 Development of Fibrinogen Aptamer-conjugates for MRI and CT applications
Koudrina A, Carleton University, DeRosa MC

1242 DNA Aptamer Toxin-binding Motif Revealed Using an Internal FRET Probe
Van Riesen AJ, University of Guelph, McNamee JT, Deore PS, Manderville RA

1243 Deciphering the Biosynthetic Logic of Exopolysaccharide Phosphite Tailoring
Rice K, Wilfrid Laurier University, Batul K, Bartlett C, Bansal S, Schaefer J, Cegelski L, Weadige J, Horsman G

1244 Studying the Reactivity of CS2 with 1,4,5,6-tetrahydropropimidin Alishamrani AK, Queen's University, Jessop PG

1245 Synthesis and Properties of Novel Cyanine Dyes and their Incorporation into Oligonucleotides for Aptasensor Development for Improved Protein Detection
Deore PS, University of Guelph, Manderville RA

1246 Developing Colourimetric Biosensors for Prostate Cancer Biomarkers
Manochehry S, McMaster University, Li Y

1247 Structure-activity Relationship of Benzimidazolium Salts as Anion Transmembrane Transporters
Lecluse M, Université de Montréal, Tessier J, Gravel J, Schmitzer AR

1248 Characterization of Protein Solutions Using SAXS
Quinn JE, PANalytical, Inc, Bolze J, Beckers D

1249 Ruthenium Complexes of Anastrozole as Multitargeting Chemotherapeutic Agents
Golbaghi G, Institut national de la recherche scientifique, Haghdoost M, Castonguay A

1250 A Modular Approach to the Synthesis of Drug-based Molecular Probes
Junor P, Ryerson University, Viirre RD

1251 Engineering Exosomes for Targeted Anti-HCV Activity through Metabolic Inhibition
Alonzi RC, University of Ottawa, Powdrill MH, Pezacki JP

1252 Mapping the Intersections between Insulin and EGCG as a Potential Chemical Adjuvant in Type II Diabetes Treatment
Lee J, McMaster University, Ahmed R, Melacini G

1253 Multistate Approaches for Computational Protein Design
Davey JA, Georgia Institute of Technology, USA, Damry AM, Euler CK, Goto NK, Chica RA

1254 Isolation of Ulcerprotective Cucurbitane Type Triterpenoids from Cucumis Melo Seeds
Bal G, Punjab Technical University, India

Chemistry Education
CE4 205D

13:40 1255 A Peek behind the Curtain: Designing Qualitative Instruments for Chemical Education Research
Bhattacharya G, University of Missouri, USA

13:40 1256 Limitations of Traditional Assessment in Identifying Learning Challenges: Determining Characteristics of Successful Students
Dulacar O, University of California - Davis, USA, Ellis J, Bowman C

14:20 1257 3D Assessments: Assessing what We Value
Herrington DG, Grand Valley State University, USA, Sweeder RD

14:40 1258 Does the Undergraduate Chemistry Curriculum Help or Hinder the Inclusion of Cross-cutting Scientific Principles as Learning Objectives?
Holme TA, Iowa State University, USA, Murphy KL

15:20 1259 The Five Domains of CER That Focus on Curriculum/instructional Reform
Bodner GM, Purdue University, USA

15:40 Coffee Break

16:00 1260 Active Learning Interventions and Affective Domain Exercises towards Student Achievement of Learning Outcomes
Costable E, Wilson C, Dawe LN, Wilfrid Laurier University

16:20 1261 Let's Try a Little Walking before We Run: Using Measurement Standards to Promote Better Assessment of the Affective Domain
Lewis JE, University of South Florida, USA, University of South Florida, USA

16:40 1262 Interdisciplinary Science Boosts to Affective Domain Learning and Student Engagement
Loppnow GR, University of Alberta

17:00 1263 Motivation, Self-regulated Learning, Learning Strategies, and Organic Chemistry Achievement: The Mediated Roles of Achievement Emotions
Raker JR, University of South Florida, USA

17:20 1264 Effects of Metacognitive Interventions on Student Learning in University Chemistry Courses: A Meta-analysis of the Primary Literature
MacNeil S, Wilfrid Laurier University, Wood E

17:40 End of Session

Environment
EN3 206A

Organic Contaminants
Organizer(s) - Derek Muir, Frank Wania
Chair(s) - Derek Muir

13:40 1265 Passive Samplers for Determining Levels and Environmental Fate of Polar Aquatic Organic Contaminants: How Do they Stack Up?
Wong CS, University of Regina, Canada, Challis JK, Luong KH

14:20 1266 Advances in Chromatography-Mass Spectrometry Methods for Pesticides in Environmental Samples
Raina-Fulton R, University of Regina, Yang L, Behdarvandt A, Dunn N, Smith E, Etter M

14:40 1267 Mass Spectrometry Identification of N-chlorinated Dipedeptides in Drinking Water
Huang G, University of Alberta, Jiang P, Li X-F
15:00 1268 Using Subsurface Filtration Technology to Enhance Nutrient and Organic Contaminants in a Wastewater Treatment Facility in Rural Manitoba, Canada *Chaves-Barquero LG* <Instituto Tecnológico de Costa Rica, Costa Rica>, Luong KH, Parajas A, Andre A, Hanson ML, Wong CSG

15:20 1269 Sorption and Leaching Behaviours of Phytoremediation in Tropical Soils *Agbaogun BKO* <University of Trier, Germany>, Fischer K, Olu-Owolabi BI

15:40 Coffee Break

16:00 1270 Characterization of Naphthenic Acids and Bitumen Derived Organics in Natural Water from the Athabasca Oil Sands Region, Canada *Sun C* <University of Alberta>, Shotyk W, Martin J


16:40 1272 A Fluorescence Method for Quantitative Detection of Oil PAHs in Various Solutions *Brown RS* <Queen's University>, Mason J, Flynn K, Trenton L, Langa V, Adams J, Charbonneau K, Hodson PV

17:00 1273 Water Processed by the Oil Sands Industry: Attributing Toxicity to Organic Chemical Classes *Gault IGM* <University of Alberta>, Sun C, Martin JW


17:40 End of Session

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**Industrial Chemistry**

**IC3 202D**

Chemistry-based Start-ups & Small and Medium Enterprises
Organizer(s) - Kazim Agha, Tim Clark, Philip Jessop, Laura Reyes
Chair(s) - Tim Clark, Kazim Agha

13:40 1275 From Beaker to Business: Some Key Lessons for Green Chemistry Start-ups *Maguire S* <McGill University>

14:20 1276 CelluForce: Bringing a New Material to Market *Berry RM* <CelluForce>

14:40 1277 So I've Decided to Do a Start-up... What Happens Next? *Shen C* <Alchemy>

15:00 1278 Converting Waste Greenhouse Gas Emissions (CO₂) into Calcium Carbonate to Make Stronger and Greener Concrete *Wagner JA* <CarbonCure Technologies>

15:20 1279 Derisking Commercialization of Solid Sorbents for Carbon Capture *Shimizu GKH* <University of Calgary>, Lin JB, Taylor JM, Mah RK, Akhtar F

15:40 Coffee Break

16:00 1280 Panel Discussion: Challenges & Resources for Start-ups & Small and Medium Enterprises *Reyes LM* <GreenCentre Canada>

16:40 1281 The Making of My Green Lab *Daley EN* <My Green Lab>, Paradise A

17:00 1282 Self-cleaning and Antimicrobial Coating Commercialization *Charpentier PA* <University of Western Ontario, London, Ontario, NGA-5B9>, Chen C, Thirrien P, Van Esbroeck J

17:20 End of Session

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**Inorganic Chemistry**

**IN1 206D**

Transition Metal Alkyl Chemistry
Organizer(s) - Ulrich Fekl, Datong Song
Chair(s) - David Emslie

13:40 1286 Cooperative Carbon-atom Abstraction from Alkenes in the Core of a Pentanuclear Nickel Cluster *Shoshani MM* <University of Windsor>, Johnson SA

14:00 1287 Synthetic Investigations of N-phosphinoamidinate Platinum(II) Complexes *Kelly CM*, Fuller IJT, Kwon D-H, Macaulay CM, Bischof SM, Sydora OL, Ess DH, Stradiotto M, Turculet L <Dalhousie University>

14:20 1288 Organometallic Dicopper Complexes: Synthesis, Mixed-Valence, Reaction Chemistry and Catalysis *Ziegler MS*, Lakshmi KV, Tilley TD <University of California - Berkeley, USA>

15:00 1289 Sorry, Chauvin! Metathesis of Fluorinated Alkenes via a Non-traditional Mechanism *Daniels AD* <University of Ottawa>, Harrison DJ, Guan J, Gabidullin BM, Hall MB, Baker RT

15:20 1290 Copper(I) Alkynide Chemistry: Reaction Potential in Construction of High-nuclearity Nanoclusters *Zhang LM*, Mak TCW <Chinese University of Hong Kong, Hong Kong>

15:40 Coffee Break

16:00 1291 Thermal and Photochemical Behaviour of Tantalum(IV) Trimethyl Complexes *Burford RJ*, Zydror A, Fyruz MD <University of British Columbia>


16:40 1293 Synthesis, Structure and Reactivity of Tungsten Cyclopentadienyl Complexes *Parker KDJ* <Laboratoire de Chimie de Coordination, France; Université de Toulouse, France>, Etienne M

17:00 1294 Nickel-catalyzed C-H Silylation of Arenes with Vinylsilanes: Rapid and Reversible β-Si Elimination *Elsby MR* <University of Windsor>, Johnson SA

17:20 1295 Mononuclear Titanium Methylenides. A Historic Perspective and Value in Catalytic Dehydrogenation *Mindiola DJ* <University of Pennsylvania, USA>, Kurogi T, Grant LN

18:00 End of Session

**IN4 206B**

Main Group Transformations and Catalysis - joint with the Royal Society of Chemistry and OR
Organizer(s) - Cathy Cruden, Douglas Stephon
Chair(s) - Cathy Cruden, Zamora

13:40 1296 Olefin Hydrofunctionalization using Earth-abundant Metal Catalysis *Thomas SP* <University of Edinburgh, UK>

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<th>Institution(s)</th>
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<tr>
<td>14:40</td>
<td>Main Group Elements as Transition Metals: The Curious Reactivity of 2,4,6-Trithiophenazenes</td>
<td>Falconer RL</td>
<td>University of Windsor, Dalhousie University</td>
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<td>Klisik SC, Bind JF</td>
<td>Queen's University</td>
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<td>15:00</td>
<td>Geometric Deformation as a Design Principle in Organophosphorus Catalysis</td>
<td>Rodosevich AT</td>
<td>Massachusetts Institute of Technology, USA</td>
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<td>15:40</td>
<td>Coffee Break</td>
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<td>16:00</td>
<td>Main Group Element-containing π-Electron Materials with Structural Constraint</td>
<td>Yamaguchi S</td>
<td>Nagoya University, Japan</td>
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<td>16:40</td>
<td>Chemistry Derived from Phosphorus(III) Transfer Agents</td>
<td>Macdonald CLB</td>
<td>University of Windsor, Dalhousie University</td>
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<td>Kosnik SC, Swidan A</td>
<td>University of Bristol, UK</td>
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<td>Elnajjar F</td>
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<td>17:00</td>
<td>New Insights on Photochromism of N,C-Chelate Boron Compounds</td>
<td>Mellerup SK, Li C</td>
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<td>Wang S</td>
<td>University of Victoria</td>
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<td>17:20</td>
<td>Catalytic Addition of a P-P Bond to Nitriles and Isocyanides</td>
<td>Ch tinkis SS</td>
<td>University of Bristol, UK</td>
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<td>Sparkes HA, Pridmore N, Annibale VT</td>
<td>University of Windsor, Dalhousie University</td>
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<td>Manners I</td>
<td>Queen's University</td>
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<td>17:40</td>
<td>Progress towards an Air-stable Catalyst for Frustrated Lewis Pair Chemistry</td>
<td>Piotrowski SS</td>
<td>University of Victoria</td>
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<td>Freitas LBO, Gruden CM</td>
<td>Queen's University</td>
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**IN6**

**Crystalline and Semi-crystalline Molecule-based Materials - joint with MT**

Organizer(s): Kathryn Preuss, Dmitry Soldatov  
Chair(s): Dmitry Soldatov

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<tr>
<td>13:40</td>
<td>Role of Halogen Bonding Interactions in Molecular Conductors</td>
<td>Fournigue M</td>
<td>Université de Rennes, France</td>
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<td>Lefliffig J, Jannin O, Shin K-S, Swientlik</td>
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<td>14:20</td>
<td>Exploring the Coordination Chemistry of npmH as a New Ligand in 3D-cluster Chemistry</td>
<td>Pilkington M</td>
<td>Brock University</td>
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<td>Stamatakis TC, Athanasopoulou AA, Abbasi P, Teat SJ, Escuer A, Werndorfer W</td>
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<td>14:40</td>
<td>New and Versatile Mechanochemical Routes to Materials and Molecules</td>
<td>Frisicic T</td>
<td>McGill University</td>
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<td>15:20</td>
<td>Characterization of Self-assembled Biphasic Composites and their Adsorption Properties</td>
<td>Wilson LD</td>
<td>University of Saskatchewan, Mohamed MH, Dolatkha A</td>
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<td>15:40</td>
<td>Coffee Break</td>
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<td>16:00</td>
<td>Hydrogen-bonded Zeolite-like Frameworks and Functional Materials</td>
<td>Ward MD</td>
<td>New York University, USA</td>
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<td>16:40</td>
<td>Supramolecular Protecting Group Strategies to Achieve a Series of Solid-state Photoreactions</td>
<td>Groeneman RH</td>
<td>Webster University, USA</td>
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<td>17:00</td>
<td>Supramolecular Chemistry and the Glassy State: the Role of Intermolecular Interactions in Impeding or Promoting Crystallization</td>
<td>Lebel O</td>
<td>Royal Military College of Canada, Lavenaure A, Pellerin C</td>
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<td>17:20</td>
<td>From Liquid Crystal to Crystal Engineering and Vice Versa</td>
<td>Eichhorn SH</td>
<td>University of Windsor, Dalhousie University</td>
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<td>Taing H, Rothera J, Koj, Cassar A</td>
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<td>17:40</td>
<td>A Density-functional Examination of the Magnetic States of Electrides and the Evolution of Piezomagnetic Behaviour Under Pressure</td>
<td>Dale SG</td>
<td>Dalhouse University, Johnson ER</td>
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<td>18:00</td>
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**INP**

**Poster Session**

*From 17:40 until 19:30*

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<th>Poster Title</th>
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<tr>
<td>1315</td>
<td>Bioactive 4-Acrylyrazolone Heterocycles and Their Transition Metal Complexes of Therapeutic Importance</td>
<td>’Idemudia OG</td>
<td>University of Fort Hare, South Africa</td>
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<td>Sadimenko AP</td>
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<td>1316</td>
<td>Fe 2+ and 3+ Complexes with Carbazole Based Tetrazole Ligands</td>
<td>Gajbecki L</td>
<td>University of Victoria, Berg DJ</td>
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<td>1317</td>
<td>Electrochemical Synthesis of Crystal CuO / Graphene Composites and Their Electrocatalysis for ORR in Fuel Cells</td>
<td>Lin S</td>
<td>Fujian Normal University, China, Zhang XF</td>
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<td>1319</td>
<td>Multifunctional Study on a Porphyrin Containing MOF: A Comparative Analysis of Oxidase like Activities</td>
<td>Aghayan M</td>
<td>Islamic Azad University, Iran, Mahmoudi A, Nazari K, Dehghanpour S, Sohrabi S</td>
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<td>1320</td>
<td>Hydroboration and Phosphinoboration of 3-hydroxy-4-pyridinone Bismuth(III) Compounds</td>
<td>Baird SM</td>
<td>Mount Allison University, Caron HR, Dupont HA, Vogels CM, Geier SJ, Masuda JD</td>
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<td>1321</td>
<td>Ferrocene-BODIPY Dyes as Prospective Compounds for Light-harvesting</td>
<td>Zatsikha YV</td>
<td>University of Manitoba, Didukh NO, Rohde GT, Blesener T, Yakubovskiy VP, Koptun YP</td>
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<td>1322</td>
<td>Experimental and Computational Studies on Zeolite-Y Encapsulated iron(II) and Nickel(II) Complexes Containing Mixed- ligands of 2,2- bipyridine and 1,10-phenanthroline</td>
<td>Haillu S</td>
<td>Addis Ababa University, Ethiopia; CSIR-Central Leather Research Institute, India, Umn Nair B, Redi- Abshiro M</td>
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<td>1323</td>
<td>Electrocatalytic O2 and CO2 Reduction Using Metal-porphyrins Bearing a Single Proton Relay Group</td>
<td>Sinha S</td>
<td>Simon Fraser University, Warren JJ</td>
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<td>1324</td>
<td>Electron-transfer Processes in Non Covalent Interactions Between Azordon(BODIPY Derivatives and Carbon Nanostructures</td>
<td>Blesener TS</td>
<td>University of Manitoba, Zatsikha YV, Rohde GT, Holstrom C, Nemykin VN</td>
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<td>1325</td>
<td>Thermoelectric Properties of Ti2Ag2Te222F12</td>
<td>Shi Y</td>
<td>University of Waterloo, Kleinke H</td>
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<td>1326</td>
<td>Processable Poly (Hydroxybutyrate): Synthesis and Rheological Characterizations</td>
<td>Ebrahimie T</td>
<td>University of British Columbia, Mehtkhodavandi P, Hatzikiriakos S</td>
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<td>1328</td>
<td>Expanding the Ligand Scope for Phosphorus Dications (RP2)</td>
<td>Sinclair H</td>
<td>University of Victoria, Burford N, McDonald R, Ferguson MJ</td>
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<td>1329</td>
<td>Iron Amino-bis(phenolate) Complexes for CO2 Activation</td>
<td>Andrea KA</td>
<td>Memorial University of Newfoundland, Kerton FM</td>
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1330  Understanding Aerobic Oxidation Reactivity of the NiCl(cinnamyl)(NHC) Complexes Hendriks S <Western University>, Park JH, Hazlehurst RJ, Blacquiere JM

1331  Electrocatalytic Reduction of Carbon Dioxide Using Cobalt and Iron Porphyrin Complexes Tsagarakis EZ <University of Toronto>, Tran SM, Abidinejad MA, Kraatz HB, Zhang X

1332  Developing Electron Rich PCarboxylP Frameworks for Cooperative Small Molecule Activation Smith JD <University of Calgary>, Chih E, Piers WE

1333  Reactions of Neutral Co(II) Complexes Supported by a Dianionic Pentadentate Ligand: Co-imido and Co-oxo Complexes Nurdin L 

1334  Structural Modulation of Tris Porphyrin Molecules for Electrochemical Reduction of Carbon Dioxide Sweeney ME <University of Toronto>, Abidinejad MA, Kraatz HB, Zhang XA

1335  Exploring the Reactivity of Electrophilic Phosphonium Cations Mehta M <University of Toronto>, Stephan DW

1336  Lewis Acid Catalyzed Dehydrocoupling Reactions Involving Phosphorus Wu L <University of Bristol, UK>, Chitnis S, Jiao H, Manners I, Annibale V

1337  Investigating the Effect of Chemical Substitution on the Local Structure of Garnet Sifat R <University of Saskatchewan>, Groversen AP

1338  Effect of Synthetic Method on the Structures of Brannerite-and Hollandite-type Oxides Ebinumolishen I <University of Saskatchewan>, Groversen AP

1339  Amino-Acids/Phosphate Frustrated Lewis Pairs: B-B Bond Formation and Csp3-H Bond Activation Rochette E <Université Laval>, Fontaine F-G

1340  Mechanistic and Synthetic Studies on Copper Carbazolides in Photoinduced, Copper-catalyzed C-N Couplings Ahn JM <California Institute of Technology, USA>, Ratani TS, Fu GC, Peters JC

1341  Synthesis and Photolytic Reactivity of Chromium Bipyridine Bis(aryl) Complexes Olafsen B <University of British Columbia>, Crescenzo GV, Smith KM

1342  Synthesis and Reactivity of Dimonocleating Phenoxy Ligands for Enforcing Metal Cooperativity Mehrkhodavandi P, Zhai X <University of British Columbia>, Kelley P, Ebrahimi T

1344  Systematic Hydrophobic Modification of Starch with Commercially Available Substituted Succinic Anhydrides and Maleated Vegetable Oil Amos RC <University of Waterloo, >, Kusma M, Mesnager J, Gauthier M

1345  Synthesis and Reactivity of BN Indenylide Anions towards Small Molecules Morgan MM <University of Calgary>, Patrick EA, Piers WE

1346  Inclusion Chemistry of Thiayxl and Selenenzyl Radicals in MIL-53(Al) Stephaniuk NT <University of Windsor>, Rawson WJ

1347  Atom Transfer Radical Polymerization (ATRP) Grafting of Starch Nanoparticles with Sodium Acrylate Fernandez J <University of Waterloo>, Tratnik N, Gauthier M

1348  Mechanistic Aspects of Silylenes with Carboxyl Compounds in Solution Son M <McMaster University>, Browne C, Duffy IR, Pourzarea R, Svetlana K, Leigh WJ

1349  Time-resolved Luminescence Spectroscopy of Lanthanide Nanoparticles Coated with Antenna Ligands Harris JP <Université de Montréal>, Reber C, Medina Tato SB, Castillo Blum SE


1351  Chirality and Diastereoselection (A vs. A) At Four Coordinated Non-planar Metal(II)-complexes Induced by Enantiopure N’O-chelate Ligands Enamullah M <York University, >

1352  Pyridinium-substituted Phosphonium Salts as Efficient Lewis Acid Catalysts Bayne JM <University of Toronto>, Stephan DW

1353  Phase Diagram of Ce-Rh-Ge System at 800 AC Zhang D <University of Alberta>, Olynyk AO, Iyer AK, Mar A

1354  Effect of Synthetic Method on the Structure of Pyrochlore- and Zirconolite-type Oxides McCaugherty S <University of Saskatchewan>, Groversen A

1355  Quaternary Layered Arsenide A-MGe-As (A = K, Rb; M = Zr, Cd) Gzyl AS <University of Alberta>, Khatun M, Mar A

1356  Excellent Thermoelastic Properties of Thallium Silver Tellurides Shi Y <University of Waterloo>, Kleineke H

1357  Metal-free Catalytic Csp2-H Bond Activation and Borylation by Frustrated Lewis Pairs: When Size Matters Légaré Lavergne J <Université Laval>, Rochette E, Fontaine F-G

1358  Organometallic Host Materials Based on Antimony(III) and (V) Compounds Visontai L <University of Guelph>, Preuss KE, Soldatov DV

1359  Versatility and Remarkable Hypersensitivity of Exo-6, Exo-9 Imidazole-substituted Nido-Decaborane Rachiero GP <McGill University>, Titi HM, Rogers RD

1360  Multifunctional Dithiophosphate Transition-metal Complexes as Potential High Efficiency Co-sensitizer in Dye-sensitized Solar Cells Ajayi TJ <University of Kwazulu-Natal, South Africa, >, Van Zyl

1361  Metal Free Pincer Chemistry - Access to Polycationic Phosphonium Lewis Acids Szkop KM <University of Toronto>, Stephan DW

1362  An Air-stable Triptyl Salt for Addition of S-H, Si-H, and N-H Bonds across Unsatuated Substrates Mosafari E <University of Toronto>, Stephan DW

1363  Hydrogen Bonded Peptide Framework Selection through Guest Temptation Smith AJ <University of Guelph>, Ignacio MG, Soldatov DV

1364  Reactivity of Low-coordinate Rh and Ir β-diminate Complexes Zhang N <University of Manitoba, >, Budzelaar PHM, Zhu D, Bindra GS

1365  Coordination of Selenium Containing Diarylamine Pincer Ligands to Group 11 Metals Wiebe MA <University of Winnipeg>, Ritch JS

1366  Influence of Ligand on the Activity of Metal Ions in Heterogeneous Water-oxidation Catalysts Nune SVK <Bilkent University, Turkey>, Alsaad EP, Ulker E, Karadas F

1367  α-Lipoic Acid for the Design of Pharmaceutical Co-crystals Tsang A <University of Guelph>, Netze S, Soldatov DV

1368  Metal Coordination of Symmetric and Asymmetric Ferrocene-histidine Peptide Conjugates Ferranco A <University of Toronto>, Udapaul T, Kraatz H-B

1369  Non-innocent Pincer Ligands with Low-coordinate Phosphorus Welsh T <University of Calgary>, Baumgartner T

1370  Monitoring Mechanochemical Reactions in situ X-ray Diffraction and Spectroscopy Julian PA <McGill University>, Malavatili I, Friscic T
1371 Metal-free Catalytic S-H Bond Dehydrogenative Borolation Using Frustrated Lewis Pairs Boutil H <Université Laval>, Rochette E, Fontaine FG

1372 A Room Temperature Stable Singlet Phosphinidene Liu L <University of California - San Diego, USA; University of Toronto>, Bertrand G

1373 Towards the Metal-free Reduction of Carbon Dioxide: Reducing the Lewis Acidity within Frustrated Lewis Pairs Jupp AR <University of Toronto>, Stephen DW

1374 Titanium Imido Species as Unique Dehydrocoupling Complexes for Amine-boranes Slusarczyk M <University of Oxford, UK>, Bellin S, Mountford P


1376 Solution Synthesis and Dehydrogenation of Ammine Potassium-Zinc Borohydride, [KZn(BH4)(NH3)] Motasefane M <University of Ottawa>, Baker RT

1377 Zinc and Phosphorus Complexes Supported by Bis(imino) NPN Pincer Ligand Nikov GI, Nguyen MT <Brock University>

1378 Studies on the Reactivity of Phosphino-phosphino-chations Poller MJ <University of Victoria; University of Munich, Germany>, Huber T, Frickel JS, Karaghissof K Burford N

1379 Catalytic Polymerisation of Polar Norbornenes with Pd Complexes: Tuning of the Reactivity of the Pd Alkyl Bond to Recycle the Catalyst Martin B <Université de Sherbrooke>, Compore M, Commarie B, Imbeault R, Claverie J


1381 N-Heterocyclic Carbene Boranes as Hydrogenation Catalyst Precursors and Carbon Dioxide Capture Agents Lam J <University of Toronto>, Stephan DW

1382 Rh and Ir Complexes Ligated by N,N and P,N Ligands Containing a 2-Electronized Pyridine Motie for the Activation of E-H Bonds Brandt JW <University of British Columbia>, Schafer LL

1383 Isomerization of Styryl Epoxides Using Low-valent Nickel Complexes and Reactivities of π-Bound Carbonyl Complexes Geng J <University of British Columbia>, Denoyer AN, Love JA

1384 S(VI) Lewis Acids: Fluorosulfonium Cations Waked AE <University of Toronto>, Stephen DW

1385 First Use of Acenaphthenequinone Dioxide as Bridging/Chelating Ligand in Heterometallic Mn/Ln Cluster Chemistry: Ferromagnetic Complexes and Single-molecule Magnets Worrell A <Brock University>, Lampropoulos C, Tang J, Stamatis TC

1386 Synthesis and Reactivity Studies of Bulky, Electron-rich PNP Ligands and their Transition Metal Complexes Lapointe S <Okinawa Institute of Science and Technology, Graduate University, Japan>, Khaskin E, Khusnutdinova JR

1387 Transition Metal Complexes of N,O-ligands: Co-ordination Chemistry and Catalysis May K <Ryerson University>, Gossage RA

1388 Synthesis, Characterization and Reactivity of Group IV Complexes of Diminopyridine Rahimi N <University of Manitoba>, Budzelaar PHM

1389 A Bis(imino)acenaphene (BLAN) Ligand with Pendent Amines for Proton-coupled Electron Transfer Catalysis Relethford ZR <University of New Hampshire, USA>, Reynolds JL, Caputo CA

1390 Synthesis and Electronic Structure of an Unprecedented Nickel hastanido-dipyrin Radical Complex Mouet J <Université Grenoble Alpes, France>, Philoze C, Thomas F, Leconte N, du Moulinet d'Hardemade A

1391 Metal Complexes of DTDA Radicals Nascimento MA <University of Windsor>, Rawson JM

1392 Zinc Hydride Catalyzed Regioselective Hydrolysilolation and Hydroboronation of N-heterocycles Lortie JL <Brock University>, Dudding T, Nikov GI

1393 Iridium Mediated P-H Bond Oxidative Addition Leading to Terminal Phosphido Hydride Complexes Lindepeorg F <Dalhousie University>, Turculet L

1394 Circular Chemistry Slootweg JC <University of Amsterdam, The Netherlands>, Zarate X, Schott E

1395 Design, Synthesis and Characterization of New Building Blocks for Functional Metal-organic Frameworks Avaria A <Universidad Católica de Chile, Chile>, Zarate X, Schott E

1396 FLP Systems with Heavy Group 13 Elements (Ga, In) Xu M <University of Toronto>, Roy J, Waked A, Stephen D

1397 Towards Putting the "P" in Perovskites: Synthesis and Characterization of Phosphonium/Group 14 Halide Salts Omahen EH <University of Windsor>, Binder JF, Macdonald CLB

1398 Incorporation of Complexes Containing Redox-active Ligands as Linkers in Metal Organic Frameworks Herzymuch K <Simon Fraser University>, Leznoff DB, Sot T

1399 Preparation and Reactivity of Low Oxidation State Indium Reagents Jacobs BF <University of Windsor>, Macdonald CLB

1400 Coordination and Oxidation Chemistry of Cyclic Selenoarenes Perras J, Mezbriksi S, Garcia A, Ritch JS <University of Winnipeg>

1401 Neutral Diamagnetic sp3-sp3 B-B Bond Diborane Reacts Paramagnetically Cao LL <University of Toronto>, Farrell JM, Stephen DW

1402 Single Electron Transfer in Ferrocene/Lewis Acid Pair System Liu L, Cao L, Shao Y <University of Toronto>, Stephen D

1403 Synthesis and Characterization of Push-pull Polystannane Dhindsa JS <Ryerson University>, Jacobs BF, Fouche DA

1404 Thermally Stable Precursors to Rare Earth Terminal Irido (LnM=NR) Complexes Supported by a Rationally Designed NNN-Pincer Ligand Jepson JP <University of Lethbridge>, Hayes PG

1405 Mechanistic Study of the Cycloaddition Addition of an Alkyne to an Asymmetric Disilene Henry AT <Western University>, Baines KM


1407 New Ruthenium Catalyst for Transfer Hydrogenation with 2-Propanol and Ethanol Alshakova ID <Brock University>, Nikonov GI


1409 Synthesis, Characterisation, and Computational Study of Functionalized(mido)tungsten(VI) Complexes Turnbull D <University of Lethbridge>, Wetmore SD, Gerken M
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**CSC 2017**

**1490 Neutral and Anionic Phosphorus(I) Molecules**

Kosnik SC *University of Windsor*, Nascimento MC, Macdonald CLB

**1491 PID Analyzers: Bringing Sustainable Science to the Lab and Field**

Ruger G *PID Analyzers, USA*, MacIchlan J

**1492 A General Investigation of Bipod-like Bithiazole Ligands for Transition Metal Coordination Chemistry**

MacKinnon CD *Lakehead University*, Jarem JN, Marrows JS

**1493 Alternative Synthetic Route for (Mn,Fe)_{3}(P,Si): Structural, Magnetic, Magnetocaloric Properties**

He A *McMaster University*, Mozharyshky Y

**1494 Synthesis and Reactivity of Zirconium and Hafnium Borylilidio Compounds**

Xie B *University of Oxford, UK*, Clough BA, Mountford P

**1495 Self-assembly and Electron Transfer upon Reaction of Copper(I) Complexes with Argyrrotrispid Species**

Cabral-Cerqueira K *Concordia University*, Askari MS, Ottenwaelder X

**1496 Dy/ScNbO: A New Spin Ice Candidate**

Rutherford M *University of Winnipeg*, Mauw C, Wiebe F

**1497 Low-cost Electrocatalysts for Selective Reduction of CO2 Using Renewable Energy**

Bushuyev OS *University of Toronto*, Dinh CT, Kibria MG, Sargent EH

**1498 Prussian Blue Analogs as Bifunctional Electrocatalysts for Overall Water Splitting**

Alsac EP *Bilkent University, Turkey*, Nune SVK, Ulker E, Karadas F

**1499 Exposing the Magnetic Exchange Coupling in a Lanthanide Cabane System with Peripheral Reduced Tetrane-based Ligand**


**1500 DFT Study of Spin Distribution in Pincer Verdzayl Palladium Complexes**

MacLean SWC *University of Victoria*, Sanz C, Hicks R

**1501 1,2,4-Triazol-5-ylidenes versus Iminoloz-2-ylidenes for the Stabilization of Phosphorus(I) Cations**

Elnajjar FO *University of Windsor*, Binder JF, Macdonald CLB

**1502 Crystalline Azobenzene Materials Exhibiting Unusual Photoresponsive Behavior**

Christopherson JC *McGill University*, Bushuyev OS, Huskic I, Tan D, Barrett CJ, Friscic T

**1503 Taking Plasmonic Catalysis to Reductive Chemistry: Ketone and Aldehydes Hydrogenation Catalyzed by Silver Cubes and Light**

Landry MJ *McGill University*, Barrett CJ, Mooses A

**1504 Regioselectively H/D Exchange Catalyzed by Multi-hydride Ruthenium Catalysts, Bearing N-heterocyclic Carbene or Phosphine Ligands**

Ma VH * Brock University*, Nikonorov GI

**1505 Reactivity of Carbene-stabilized Phosphorus(I) Cations**

Binder JF *University of Windsor*, Swidan A, Macdonald CLB

**1506 Luminescence Spectra of Square-planar Complexes with d4 Metals: Pressure and Temperature Effects**

Poirier S *Université de Montréal*, Reber C, Bélanger-Demasarie N

**1507 Coordination Chemistry of the Macrocyclic Aggregates of iso-Tellurazol N-Oxides**

Ho PC *McMaster University*, Sequeira SL, Bui R, Cevallos A, Vargas-Baca I

**1508 Design of Ligands with Flexible and Dynamic Coordination Modes**

Jackman KMK, Fogh AA *Western University*, Stubbs JM, Boyle PD, Blacquiere JM

**1509 Synthesis of and Reactivity of Boron Sulphur Geminal Frustrated Lewis Pairs**

Fan L *University of Toronto*, Jupp AR, Stephan DW

**1510 Engineered Designer Monomers: The Path to Light and Moisture Stable Polystannanes**

Pau J *Ryerson University*, Lough A, Foucher D

**1511 Studies of Chalcogen Bonding in N-substituted benz-2,1,3-selenadiazoles**

Lee LM *McMaster University*, Lee J, Luu H, Corfess V, Tran M, Adam F, He A, Vargas-Baca I

**1512 Ni(II) Mediated C-H and C-X Cyclometallation of Aryl-phosphinines**

Mangin LP *Université de Montréal*, Zargar D

**1513 Reactions of Group 4 Metalloocene Hydrides and Imides with Boranes and Silanes**

McNeillis A *University of Oxford, UK*, Kawakita K, Mountford P

**1514 Versatile Group IV Metal Containing Complexes Supported by an NNN-Pincer Ligand for Olefin Polymerization and Nitrogen Reduction**

Forfar CP *University of Lethbridge*, Hayes PG

**1515 The Intergration of Non-heavy Metal Containing Quantum Dots into Polymer Films**

Machin DD *Western University*, Charpentier PA, Hiscott DV, Metke TI

**1516 Zinc(II) Complexes of N,N-diubstituted Amidine-N-oxides: Toward Emissive Materials**

Castro JJ *Université de Montréal*, Cibian M, Hanan GS

**1517 Lanthanide Complexes with Phenolate Ligands: Towards Redox Active Luminescent Switches**

Moloy JK, Philouze C, Fédèle L, Imbert D, Jarjasies O *Université Grenoble Alpes, France*, Thomas F

**1518 Complexes of Ge (II) and Sn (II) Halides with Crown Ethers and Glymes**

Secara AM *University of Windsor*, Binder J, Macdonald CL

**1519 The Effect of β-Diketones on the Structural and Magnetic Properties of DyIII Complexes**

Mazarakiotis EC *Brock University*, Kaur P, Unhla-Silva L, Tang J, Wemkesor W, Stamatos TC

**1520 Metal-organic Frameworks of Pyrazolate Derivatives**

Kivi CE *University of Toronto*, Song D

**1521 A Metal-organic Framework for Selective Gas Absorption Synthesized from Carboxylate Functionalized Bispyrazolylmethane**

Kivi CE *University of Toronto*, Gelland BS, Dureckova H, Ma C, Woo TK, Shimizu GH, Song D

**1522 Ligand Influence on the Isolation and Characterization of Group 14 and 13 Cations**

Gray PA *University of Victoria*, Suter R, Burford N, Patrick BO, McDonald R, Ferguson MJ

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**Macromolecular Science and Engineering**

**MS1 205A**

Frontiers in Controlled Polymerization - joint with IN

Organizer(s) - Parisa Mehrkhodavandi
Chair(s) - Jeffrey Byers

**13:40 1523 Olefin Polymerisation Catalysts Based on Group 4 Imide, Amidinate and Guanidinate Compounds: Catalyst Discovery and Fundamental Aspects of Bonding and Reactivity**

Mountford P *University of Oxford, UK*

**14:20 1524 New Monomers and Mechanisms in the Synthesis of Functional and Sustainable Polymers**

Shaver MP *University of Edinburgh, UK*, Cairns SA, Sinclair F

**14:40 1525 Functional Degradable Polymers by Ring-opening Polymerisation**

Dove AP *University of Warwick, UK*, Wilson JA, Naumann S
Tuesday PM 1526  
May 30, 2017

15:00 1526  Ruthenium-catalyzed Mechanocatalytic Olefin Metathesis Polymerization: A Solvent-free Approach to ROMP and ADMET  
Do J-L  McGill University, *Fišćic T

15:20 1527  Redox Switches for Catalysis Using Ferrocene-based Ligands  
*Diaconescu PL  University of California - Los Angeles, USA

15:40 Coffee Break

16:00 1528  Conjugated Polymers that Contain Selenium and Tellurium  
Seferos DS  University of Toronto

16:40 1529  Control of PLA Micro-and Macrostructure by Air/Moisture Tolerant Indium Complexes  
*Mehrokhodavandi P  University of British Columbia, Ebrahimi T, Chile L-E

17:00 1530  Mechanistic Spectroscopic Analysis of Carbonate Synthesis from CO2 and Epoxides Using Aminoe-bisphenolate Complexes  
*Kozak CM  Memorial University of Newfoundland

17:20 End of Session

MS2 202A

Polymers with Biological and Medicinal Applications  
Organizer(s) - Elizabeth Gillies, Todd Hoare  Chair(s) - Elizabeth Gillies, Todd Hoare

13:40 1531  Controlling the Architecture of Carbohydrate-derived Polymers  
Slavko E  University of Toronto, *Taylor MS

14:00 1532  Factors Controlling Drug Release from Cross-linked Polyester-based Matrices  
Le Dèvède F  University of Toronto, Boucher H, Allen C

14:40 1533  Rapid Synthesis of Functionalized High Generation Polyester Dendrons via Strain Promoted Alkyne-azide Cycloaddition  
McNelles SA  McMaster University, *Taylor MS

15:00 1534  Multifunctional Polymeric Nanostructures for Cancer Theranostic Applications  
Wang M  Nanyang Technological University, Singapore

15:20 1535  Advanced Molecular Characterization of Biodegradable Polymers by Tetra Detection Size Exclusion Chromatography: Solutions to Industrial and Academic Challenges  
Eibed A  University of Western Ontario, Abu Romeh A, Landry E, Alassuitly AS, Bassi A, Zhu J, Xiang P

15:40 Coffee Break

16:00 1536  Supramolecular Nanofibrillar Thermoreversible Hydrogel for Growth and Release of Cancer Spheroids  

16:20 1537  Dielectro-Alder and Thiol-ene Crosslinked Polymer Scaffolds for Cellular Therapies  
Stewart SA  McMaster University, Coulson MB, Burke NAD, *Stöver HDH

16:40 1538  Crosslinked Hyaluronan-based Hydrogels for Gliona Neural Stem Cell Culture  
Smith LJ  University of Toronto, Tam RY, Baker AEG, Shoichet MS, Dirks P

17:00 1539  A Two-step Affinity Based Drug Delivery System for Long Term Delivery of Therapeutic Proteins from Hydrogels  
Huyhn V  McMaster University, Asohan J, Shoib MM, *Wylie RG

17:20 1540  Conformation of the Side Chains of Amylopectin in DMSO Determined by Pyrene Excimer Fluorescence and Molecular Mechanics  
Li L  University of Waterloo, *Duhamel J

17:40 End of Session

MS4 203C

Stimuli-responsive Polymers and Polymer Gels  
Organizer(s) - Michael Serpe  Chair(s) - Todd Hoare

14:00 1542  CO2-responsive Polymers for Water-based Coatings  
Ho JH  Queen's University, Mudraboyina BH, Yang YY, Ozvald AO, Belander RS, Cunningham MFC, *Jessop PGI

14:20 1543  Engineering Smart Hydrogels on Multiple Length Scales for Biomedical and Biosensing Applications  
Hoare TR  McMaster University

14:40 1544  Formation and Optimisation of pH Sensitive Membranes for Triggered Release of Nanosilica Drug Carriers Using Microfluidics  
Nan J, Rosella E, Klietz F, Mantovani D, *Greener J  Université Laval

16:00 1547  Force as a Stimulus for Chemically Responsive Polymers  
Craig SL  Duke University, USA

1540 Coffee Break

16:40 1548  The Effects of Counter Anions on the Dynamic Mechanical Response in Polymer Networks Crosslinked by Metal-ligand Coordination  
Rao Y  Stanford University, USA, *Ryerson University, *Bao Z

17:00 1549  Using Pyrene Excimer Fluorescence to Probe the Interactions between Viscosity Index Improvers and Waxes Present in Automotive Oil  
Pirouz S, *Duhamel J  University of Waterloo, Jiang S, Duggal A

17:20 1550  The Effect of PDMAEMA on the Depolymerisation of Block Copolymers in Solution  
Yardley RE  University of Western Ontario, *Gillies ER

17:40 End of Session

Materials Chemistry

MT5 201D

Metal and Covalent Organic Frameworks  
Organizer(s) - Muralee Murugesu  Chair(s) - Gabriel Brunet

13:40 1551  Designing Highly Birefringent Metal Coordination Polymer Materials  
Leznoff DB  Simon Fraser University

14:00 1552  Theoretical Evaluation of Thermodynamic Stability of ZIF Topologies Using Periodic DFT Calculations  

14:20 1553  Aromatic Ligand Stacking as an Active Site in MOFs for the Capture of Carbon Dioxide  
Stylianou KC  École Polytechnique Fédérale de Lausanne, Switzerland, Chidambaram A, Boyd PG, Smit B

14:40 1554  A Computational Study of Metal Organic Frameworks and their Potential to Capture Fugitive Coal Mine Methane  
Burns TD  University of Ottawa, Collins SP, *Woo TK

15:00 1555  Synthesis and Characterization of Functional Metal Organic Framework Materials  
Farha OK  Northwestern University, USA

15:40 Coffee Break

16:00 1556  Light, Water, and Air: Metal-organic Frameworks in Materials Chemistry  
Katz MJ  Memorial University of Newfoundland

16:20 1557  Development of New Phosphonate Monoester-based Frameworks  
Gelfand BS  University of Calgary, Huynh HS, Mah RK, *Shimizu Kh

17:00 End of Session
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<td>16:40</td>
<td>1558</td>
<td>Molecular Shuttling inside Z-based MOFs</td>
<td>Gholami G &lt;University of Windsor&gt;, Zhu K, Loeb SJ</td>
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<td>17:00</td>
<td>1559</td>
<td>New Porous MOFs with Enhanced Gas Uptake and Luminescence Properties</td>
<td>Fedin VP &lt;Nikolaev Institute of Inorganic Chemistry, Russia&gt;</td>
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<td>17:20</td>
<td>1560</td>
<td>Optimizing the Energetic Cost of CO₂ Capture in Nanoporous Materials Using the Molecular Simulation Toolbox</td>
<td>Woo TK &lt;University of Ottawa&gt;</td>
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<td>13:40</td>
<td>1561</td>
<td>New Near-infrared Absorbers Based on Structural Variants of Isodindigo</td>
<td>Kelly TL &lt;University of Saskatchewan&gt;, Randell NM, Ganuguly A, Franshijyn KF</td>
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<td>14:00</td>
<td>1562</td>
<td>Patchy Nanofibers from the Self-assembly of a Conjugated Diblock Copolymer</td>
<td>Kynaston EL &lt;University of Toronto&gt;, Fang Y, Manion JG, Obhi NK, Howe JY, Pernesichka DF, Seferos DS</td>
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<td>14:20</td>
<td>1563</td>
<td>Design Principles for Organic Double Heterojunction Solar Cells</td>
<td>Kaake LG &lt;Simon Fraser University&gt;</td>
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<td>14:40</td>
<td>1564</td>
<td>Direct (hetero)arylation Polymerization (DHAP): A Powerful Tool for the Synthesis of Conjugated Polymers</td>
<td>Leclerc M &lt;Université Laval&gt;</td>
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<td>15:00</td>
<td>1565</td>
<td>Silicon Phthalocyanines as Emerging Materials in Organic Photovoltaics/Solar Cells; Methods to Solubilize and Enhance Functionality</td>
<td>Bender TP &lt;University of Toronto&gt;, Lessard BH</td>
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<td>15:20</td>
<td>1566</td>
<td>Simple Non-fullerene Molecular Acceptors for Organic Solar Cells</td>
<td>Josse P &lt;University of Angers, France&gt;, Blanchard P, Cabanetos C</td>
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<td>16:00</td>
<td>1567</td>
<td>Design, Synthesis and Characterization of Simple Photocative Materials for Single-component Organic Solar Cells</td>
<td>Labrunie A, Blanchard P, Cabanetos C &lt;Université d’Angers, France&gt;</td>
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<td>16:40</td>
<td>1569</td>
<td>How Dyes Serve as a Tool for Quantifying Non-covalent Interactions</td>
<td>Kellett CW &lt;University of British Columbia&gt;, Berlinguette CP</td>
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<td>17:00</td>
<td>1570</td>
<td>Design Considerations for Incorporating Visible Light Absorbing Chromophores into Electrochemical Ni(II) Complexes for Photochemical Proton Reduction</td>
<td>Majewski MB &lt;Northwestern University, USA&gt;, Phelan BT, Wasielewski MR</td>
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<td>13:40</td>
<td>1572</td>
<td>Bio-derived Polymers for Sustainable Lithium-Ion Batteries</td>
<td>Schon TB &lt;University of Toronto&gt;, Tilley AJ, Bridges CR, Miltenburg MB, Seferos DS</td>
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<td>14:00</td>
<td>1573</td>
<td>Understanding Heterogeneous Photocatalytic Systems with Time-resolved Diffuse Reflectance Spectroscopy</td>
<td>Godin R &lt;Imperial College London, UK&gt;, Durrant J</td>
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<td>14:20</td>
<td>1574</td>
<td>Photoelectrochemical Hydrogen Evolution at Conjugated Polymer Nanoparticle Electrodes</td>
<td>Fortin PJ &lt;Simon Fraser University&gt;, Holdcroft S</td>
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<td>14:40</td>
<td>1575</td>
<td>Effect of Oxidation on Thioule Containing Conjugated Materials</td>
<td>Claridge RC &lt;University of Waterloo&gt;, Schipper DJ</td>
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<td>15:00</td>
<td>1576</td>
<td>Cu₃ZnSnS₄ (CZTS)-based Photocatalysts for Hydrogen Generation from Water</td>
<td>Ha E, Man H-W, Wang L, Tsang SCE, Wong K-Y, Lee LYS &lt;Hong Kong Polytechnic University, Hong Kong&gt;</td>
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<td>15:40</td>
<td>Coffee Break</td>
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<td>16:00</td>
<td>1577</td>
<td>Surface and Size Effects in the Silicon Is 8 Near Edge X-ray Absorption Fine Structure Spectroscopy of Functionalized Silicon Nanocrystals</td>
<td>Ritchie A, Cao W, Purkait TK, Sengar C, Hu YF, Xiao QF, Veinot JGC, Urquhart SG &lt;University of Saskatchewan&gt;, Dasog M</td>
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<td>16:20</td>
<td>1578</td>
<td>Functionalized Porous Silica Materials for Selective Recovery of Rare Earth Elements</td>
<td>Hu Y &lt;Université Laval&gt;, Giret S, Mitsal Castrol LC, Larivière D, Fontaine F-G, Kleitz F</td>
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</table>

**Organic Chemistry**

- A Century of Organic Synthesis in Australia and Canada
- Biomimetic Synthesis of Meroterpenoid Natural Products
- A Mild Photo-mediated Methylation and Hydroxymethylation of Heteroarenes and Oxidation of Ethers
- Stereoselective Total Synthesis of Alkaloids and towards a Functional Protecting Group Approach

**Tuesday PM**

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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Location</th>
<th>Speaker(s)</th>
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<tr>
<td>16:00</td>
<td>1580</td>
<td>Aging Processes in &quot;Smart&quot; Magnetic Fluids</td>
<td>Chen X &lt;McGill University&gt;, Hajibaboli A, Andrews M</td>
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<td>17:00</td>
<td>1581</td>
<td>Hybrid Structures of g-C3N4 for Photocatalytic Degradation of Environmental Pollutants and H₂ Production</td>
<td>Masih D &lt;University of Western Ontario&gt;, Luzon B, Zhang Q, Chen S, Huang Y, Rohani S</td>
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<td>17:20</td>
<td>1582</td>
<td>Novel Molecular Materials for Colorimetric Recognition of Iron Ions in Aqueous Solutions</td>
<td>Zenkina OV &lt;University of Ontario Institute of Technology&gt;, Ebralidze II, Laschuk NO</td>
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**OR2**

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<tr>
<td>13:40</td>
<td>1583</td>
<td>General Approach toward Aspidospermatan-type Alkaloids</td>
<td>Bélanger G &lt;Université de Sherbrooke&gt;, Hauduc C</td>
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<tr>
<td>14:00</td>
<td>1584</td>
<td>Biomimetic Synthesis of Meroterpenoid Natural Products</td>
<td>George JH &lt;University of Adelaide, Australia&gt;</td>
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<td>14:40</td>
<td>1585</td>
<td>A Mild Photo-mediated Methylation and Hydroxymethylation of Heteroarenes and Oxidation of Ethers</td>
<td>McCallum T &lt;University of Ottawa&gt;, Pitre SP, Morin M, Sciano JC, Barriault L</td>
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<tr>
<td>15:00</td>
<td>1586</td>
<td>Stereoselective Total Synthesis of Alkaloids and towards a Functional Protecting Group Approach</td>
<td>Maar tens G, Deruer E, Coulibali S, Beaulieu MA, Jacquemot G, Canesi S &lt;Université du Québec à Montréal&gt;</td>
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<td>15:40</td>
<td>Coffee Break</td>
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<tr>
<td>16:00</td>
<td>1587</td>
<td>Synthesis of Cyclopropamines via Unusual Zinc-homoenolate Reactivity</td>
<td>Rousseaux S &lt;University of Toronto&gt;</td>
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<td>16:20</td>
<td>1588</td>
<td>Synthesis and Catalysis with Branched C=C Bond Rich Systems</td>
<td>Sherburn MS &lt;Australian National University, Australia&gt;</td>
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<td>17:00</td>
<td>1589</td>
<td>Development of New Cyclopropanation Reactions in Batch and in Flow to Access Poly-substituted Cyclopropanes</td>
<td>Charette AB &lt;Université de Montréal&gt;</td>
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</table>
Transition Metal Catalysis for Organic Synthesis
Organizer(s) - Stephen Newman, Sophie Rousseaux
Chair(s) - Stephen Newman
14:00 1590 New Allylic and Homoallylic Cross-coupling Reactions for the Asymmetric Construction of Acyclic Ternary and Quaternary Carbon Stereocenters Evans PA <Queen's University, USA>
14:40 1591 C-H Functionalization in Pharmaceutical Applications Malik HA <Novartis Institutes for BioMedical Research, Inc., USA>
15:20 1592 Designing Pd-NHC Complexes to Provide Selective Monoaarylation Organ MG <University of Ottawa; York University>, Lombardi C, Day J, Chandrasoma N, Sharif S, Rucker R, Khadra A
15:40 Coffee Break
16:00 1593 Controlling Catalysis with Visible Light Rovis T <Columbia University, USA>
16:40 1594 Gold(III) Intermediates in Catalysis of Organic Reactions Hashmi ASK <Heidelberg University, Germany>
17:00 1595 Chirality in Coupling Reactions: Stereoregulative Suzuki-Miyaura Cross-couplings and the Development of New Electrophiles for Cross-coupling Chemistry Crudden CM <Queen's University, Nagoya University, Japan>
17:20 1596 Rh/Pd Dual-metal Catalyzed Synthesis of Pyridobenzazepines Lam H <University of Toronto>, Tsoung J, Lautens M
17:40 1597 Direct Access to Conjugated Trienes by Ru(0)-catalyzed Coupling of Internal Alkynes with Conjugated Dienes Hirano M <Tokyo University of A & T, Japan>, Kiyota S, In S, Saito R, Komine N
18:00 End of Session

OR9 201F
Organizer(s) - Graham Bodwell, Rik Tykwinski
Chair(s) - Rik Tykwinski
13:40 1598 Adventures of an sp³ Chemist in the sp² World Schreiner PR <Justus-Liebig University, Germany>
14:20 1599 Phosphangulene and Phirien: Bowl-shaped Molecules and their Co-crystallizations with Fullerene Keski A <Université de Montréal>, Maris T, Wuest JD
14:40 1600 Nanohoops as New Architectures in Materials Design Jasti R <University of Oregon, USA>
15:20 1601 Synthetic Studies on [10]-Annulenes Blaquiere C, Gravel M <University of Saskatchewan>
15:40 Coffee Break
16:00 1602 Polycyclic Heteroaromatic Compounds: From Chemical Synthesis to Molecular Materials Kivala M <University of Erlangen-Nürnberg, Germany>
16:40 1603 Regioisomeric Effects of Donor-acceptor Pyrene Based Chromophores Sutherland TC <University of Calgary>
17:00 1604 [n](2,9)Peropyrenophanes MacKinnon MR <Memorial University of Newfoundland>, Kubo T, Bodwell GJ
17:20 1605 Sulfonamide-based Pi-conjugated Systems for Organic Electronics Chan JM <University of Ottawa>
17:40 End of Session

OR10 206E
Fluorinated Molecules: Syntheses, Analyses, and Applications - joint with BM
Organizer(s) - Jean-François Paquin, Glenn Paquin J-F
13:40 1606 Metal Catalyzed Strategies to Trifluoromethyl-containing Molecules Lautens M <University of Toronto>, Johnson T
14:00 1607 Development of a F-18 Labeled Pyridine Analog of Losartan for Translational PET Imaging of AT1 Receptors DaSilva JN <Université de Montréal>
14:20 1608 Recent Developments in the Preparation of Mono/fluoralkylalkenes from 3-Fluoro-3-halogenoalkenes Hamel J-D <Université Laval>, Cloutier M, Drouin M, Paquin J-F
14:40 1609 Development of an F-labelled Derivative of the FFA1 agonist TAK875 Dorman MH <Université de Montréal>, Piotot V, DaSilva JN
15:00 1610 Fluorooalyl Groups and Sulfur or Selenium Associations: New Opportunities in Molecules Design Billard T <Université de Lyon, France; Neurological Hospital, Lyon, France>
15:40 Coffee Break
16:00 1611 Fluorooform-derived CuCF₃ for Trifluoromethylation and Hydrotrifluoromethylation of Alkenes Tsui GC <Chinese University of Hong Kong, Hong Kong>, He L
16:20 1612 Asymmetric Fluoroarylvinyl Synthesis: A Scaffold for Accessing Fluorinated Biologically Relevant Molecules Meanwell M <Simon Fraser University>, Ren W, Bergeron-Brelle M, Movahedi S, Dudding T, Britton R
16:40 1613 Generation and Capture of Difluorocarbonium Ion By Silylum Cation-phosphine Frustrated Lewis Pairs and Conversion of a,α,α-Trifluorotoluene to a,α-Difluorotoluene Mallov I <University of Toronto>, Ruddy AJ, Zhu H, Grimm S, Stephan DW
17:00 1614 Synthesis and Biological Evaluation of Mono- and Poly-fluorinated Carbohydrates Giguère D <Université Laval>
17:20 1615 Unusual Properties of Selectively Fluorinated Aliphatic Rings O'Hagan D <University of St Andrews, UK>
18:00 End of Session

Physical, Theoretical and Computational Chemistry

PT4 203A
Nanoengineered Materials: Fundamentals and Applications
Organizer(s) - Al Amin Dhirani
Chair(s) - Al Amin Dhirani
13:40 1616 Interfacial Engineering of RuRuO₂/TiO₂ Heteroanostuctures Toward Efficient Photocatalytic Water Splitting Xue C <Nanyang Technological University, Singapore>, Gu Q
14:00 1617 Shaping Up at the Nanoscale: Tuning Plasmonic Activation of Singlet Oxygen Maca N <University of Calgary>, Heyne B
14:20 1618 Giant Photon Gain in Large-scale Quantum Circuit-QED Systems Agarwalla BK <University of Toronto>, Kulkarni M, Mukamel S, Segal D
14:40 1619 Ratcheting of Photo-generated Carriers in an Organic Bulk-heterojunction Kedem O <Northwestern University, USA>, Lau B, Weiss EA
15:00 1620 Controlling Charge Transport across 2-15 nm in Carbon-based Molecular Junctions Morteza-Najarian A, Bergren A, McCreery R <University of Alberta; National Institute for Nanotechnology>
15:40 Coffee Break
16:00 1621 Helical Gold Nanorod and Chiral Gold Nanocage Structures Liu XJ, Hamilton IP <Wilfrid Laurier University>
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<tr>
<td>16:20</td>
<td>1622</td>
<td>PT9 Quantum Dynamical Phenomena in Chemistry</td>
<td>Artur Izmaylov, Dvira Segal</td>
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<td>16:20</td>
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<td>13:40 1625</td>
<td>Machine Learning the Best Potential Energy Surface for a Polyanatomic Molecule: Bayesian Optimization with Gaussian Processes</td>
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<td>16:20</td>
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<td>14:20 1626</td>
<td>A Rank-reduced Tensor Basis Method with Intertwining for Computing Vibrational Energy Levels: Results for C3H4 Using 3 GB of Memory</td>
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<td>16:00</td>
<td>1628</td>
<td>SS1 Self-assembly at Surfaces</td>
<td>Jillian Buriaik</td>
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<td>16:20</td>
<td>1628</td>
<td>14:00 1638</td>
<td>Crystal-bound Ligands</td>
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<td>16:00</td>
<td>1631</td>
<td>13:40 1631</td>
<td>A Sumptuous Buffet of New Methods in Electronic Structure Theory and Quantum Statistical Mechanics</td>
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<td>1634</td>
<td>15:20</td>
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<td>16:40</td>
<td>1645</td>
<td>17:20</td>
<td>Interactions of Oligoanilines with Iron Oxide Surfaces</td>
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<td>18:00</td>
<td>1632</td>
<td>17:20</td>
<td>Extensions and Applications of the Semistochastic Heat Bath Configuration Interaction Sharma S</td>
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Surface Science

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<td>16:40</td>
<td>1643</td>
<td>Orthogonally Processable Carbazole-based Polymer Thin Films by Nitroxide-mediated Polymerization</td>
<td>Malville OA University of Ottawa, King B, Imperiale C, Lessard BH</td>
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<td>1654</td>
<td>17:20</td>
<td>Interactions of Oligoanilines with Iron Oxide Surfaces</td>
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<td>18:00</td>
<td>1648</td>
<td>With Serendipity from Corrosion Inhibitor to Water Quality Sensor</td>
<td>McMaster University, Kruse P</td>
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<td>16:20</td>
<td>1649</td>
<td>Defect-rich Photocatalysts for Ultra-efficient Photocatalytic Water Splitting</td>
<td>Leung KT University of Waterloo, Rahman MA</td>
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<td>1650</td>
<td>16:40</td>
<td>Surface Science in Honour of Peter Norton</td>
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<td>18:00</td>
<td>1651</td>
<td>Tracking Surface and Interface with Synchrotron Light</td>
<td>Sham TK Western University, North American X-ray Absorption Spectroscopy</td>
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Tuesday PM 1654
May 30, 2017

16:20 1654  Large Area Fabrication and Quantification in Surface-enhanced Raman Scattering
Brolo AG, Université de Montréal, Lebel O, Gujral A, Pellerin C, Ediger MD

16:40 1655  Probing the Structure and Chemistry of Surfaces and Interfaces with Electron Energy Loss Spectroscopy in the Electron Microscope
Botton GA, Munich University

17:00 1656  Hydrogen Bonding Influence on the Kinetic Stability of Vapor Deposited Triazine Glasses
Laventure A, Université de Montréal, Lebel O, Gujral A, Pellerin C, Ediger MD

17:20 1657  Sulfur-metal Complexes on Surfaces of Copper, Silver, and Gold
Thiel P, Iowa State University, USA, Waken H, Liu D-J, Oh J, Yang HJ, Kim Y

17:40 1658  Tuning Surfaces for Spectroscopy: Studies of Biological Cells
Lagugné-Labarthet F, Western University

18:00  End of Session

Wednesday AM

Plenary Lectures

PL3  105/106
Montréal Medal

11:20 1659  Introductory Remarks

11:25 1659  Shifts, Atlas, Hybridization and Characterization of the Chemistry Discipline
Burford N, University of Victoria

12:05  End of Session

Analytical Chemistry

AN2  104D

Analytical Separations: Fundamentals, Proof of Principle and Practical Applications
Organizer(s) - Sergey Krylov, Karen Waldron
Chair(s) - Michael Reid, Nicole Unterlander

08:00 1660  Rapid Calibration-free Sampling and Enrichment with Solid-phase Microextraction: Numerical Modeling and Experimental Verification
Alam MN, University of Waterloo, Ricardez-Sandoval L, Pawliszyn J

08:20 1661  Development of LCMS Methods for Characterization of Regenerable Amine Solvents Used in CO2 Capture
Gallant S, Université de Montréal, Waldron KC

08:40 1662  Improvement of Run-to-run Reproducibility in CE Analysis by Measuring Streaming Potential as a Criteria for the Quality of Capillary Rinsing
Slyadnev M, Lumex Instruments Canada, Okun VM

09:00 1663  Developing the Optimal Buffer System for Protein Purification Using Transmembrane Electrophoresis
Abbott R, Doucette A, Unterlander N, Dalhousie University

09:20 1664  Development of an Offline LCxLC System Utilizing Reversed Phase x Reversed Phase Separation and Continuous Shift Gradient in the Second Dimension
Aly A, University of Waterloo, Minia University, Egypt, Garecki T, Omar MA, Derayea SM, Hammad M

09:40 1665  Investigations into Background from Template-template Interactions in Exponential Amplification Reaction of DNA
Reid MS, University of Alberta, Zhang H, Le XC

10:00  Coffee Break

10:20 1666  Development of a Multi-dimensional HPLC for Process Development
Bizzari NB, York University, Zhang WZ, Kwak JK, Mallik DM, Organ MGO

10:40 1667  Validation of Solid Phase Microextraction for High throughput Industrial Applications

11:00 1668  Modelling and Numerical Evaluation of the Post-sampling Period in a Permeation Passive Sampler
Salim F, University of Waterloo, Puvanendran H, Ioannidis M, Garecki T

11:20  End of Session

AN3  202B

Applications of Nanomaterials in Analysis, Sensing and Imaging – joint with MT
Organizer(s) - Russ Algar, Jennifer Chen, Juewen Liu
Chair(s) - Jennifer Chen, Russ Algar

08:00 1669  Nanomaterials for Ultrasensitive Molecuar and Cellular Analysis
Kelley SO, University of Toronto

08:40 1670  Nanogel-based Optical Devices for Sensing and Biosensing
Serpe MJ, University of Alberta

09:00 1671  Sensitive Detection of Single Nucleotide Variants Using an Enzyme-powered Three Dimensional DNA Nanomachine
Yang X, Mason SD, Yu Z, Tang Y, Li F, Brock University

09:20 1672  Conjugation for Synthesis of Functional DNA-protein Conjugates at 1:1 Stoichiometry
Yan XW, University of Alberta, Zhang HQ, Li XF, Le XC

09:40 1673  Plasmonic Nanomaterials for the Detection of Biomarkers, Pathogens and Small Molecules
Chen JIL, York University

10:00  Coffee Break

10:20 1674  3-Dimensional Optical Imaging of Nanoparticles in Tissues
Chan WCW, University of Toronto

11:00 1675  Noninvasive Microsurgery Using Aptamer-functionalized Magnetic Microdisks for Tumor Cell Eradication
Zamay AS, Belyanina IV, Zamay TN, Kolovskaya OS, Zamay GS, Ivchenko TI, Grigorieva VL, Vepreptsev DV, Glazyrin YE, Gargaun A, Berezovski MV, University of Ottawa

11:20  End of Session

AN6  206C

Portable Analytical Systems and Point-of-Care Analysis
Organizer(s) - Jean-François Masson, Aaron Wheeler
Chair(s) - Jean-François Masson

08:00 1676  Translating Chips from the Lab to the Field: Preparing for Field Evaluation of Malaria Assays
Narahari T, University of Toronto, Rackus D, de Campos RPS, Karcz M, Kain K, Wheeler AR

08:20 1677  Towards Room-temperature Nucleic Acid Amplification and Detection
Gibbs JM, University of Alberta, Alladin-Mustan BS, Lam M, Osman E, Gadzikwa T

08:40 1678  Chemical Biopsy based on SMPE Approach: A New Medical Tool
Pawliszyn J, University of Waterloo, Bojko B, Gomez-Rios G, Cypel M, Wasowicz M

09:20 1679  Microfluidics for Personal Mobile Diagnostics
Sia SK, Columbia University, USA

10:00  Coffee Break

10:20 1680  A Digital Microfluidic Method for Measles and Rubella Serosurveillance in Resource-limited Settings
10:40 1681 Pocket Diagnostics in Low and Middle Income Countries

Hallen EAH <University of Cambridge, UK>, Henderson C, Seevaratnam D, Daly R, Chee HY, De Villiers CA

11:20 End of Session

**BM6 201B**

11:20 End of Session

**Chemical Biology and Imaging - joint with OR**

Organizer(s) - Peter Brown, Len Luyt, Mark Nit, Chris Phenix, Santha Sathakumar

Chair(s) - Mark Nit

08:00 1682 Targeted Strategies Mediating Immune Recognition Of Cancer Rullo AF <Yale University, USA>, Spiegel DA

08:20 1683 Targeted Polarization of Immunomodulatory Macrophages through a Multivalent Display of Synthetic Glycans Edgar LJ <The Scripps Research Institute, USA>, Elchik MK, Paulson JC

08:40 1684 Exploiting Divergent Enzyme Selectivities for Green Chemistry and Narrow Spectrum Antimicrobials Horsman GP <Wilfrid Laurier University>

09:00 1685 Genomes to the Next Generation Antibiotics Magarvey NA <McMaster University>

09:20 1686 Transglutaminase-mediated Protein Labelling: Successes and Challenges Rachel N, Pelletier JN <Université de Montréal; PROTEO, The Québec Network for Research on Protein Function, Engineering and Applications>

09:40 1687 Enzymology by Terahertz Chemical Microscopy Nahar S <INRS>, Xavier R, Lopez Y, Doucet N, Kiwa T, Ozaki T, Gauthier MA

10:00 Coffee Break


11:00 1689 SERS-based Sensors of Oncogenic Transcription Factors Pazos E <Universitat Rovira i Virgili and Centre Tecnològic de la Química de Catalunya, Spain>, García-Algar M, Penas C, Torruella A, Pazos-Perez N, Guerini L, Vázquez ME, Garcia-Rico E, Mascaréñas JL, Alvarez-Puebla RA

11:20 End of Session

**BM6 201B**

11:20 End of Session

**Nucleic Acid Chemistry and Biology**

Organizer(s) - Andrew Beharry

Chair(s) - Andrew Beharry

08:00 1690 Studies on Modified dNTPs for Use in SELEX Experiments Perrin DM <University of British Columbia>, Wang Y, Liu E, Lam CH, Rengers M, Miller E

08:20 1691 Photochemical Control of siRNAs Desaulniers JP <University of Ontario Institute of Technology>, Hammill M, Hagen G

08:40 1692 Targeted Genetic Therapeutic Delivery to Glioblastoma Stem Cells Arnold AE <University of Toronto>, Malek-Adamian E, Le PU, Dammha MJ, Petrecca K, Shoichet MS

09:00 1693 Expanded Functionality of Nucleic Acids via Nucleobase Modification Hudson RHE <University of Western Ontario>

09:20 1694 Tuning DNA/RNA Sugar Conformation via Intramolecular H-F Interactions O'Reilly D <McGill University>, Kurian J, Moitessier N, Masad D

09:40 1695 A Ca2+-specific RNA-cleaving DNAzyme Liu J <University of Waterloo>

10:00 Coffee Break

10:20 1696 DNA Quadruplexes as a Scaffold for Self Assembling Sensors Linkletter BA <University of Prince Edward Island>, Henley J, Price JTD

10:40 1697 Modifying and Detecting RNA with Bioorthogonal Reactions Devaraj NK <University of California - San Diego, USA>

11:20 End of Session

**CE4 205D**

**Chemistry Education**

Organizer(s) - Alison Flynn, Stephen MacNeil

Chair(s) - Alison Flynn, Stephen MacNeil

08:00 1698 Acid-base Explanations: From Descriptive to Causal Mechanistic Reasoning Kouyoumdjian H <York University>, Underwood SM, Cooper MM


08:40 1700 Using Simulations and Screenecasts to Promote Student Understanding of Atomic Interactions Sweeder RD <Michigan State University, USA>, Harrington DG, VandenPlas JR

09:00 1701 Studying Students’ Experience with Animations of Organic Reaction Mechanisms Bongers AL <University of Ottawa>, Northoff G, Flynn AB

09:20 1702 Contrasting Visualizations - Empowering Students to Make a Choice to Insight into their Molecular Level Understanding Kelly RM <San Jose State University, USA>

10:00 Coffee Break

10:20 1703 Interplay between Relationships and the Flipped Classroom McCollum B <Mount Royal University>, Skagen D, Fleming C, Plotnikoff K


11:00 1705 Next Steps Toward Improving the Organic Chemistry Curriculum at the University of Ottawa Raycroft MAR <University of Ottawa>, Flynn AB

11:20 End of Session

**EN1 205C**

**Atmospheric Chemistry in a Changing Climate**

Organizer(s) - Arthur Chan, Sarah Styler

Chair(s) - Arthur Chan, Sarah Styler

08:00 1706 A Global Perspective on Reactive Organic Carbon in the Atmosphere Heald CL <MIT, USA>, Safieddine SA

08:20 1707 Water-soluble Organic Aerosol in Rural and Urban Environments in the Southeastern United States Ng NL <Georgia Institute of Technology, USA>, Xu L, Guo H, Weber R

08:40 1708 Molecularly size-resolved Brown Carbon within size-resolved Particulate Matter from a Boreal Forest Fire: Indications of Amine Reactive Uptake VandenBoer TC <Memorial University of Newfoundland>, Di Lorenzo RA, Place BK, Young CJ
08:40 1718 Use of a Spatially Explicit Food Web Bioaccumulation Model to Uncover Ecological and Physiological Drivers of PCB Bioaccumulation Risk in Detroit River Sport Fish Li J <University of Windsor>, Grigciuc-Mannion A, Demers J, Drouillard K

10:00 Coffee Break

10:20 1719 Identifying Environmentally-relevant Signals and Curve Classes in Tox21 qHTS Data Melnikov F <Yale University, USA>, Zimmerman JB, *Anastas PT

10:40 1720 Novel Brominated Flame Retardants and Their Role in Human Liver Thyroid Deiodination and Sulfotransferation Smythe TA <University of Manitoba>, Butt CM, Stapleton HM, Pleskach K, *Tomy GT


11:20 End of Session

Industrial Chemistry

IC5 203C

Innovative Processes for Pharmaceutical & Fine Chemical Manufacturing
Organizer(s) - Andrew Martins
Chair(s) - Andrew Martins

08:00 1722 Early Process Development Engagement to Scale a Complex Drug Candidate Wilsly A <Amgen, Inc., USA>, Beaver M, Fang E, Farrell R, Hedley S, Tedrow J

08:20 1723 High Throughput Screening for Process Chemistry Enhancement in the Pharmaceutical Industry Rey AW <Apotex Pharmachem Inc.,>

08:40 1724 Accelerate Pharmaceutical Process Development with Enabling Continuous Flow Chemistry Technology Fang E <Snapdragon Chemistry, Inc, USA,>

09:00 1725 Rise of the Machinists: Using Laboratory Automation for In-situ Reaction Analysis Hein JE <University of British Columbia>

09:20 1726 Synthesis Inspires Design: The Importance of Synthetic Innovations in Drug Discovery and Development Maddess ML <Merck Research Laboratories, USA>

10:00 Coffee Break

10:20 1727 From Leopold Ruzicka in 1935 until Now: The Story of (Z)-β-Santalol at Firmenich: Towards an Industrial Synthesis Birkbeck A <Firmenich SA, Switzerland>

10:40 1728 Continuous Flow Strategies for Enhancing Process Efficiency Newman SG <University of Ottawa>

11:00 1729 A Combined High-throughput and Mechanistic Approach to the Development of Catalytic Reactions for the Synthesis of Active Pharmaceutical Ingredients Leitch DC <GlaxoSmithKline Inc., USA>

11:20 End of Session

IC6 202C

Industrial Water Treatment Technologies - joint with EN
Organizer(s) - Gord Knight
Chair(s) - Katherine Bell/Ron Hofmann

08:00 1730 Global Challenges and Opportunities in Water DeVries M <Trojan Technologies>

08:40 1731 Ultraviolet Light Sources and Sensors for Environmental Contaminant Treatment Knight DG <Trojan Technologies>

09:20 1732 Towards a Sensor Array for Identifying Disinfectants and Quantifying Disinfectant Levels in Water Sharif O <McMaster University>, Selvaganapathy PR, *Kruse P


10:00 Coffee Break

10:20 1734 Practical Application of UV and UV-AOP Treatment in Advanced Water Reuse Bell KY <Stantec>

11:00 1735 Experimental Evaluation of Two UV Reactors in Series using MS2 and Bacillus Pumilus Wang Y <University of Toronto>, Wang J, Hofmann R, Lawryshyn Y

11:20 End of Session

Inorganic Chemistry

IN1 206D

Transition Metal Alkyl Chemistry
Organizer(s) - Ulrich Feld, Datong Song
Chair(s) - Laura Turculet

08:00
08:40 1736  Towards Pt-catalyzed Hydrocarbon Functionalization  
Love JA  
University of British Columbia  

09:00 1737  New Metal Adamantyl Complexes: Extending the Organometallic Chemistry of Adamantane  
Taulaj F  
University of Toronto at Mississauga, Armstrong D, Singh K, Lough AJ  
Feki U  

09:20 1738  London Dispersion Effects in Molecular Chemistry: Reconsidering Steric Effects  
S-C, DiPucchio RC  
University of Toronto  

10:00 Coffee Break  

10:20 1739  manganese Alkyl and Hydride Complexes: Synthesis, Structures and Reactivity  
Emslie DJH  
McMaster University  
Price JS, Chadha P  

08:40 1740  Lewis-acid Activation of Metal Carbonyls: Setting the Stage for Single-site Catalytic Reduction of CO to Ethanol  
MacNeil CS  
University of Lethbridge, Hayes PG  

11:00 1741  Advancing Hydroamination Catalysis with Early Transition Metal Alkyl Precursors  
Schafer LL  
University of British Columbia, Rosca S-C, DiPucchio RC  

11:20 End of Session  

IN3  
Recent Advances in Sustainable Chemistry - joint with EN, IC  
Organizer(s) - Kevin Szkop  
Chair(s) - Ian Mallov  

08:00  

08:40 1742  Two Thrusts of Green Chemistry: Catalytic Synthesis of Renewable Polymers & Enhancing the Culture of Innovation  
Tolman W  
University of Minnesota, USA  

09:20 1743  Lignin-graft-PLA Copolymers: Synthesis to Material Characterization  
Chile LE  
University of British Columbia, Hatzikirakos SG, Mehrkhodavandi P  

09:40 1744  Hybrid Organic/Inorganic Building Materials from Mining/Refinery Waste  
Smith RC  
Clemson University, USA, Tennyson AG  

10:00 Coffee Break  

10:20 1745  Better Delivery Systems for Agricultural Chemicals  
Anderson DJ  
Vive Crop Protection  

10:40 1746  Development of a Forward Osmosis Platform for the Treatment of Difficult Wastewater: Bench to Commercialization  
Holland AM  
GreenCentre Canada; Forward Water Technologies, Clark TJ, Mariampillai BE, Honeyman CH  

11:20 End of Session  

IN4  
Main Group Transformations and Catalysis - joint with the Royal Society of Chemistry and OR  
Organizer(s) - Cathy Crudden, Douglas Stephen  
Chair(s) - Cathy Crudden, Speed  

08:00 AGWIC Award Lecture - Inorganic Division Student Award for Graduate Research  

08:00 1747  Xenon Trioxide and Its Coordination Chemistry with Halides and Nitrogen Bases  
Goettel JT  
McMaster University, Haensch V, Mercier HPA, Schrobilgen GJ  

08:40 1748  Fluorescent Frustrated Lewis Pairs for Activating and Sensing Small Molecules  
Heiden ZM  
Washington State University, USA, Kieffer IA, Fernandez JL, Allen RJ  

09:00 1749  Designing Water-stable Heavy Main Group Metal Lewis Acid Catalysts  
Briand GG  
Mount Allison University, Anderson TS, Margeson MJ, Pickard HM, Shannon WE, Trevors EE, Decken A  

09:20 1750  Cooperative Lewis Acid/Base Catalysis  
Boom DHA, Krachko T, Habraken ERM, Slootweg JC  
University of Amsterdam, The Netherlands  

09:40 1751  Substituent Directed Phototransformations of BN-Heterocycles: Elimination vs Isomerization via Selective BC Bond Cleavage  
Yang D-T  
Queen's University  

10:00 Coffee Break  

10:20 1752  Bond Activation on Al(I): From Strong Single Bonds to Double Bonds  
Nikonov GI  
Brock University  

10:40 1753  Cationic Indium Complexes in Catalysis  
Mehrkhodavandi P  
University of British Columbia, Yu I, Chang C, Diaz Lopez C  

11:00 1754  Electrophilic Phosphonium Cations (EPC) Catalysts  
Stephan DW  
University of Toronto  

11:20 End of Session  

ING1  
General Session 1  
Organizer(s) - Robert Morris  
Chair(s) - John Corrigan  

08:20 1755  Coordination-based Self-assembly of Gold Nanoparticles: Hemoglobin vs Iron Ions in Aqueous Solutions  
Zenkova OV  
University of Ontario Institute of Technology, Egan JG, Fruehwald HM, Ebralizide II, Loschuk NO  

08:40 1756  Light-induced Self-assembly of Discrete Metallacycle  
Laramee B  
Université de Montréal, Hanan GS  

09:00 1757  d-d Luminescence Energy Variations in Square-planar Platinum(II) and Palladium(II) Complexes with Near-identical MS Motifs: A Variable-pressure Study  
Poirier S  
Université de Montréal, Reber C  

09:20 The AURIC Award Lecture  

09:20 1758  Gold(I) Trimethylsilylchlorogenolate Precursors to Luminiscent Mixed Coinage Metal-chalcogenide Clusters  
Polgar AM  
Western University, Khadka CB, Azizpoor Fard M, Cadogan C, Zhang A, Stillman MJ, Wiegend F, Corrigan JF  

10:00 Coffee Break  

10:20 1759  Towards Modeling the Active Site of Photosystem II: New Structural Motifs in Mn/Co Chemistry from the Employment of Hydroxamic Acids  
Alaimo AA  
Brock University, Gunha-Silva L, Teal S, Christou G, Stamatas TC  

10:40 1760  The Synthesis of π-Extended Luminescent Tellurophenes  
Braun CA  
University of Alberta, Ferguson MJ, McDonald R, Rivad E, Qi Y, He G  

11:00 1761  Spectroscopic & Electrochemical Properties of Aluminum Formazanate Complexes  
Maar RR  
University of Western Ontario, Gilroy JB  

11:20 End of Session  

Macromolecular Science and Engineering  

MS1  
Frontiers in Controlled Polymerization - joint with IN  
Organizer(s) - Parisa Mehrkhodavandi  
Chair(s) - Parisa Mehrkhodavandi  

08:20 1762  Novel Synthesis and Branching of a Spiroyclic Silicone  
Morgan J  
McMaster University, Chen T, Brook MA  

08:40 1763  Grafting-from Cellulose Nanocrystals via Photoinduced Cu-mediated Reversible-deactivation Radical Polymerization  
Kedzior SA  
McMaster University, Hatton FL, Cranston ED, Carmack A  

12:00 End of Session
09:00 1764 High-throughput Synthesis of Aryl-rich Siloxane Elastomers with Tunable Optical Properties Schneider AF<br/><McMaster University>, $Brook MA

09:20 1765 Polyglyoxylates: Controlled Depolymerization and Steps towards Controlled Polymerization Gillies ER<br/><University of Western Ontario>

10:00 Coffee Break

10:20 1766 Arborescent Copolymers with a Core-shell-corona Morphology as Templates for the Preparation of Metallic Nanoparticles Worku A, Nguyen VTA, Gauthier M<br/><University of Waterloo>

10:40 Macromolecular Science and Engineering Award Lecture

10:40 1767 A Strategy for Controlled Silicone Polymer Synthesis: Just Add Water (and a Few Other Things) Brook MA<br/><McMaster University>, Liao M, Laengert SE, Schneider A, Morgan J, Grande JB, Zhang J

11:20 End of Session

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**MT1 201E**

**Singlet Fission Materials**

Organizer(s) - Dwight Seferos, Matthew Sfier<br/>Chair(s) - Dwight Seferos

*08:00 1773 Design and Synthesis of Singlet Fission Chromophores Campos LM<br/><Columbia University, USA>*

*08:40 1774 Design and Synthesis of Acene Dimers to Determine the Mechanism of Singlet Fission Tykwnski RR<br/><University of Alberta; University of Erlangen-Nuremberg, Germany>, Hetzer C, Zirnlemeier J, Basel BS, Guldi DM

*09:20 1775 Sulfur-bridged Symmetrical Chromophore Dimers: Controlling Intermolecular Electronic Coupling with Sulfur Oxidation State Christensen PR, Cruz CD, Casanova D, Bardeen CJ, Wolf MO<br/><University of British Columbia>

*09:40 1776 Singlet Fission in Solution-based Assemblies of Functionalized DNA and PEG Polymers Tilley AJ<br/><University of Toronto>, Pensack RD, Scholes GD, Seferos DS

10:00 Coffee Break

10:20 1777 Towards Structural Design Rules for Singlet Fission Materials in the Condensed Phase Scholes GD<br/><Princeton University, USA>, Pensack RD

11:00 1778 Solid-state Organic/Nanocrystal Films for Infrared Visible Photon Conversion via Excitons Wilson MWB<br/><University of Toronto>

11:20 End of Session

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**MT6 201D**

**NanoHybrid Materials - joint with MS**

Organizer(s) - Mita Dasog, Rob Scott, Jon Veinot<br/>Chair(s) - Robert Scott

*08:00 1779 BiO1 Nanoplate Sensitive TiO2 Films for Visible Light Photocatalytic Degradation of Organic Pollutants Odling G, Robertson N<br/><University of Edinburgh, UK>

*08:20 1780 Photocatalytic Performance of Noble Metal-modified TiO2 from UV to Visible Light Organic Transformations Elhage A<br/><University of Ottawa>, Lanetna AE, Scalano JC


09:00 1782 Photodeposited Metal Oxides for Electroanalysis Detlefbach KE<br/><University of British Columbia>, Huang A, Kolbeck M, Berlinguette CP

09:20 1783 Synthesis of Core@Shell Nanocatalysts with Intermetallic Interiors Skrabalak SE<br/><Indiana University, USA>

10:00 Coffee Break

10:20 1784 Two-dimensional Silicon Nanosheets - From Synthesis to Functionalization and Application Helbig T, Luleeva A, Scherer LM, Fassler TF, Lugli P, Veint JGC, Rieger B<br/><Technische Universität München, Germany>

11:00 1785 Nanoparticle/Perovskite Composites for Photocatalytic C-C Bond Formation Crabbe BW<br/><Saint Francis Xavier University>, Kuehn OP, Hallett-Tapley GL

11:20 End of Session

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**OR2 205B**

**Organic Chemistry**

A Century of Organic Synthesis in Australia and Canada
Organizer(s) - Louis Barriault, Robert Britton, Mike Kerr<br/>Chair(s) - Michael Kerr

*08:00 1786 Chemoenzymatic Total Synthesis of the Hydroxylated Cyclohexenone Carboxylic Acid Moiety of Xylomin Gharve M<br/><Brock University>, Froese J, Murphy B, Simionescu R, Hudlicky T

*08:20 1787 Synthesis of Previously Inaccessible Electron-poor Allylboronates and their Application in the Heterocycle Synthesis Shao W<br/><University of Toronto>, Kaldas SJ, Yudin AK

*08:40 1788 Utility of Iron Nanoparticles and a Solution-phase Iron Species for the N-demethylation of Alkaldoids Singer RD<br/><Saint Mary's University>, Awalt JK, Lam R, Kellam B, Graham B, Scammells PJ

09:00 1789 Revisiting the Mechanism of Thiele's Ester and Application of its Derivatives Chen J<br/><University of Victoria>, Kilpatrick B, Moffitt MG, Oliver AG, Burns F, Wulff JE

*09:20 1790 Gold Catalysis for Organic Synthesis Gagosz F<br/><University of Ottawa>

10:00 Coffee Break

10:20 1791 The Total Synthesis of Viroside A Gleason JL<br/><McGill University>, Hughes JME

10:40 Alfred Bader Award Lecture
10:40 1792 Synthesis of Bioactive Macrocycles  
*Yudin AK*  
<University of Toronto>

11:20 End of Session

**OR5**  
**201C**

**Recent Advances in Metal-free Transformations**

Organizer(s) - André Beauchemin, Yuri Bolshaaan  
Chair(s) - Yuri Bolshaaan

**08:00 1793** Metal-free Intermolecular Cyclopropanation of Alkenes Using Iodonium Ylides  
*Tao J*  
<University of Waterloo>,  
*Estrella CD*  
*Murphy GK*

08:20 1794  
*A Solution to the ProTide Synthesis Problem: Adventures in Asymmetric Nucleoside Phosphorylation*  
*Campeau L-C*  
<Merck & Co., Inc.>

09:00 1795  
*Utilizing Divergent Photocyclization/1,4-Sigmatropic Rearrangements for Sexipenderonoid Synthesis*  
*Derksen D*  
<University of Calgary>

09:20 1796  
*Boronic Acid Catalysis for Direct Activation and Transformations of Hydroxyl Functional Groups*  
*Hall D*  
<University of Alberta>,  
*M X Morgan TDR, Verdelet T>

10:00 Coffee Break

10:20 1797  
*Metal-free Cycloetherification by in Situ Generated P-Stereogenic Diazenium Diacids: A Convergent Synthesis of Enantiomerically Pure Dihydrobenzooxaphospholes*  
*Li S-G*  
<McGill University>,  
*Han ZS, Vierec P, Lee H, Kuroki D, Senanayake CH, Tsantrizos YS>

10:40 1798  
*Iodine-based Reagents: A Purple Future for Additions and Rearrangements*  
*Wirth T*  
<Cardiff University, UK>

11:20 End of Session

**OR6**  
**203B**

**Transition Metal Catalysis for Organic Synthesis**

Organizer(s) - Stephen Newman, Sophie Rousseaux  
Chair(s) - Sophie Rousseaux

08:00 1799  
*Novel Ester Metathesis Reaction Catalyzed by Organometallic Ruthenium Complexes: Application to Transfer Hydrogenation of Esters*  
*Khaskin E*  
<Okinawa Institute of Science and Technology, Japan>,  
*Duby A*

08:20 1800  
*Decarboxylative and Desulfitative Cross-coupling Reactions as a Versatile Synthetic Tool*  
*Forgione P*  
<Concordia University>

08:40 1801  
*Highly Regioselective Gold-Catalyzed Formal Hydration of Propargyl gem-Difluorides as a Synthetic Equivalent to the Selective Deoxofluorination of 1,3-Diketones*  
*Hamel J-D*  
<Université Laval>,  
*Hayashi T, Cloutier M, Savoie PR, Beaudoin M, Paquin J-F*

09:00 1802  
*in-situ Tantalum-catalysed Hydroamination: Accessing Novel Substrates and Selective Reactivity via Ligand Tunability*  
*DiPucchio RC*  
<University of British Columbia>,  
*Rosca SC, Schafer LL*

09:20 1803  
*Application of Non-precious Metals Catalysts in the Synthesis of Pharmaceuticals*  
*Monteforte S*  
<Pfizer, Inc., USA>

10:00 Coffee Break

10:20 1804  
*Z-Selective Cross-coupling of Allylic Carboxylates and α-Diazo Esters*  
*Lundgren RJ*  
<University of Alberta>

11:00 1805  
*Simplifying Earth-abundant Metal Catalysis*  
*Thomas SP*  
<University of Edinburgh, UK>

11:20 End of Session

**OR7**  
**206F**

**Advances in Heterocycle Synthesis**

Organizer(s) - Louis-Charles Campeau,  
Ernest Lee  
Chair(s) - Ernest Lee, Louis-Charles Campeau

08:00 1806  
*Development and Application of Flow Chemistry Methodologies in Heterocycle Synthesis*  
*Tranmer GK*  
<University of Manitoba, Fong Y>

08:20 1807  
*Direct Functionalization of Pyridines with Cyclopropanol Derived Radicals: The Cyclopropanol Minisci Reaction*  
*Orellana A*  
<York University>,  
*Nolakoa A, Zhang M*

08:40 1808  
*Development of the Cu(I)-catalyzed [3+2] Asymmetric Cycloaddition Process for the Manufacture of Idasanutlin Fishlock D*  
<Hoffmann-La Roche>

09:20 1809  
*Selective Functionalization of Pyridines and Diazenes via Heterocyclic Phosphonium Salts*  
*Mcnally A*  
<Colorado State University, USA>

10:00 Coffee Break

10:20 1810  
*Utilizing a Versatile N-Silylenamine Intermediate Towards a Modular Synthesis of Poly-substituted Pyridines*  
*Lui EKJ*  
<University of British Columbia>,  
*Schafer LL*

10:40 1811  
*Rapid Synthesis of Stereoelectronically Rich Heterocycles and New Methods for the Direct Functionalization of Heteroaryl C-H Bonds*  
*Britton RA*  
<Simon Fraser University>

11:20 End of Session

**OR9**  
**201F**


Organizer(s) - Graham Bodwell, Rik Tykwinski  
Chair(s) - Graham Bodwell

08:00 1812  
*Optically Switching Charge and Energy Transfer Processes in Pi Conjugated Chromophores: Molecules to Devices*  
*Frank NL*  
<University of Victoria>,  
*Kurimoto A, Paquette MP>

08:40 1813  
*Alkynyl PDI Derivatives as a Versatile Platform for Diverse Functional Materials for Organic Electronics*  
*Cann JR*  
<University of Calgary>,  
*Welch GC*

09:00 1814  
*Phenylacetylene Scaffolding as Receptors for Anions: Synthesis, Supramolecular Chemistry and Emerging Applications*  
*Haley MM*  
<University of Oregon, USA>

09:40 1815  
*Redox Controlled Supramolecular Chemistry Based on Viologen Architectures*  
*Weiss J*  
<Université de Strasbourg, France>,  
*Wytko J, Berville M>

10:00 Coffee Break

10:20 1816  
*Boron Subphthalocyanines and Boron Subnaphthalocyanines: Very Versatile Materials with Robust Chemistry and High Stability for Applications in Organic Photovoltaics/Solar Cells*  
*Bender TP*  
<University of Toronto>

11:00 1817  
*Electronic and Magnetic Interactions between Porphyrins*  
*Ruppert R*  
<Université de Strasbourg, France, >

11:20 End of Session

**OR10**  
**206E**

**Fluorinated Molecules: Syntheses, Analyses, and Applications - joint with BM**

Organizer(s) - Jean-François Paquin, Glenn Sams  
Chair(s) - Glenn Sammis

08:00 1818  
*Stability and Polarity of the Insertion Complexes of Fluorinated Molecules in Ion-pairs*  
*Naumkin FY*  
<University of Ontario Institute of Technology>,  
*Kerr S>
08:00 1819 Optimized Radiofluorination of DFH17 Using Aluminum-fluoride (AlF3) 1Alonso Martínez LM <University of Montreal Hospital Research Centre; Université de Montréal; Montreal Heart Institute>, Harel F, Nguyen QT, Letourneau M, D‘Oliviera-Sousa C, Meloche B, Fournier A, Dupuis J, DaSilva JN

08:40 1820 New Synthesis of Monoofluoroalkenes Drouin M <Université Laval>, Tremblay S, Paquin J-F

09:00 1821 New Fluorination Reactions of p-(Difluorowiodo)toluene Murphy GK <University of Waterloo>, Zhao Z, Kulkarni KG, Mirkovic B, Sauder M, Sinclair GS, Tran R, Tao J, Shi J, Racicot L


09:40 1823 Shedding Light on Trk Neurotrophin Receptors with PET Neuroimaging: A 6 year journey Schirrmacher RS <University of Alberta>, Bernard-Gauthier VB

10:00 Coffee Break

10:20 1824 Biosynthesis of Fluorometabolites and the Perplexing Case of a Missing Molecule Zechel DL <Queen’s University>

10:40 1825 Importance of Fluorine in Agrochemistry: Example of the Mitochondrial Respiration Inhibitors Fungicides Vors J-P <Bayer SAS, France>

11:20 End of Session

Physical, Theoretical and Computational Chemistry

PT10 203D Electronic Structure Theory
Organizer(s) - Paul Ayers, Marcel Nooijen, Viktor Staroverov Chair(s) - Marcel Nooijen

08:00 1826 Vertical Excitation Energies from the Adiabatic Connection Becke AD <Dalhousie University>

08:40 1827 Confronting Memory-dependence in Time-dependent Density Functional Theory Maitra NT <City University of New York, USA>

09:20 1828 The Exact Functional of Density Functional Theory Cohen AJ <Universidad Autónoma de Madrid, Spain>, Morí-Sánchez P

10:00 Coffee Break

10:20 1829 Generation of Exchange-correlation Potentials from Electronic Wave Functions in the Basis-set Limit Ryabinkin IG <University of Toronto at Scarborough; University of Toronto>

10:40 1830 Localized Operator Partitioning Method for Electronic Excitation Energies Izmaylov AF <University of Toronto at Scarborough; University of Toronto>

11:20 End of Session

Protein Machines and Allostery
Organizer(s) - Lewis Kay, Scott Prosser and Giuseppe Melacini Chair(s) - Scott Prosser

08:00 1831 NMR: Why Bother? Kay L <University of Toronto>

08:40 1832 Addressing the Functional Importance of Molecular Flexibility among Structural Enzyme Homologs, or How the Subtle Dance of Atoms Influences Protein Function Bernard DN, Narayanan C, Gagné D, Bafna K, Gobeil SMC, Pelletier JD, Agarwal PK, Doucet N <Université du Québec>


09:20 1834 Allosteric and Dynamic Regulation of E2-E3 Recognition during Ubiquitination Das R, Chakrabarti K, Li J, Byrd RA <National Cancer Institute, USA>

10:00 Coffee Break

10:20 2803 Allosteric Regulation of the Sarco/Plasmatic Reticulum Ca2+-ATPase (SERCA) by Phospholamban Veglia G <University of Minnesota, USA>

11:00 1836 Probing Allosteric Communication with Long-range Rigidity Propagation across Protein Networks Sjoka A <Kwansei Gakuin University, Japan; Japan Science and Technology Agency, Japan>

11:20 End of Session

Surface Science

Surface Electrochemistry
Organizer(s) - Ian Burgess, David Hall, Janine Maureroll Chair(s) - Bernie Kraatz/Janine Maureroll

08:00 1837 Microscale Synchrotron Infrared Spectroscopy of the Electrode-solution Interface Morhart TA <University of Saskatchewan>, Quirk A, Lardner MJ, May TE, Rosendahl SM, Burgess IJ

08:20 1838 Downstream Impedance in Microfluidic Channels Holm T, Ingdal M, Strobl JR, Fanavoli EV, Sunde S, Seland F, Harrington DA <University of Victoria>

08:40 1839 Cuvette-based Electrogeneated Chemiluminescence Detection System for the Assessment of Polymerizable Ruthenium Luminophores Danis AS <McGill University>, Odette WL, Perry SC, Canesi S, Sleiman HF, Mauzeroll J

09:00 1840 The Influence of Oxygen and Copper Coatings on Carbon Steel Corrosion Standish TE <Western University>, Zagulidin D, Ramamurthy S, Noël JJ, Shoesmith DW

09:20 1841 Studying and Remediating Non Specific Adsorption of DNA onto MCH/DNA Self Assembled Monolayers Using In-situ Spectroelectrochemical Fluorescence Microscopy Yu Z, Casanova-Moreno J, Bizzotto D <University of British Columbia>

09:40 1842 In Situ Observation of Electrochemical Processes in Lithium Ion Batteries Using Magnetic Resonance Imaging Krachkovsky SA, Bazak JD, Gowd GR <McMaster University>

10:00 Coffee Break

10:20 1843 Electrochemical Nucleation and Physical Behavior of Individual Nanobubbles of H2, O2, and N2 White H <University of Utah, USA>, Edwards M, Liu Y, Ren H, German S

10:40 End of Session

Analytical Chemistry

AN3 202B Applications of Nanomaterials in Analysis, Sensing and Imaging – joint with MT Organizer(s) - Russ Algar, Jennifer Chen, Juween Liu Chair(s) - Russ Algar, Juween Liu

13:40 Fred Beamish Award Lecture

13:40 1845 Semiconducting Polymer Dots (Pdots) for Biosensing and Molecular Analysis Chiu DT <University of Washington, USA>
14:20 1846 Detection of Specific Proteins Using Binding-induced DNA Assembly and Fluorescence Resonance Energy Transfer Paliwoda RE <University of Alberta>, Zhang H, Le XC

14:40 1847 Investigation of Energy Transfer Between Semiconducting Polymer Dot Donors and Organic Dye Acceptors Liu K <University of British Columbia>, Algar WR

15:00 1848 Designing Plasmonic Nanoarchitectures to Improve the Analytical Properties of Fluorescent Ionophores Boudreau D <Université Laval>

15:40 Coffee Break

16:00 1849 The Small Matter of Bioanalytics: Adventures at Less Than 10 nm with Quantum Dots and/or FRET Algar WR <University of British Columbia>

16:40 1850 Optical Immunosensor for Detection of Pathogens Mahshid S <University of Toronto>, Kelley SO

17:00 1851 Fabrication of Patterned Superhydrophobic/Hydrophilic Substrates by Laser Micromachining for Small Volume Deposition and Droplet-based Fluorescence Bachus KJ, Mats L, Choi HW, Gibson GTT, Oleschuk RD <Queen's University>

17:20 1852 Surface Modification of Nanomaterials for Analytical Applications Liu B <University of Waterloo>, Liu J

17:40 1853 Tailored Nanostructured Films for Chemical and Biological Detection Jemere AB <National Research Council Canada>

18:00 End of Session

AN6 206C

Portable Analytical Systems and Point-of-Care Analysis Organizer(s) - Jean-François Masson, Aaron Wheeler Chair(s) - Aaron Wheeler


14:20 1855 Point-of-care Tests for Global Health: Promises and Challenges Peeling RW <London School of Hygiene and Tropical Medicine, UK>

15:00 1856 Field-deployed SPR Sensors for Clinical and Environmental Applications Masson JF <Université de Montréal>, Aubé A, Pelletier JN, Granger G, Brule T, Bukar N, Schmitzer AR, Martel R

15:40 Coffee Break

16:00 1857 Development of Sensors for Marine Monitoring: Targets, Technologies and Trials Regan F <University of Limerick>, Ireland

16:40 1858 Field Deployable Optical Sensing Devices Serje MJ <University of Alberta>

17:20 1859 Combining Centrifugation and Articulation of the Chip: A Novel and Versatile Concept for Fluid Manipulation and Integration of Bioanalytical Processes Geissler M <National Research Council Canada>, Clime LP, Hoa XD, Morton KJ, Blais BW, Veres T

17:40 End of Session

ANG 104D

General Session Organizer(s) - Demian Ifa, Dajana Vuckovic Chair(s) - Demian Ifa, Dajana Vuckovic

13:40 Maxxam Award Lecture

13:40 1860 The Unlimited Capabilities of Inductively Coupled Plasma Spectrometry Beauchemin D <Queen's University>

14:20 1861 Microfluidic Platforms for Drug Discovery Elvira KS <University of Victoria>

14:40 1864 Solving the Comundrum of Nitrocycloluse Identification via Mass Spectral Analysis of a Small Molecule Analogue Black C, Brown J, Shields SWJ, Smith JC, Hearns NGR, Manthorpe JM <Carleton University>

15:00 1863 Refocussing the Past: Uncovering the Chemical Mystery of Duguerreotypes Kozachuk MK <University of Western Ontario>, Sham TK, Martin RR, Nelson AJ, McElhone J

15:40 Coffee Break

16:00 1865 Quantification and Speciation of Total Phosphorous Inputs from Precipitation and Dust Deposted along a Latitudinal Transect in Newfoundland and Labrador Laprise CM <Memorial University of Newfoundland>, Place BK, Edwards KA, MacInnis JJ, Young CJ, Ziegler SE, VandenBoer TC

16:20 1866 Identification of VOCs Using Polymer Sensing Materials: Application of PC4 Scott AJ <University of Waterloo>, Stewart KME, Penlidis A

16:40 1867 Carbon Nanotube Based Chemi-resistive Biosensors for Bacteria Detection Gill G <University of Waterloo>

17:00 1868 Novel Application of Electrospray Ionization Mass Spectrometry to Validate Umbrella Sampling Results Mehrzam B <University of Calgary>, Rauk A


17:40 1870 Improving Metabolite Coverage in LC-MS Untargeted Metabolomics of Human Plasma Sitnikov D, Monnin C <Concordia University>, Vuckovic D

18:00 End of Session

ANP Hall C

Poster Session

From 17:40 until 19:30

1871 Separation of Dissolved Trace Elements into Bioaccessibility-based Fractions Using Asymmetrical Flow Field-flow Fractionation Coupled to ICPMS Cuss CW <University of Alberta>, Grant-Weaver I, Shotyk W

1872 Interannual and Source-based Variation in the Molecular Composition of Dissolved Organic Matter: Self-organizing Maps for Global Patterns and Drilling Down to the Molecular Level Cuss CW <University of Alberta>, Sun Chenxing, Martin JW, Shotyk W

1873 Synthesis, Characterization and Structure Elucidation of 3-allyl-Carbonylnitroxy Triphenylphosphine Iron Complexes Mahood Z <University of the Punjab, Pakistan>, Misbah T, Muhammad I, Syeda Robina G

1874 Low Field Fluorine - 1 & 2D 19F Benchtop NMR Experiments McLachlan AS <Oxford Instruments, UK>, Williamson DC

1875 Use of Modified Carbon Paste Electrode for Determination of Trace Levels of Inorganic Mercury in Industrial Effluents Farooq U <University of the Punjab, Pakistan>, Mazhoo H, Zain M, Salman M, Makshoof N

1876 Characterization of Electronic Structure via Voltammetry: A Theoretical Study of Single-walled Carbon Nanotubes Hossain MS <McGill University>, Muralidharan B, Bevan KH

1877 Determining the Permeation Parameters of Chemicals in Metalworking Fluids through Skin Absorption Lin YJ <National Taiwan University, Taiwan>, Tsai SW
**Wednesday PM 1954**


1955  Detection of Proteins Using a DNA Three-way Junction and Gold Nanoparticle Amplification by ICP-MS *Huang X*,<br>Lin Y <University of Alberta>,<br>Zhang H, *Le XC*

1956  The Effect of Copper Contamination at the Cathode in Cu-Cl Electrolyzers *Siu KWM, Hopkinson AC*

1958  Surface-based Electrochemical Sensor for Monitoring the Tau Aggregation: Pharmaceutical Application *Ahmadi S*<br>University of Toronto at Scarborough; University of Toronto,<br>She Z, *Kraatz HB*

1959  Simultaneous Detection of Hydroquinone and Pyrocatechol with Glassy Carbon Electrodes *Bell JG* <University of Windsor>, *Wang J*

1960  Non-aqueous Background Electrolytes in Free Flow Electrophoresis *Liu Y* <York University>, *Kochmann S*,<br>Krylov SN

1961  Collision-induced Dissociation of Br4, Isomers Derived from Tetraglycine *Lam B* <York University>,<br>Lau JK-C, Lai C-K, Sui KWM,<br>Hopkinson AC

1962  A Protein-activated DNAzyme Motor Enabling Simultaneous Amplified Detection and Imaging of Cancer Cells *Deng W*<br>University of Alberta; Southwest University of China,<br>Zuehke A, Huang C, *Zhang H*

1963  Separation and Classification of Nucleobase Tautomers Using Differential Mobility Spectrometry *Psutka J*<br>University of Waterloo,<br>Anwar A, Walker SWC, Dickmann T, Janiszewski JS, Campbell JL,<br>Hopkins WS

1964  Protein Preservation through Acetone Precipitation *Caterini ZS* <Dalhousie University>, *Doucette A*

1965  Development and Validation of a Point-of-need Diagnostic for Quantification of Myeloperoxidase *Wolfe MG*,<br>McMaster University,<br>Zhang Q, Radford K, Nair P,<br*Brennan JD*

1966  Selective Removal of Barriers to Charge-carrier Flow at the Cu-zeolite/Graphene Heterojunction in Solar Cells *Turnbull MJ*<br>Western University; Vaccarello D, Yiu YM,<br>Sham TK, *Ding Z*

1967  Novel Application of Hansen Solubility Parameters in Fabrication of Molecularly Imprinted Polymers *Jafari M*<br>Memorial University of Newfoundland,<br>Bottaro CS

1968  Detecting Spillover of Tomatoes by Ultrasens Spectroscopy *Power AK*<br>University of New Brunswick,<br>Rackov AA, *Burns DH*

1969  The Electrochemical Detection of Methcillin-resistant Staphylococcus aureus<br>*Nemr CR*<br>University of Toronto,<br>Smith SJ, Liu W, Labib M, *Kelley SO*

1970  The Characterization of Atmospheric Odored Organic Nonaqueous Conventional and Novel Techniques *Ghoshtadistad AR*<br>McGill University,<br*Ariya PA*

1971  P(Tt)TMPyP Porphyrin and Its Encapsulation in Metal-organic Framework for Anion Sensing *Masih D*<br>University of Western Ontario; King Abdullah University of Science and Technology, Saudi Arabia,<br>Chernikova V, Shekhab O, Rohani S, Edduadi M, *Mohammed OF*

1972  Characterization of Alpha-Synuclein's Residual Structure in the Phospholipid Bilayer Nanodiscs by TRESI-MS Coupled with HDX *Oganesyan IO*<br>York University,<br>Tandon AT, *Wilson DW*

1974  Parallel Poly-adenine Duplex Formation at Low pH Facilitates DNA Conjugation onto Gold Nanoparticles *Huang Z*<br>University of Waterloo,<br>Juewen L

1975  The Determination of Carotenoids in the Plasma of the American Redstart (Setophaga ruticilla) by HPLC and LCMS *McKenna KJ*<br>Thompson Rivers University,<br>Redudink M, Donkor K, Hudon J

1976  Accurate microRNA Analysis in Crude Cell Lysate by Capillary Electrophoresis-based Hybridization Assay in Comparison with Reverse-transcriptase Polymerase Chain Reaction<br>*Hu L*<br>York University,<br>Staheuski A, Wegman DW, *Krylov SN*

1977  Microstructured Fibres as Multi-electrospray Emitters for Mass Spectrometry *Bachu KJ*,<br>Simon DJ<br>Queen's University,<br>Fu Y, Hutama T, *Oleschuk RD*

1978  Application-driven Sensing Material Design for VOC Sensors *Stewart KME*<br>University of Waterloo,<br>Penlids A

1980  Trace Phosphate Ions Sensing Using Silicon-on-insulator Ring Resonators *Wu JW*<br>Queen's University,<br>Saunders J, Chen H, Borjain S, Crucend C, *Loock HP, Xu DX*

1981  Chemical Approaches to Evaluate the Diversity of Medicinal Cannabis *Mudge EM*<br>University of British Columbia; BC Institute of Technology,<br>Murch SJ, *Brown PN*

1982  Lateral Flow Assay Nano-aptasensors for Mycotoxins Detection<br>*Ranganathan V*<br>Carleton University; ;<br>*DeReso MC*

1983  Ultrag high Performance Liquid Chromatography (UHPLC-MS/MS) Analysis of Oxiflurine in Citrus Fruits with a Modified QuEChERS Method *Parajas AE*<br>University of Winnipeg,<br>Luong K, Wong CS

1984  A Binding-induced Fluorescence Turn-on Assay for Aflatoxin B1<br>*Xu L*<br>University of Alberta; Chinese Academy of Agricultural Sciences, China,<br>Zhang HQ, Zhang ZW, Li PW,<br>Le XC

1985  A Simple Filter for Water Purification<br>*Gracious S*<br>Dalhousie University,<br>Doucette A, Chisholm R

1986  Mimicking Electrochemical Processes Using Gas-solid Reactions *Savignac L*<br>Université du Québec à Montréal,<br>Scouhaud SB

1987  Digestive a and b Ions Derived from Lanthanide-peptide Complexes<br>*Wang Y*<br>York University,<br>Lau JK-C, Lai CK, Lam B,<br>Siu KWM, Hopkinson AC


1989  Temperature Programming of the Second Dimension in GCxGC<br>*Chow H-Y*<br>University of Waterloo,<br>*Gorecki T*

1990  Alcohol Consumption during Gestation Period Affects Phosphatidylcholine Distribution in Developing Fetal Brain<br>*Bagg A*<br>York University,<br>Whyle-Fagundes P, Zoidi GR, *Hall DR*

1991  A Snapshot of Various Targeted Metabolomic Methodologies and their Applications<br>*Fei F*<br>McMaster University,<br>Bloomfield J, Green MK

1992  A New Method for High Throughput Analysis of Neonicotinoids in Honey by UPLC-PDA and UPLC-MS/MS<br>*Gauthier JR*<br>Memorial University of Newfoundland,<br>Bottaro CS

1993  Application of GC/QQO-MS/MS, GC-MSD, and LC-MS/MS QTrap for The Determination of Pesticide Residues in Food Products<br>*Mamur A*<br>U.S. Food and Drug Administration, USA,<br>Williams K, Damanti A, Masse C, Iorsh M, Katsoudas E, *Viner M*


1996 Comprehensive Screening of Environmental Contaminants in Surface Waters by Non-targeted LC-MS and Quantitation on a Q-Exactive Orbitrap Morrison L, *Agriculture and Agri-Food Canada; Western University, *Sumarah M, Yeung K, Renaud J


1998 Fluorescence and Ultraviolet Spectroscopic Studies of Ciprofloxacin- DL-Dopa Binding in the Presence of Indium (III) and Andrographolide: A New Approach for the Detection of Drug in Pharmaceutical Formulation Khan AM, *Allaghar Muslim University, India, >, Manea YK, Syed AN

1999 Sensitive Determination of 2- and 4-(5)-Methyylimidazoles in Food Products by Cyclodextrin-modified Capillary Electrophoresis Guo Z, *Thompson Rivers University, *Donkor KK


2004 Supercapacitors and Applications mohammadi A, *Hosseiny Davarani SS, Shahid Beheshti University, Iran

2005 Novel Covalent Organic Frameworks as Stationary Phase for Open-tubular Capillary Electrophromatography *Bao T, *Xi’an Jiaotong University, China, Wang S


14:00 2016 Target-molecule Triggered Release Technology *Tsae PK, *Carleton University, Zhang X, *DeRosa MC

14:20 2017 Salt-controlled Two-site Ligand Binding by the Cysteine-binding Aptamer *Johnson PE, *York University, Slavkovic S, Neves MAD, Chucker ZA, Shoara AA

14:40 2018 Riboswitching on the Light: Imaging Cyclic Dinucleotides Involved in Bacterial and Immune Signaling *Hammond MC, *University of California - Berkeley, USA

15:20 2019 Recognition of Guanine Quadruplexes by Small Molecule Ligands: Towards Anticancer Applications Miron CE, *Queen’s University, Mergny JL, *Petitjean A

15:40 Coffee Break


16:40 2022 Cyclic Azobenzene as a Photoswitch to Regulate DNA Hybridization Jun M, Drhuval J, *Brock University, Eljaba F, Yalagala Y, *Yan T


17:40 2025 Introducing Turnover and Increasing Selectivity towards Single Nucleotide Polymorphisms in a Ligase Chain Reaction Using a Destabilizing Abasic Lesion *Gibbs JM, *University of Alberta, Kausar A, Osman EA, Gadzikwa T, Hales S, Alladin-Mustan BS

18:00 End of Session
First and Second Year Undergraduate Teaching Initiatives
Organizer(s) - Noel George, Anne Johnson
Chair(s) - Noel George, Anne Johnson

13:40 CEC Award for Chemical Education Lecture

13:40 2026 Welcome to my Classworld: Engaging Learners in Large Chemistry Classes and Beyond Lucy CA <University of Alberta>

14:20 2017 Learning Objectives and Strategies for Infusing Systems Thinking into General Chemistry: An International Initiative *Mahaffy PG <King's University>

14:40 2028 Incorporating Team-based Learning into the General Chemistry Curriculum McManus GJ <Florida Gulf Coast University, USA>

15:00 2029 Incorporating an Active Learning Component into a General Organic Chemistry Course Mihaylichenko L <University of Toronto at Scarborough>, Restivo W

15:20 2030 Active Learning Works: Combining Different Learning Initiatives in an Organic Chemistry Class Jackson DA <York University>, Kouyoumdjian H

15:40 Coffee Break

16:00 2031 Specifications Grading Adapted for Organic Chemistry Ring J <Lemoyne-Rhyme University, USA>

16:40 2032 Verbal Final Exams in a General Chemistry Course Sweeder RD <Michigan State University, USA>

17:00 2033 A Tale of "Two-stage" Chen LWL <McMaster University>

17:20 2034 Using the Crowdmark Online Grading Platform in Intro Organic Chemistry Courses Pavelka LC <McGill University>

17:40 End of Session

CEP Hall C

Poster Session
From 17:40 until 19:30

2035 Creating Sustainable Labs, Together Daley EN <My Green Lab>, Paradise A

2036 Observation of Acid Rain in Northern Japan during 2006-2016 and its Application to Chemical Education Kan M <Hokkaido University of Education, Japan>

2037 Revolutionizing Undergraduate Labs with Benchtop NMR - An Active Learning Approach Zamora MT <Nanalysis Corp>, Araneda JF, Riegel SD

2038 Innovative Project Design with Microwave Technology in Undergraduate Teaching Labs Dusharm G <CEM Corporation>, Karney M

2039 The Green Chemistry Initiative at the University of Toronto Smith SAM <University of Toronto>, Demmings KZ, Mallov I, Szop KM

2040 Something Old, Something New: A Cultural and Chemical History of Two Blues McNeil WS <University of British Columbia>

2041 Developing Property-directed Integrated Synthetic Laboratories Yousaf M <Ryerson University>, Koivisto BD

2042 Science Olympiads for Junior High Students: A Great Outreach Activity and University Recruiting Tool Pelletier S <University of Alberta>, Alary E, Babooram K, Frank D, Lepage M

2043 Collaborative Learning: Introducing Group Management Skills in the Laboratory by Assigning Roles Saleem R <University of Toronto at Mississauga>, Habeeb Z

2044 An Introduction to the Hazard Reflection Framework McKenna KJ <Thompson Rivers University>, Brewer S

2045 Organic Chemistry Faculty's Perceptions of Student Misconceptions and its Link to Pedagogical Content Knowledge Hjerstedt A <Purdue University, USA>, Tasker R


2047 Electrochemical Sensor for Detection of UV-induced DNA Damage: Introducing the Research Application of Electrochemical Sensor to Undergraduate Students Ahmad S <University of Toronto, University of Toronto at Scarborough>, Fini H, Kerman K, Kraatz HB

2048 A Fresh Perspective: Designing a Laboratory Manual to Engage and Prepare Students Fan L <University of Toronto>, Browning CS

2049 Modeling the Perception and Experience of Pleasure, Engagement, and Meaning; and their Impact on Success Plavnik M <Georgia State University, USA>, Mooring S

2050 Comparing Study of Traditional Organic Chemistry Textbook with a Digital, Interactive Textbook in Introductory Organic Chemistry Dalili S <University of Toronto at Scarborough>, McCann LC

2051 Development of a Laboratory Practical Exam for Instrumental Analysis Rankin KM <Sheridan College>

2052 Development and Evaluation of the Chemistry-specific Achievement Emotions Questionnaire (AEQ-CHEM) Raker JR <University of South Florida, USA>

2053 The Effective Use of Instant Messaging as a Supportive Strategy in Teaching Almatarneh MH <University of Jordan, Jordan>

2054 Incorporating SEM-EDX Glass Analysis into the Undergraduate Forensic Science Laboratory Curriculum Carlson HJ <MacEwan University>, Melendez de la Cruz M, Ross MS

Environment

EN1 206A

Atmospheric Chemistry in a Changing Climate
Organizer(s) - Arthur Chan, Sarah Styler
Chair(s) - Trevor VandenBoer, Jennifer Faust

16:00 2055 Regional Differences in Methane Emissions from Oil and Natural Gas Production Sites in Three US Basins Zimmerman N <Carnegie Mellon University, USA>, Omar M, Li X, Sullivan M, Ellis AE, Cesa R, Subramanian R, Presto AA, Robinson AL


16:40 2057 Air Pollution Measurements at the Rwanda Climate Observatory: Transported and Local Emissions DeWitt HL <MIT, USA>, Gason J, Prinn R

17:00 2058 Understanding Ground-level Ozone Pollution in Johannesburg, South Africa, with Comparisons to Ozone Pollution in Toronto, Canada Boudus N <ETH Zurich, Switzerland>, Garland B, Geddes J, Naidoo M

17:20 2059 Modelling Urban CO2 and CO2 in the Greater Toronto Area Pugliese SC <University of Toronto>, Murphy JG, Vogel F, Zhang J, Zheng Q, Moran MD, Ren S, Stroud CA, Chan E, Worthy D

17:40 End of Session
Wednesday PM 2060
May 31, 2017

Organizer(s) - Hind Al-Abadleh, Bridget Bergquist
Chair(s) - Hind Al-Abadleh, Bridget Bergquist

13:40 2060 Atmospheric Chemistry and Health Effects of Natural and Anthropogenic Metal-containing Aerosols 1Grassian VH
University of California - San Diego, USA

14:20 2061 Iron Biogeochemistry and the Role of Organic Ligands: Insights from Field Studies 1Buck KN
University of South Florida, USA

15:00 2062 Contribution of Fe(III) to Tropospheric Halogen Activation 1Zetzsch C
Max-Planck-Institut für Chemie, Germany

15:40 Coffee Break

16:20 2063 The Distribution of Biologically Utilized Trace Metals in the Arctic Ocean 1Cullen JT
University of Victoria, Canada

16:40 2064 Role of Electrolytes in Binding Mechanism of Low Molecular Weight Organic on Hematite Nanoparticles 1Rahman MA
Wilfrid Laurier University, Canada

17:00 2065 Arsenic Speciation in the Environment: An Example of Arsenic Species in Chicken 1Liu Q, Peng H, Lu X, Hu B, Zuidhof MJ, Li X-F, 1Le XC
University of Alberta, Canada

17:20 2066 Detoxification of Inorganic Arsenic: Abiotic Fractionalization of Non-toxic Arsenobetaine 1Koch I
Royal Military College of Canada, Canada

17:40 End of Session

EN3 206A

Organic Contaminants
Organizer(s) - Derek Muir, Frank Wania
Chair(s) - Derek Muir

13:40 2067 ATOUSSA Assessing Toxicity of Organics in Urban Source Sectors for Air 1Harmer T
Environment and Climate Change Canada, Canada

14:00 2068 Sampling Artifact in Gas-particle Phase Characterization of Organophosphate Esters 1Okeme JO
University of Toronto, Canada

14:20 2069 Changes of Aerosol Size Distribution and Deposition of Selected Organic Pollutants from Gasoline Engine Exhaust into the Snowpack 1Nazarenko Y
McGill University, Canada

14:40 2070 Unravelling Phase Partitioning of Semivolatile Organic Air Pollutants by Means of Denuders 1Forbes PBC
University of Pretoria, South Africa

15:00 2071 Organophosphate Ester Transport, Fate and Emissions in Toronto, Using the Multimedia Urban Model 1Rodgers TM, Truong J, Jantunen LM, Helm P, 1Diamond ML
University of Toronto, Canada

15:20 End of Session

ENP

Hall C

Poster Session
From 17:40 until 19:30

2072 Biosorptive Removal of Hyper Toxic Metal Pb(II) Ions Using Microfiltration A Green Approach 1Athar MM
University of Punjab, Pakistan

2073 Cellulose Fibers Functionalized by Metal Nanoparticles Stabilized in Dendrimer for Formaldehyde Decomposition and Antimicrobial Activity 1Kebede MA
National Taiwan University of Science and Technology, Taiwan

2075 Pilot Assessment of Electropolypyrrole Nanofiber Membranes for the Removal of Pathogens from Wastewater Using Nanoparticle Surrogates 1Amerian T
University of Toronto, Canada

2076 Alzatrane In a Physically And Chemically Analyzed Soil 1Gamble DS
Saint Mary's University, Canada

2077 A Coupling of Two Oxidizing Species in New Magnetite System Mn(II)/H2O2; for the Treatment of Dye Wastewater 1Aznat R
University of Karachi, Pakistan

2078 Sample Preparation Strategies for the Determination of Metal(loid) Fractionation Patterns in Lichen Air Biomonitors 1Kroukamp EM
University of Pretoria, South Africa

2079 Removal of Pharmaceutical and Personal Care Products from Drinking Water by Adsorption Using a Composite Carbon Nanoparticle Electropolypyrrole Membrane 1Soberman SJ
University of Toronto, Canada

2080 Detection of Aqueous Pb(II) and Hg(II) Using Periodic Mesoporous Organo-silica Coated Ring Resonators 1Chen H
Queen's University, Canada

2081 Litter, Root and Fertilizer Manipulations Cause Molecular-level Changes in Soil Organic Matter Composition after 10 Years 1vandenEnden L
University of Toronto, Canada

2082 Anthropogenic Radioisotopes in the Arctic Ocean 1Zhou Z
University of Ottawa, Canada

2083 Lipid Signal Suppression for NMR-based Environmental Metabolomics In Vivo 1Dutta Majumdar R
University of Toronto at Scarborough, Canada

2084 Long-path Measurements of Pollutants across Highway 401 in Toronto and Comparison to Air Quality Model Results 1You Y
University of Calgary, Canada

2085 Environmentally Relevant Concentrations of Aminopolycarboxylate Chelating Agents Mobilize Cd from Humic Acid 1Sarpang-Kumankomah S
University of Calgary, Canada

2086 Using Lead Isotopes to Study Source and Mixing of Lead during the Treatment of Municipal Solid Waste Influenced by Air Emission Ratios 1Zhang H
Tongji University, China

2087 Using Lead Isotopes to Study Source and Mixing of Lead during the Treatment of Municipal Solid Waste Influenced by Air Emission Ratios 1Zhang H
Tongji University, China

2088 A Low Power, High Mobility Cavity Ring-down Spectroscopy Analyzer for In Situ Measurements of CO2, CH4, and H2O 1Markovic MZ
Piccaro Inc., USA

2089 Humic Acid from Vermicomposts: Extraction, Characterization and Applications 1Rojo JB
University of the Philippines Visayas, Philippines

2090 In Vivo NMR Metabolomics Using a Low Volume Flow System 1Tabatabaei Anraki M
University of Toronto at Scarborough, Canada

2091 From Spill to Sequestration: The Molecular Journey of Soil Contamination via Comprehensive Multiphase NMR 1Masoom H
University of Toronto, Canada

2092 Assessing the Distribution and Deposition of Selected Organic Pollutants from Gasoline Engine Exhaust into the Snowpack 1Nazarenko Y
McGill University, Canada

2093 Changes of Aerosol Size Distribution and Deposition of Selected Organic Pollutants from Gasoline Engine Exhaust into the Snowpack 1Nazarenko Y
McGill University, Canada

2094 The Distribution of Biologically Utilized Trace Metals in the Arctic Ocean 1Cullen JT
University of Victoria, Canada

2095 Role of Electrolytes in Binding Mechanism of Low Molecular Weight Organic on Hematite Nanoparticles 1Rahman MA
Wilfrid Laurier University, Canada

University of Alberta, Canada

2097 Detoxification of Inorganic Arsenic: Abiotic Fractionalization of Non-toxic Arsenobetaine 1Koch I
Royal Military College of Canada, Canada

2098 Sampling Artifact in Gas-particle Phase Characterization of Organophosphate Esters 1Okeme JO
University of Toronto, Canada

2099 Changes of Aerosol Size Distribution and Deposition of Selected Organic Pollutants from Gasoline Engine Exhaust into the Snowpack 1Nazarenko Y
McGill University, Canada

2100 Unravelling Phase Partitioning of Semivolatile Organic Air Pollutants by Means of Denuders 1Forbes PBC
University of Pretoria, South Africa

University of Toronto, Canada

2102 Litter, Root and Fertilizer Manipulations Cause Molecular-level Changes in Soil Organic Matter Composition after 10 Years 1vandenEnden L
University of Toronto, Canada

2103 Anthropogenic Radioisotopes in the Arctic Ocean 1Zhou Z
University of Ottawa, Canada

2104 Long-path Measurements of Pollutants across Highway 401 in Toronto and Comparison to Air Quality Model Results 1You Y
University of Calgary, Canada

2105 Environmentally Relevant Concentrations of Aminopolycarboxylate Chelating Agents Mobilize Cd from Humic Acid 1Sarpang-Kumankomah S
University of Calgary, Canada

2106 Using Lead Isotopes to Study Source and Mixing of Lead during the Treatment of Municipal Solid Waste Influenced by Air Emission Ratios 1Zhang H
Tongji University, China

2107 Using Lead Isotopes to Study Source and Mixing of Lead during the Treatment of Municipal Solid Waste Influenced by Air Emission Ratios 1Zhang H
Tongji University, China

2108 A Low Power, High Mobility Cavity Ring-down Spectroscopy Analyzer for In Situ Measurements of CO2, CH4, and H2O 1Markovic MZ
Piccaro Inc., USA

2109 Humic Acid from Vermicomposts: Extraction, Characterization and Applications 1Rojo JB
University of the Philippines Visayas, Philippines

2110 In Vivo NMR Metabolomics Using a Low Volume Flow System 1Tabatabaei Anraki M
University of Toronto at Scarborough, Canada

2111 From Spill to Sequestration: The Molecular Journey of Soil Contamination via Comprehensive Multiphase NMR 1Masoom H
University of Toronto, Canada

2112 Assessing the Distribution and Deposition of Selected Organic Pollutants from Gasoline Engine Exhaust into the Snowpack 1Nazarenko Y
McGill University, Canada

2113 Changes of Aerosol Size Distribution and Deposition of Selected Organic Pollutants from Gasoline Engine Exhaust into the Snowpack 1Nazarenko Y
McGill University, Canada

2114 Unravelling Phase Partitioning of Semivolatile Organic Air Pollutants by Means of Denuders 1Forbes PBC
University of Pretoria, South Africa

2115 Organophosphate Ester Transport, Fate and Emissions in Toronto, Using the Multimedia Urban Model 1Rodgers TM, Truong J, Jantunen LM, Helm P, 1Diamond ML
University of Toronto, Canada

2116 Litter, Root and Fertilizer Manipulations Cause Molecular-level Changes in Soil Organic Matter Composition after 10 Years 1vandenEnden L
University of Toronto, Canada

2117 Anthropogenic Radioisotopes in the Arctic Ocean 1Zhou Z
University of Ottawa, Canada

2118 Long-path Measurements of Pollutants across Highway 401 in Toronto and Comparison to Air Quality Model Results 1You Y
University of Calgary, Canada

2119 Environmentally Relevant Concentrations of Aminopolycarboxylate Chelating Agents Mobilize Cd from Humic Acid 1Sarpang-Kumankomah S
University of Calgary, Canada


2094 Substituted Diphenylamine Antioxidants and Benzotriazole UV Stabilizers in Plasma of Fish, Snapping Turtles (Chelydra serpentina), Double-Crested Cormorants (Phalacrocorax auritus) and Bottlenose Dolphins (Tursiops truncatus) from North America. Lu Z, <Environment and Climate Change Canada, > De Silva AO, Zhou W, Cook C, Tetreault GR, de Solla SR, Muir DCG

2095 Amino Acid Only Real Time in vivo NMR of Daphnia magna. Lane D, <University of Toronto>, Soong R, Simpson AJ, Bermel W, Maas WE, Schmidt S, Heumann H

2096 Fluorescence-based Trace Detection of Pesticides in Natural Waters on Prince Edward Island. Sweet SD, <University of Prince Edward Island>, Wagner BD

2097 Novel Functionalized Electrospun Nanofibrous Membranes for Virus Adsorption in Drinking Water Applications. Lieger S, <University of Toronto>, Farnood R


2100 Adsorption/Desorption Behaviour of Sulfolane in Soil. Hassanvand-Gandaei N, <University of Calgary>, Langford CH, Achari G

2101 Tracing the Fate of Atmospheric Selenium in a Chemistry-climate Model. Feinberg AI, <ETH Zürich, Switzerland>, Eawag, Swiss Federal Institute of Aquatic Science and Technology, Switzerland. Stenke A, Suess E, Peter T, Winkel LHE


2103 Comparison of Cell Disruption Techniques Prior to Lipid Extraction of Wet Microalgal Biomass for Biodiesel Production Using Liquid Carbon Dioxide. Viner KJ, <Queen's University>, Jessop PG, Champagne P


2105 Risk Assessment of Toxic and Essential Elements in Natural Toothbrush from Saudi Arabia Using Inductively Coupled Plasma Mass Spectrometry. Althobiti R, <Queen's University>, Beauchemin D

2106 Removal of Sterane Using a Physical-biological Process Unit. Shareefdeen Z, <American University of Sharjah, United Arab Emirates>, Janjani S

2107 Source Apportionment Analysis of Semivolatile Organic Compounds in the Greater Toronto Area. Takhar M, <University of Toronto>, Iqbal MA, Chan A


2109 Volatility Distribution of Primary Organic Aerosol from Food-cooking Emissions and its Evolution upon Oxidation. Takhar M, <University of Toronto>, Chan A

2110 Chemical Characterization of Particulate Matter during 2016 Alberta Wildfires. Meng M, <University of Toronto>, Wang SY, Takhar M, Chan A


2115 Detection and Characterization of ZnO Nanoparticles at Environmentally Relevant Concentrations by Single-particle ICP-MS. Fréchette-Viens L, <Université de Montréal>, Hadioui M, Wilkinson KJ

2116 Effect of Iron Oxide Aerosols on Traditional Gas Phase Ozone Oxidation of Mercury. Kurien UK, <McGill University>, Arya PA

2117 "It’s Not Just A Phase": The Occurrence and Implications of Atmospheric Oxidized Mercury Nanoparticles. Ghoshstaddar AJ, <McGill University>, Aryia PA

2118 Understanding Meteorological Drivers of Variability in Atmospheric Mercury. Giang A, <Massachusetts Institute of Technology, USA>, Selin N, Monier E, Couzo E, Thackray C


2120 The Release of Wastewater Contaminants in the Arctic: A Case Study from Cambridge Bay, Nunavut, Canada. Chaves- Barquero LG, <Instituto Tecnológico de Costa Rica, Costa Rica; University of Manitoba>, Luong KH, Mundy CJ, Knapp CW, Hanson ML, Wong CS

2121 Evaluating Models of Secondary Organic Aerosols Produced from the Alberta Oil Sands. Sommers JM, <Université de Montréal>, Hayes PL


2123 Human Exposure of Emerging Photoinitiator Additives. Liu R, <University of Toronto>, Mabury SA


2126 Enhancement of Anaerobic Digestion of Thickened Waste Activated Sludge Using Free Nitrous Acid. Okoye F, <Ryerson University>, Ho D, Sarathy S, Parker W, Eibeshiby E
14:40 2158  Metal Matters: Divergent Reactivity in Alkene Isomerization/hydroboration Catalyzed by Isostructural Three-coordinate Mn, Fe, Co, and Ni Complexes  
"Macaulay CM" <Dalhousie University>, Ogawa TO, Kelly CM, Sydora OL, Stradiotto M, Turculet L

15:00 2159  Synthesis and Reactivity of a Novel Ru(i) Complex  
"Mosaferi E" <University of Toronto>, Stephan DW

15:20 2160  Iron-catalyzed Gem-specific Dimerization of Terminal Alkynes  
"Liang Q" <University of Toronto>, Osten KM, Song D

15:40 Coffee Break

16:00 2161  Getting in on the Ground Fluorine: Nickel-mediated and -catalyzed Synthesis of Hydrofluoroalkanes  
"Baker RT" <University of Ottawa>

16:20 2162  Real-time Monitoring of Olefin Polymerization Catalyst Activation  
"Zijlstra HS" <University of Victoria>, McIndoe JS

16:40 2163  Motl-mediated C-H Bond Activation-reductive Elimination/Protonation and Formation of Diels-Alder Pyridyl Fragmentation Products  
"Yahaya NP" <Gombe State University, Nigeria>, Fairlamb IJS, Appleby KM

17:00 2164  Group 10 Complexes of an Unsymmetrical Electron-rich Diphosphine Ligand  
"Zimmerman AC" <University of British Columbia>, Fryzik MD

17:20 2165  Iron-ate Species in Iron-catalyzed Cross-couplings with Simple Ferric Salts  
"Neidig ML" <University of Rochester, USA>

18:00 2166  End of Session

IN3 107

Recent Advances in Sustainable Chemistry - joint with EN, IC

Organizer(s) - Kevin Szkop  
Chair(a) - Kevin Szkop

13:40 2166  Polymers as Solvents and Tools in More Sustainable Homogeneous Catalysis  
"Bergbreiter DE" <Texas A&M University, USA>

14:20 2167  Recycling Polystyrene Waste by Dissolution  
"Côté Roland CR" <Université du Québec à Trois-Rivières>

14:40 2168  Adaptive Porous Media for Remediation of Oil Sands Tailings  
"Cherukupally P" <University of Toronto>, Sun W, Wong A, Ozin G, Butvin A, Park C

15:00 2169  Making Waste Mussels Work: A Story of Road Salt, AMD Remediation and Manicures  
"Murphy JN" <Memorial University of Newfoundland>, Hawboldt KA, "Kerton FM

15:20 2170  Recovery of Gold from Electronic Waste Using Potassium Ferrate  
"Alzate A" <University of Antioquia, Colombia>, INSUMON S.A.S, Colombia>, Lópe ME, Serna C, Gonzalez O

15:40 Coffee Break

16:00 2171  Homogeneous Catalyst Systems for the Hydrodeoxygenation of Sugar-derived Substrates. Insights into the Principles, Opportunities and Challenges of Catalyst Design  
"Latifi E" <University of Ottawa>, Soltanipanah P, Soldatov D, "Schaf M" <University of Guelph>

16:20 2172  Solid State Reduction of Carbonyls  
"Li AL" <McGill University>, Li CJ, "Moores AH"

16:40 2173  Towards Greener Photochemistry  
"Polakoff M" <University of Nottingham, UK>, George MW

17:20 2174  Electrochemical Reduction of CO₂ to Methanol in the Presence of Benzannulated Dihydroprydine Additives: Insights into the Mechanism of Pyridine-mediated CO₂ to Methanol Conversion  
"Herbert DE" <University of Manitoba; Manitoba Institute for Materials>, Giesbrecht PK

17:40 2175  How Supercritical Carbon Dioxide Enables New Chemistry for A Sustainable Future  
"Chen C" <National University of Singapore, Singapore>

18:00 End of Session

IN5 203A

Advances in Solid State Chemistry  
Organizer(s) - Holger Kleinke, Venkataram High Energy Physics, China; University of Western Ontario

13:40 2176  High Rate Batteries by Optimizing Transport in the Solid State  
"Adams S" <National University of Singapore, Singapore>

14:20 2177  Synthesis, Lithium-ion Conductivity and Characterization of Substituted Perovskite-type Solid-state Electrolytes  
"Groleau L" <Université de Montréal>, Bibienn T, Lachal M, "Dollé M"

14:40 2178  Exploration of Meta-stable Spinels for Lithium-ion Batteries  
"Kan WH" <China Spallation Neutron Source, Institute of High Energy Physics, China; University of Texas at Austin, USA>, Huq A, "Manthiram A"

15:00 2179  Synthesis, Structure and Electrochemical Properties of New Lithium Iron Vanadates  
"Benabd Y" <Université de Montréal>, Razafindramanana V, Castro L, Penin N, Carlier D, Wattiaux A, Darriet J, "Dollé M"

15:20 2180  Machine-learning-driven Search for Superhard Materials  
"Olynyk AO" <University of Houston, USA>, Manoueri A, Parry M, Sparks TD, "Brogh J"

15:40 Coffee Break

16:00 2181  Development and Characterization of Novel Antiferro-/Ferroelectric Materials for Energy Storage  
"Ye Z-G" <Simon Fraser University>, Huo C, Wu H, Ren Z, Zhang N

16:40 2182  Electro-optical Properties of Niobium in Phosphate Glasses for Gas Detection  
"Landyrie A-K" <Université Laval>, Messaddeq Y

17:00 2183  Catalyst-assisted Growth of H₂O Nanostructures Using PLD Method: Effect of Temperature and Oxide Buffer Layer Thickness  
"Beedel M" <University of Waterloo>, Rahman MA, Thomas JP, Heising NF, "Leung KT"

17:20 2184  Solid State Chemical Transformations in Peptides  
"All FI" <University of Guelph>, "Soldatov DV"

17:40 End of Session

Macromolecular Science and Engineering

MS1 205A

Frontiers in Controlled Polymerization - joint with IN

Organizer(s) - Parisa Mehrkordavandi  
Chair(a) - Christopher Kozak

13:40 2185  From Metal-ligand Cooperative Catalytic Cycloisomerization to Tailor-made Block Copolymers  
"Martin-Vaca B", "Bourissou D" <Université Paul Sabatier, France>

14:20 2186  Synergy Using Zinc and Magnesium: Heterodinuclear Polymerization Catalysts Showing Enhanced Performances  
"Trott G" <University of Oxford, UK>, "Williams CK"

14:40 2187  On the Role of Oxidation State in Ring Opening Polymerization Reactions Catalyzed by Iron  
"Byers JA" <Boston College, USA>, Della Chiaie KR, Biernesser AB, Qi M, Kehl JA, Sudyn A

15:00 2188  Controlled ROMP of Amine Containing Monomers for the Preparation of Block Copolymers  
"Schaefer LL" <University of British Columbia>, Perry RR, Gilmour DJ

15:20 2189  Amino-phenolate Complexes of Aluminum and Iron in Polymerization Catalysis  
"Kerton FM" <Memorial University of Newfoundland>, Plommer H, Andrea K

15:40 Coffee Break
16:00 2190 Simple Complexes for the Polymerisation of rac-Lactide  
*Jones MD*  
<University of Bath, UK>, McKeeon P, Kirk SM, Quilter H, Beamont J

16:20 2191 Insights into the Active Species in Lactide Polycondensations with Copper Catalysts  
*Daneshmand P, Schaper F*  
<Université de Montréal>

16:40 2192 Polymerization of Heterocycles: A Simple Approach to Sequence Control in Polymer Synthesis  
*Thomas CM*  
<Institut de Recherche de Chimie Paris, France>

17:20 End of Session

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17:40 End of Session

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**MSP**  
**Hall C**

**Poster Session**

**From 17:40 until 19:30**

2201 Fluorinated Hexylfluoropropylene Oxide Based Chelating Ligand and Its Interaction with CO₂  
*Liu Z-T*  
<Shaaxin Normal University, China>, Yang Z-TNG, Li R-Q, Chen J-GAN, Liu Z-WEN

2202 Chemical Synthesis, Characterizations and Applications of Anti-biofouling Membranes for Water Treatment Applications  
*Rana D*  
<Otawa University>, Matsuura T, Chung W-J

2203 "Patchy" Micelles from ABC Triblock Terpolymers with a Crystallisable Central Poly(2-Fluorocyclohexylsiloxane) Segment  
*Oliver AM*  
<University of Bristol, UK>, Manners I

2204 Recyclable Polymer-supported Transition Metal Complexes  
*Bazzi HS*  
<Texas A&M University at Qatar, Qatar>, Choukhi D, Al-Hashimi M, Bergbreiter DE

2205 Preparation and Properties of Hemicellulose-nanocrystalline cellulose-Poly(vinyl alcohol) Composite Film  
*SUN H, YANG B*  
<Beijing Technology and Business University, China>, WEN BY, HU Y

2206 Synthesis and Characterization of pH Sensitive Poly(2,5)-diethylamino-5-ethyl-2,5-dihydroxy-1,4-benzoquinone Dipolymer  
*Bibilari AL*  
<Eastern Mediterranean University, Cyprus>, Yilmaz EI

2207 Thermomechanical Properties of End-functionalized Poly(lactic acid)s  
*Chile LE*  
<University of British Columbia>, Hatzikirakos SG, Mehrrkhodavandi P

2208 Application of a Reversible Linkage in Binodal Siloxane-based Networks Cross-linked via a Furanyl-modified Polyhedral Oligomeric Silsesquioxane  
*Nasresfahani A*  
<Brock University>, Dan Li, Elias AL, Zelisko PM

2209 Mechanically Activated Cis-to-Trans Isomerization of Carbon-Carbon Double Bond  
*Radiom M*  
<University of Geneva, Switzerland>, Kong P, Maroni P, Schafer M, Kilbinger AFM, Borkovec M

2210 Modification of Cellulose Nanocrystals with Quaternary Ammonium-containing Hyperbranched Polyethylene Ionomers by Ionic Assembly  
*Huang L*  
<Laurentian University>, Ye Z

2211 Insights into Linear Supramolecular Polymer Formation via TPE and BODIPY Containing Host-guest Interaction  
*Gouda C*  
<National Chiao Tung University, Taiwan>, Lin H-Chen

2212 Co-supported Catalysts for the Tandem Trimerization and Polymerization of Ethylene  
*Aluthge DC*  
<California Institute of Technology, USA>, Sattler A, Labinger JA, Bercaw JE

2213 Metal Chelating Polymer-Trustuzmab Radiomunuconjugates with Polycarboxybetaine Pendants for Treatment of HER2-Positive Breast Cancer  
*Xu J*  
<University of Toronto>, Lu Y, Zhao G, Zhou H, Winnik MA

2214 Using Pyrene Excimer Fluorescence to Probe Intramolecular Forces in Solution  
*Raimbault J, Casier R*  
<University of Waterloo>, Little H, Duhamel J

2215 Synthesis and Characterization of Thermo-responsive Starch Nanoparticles  
*Zheng BW*  
<University of Waterloo>, Taylor SD

2216 Probing the Conformations of Pyrene Labeled PEGMA Polymeric Bottle Brushes in Solution by Pyrene Excimer Formation  
*Thoma JL*  
<University of Waterloo>, Duhamel J

2217 Study of Rod-like PFS Micelles as Potential Nanomedicine for Drug Delivery in Cancer Therapy  
*Yu Q*  
<University of Toronto>, Allen C, Manners I, Winnik M

2218 Polymer Modified Rod-like Cellulose Nanostuctures for Delivery of Radiocunclides to Tumours  
*Keunen R*  
<University of Toronto>, Guo M, Her S, Zhang S, Allen CJ, Winnik MA

2219 Functionalization of Cellulose Nanocrystals with PEGMA-metal-chelating Copolymers  
*Roberts MG*  
<University of Toronto>, Guo M, Keunen R, Yu Q, Allen C, Winnik MA

2220 Delivery of Paclitaxel and Everolimus in Polymeric Nanoparticles to Tratuzmab Resistant HER2+ Metastatic Breast Cancer Cells  
*Houdaifel L*  
<University of Toronto>, Allen C

2221 Self-crosslinking p(APM-co-AA) Nanofibrous Scaffolds and Microstructured Films as Biomimetic Scaffolds  
*Zhao C*  
<McMaster University>, Stöver HDH, Moran-Mirabal J

2222 Characterization of Naturally Sourced Biopolymers: Collagen and Hyaluronic Acid  
*Stabler JL*  
<Trent University>, Vreugdenhil AJ

2223 Effect of Low Molecular Weight Polymer Diluent on Latex Film Formation Probed by Pyrene Excimer Fluorescence  
*You Z*  
<University of Waterloo>, Casier R, Duhamel J

2224 Polyglycoylamines: A Novel Class of Stimuli-responsive Polymers  
*Siranni QEA*  
<University of Western Ontario>, Gambles MT, MacDonald JP, Gillels ER
2225 Chemical and Mechanical Analysis of Hydrogenated Nitrile Butadiene Rubber (HNBR) after Thermal Treatments under Various Atmospheres Verdiér N <Université de Montréal>, Zohrevand A, Lepage D, Rocchetto D, Dolle M

2226 Functionalization of Polymer Vesicles with Glycopolymer Arms Jadischke JJ <Western University>, Raycraft BM, Trant JF, Whitton GM, Gillies ER

2227 Effect of PDMS Chain Length on Anti-smudge Coating Performance Gee E <Queen's University>, Hu H, Wang J, Liu G

2228 Poly(tonic liquids) for Application in Electrolyte-gated Organic Field-effect Transistors Peltkoff AJ <University of Ottawa>, Lessard BH

2229 Pseudopeptides: A New Biocompatible Self-immolative Material Leckie DM <University of Windsor>, Trant JF

2230 Sequential Functionalization of a Natural Crosslinker Leads to Designer Silicone Networks Laengert SE <McMaster University>, Schneider AF, Loevinger E, Chen Y, Brook MA

2231 Probing the Conformation of Perylene-labeled Foldamers in Solution Using Time Resolved Fluorescence Anisotropy Little H <University of Waterloo>, Duhamel J, Li X, Maurizot V, Huc I

2232 Effect of the Preparation Process on the Architecture and the Physicochemical Properties of PLA-PEG Nanoparticles Rode García T <Université de Montréal>, Rabanel JM, Banquy X

2233 Electrochemical Protein Detection by Target-responsive Programmable Dynamic DNA Assembly Hasan R <McMaster University>, Wang A, Feng L, Soleymani L


2235 Solution Self-assembly of Block Copolymers Into Inverse Bicontinuous Cubic Phases La Y <Ulusan National Institute of Science and Technology, Korea>, Kim KT

2236 Stimuli Responsive Phosphoncontaining Hydrogels Harrison TD <University of Western Ontario>, Ragogna PJ, Gillies ER

2237 A Pulsed 300 kV Electron Source for Serial Protein Nanocrystallography Khazai N <University of Toronto>, Kassier G, Bucker R, Hogan P, Miller RJD

2238 The Extent of the Glass Transition from Fine Grained Simulation, an Overcranking Perspective Soldera A <Université de Sherbrooke>, Godoy F, Fleury A, Ghoufi A

2239 Local Domain Dynamic pH/Glutathione-responsive Block Copolymer Strategy for Precise Control of Drug Release and Cellular Uptake Jazani AM <Concordia University>, Oh JK

2240 Relationship between PDMS Architecture and Anti-smudge Properties in a Polyurethane Coating Becher Nienhaus B <Queen's University>, Hu H, Liu G

2241 Monoacidic-responder Polymers of Boronic Acid Derivatives for Smart Drug Delivery Vehicles under Physiological Conditions Joeng ES <UNIST, Korea>, Kim KT

2242 Synthesis of Photopolymerizable Polycrylic acid-co-Iaconic acid: Using Methacrylic Anhydride and Glycidyl Methacrylate Mirzadeh M <Iran Polymer and Petrochemical Institute, Iran>, Alti M, Azzizollah N

2243 Influence of Regiochemistry in the Selective Dispersion of Metallic Carbon Nanotubes Using Electron Poor Conjugated Polymers Bodnaryk WJ <McMaster University>, Rice NA, Adronov A

2244 Hydrolysis of 2-(Dimethylamino)ethyl Acrylate, Related Monomers, and their Corresponding Polymers Ros S <McMaster University>, Burke NAD, Kleinberger RM, Nair AAA, Stöver HDH

2245 A Hydrolytic Complex to Prepare Hydrolytic Stable Complex Elastomers Liao M <McMaster University>, Chen Y, Brook MA

2246 Preparation of a Stable Cyclooctyne-containing Polymer by Wittig Chemistry Li KL <McMaster University>, Kardelis VK, Adronov AA

2247 Mix-and-match Assembly of Block Copolymer Blends in Solution Cho A <Ulusan National Institute of Science and Technology, Korea; Seoul National University, Korea>, Kim KT


2249 Water-based Anti-smudge Epoxy Coating Buddingh JV <Queen's University>, Hu H, Liu G

2250 Synthesis and Properties of Cationic Charge-shifting Polymers Hastings DE <McMaster University>, Ros S, Burke NAD, Stöver HDH

2251 Biopolymer-immobilized Bacterium for Adsorption and In-situ Biodegradation of Chlorophenols Wilson LD <University of Saskatchewan>, Karoyo AH, Yang J

2252 Using MARTINI (Coarse Grain Force Field) to Model the Self-assembly Behavior of Amphiphilic Dendron-lipid Hybrids Taimoory SMD <University of Windsor>, Rahimi A, Trant JF

2253 Incluion Complexes Formed with Modified Beta-cyclodextrins of Varying Chain Lengths Lam WM <University of Calgary>, Ling CC, Heyne B

2254 Nonlinear Lithography of 3-D Scaffolds for Cell Growth Chang W <McMaster University>, Hudson AD, Saravanamuttu K

2255 Silicon Quantum Dots: Applications toward Fluorescent Cellular Imaging Abdelnour M <Western University>, Charpentier P

2256 Synthesis of optically Transparent Nanocomposites of Zinc Oxide Quantum Dots with Different Siloxane Capping Agents Hiscott DV <University of Western Ontario>, Wu W, Leidl JA, Machin D, Charpentier PA

2257 A Guide to the Selection of the Ideal Switchable Functional Group (SFG) for CO2-Switchable Compounds in Water Alshamrani AK <Queens' University>, Jessop PG

2258 Radioimmunoconjugates by Enzymatic Attachment of Metal-chelating Polymers to Antibodies Le PJ <University of Toronto>, Miersch S, Lu Y, Forbes MW, Boyle AJ, Sidhu SS, Reilly RM, Winnik MA

2259 Monitoring Changes in the Solid State Structure of Starch in the Wheat Flour Dough Pozz I <University of Guelph>, Sodatov DV, Bock JE

2260 Uniform Nanorods with a Thermoresponsive Corona in Water Based on the Seeded Growth of PFS Block Copolymer Micelles Zhou H <University of Toronto>, Lu Y, Guerin G, Manners I, Winnik M


2262 Fluorescently Labelled Latex Particles to Monitor Film Formation Hisko V <University of Waterloo>, Gauthier M, Duhamel J

2263 Covalently Cross-linked Polyelectrolyte Capsule Membranes Using Reduced Charge Density Polycations and Temporarily Reactive Polymers Kleinerber GM <McMaster University>, Burke NAD, Stöver HD
2017 Wednesday PM
2264 Porphyridin Assembly Induced by Lipoprotein Receptor Binding in a Chlorosome-Mimetic Nanoplatform
S Harmatsy KM, Heuchan SME, Bauman LA, Henry HAL
15:20 2275 Recent Advances in Exciton Fission and Fusion
Congreve DN, Gangishetty MK

2265 Stimuli-responsive Coatings for Targeted Release of Fertilizer
MacDonald JP, Fan B, Heuchan SME, Bauman LA, Henry HAL
15:40 Coffee Break

2266 Porous Agarose Hydrogels with Dynamic Chemical Environment in vitro Cell Culture
Njusere D, Wylie RG

2267 DFT Calculations of Intrinsically Chiral Quantum Dots
Edwards RD, Hamilton IP

2268 Water-borne Anti-smudge Polyurethane Coatings that are Transparent and Dynamic
Huang S, Queen's University

2269 Fabrication of Lipid-stabilized Oil-in-water Nanomulsions as Dual-modal Fluorescent, CT Contrast Agents for In Vivo Imaging
Jaimes Castillo A, University of Toronto; Princess Margaret Cancer Centre
Huynh E, Chen J, McLoughlin CM, Zheng G

2270 Study of the Interactions of Pyrene-labeled SNPs with Sodium Dodecyl Sulfate (SDS)
Zhang Q, University of Waterloo; Li L, Duhamel J

Materials Chemistry

MT1 201E
Singlet Fission Materials
Organizer(s) - Dwight Seferos, Matthew Sfier
Chair(s) - Matthew Sfier
13:40 2271 The Nature of the Triplet-pair State in Singlet Fission
Zhu X, Columbia University, USA

14:20 2272 Spectroscopic Observation of Triplet Separation as a Driving Force of Singlet Fission
Turner DB, New York University, USA, Breen ID, Tempelar R, Bizimana LA, Kloss B, Reichman DR

14:40 2273 Singlet Fission in Acene Heterodimers
Sanders SN, Columbia University, USA; Brookhaven National Lab, USA, Campos LM, Sfeir MY

15:00 2274 Singlet and Triplet Pair States in Organic Singlet Fission Materials
Niesner D, Brookhaven National Laboratory, USA; Columbia University, USA, Sanders SN, Tayebjee MJY, Kumaramamy E, Zhu X-Y, Campos LM, McCamey DR, Sfeir MY

15:20 2275 Recent Advances in Exciton Fission and Fusion
Congreve DN, Gangishetty MK

16:00 2276 Theoretical Investigation of Singlet Fission: Mechanisms and Molecules
Ananth N, Cornell University, USA
16:40 2277 Effect of Crystal Packing on the Electronic Properties of Molecular Crystals
Marom N, Carnegie Mellon University, USA

17:20 2278 Simple Computational Screening of Potential Singlet Fission Materials
Match C, Perkins J, Schreckenbach G, University of Minnesota, Adeyemi M, Ferk L, Kour G

17:40 End of Session

MT2 203C
Electronic Materials and their Chemistry (Organic, Inorganic and Hybrid Materials)
Organizer(s) - Tim Bender, Yuning Li, Clara Santato
Chair(s) - Tim Bender, Yuning Li, Clara Santato
13:40 2279 Recent Advances in Organic Photovoltaic Materials
Leclerc M, Université Laval

Welch GC, University of Calgary

14:40 2281 Peroxovite Solar Cells: Probing Decomposition Mechanisms by in situ Grazing-Incidence Wide Angle X-ray Scattering
Kelly TL, University of Saskatchewan, Franshishyn KM, Yang J

15:00 2282 Lead-free Organic-inorganic Iodobismuthates for Photovoltaics
Robertson N, University of Edinburgh, UK, Wu W, Morrison C, Han H, Hu Y

15:20 2283 Biopolymers for Solar Energy Conversion
Santato C, Polytechnique Montréal, Di Mauro E, Boisvert D

15:40 Coffee Break

16:00 2284 Donor-acceptor Type Conjugated Polymers for High Performance Electrochromic Materials
Xu J, Agency for Science, Singapore

16:20 2285 Interactions of Carbon Nanotubes with Conjugated Polymers - the Effect of Polymer Electronics
Dong D, Bodnaryk WJ, Li K, McMaster University, Adronov A

16:40 2286 Acetylenic Polymer Based Highly Conductive Graphene-like Carbon and its Application in Lithium-sulfur Batteries
Yan L, Sun Yat-sen University, China; University of Waterloo, Han D, Xiao M, Ren S, Li Y, Wang S, Meng Y

17:00 2287 Unveiling Electronic Structures of Lithium Based Battery Materials: A Lithium K-edge X-ray Absorption Near Edge Structure Study
Wang D, Canadian Light Source Inc, Zui L

17:20 2288 Rechargeable Batteries Using Coordination Compounds
Yoshikawa H, Kwansei Gakuin University, Japan, Wang H, Shimizu T

17:40 End of Session

MT6 201D
Nano/Hybrid Materials - joint with MS
Organizer(s) - Mita Dasog, Rob Scott, Jon Veinot
Chair(s) - Mita Dasog
13:40 2289 Formation and Fluorescence of Wurtzite-CuInS2
Macdonald JE, Vanderbilt University, USA; Vanderbilt Institute of Nanoscale Science and Engineering, USA

14:20 2290 Optimized Lead Sulfide Quantum Dot Synthesis for Photovoltaic Applications
Sohn P, University of Toronto, Green P, Wilson M

14:40 2291 Enhanced Electrocatalytic CO2 Conversion via Field-induced Reagent Concentration

15:00 2292 Chemically and Physically Anisotropic Plasmonic Nanomaterials
Janoul A, Carleton University

15:20 2293 Synthesis of Bimetallic Hollow AgM Nanoparticles, Structure and Composition Analysis
Daniel JR, Université Laval, Yazdi S, Ringe E, Boudreau D

15:40 Coffee Break

16:00 2294 Branched Metal Nanoparticles for Catalysis
Tilley RD, University of New South Wales, Australia, Glog L

16:40 2295 Probing the Surface of Silicon Nanocrystals with Advanced Solid-state NMR Spectroscopy
Hanahan MP, Wheeler LM, Anderson NC, Neale NR, Rossini AJ, Iowa State University, USA

17:00 2296 Phosphorous Pentachloride Initiated Functionalization of Silicon Nanocrystals
17:20 2297 Origins of Unconventional Magnetism in Coagulate Metal Nanomaterials
Mirano A, Pedersen D, "Trudel S <University of Calgary>

17:40 End of Session

Organic Chemistry

OR2 205B

A Century of Organic Synthesis in Australia and Canada
Organizer(s) - Louis Barriault, Robert Britton, Mike Kerr
Chair(s) - André Beauchemin, Yuri Bolshak
13:40 2298 Driving Synthesis by Oxidation "Lumb JP <McGill University>
14:20 2299 Recent Adventures in Total Synthesis "Rizzaca MA <University of Melbourne, Australia>
15:00 2300 New Chemistry for the Generation and Synthetic Exploitation of Strained, Short-lived Cyclic Allenes "West FG <University of Alberta>

15:40 Coffee Break

16:00 2301 Towards the Total Synthesis of Bruceantin Using a Radical Cyclization Cascade "Labelle A <Université de Sherbrooke>, "Spin0 Cio
16:20 2302 Catalysis with N-heterocyclic Carbene Triazolium Salts: Exploration of the Counter Ion Effect "Ludington SM <University of Saskatchewan>, "Gravel M
17:00 2303 Sustainable Catalysis: Concepts and Applications "Rueping M <King Abdullah University of Science and Technology, Saudi Arabia>

17:40 2304 Enantioselective Metal-Free Approach to 5-(1-Hydroxyalkyl) Butenolide Natural Products: Synthesis of (-)-Marinaccin and (-)-L-Factor "Cooze C, "Manchoju A <Memorial University of Newfoundland>, "Pansare SV

18:00 End of Session

OR5 201C

Recent Advances in Metal-free Transformations
Organizer(s) - André Beauchemin, Yuri Bolshak
Chair(s) - Alex WH Speed, Darren J Derksen
13:40 2304 Silatrane: A Versatile and User-friendly Atom-transfer Reagent "Adler MJ <Northern Illinois University, USA; University of Ontario Institute of Technology>
14:00 2305 Development of a Metal-free Amine Oxidation Method Utilizing DEAD Chemistry "Davis RL <University of Manitoba>

14:20 2306 Development of Diazepane Carboxylates as Organocatalysts for the Cope Rearrangement, Diels-Alder and Polyene Cyclization "Gleason JL <McGill University>
14:40 2307 Rationalization of Enantioselectivity in Chiral Phosphoric Acid-catalyzed Reacties of sp3 Electrophiles Using DFT Calculations "Champagne PA <University of California - Los Angeles, USA>, "Houk KN

15:00 2308 Exploiting Reversible Covalent Interactions of Boron Compounds in Catalysis "Taylor MS <University of Toronto>

15:40 Coffee Break

16:00 2309 Metal-free Synthesis of Chiral Building Blocks and Medium Rings "Sun J <Hong Kong University of Science and Technology, Hong Kong>
16:40 2310 Application of an Alternative Route to Access N-Heterocyclic Carbene Triazolium Salts: Exploring the Counter Ion Effect "Langdon SM <University of Saskatchewan>, "Gravel M

17:00 2311 Recent Advances in Metal-free Synthesis of Heterocycles "Polat D <University of Ottawa>, "Ivanovich RA, "Beauchemin AM

17:00 2315 A Catalytic Aerobic Coupling of Phenols and Amines for the Synthesis of Heterocycles "Lumb JP <McGill University>, "Esguerra KVN, "Xu W

17:20 2320 Photocatalytic Synthesis of Enantioenriched Heterocycles "Yoon TP <University of Wisconsin-Madison, USA>

18:00 End of Session
17:20 2328 Tied Together: The Marriage of Pyridine and Non-planar PAHs, Ghods P, "Memorial University of Newfoundland", *Bodwell GJ
17:40 End of Session

ORG1 206B

General Session 1
Organizer(s) - Eric Fillion
Chair(s) - Eric Fillion

13:40 Canadian Journal of Chemistry Best Paper Award Lecture

13:40 2329 Computational Enzymology: Elucidating the Role of Enzyme Active Sites and their Residues In Ligand Binding, Oxidative Protection, and Catalysis, *Gauld JW, "University of Windsor"

14:20 2330 Development of an Easily Accessible, In-situ Generated Regio- and Diastereoselective Hydroamination Catalyzer, Edwards P, "University of British Columbia", *Schafer L


15:00 2332 New Routes to Families of NHC-Gold(I) Catalysts, Hashmi ASK, "Heidelberg University, Germany"

15:20 2333 Palladium-catalyzed Carbonylatve Synthesis of Pyrroles and Beta-lactams, Martin Torres G, "McGill University", *ArndtSEN BA

15:40 Coffee Break

16:00 2334 Tackling Challenging Amine Nucleophiles in Nickel-catalyzed C-N Cross-coupling through Tailored Ligand Design, Tassone JP, "Dalhousie University", MacQueen PM, Lavoie CM, *Stradiotto M

16:20 2335 Enantioselective Iron and Copper Catalyzed Carbonylative Insertion Reactions into Si-H Bonds, Keipour H, "Université Laval", *Ollivier T

16:40 2336 Applications of Aromatic Sulfates Derivatives in Synthesis - Using Pyridine as Both a Protecting Group and a Directing Group for Pd-catalyzed ortho-Halogenation, Chen F, "Concordia University", *Forgione P

17:00 2337 Reactivity of New NCN-type Pincer Complexes of Ni(III), Cloutier JP, "Université de Montréal", Zamani F, Zargarian D, Canac Y

17:20 2338 Nickel Catalyzed Amination of Phenol-derived Electrophiles, MacQueen PM, "Dalhousie University", *Stradiotto M

17:40 2339 Rhodium-catalyzed Enantioselective Synthesis of 3,3-disubstituted Oxindoles, Jang YJ, "University of Toronto", Larin E, *Lautens M

18:00 End of Session

ORP Hall C

Poster Session
From 17:40 until 19:30


2341 TiO@Pd Nanoparticles as Reusable Catalysis in the Synthesis of N-aryl Sulfonamides Under Mild Reaction Conditions, Khajal M, "Islamic Azad University, Iran", Ghazanfarpoor-Darjani M

2342 Isolation, Characterization of Alkaloids from Alchore cordifolia, Okoyeagu A, "Michael Okpara University of Agriculture, Nigeria", Mac-Kalunta M

2343 Immobilization of Palladium (0) Complexes on Triethanolamine Functionalized Coreshell Magnetic Nanoparticles: As a Magnetically Separable and Stable Recyclable High-performance Catalyst for Suzuki-Miyaura Cross-coupling Reactions, Pirhayati M, "Lorestan University, Iran", Veisi H, *Kakanejiafard A


2345 The Use of Cucurbituril in Pharmaceutical Sciences, Wang R, "University of Macau", Li S, Yang X, Yin H, Huang Q

2346 Pushing the Limit on Regioselective Deprotonation of Trialkylphosphine-derived Phosphonium Salts Directed by Cyclic Acetal Protecting Groups, Hurem D, McMaster University, McLeod D, Narayanappan A, *McNulty J

2347 A Highly Efficient Method for Photocyclisation of Bis(diphenylmethylene)dihydoranthracenes, Wang C, "Memorial University of Newfoundland", Zhao Y

2348 Automating Chiral Auxiliary Recycling, Sullivan RJ, "University of Ottawa", Newman SG

2349 Highly Chemo/Regioselective Organocatalyzed Morita-Baylis-Hillman versus Aldol or Aldol Condensation Reactions of Cyclic Ketones, Akbarzadeh E, "Kharazmi University, Iran; Islamshahr Azad University, Iran"

2350 Magnetite Nanoparticles Coated with Tannic Acid as a Reductor and Stabilizer Sorbent for Palladium Ions: Synthetic application of Fe2O3@TA-Pd NP, as Magnetically Separable and Reusable Nanocatalyst for Reduction of 4-nitrophenol and Suzuki Reactions, Pirhayati M, "Malayer University, Iran", Veisi H


2352 Functionalization of Pentacene, 5,7,12,14-tetraene with Ene-dyne and Dihiaflagelene Groups, Yoones E, "Memorial University of Newfoundland", Zhao Y

2353 One Step Transformation of Coenzyme A into Analogues by Transmission, Sanichar R, "University of Alberta", *Veders JC

2354 A New Facile and Efficient Synthesis of 2-(5-aryl-1, 3, 4-oxadiazol-2-yl Methoxy)-3-methyl Quinoxaline and 2-methyl Quinoxaline-3yl- 5-aryl-2H-tetrazole 2-carboxylate Derivatives, *Maritnganti T, "University of India"

2355 Synthesis and Characterization of Dendritic Oligophenylene Vinylene, Shahrokhi F, "Memorial University of Newfoundland", Zhao Y

2357 Total Synthesis of Inospekinacin and Preluostatin via a Double Directed Remote Metatilation (DreM) Cyclisation, Hurst TE, "Queen's University", Patel J, Ziebenhaus C, Kitching MO, *Sneieckus V


2359 Photochemical Synthesis of Alkynyl Sulfides Using Continuous-flow, Santandrea J, Minozi C, Cruché C, "Université de Montréal", *Collins SK


2363 Automated Reaction Progress Analysis: A Rapid and Robust Method for Elucidating Catalyst Monopoly, Chung R, "University of British Columbia", *Hein JE
2364 solvent effects on the stereoselectivity of aprotic glycosylations
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2365 total synthesis of the natural product (+)-trans-dihydronaronclaviscaine via an asymmetric organocatalytic [3+3]-cycladdition and discovery of its potent antiflaviviral (Zika) activity

2366 chiral catalysis mediated by diazaphospholenes
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2367 Carbohydrate and peptide chemistry: Bridging biology, synthetic chemistry, and computational chemistry
Trant JF <University of Windsor>

2368 discovery of [18F]JN-64413739, a PET ligand for PX77 receptor imaging
Chen G <Neuroscience, Janssen R&D LLC, USA>, Szardenings AK, Zhang W, Xia C, Berdyjeva T, Huang C, Bhattacharya A, Lord B, Letavic M, Kolb HC

2369 experimental and computational studies on the mechanism of the Pd-catalyzed hydroalgenation of 1,6-enynes
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2370 synthesis of P-chiral dihydrobenzoazaphosphole ligands and their applications in asymmetric catalysis

2371 simple and clean photo-induced methylation of heteroarenes with MeOH
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2372 the [5 + 1 + 2 + 1] rhodium-catalyzed cycloaddition reaction: A combined DFT and spectroscopic study
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2373 innovative one-pot syntheses of benzoquinone and benzoquinonimine rings driven by oxidation
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2374 C-H activation/borylation of amide directed aromatics using ruthenium catalyst
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2375 supramolecular control of p/n bulk heterojunctions using complementary hydrogen bonds
Yee N <McGill University>, *Black HT, *Perepichka DF

2376 bent bond (α and the antiperiplanar hypothesis. A novel approach in the comprehension of glycodies reactivity at the anomeric center
Parent J-F <Université Laval>, *Deslongchamps P

2377 formal cycloadditions as an expedient access to produce Dihydrofuranoindoline and Arylated (Cyclopropene or Aziridin) Cores
Deruer E <Université du Québec à Montréal>, Coulibali A, Canesi S

2378 synthesis and Applications of [1,2,3]-H labelled (+)-Disparlure, and Their Analogues
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2379 synthesis of biotin-functionalized biguane for the identification of the tumor growth inhibition mechanism of metformin
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2380 alanine scan of daftymycin
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2381 short synthesis of pynetrozine analogs using in situ-generated N-substituted isocyanates
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2382 a directed ortho metatllation approach to unusually substituted indazoles
Cullen FJ, Melanson JA <Queen's University>, Wang S, *Sniekusz V

2383 pressure-controlled conformational tuning in molecular wires
Wiebe H <Simon Fraser University>, Louwere M, *Weinberg N

2384 Copper-catalyzed intramolecular n-halovinylation of amides and carbamates
Gilbert N <Université du Québec à Trois-Rivières>, *Daoust B

2385 experimental and theoretical investigation on the lithiation of 2,4-lutidine
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2386 synthesis of functionalized bisquinoxaline macrocycles and their self-assembly directed by weak long-range C-H-with hydrogen bonds
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2387 NSERC CREATE Program in continuous flow science
Kairouz V <Université de Montréal>, Collins S, *Charette AB

2388 design of a novel chomone family, A combination of biologically active molecules: Synthesis, antimicrobial and cytotoxic behavior as well as SAR study
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2389 co-based sensitizers for photoredox reaction
Clementine CM <Université de Montréal>, *Shawn SC

2390 Gold-catalyzed reactions in microreactors
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2391 Copper-catalyzed iodovinylation of hydrazides and carbazates
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2392 Synthesis of 2,4-diaceatamido-2,4,6-tridexoxy-L-altrose: A Key Intermediate in the Synthesis of Pseudaminic Acid
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2393 synthesis of 1,2,4,3-triazaphospholene catalysts
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2394 Fast and simple access to phosphindolium salts
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2395 alkyneclibod mediated vinylogous nazarov reaction
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2397 light mediated Copper catalyzed C-C bond formation
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2398 relative stability of hexacarboydocyclic propargylic carbocycles - effect of remote substitution
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2399 linear and cyclic peptides as Green catalysts for chiral epoxidations
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2400 synthesis of pseudaminic acid derivatives by solid-phase synthesis
Loeb SJ <McMaster University>, *Organ MG

2401 development of aminosteroid derivative libraries with solid-phase synthesis to identify new anti-cancer agents

2402 novel photochromic bis(thienyl)ethene based crown ethers for preparation of mechanically interlocked molecules
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2403 3D printable, rapid cure silicone elastomers prepared using thiouline "click" chemistry
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2405 Synthesis of Cyclodextrin-based Oligomers with Different Cavity Sizes Zhang ZG <Alberta Glycomics Centre; University of Calgary>, Ling CC

2406 Fast Solid-phase Synthesis of 17β-HSD10 Inhibitors as Potential Therapeutic Agents against Alzheimer’s Disease Boutin S <Université Laval>, Poirier D, Maltais R, Roy J

2407 Enantioselective Organocatalytic Michael/Aldol Sequence: Total Synthesis of the Anticancer Natural Product (+)-trans-Michael/Aldol Sequence: Total Synthesis of the Allenes Using (Difluoroiodo)toluene University of Toronto, University of Waterloo, McGill University, McMaster University, McNulty J

2408 Structure and Reactivity of 1,3-Bis(dimethylamino)-3-iodopropargyl Iodide Land MA <Saint Mary’s University>, Robertson KN, Clyburne JAC

2409 Fluorescence and Catalysis by Cyclopropenium Dudding T <Brock University>, Mir R

2410 gem-Difluorination of Terminal Allenes Using (Difluoriodo)toluene Zhao Z <University of Waterloo>, Murphy G K

2411 Reduction of Benzylalcohols with Diethyl Ether under Mild Acidic Conditions Cook AJ <University of Ontario Institute of Technology>, Bolshian Y

2412 Synthesis of Aza-bicyclic Frameworks by Sequential Intramolecular Vilsmier-Haack and Organocatalyzed Mannich Reactions Outin J <Université de Sherbrooke>, Bélanger G

2413 Computational and Experimental Analysis of Anionic 5-endo/6-exo-dig Cyclization toward Pyrroline and Pyridinone Infante G <University of New Brunswick>, Eisler S

2414 Dibenzofurans and Pseudodepsidones from the Lichen Stereocaulon paschalde Collected in Northern Quebec Carpenter C <Université Laval>, Ferreira Queiroz E, Marcourt L, Wolfender J-L, Azelmat J, Grenier D, Boudreau S, Voyer N

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2417 Aryl Ether Synthesis via ortho-Quinone / Phenol Cross-coupling Huang Z <McGill University>, Lumb J-P

2418 Total Synthesis of the Potent Anticancer Agent Prunastatin A Chojnacka MW <University of Toronto>, Batley RA

2419 Synthesis of p-keto-a,a-difluorosulfonamides and Difluoromethanesulfonylamides Soley JA <University of Waterloo>, Taylor SD

2420 Late Stage Introduction of Quaternary Stereocentres: Towards the Synthesis of Paraparinaonic Acid Elimehriki AH <McGill University>, Gleason JL

2421 Restoring Chloroquine Efficacy and Determination of its Mechanism Kapuku B <McGill University>, Bohle DS

2422 Synthesis of Aminodiols by Enantioselective Haloamination Reactions Papa BL <Federal University of Sao Paulo, Brazil>, Vinhato E, Rodrigues A

2423 Chemo- and Stereoselective Rhodium-Catalyzed Eno-Cyclocisomerization of Thioether-Substituted Allenylencyclocopropanes: Metal-Mediated β-Sulfide Migration Su Y <Queens University>, Evans PA

2424 Stereoselective Synthesis of a Highly Oxygenated α-Lactone Related to the Core Structure of (+)-Enterocin Wegmann M <Technische Universität München, Germany; University of Toronto>, Bach T

2425 Mild, Palladium-catalyzed Lateral Functionalization of Pyridines Orellana A <York University>, Rasheed F, Wasy N

2426 Studies towards the Total Synthesis of Gelegandine B Kerovius JK <University of Western Ontario>, Kerr MA

2427 The Role of Lipoxigenase-catalyzed Lipid Peroxidation in Ferroptotic Cell Death Shah R <University of Ottawa>, Pratt DA

2428 Supramolecular Enhancement of Photochemistry in Mechanically Interlocked Molecules Baggi G <University of Windsor>, Loeb SJ

2429 Intramolecular -Complexation in Transient Allenyl- and Alkynylglycynamides Leigh WJ, Jeyakanthan K <McMaster University>, Simpson AC, Evano G

2430 Photooxidation Transformations of Organic Halides Michelet B, Deidaele C <University libre de Bruxelles, Belgium>, Kajouj S, Moucheron C, Evano G

2431 Synthesis of Carbazoles and Azahelicene Using Flow Chemistry Caron A <Université de Montréal>, Hernandez-Perez AC, Collins SK

2432 Visible Light Photocatalyst Reduction of α,β-Unsaturated Carboxyls: Utilisation of Radical Enolates Simpson QJ <Monash University, Australia,CSIRO Manufacturing, Australia>, Hutt O, Lupton DW

2433 Three Component Coupling of Organoaluminums, Silylated Amines, and Aldehydes Tarasewicz A <University of Toronto>, Ensin D, Batley RA

2434 Real Time Reaction Profiling by HPLC-MS Using a Prototype Automated Laboratory Toolkit Malig T <University of British Columbia>, Hein JE

2435 Key Bond Constructions in the Synthesis of Neornachantin A Aided by Continuous Flow Methods Morin E <Université de Montréal>, Raymond M, Dubart A, Collins SK

2436 Unusually Stable Gold Nanoparticles Protected by Large Dithiol Ligands Salloum S <University of Windsor>, Zghal O, Yu J, Eichorn SH

2437 Phenoxazine-derived Antioxidants: The Ideal Compromise between Activity and Stability? Farmer LA <University of Ottawa>, Haidasz EA, Pratt DA

2438 Benzoxazine Derived Nitrooxides and their Activity as Radical-trapping Antioxidants Harrison K <University of Ottawa>, Haidasz E, Pratt D

2439 A Mild and Non-oxidative Work-up for the Diosaxaborole-mediated Enantioselective Cyclopropanation with Enhanced Functional Group Compatibility Siddiqui SH <Université de Montréal>, Navuluri C, Charette AB


2441 Synthesis of Alkynylphosphine Oxides and their Use in Intramolecular Carbollithiation Gérard P <Université Libre de Bruxelles,Belgium>, Veillard R, Alayrac C, Gaumont A-C, Evano G

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2443 Ruthenium-catalyzed bis Homo Diels Alder [2+2+2] Cycloaddition Reactions between 1,5-Cyclooctadiene and Various Alkynes Petko D <University of Guelph>, Stratton M, Tam W

2444 Copper-mediated Nucleophilic Addition/Cascade Cyclization of Aryl Dienes Sinclair GS <University of Waterloo>, Yang T, Wang S, Chen WH, Schipper DJ

2445 Photochemical Extrusion of Dinotrogen from Boryl Azides: Ligand-based Intramolecular versus Intermolecular Boryl Nitrene Reactivity Atienza BJP <University of Alberta>, Williams FJ

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<td>Michel N &lt;University of Toronto&gt;, Rousseaux S</td>
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<td>2483</td>
<td>Complex Derivatives of Cathal and 1,2-Benzoquinone: Relax and Associative Properties</td>
<td>Langis-Barsetti S &lt;Université de Montréal&gt;, Lévesque A, Maris T, Wuest JD</td>
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<td>2484</td>
<td>Enamine Additon to Silicon Compounds</td>
<td>Promnitz CE &lt;Brock University&gt;, Zelisko PM</td>
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<td>2485</td>
<td>Cross-coupling of HeteroarylChlorides with Hindered Amines Using Pd-PF emitter Precatalyst and BHT</td>
<td>Khadra A &lt;York University&gt;, Organ MG</td>
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<td>2486</td>
<td>A Directed Metathesis Group (DMG) Dance for the Regioselective Functionalization of Benzimidazoles</td>
<td>Deichert JA &lt;Queen's University&gt;, Hurst TE, Friedman A, Gomes S, Singh S, Snieckus V, Kitching MO</td>
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<td>2487</td>
<td>Gem-Difluorination of ε-Diamide Amides Using (Difluoroiodo)toluene</td>
<td>Tran R &lt;University of Waterloo&gt;, Murphy GK</td>
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<td>2488</td>
<td>Catalyst-controlled Selectivity in Alkylation Cross-couplings of Ester Electrophiles</td>
<td>Masson-Makdessi J &lt;University of Ottawa&gt;, Newman SG</td>
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</table>
2489 Synthesis of Highly Functionalized Benzo-fused 1,4-diazepin-3-ones and 1,5-diazocin-6-ones by Sequential Ugi and Intramolecular SNAr Reactions Vezina-Dawod S <Université Laval>, Gerber N, Liang X, Biron E

2490 Light Induced Dehalogenation of Halobenzene Using Carbon Quantum Dots Lemieux AJ <University of New Hampshire, USA>, Caputo CA

2491 Efforts towards Enamine Catalyzed [3,3]-sigmatropic Rearrangements Leforte L <Bishop’s University>, Drouin A

2492 Total Synthesis of Thapsigargin Chen DZ <Queen’s University>, Evans PA

2493 The Synthesis of Alkox-substituted bist(Phenyl Ethynyl)pentacene Derivatives as Potential Liquid Crystalline Materials Foroughian N <Wilfrid Laurier University>, Malay KE

2494 Diastereoselective Borocyclopropanation of Allylic Ethers and Styrenes Benoit G <Université de Montréal>, Charette AB

2495 Development of Stereoselective Methods for the Synthesis of Chiral α-Aminoalkylboronates Li X <University of Alberta>, Hall DG

2496 New Perspectives for Lewis Acid Catalyzed [2+2] Cycloadditions between Alkenes and Allenoates Wiest JM <Indiana University, USA>, Brown MK

2497 Azabicyclo[X.Y.0]alkanone Peptidomimetic Synthesis Atmuri NDPa <Université de Montréal>, Lubell W

2498 Accounting for the Diverse Product Distribution in the Autoxidation of Cholesterol Zielinski ZAM <University of Ottawa>, Pratt DA

2499 Phthalaldehyde Catalyzed Hydrolysis of Organophosphonic Amides and Related Derivatives Li BJ <University of Ottawa>, Simard RD, Beauchemin AM

2500 A Bio-inspired Synthesis of Benzothiazines Halloran MW <McGill University>, Li E, Esguerra KV, Huang Z, Lumb J-P


2502 Investigating Ring-opening Reactions of Cyclopropanated Oxabenzonorbornadiene Boutin R <University of Guelph>, Carlson E, Tam W

2503 Synthesis of 3,6-Unsaturated α-Amino ketones Using a Tandem Copper-catalyzed vinylClicking Reaction Followed by a Claisen Rearrangement Ricard S <Université du Québec à Montréal; Université du Québec à Trois-Rivières>, Daoust B, Gagnon A

2504 Sulfoxidation of Alkenes and Alkynes with NFSI as a Radical Initiator and Selective Oxidant Zhang Y, Wong ZR <Nanyang Technological University, Singapore>, Wu X, Lauw SJL, Huang X, Webster RD, Chi YR

2505 Construction of Stereogenic Quaternary Centers Using Photooxidation Catalysis and Application to the Synthesis of Novel Nucleoside Analogues Lussier T <Institut de recherches cliniques de Montréal>, Waltz ME, Guindon Y

2506 Hydrofluorination and Difluorination Reactions of Acetophenone Hydrazones Derivatives Using (Difluoroiodo)Toluene Garie M <University of Waterloo>, Murphy GK

2507 Synthesis and Reactivity of α-Tosyloxy Boronic Esters Roest PC <University of Toronto>, Batey RA

2508 A Highly Convergent Total Synthesis of Dolabferol C (One-pot Stereoselective Bis-aldol Reactions) Diddi N <University of Saskatchewan>, Ward DE

2509 Synthesis of Novel Pentacene Derivatives with Fused Thiophene Rings as Potential Semiconducting Materials Antoniani A <Wilfrid Laurier University>, Halloran M, Malay K

2510 Synthesis of Sulfur Containing Triphenylamine Based Dyes for Dye Sensitized Solar Cell Applications Simoes SA <Ryerson University>, Koivisto BD

2511 Synthesis of Substituted Trinaphthalenones and Tetrathaphthalenones via Yamamoto Coupling Bellemore VM <Wilfrid Laurier University>, Malay KE

2512 Development of an Asymmetric Organocatalytic [2+2] for the Synthesis of Tetrasubstituted Heterodimeric and Homochiral Cyclobutanes Nielsen AJ <McMaster University>, Jenkins HA, McNulty J, McNeely Y

2513 Osazone Salts as NH2 Pre-catalysts Garapati VKR <University of Saskatchewan>, Gravel M

2514 Synthesis of Allenyld Sulfenates and an Investigation of their Reactivity Michalski MM <University of Guelph>, Kulak MR, Hirst M, Schwan AL

2515 A Nickel-catalyzed Oxa-Heck Reaction Vandavasi JK <University of Ottawa>, Hua XY, Newman SG

2516 Palladium-catalyzed Ring-opening Reactions of Cyclopropanated 7-Oxabenzonorbornadiene Tait K <University of Guelph>, Boutin R, Alrifai O, Tam W

2517 A New Bronsted Acid-catalyzed Dual-natured Coupling Reaction Harris DH <University of Ontario Institute of Technology>, Bolshan Y

2518 Sequestrering n-Alkanes in a Perfluoroindazole Based Non-covalent Organic Framework Mailman A <University of Jyväskylä, Finland>, Peuronen A, Lahtinen M, Tuononen HM


2520 Computational Investigation of Thiouracil Decomposition Pathways and the Reactivity of the GAPDH Enzyme Parmar V, Orabi E, English AM, Peshehre GH <Concordia University>

2521 Synthesis of Non-nucleoside Antiviral Cyclopropylcarboxyl Hydrazones and Initial anti HSV-1 Structure-activity Relations Dokuburra CB <McMaster University>, McNulty J, D’Alito L, McLain L, Piazza P, Williamson K, Nimangoark VL

2522 Novel Trialkylphosphoranylanides for the Two-carbon Homologation of Aldehydes to α,β Unsaturated Aldehydes McLeod D <Ontario Institute for Cancer Research>, McNulty J

2523 Synthesis and Biological Activity of Natural Quinones, Resorcinols, and their Derivatives Sisa M <Academy of Sciences of the Czech Republic, Czech Republic>, Vanek T

2524 New Synthetic Approaches to Halichondrin B Related Drug Substances Rudolph A <Alphora Research Inc.>

2525 Design and Synthesis of Ligand-directed Fluorescence Probes to Track Kainate Receptors in Living Cells Tian Z <University of British Columbia>, Menard F

Physical, Theoretical and Computational Chemistry

PT5 206E Noncovalent Interactions in Quantum Chemistry and Physics: Theory and Applications
Organizer(s) - Gino DiLabio, Alberto Otero de la Roza
Chair(s) - Alberto Otero de la Roza

13:40 2526 Strong van der Waals Attractive Forces in Nanotechnology
Reimers JR <Shanghai University School of Mathematical and Physical Sciences, China>

14:20 2527 Using Machine Learning to Probe the Relationship between Noncovalent Interactions and Topological Properties at the Picoscale
MacDougal PJ <Middle Tennessee State University, USA>, Donthula K

14:40 2528 Maximum Energy of Hydrogen Bonding in Solution Probed by 17O NMR Spectroscopy
Toubaei A <Queen's University>, Wu G

15:00 2529 The Influence of Molecular Rotational Structure on the State of H2 Films Adsorbed on MgO(100)
Sadeghifar A <University of British Columbia>, Jack DB

15:20 2530 Dipoles Inside Dipoles: Uncommon Insertion Complexes of Polar Molecules
Naumkin FY <University of Ontario Institute of Technology>, Kerr S

15:40 Coffee Break

16:00 2531 Noncovalent Interactions in Organic Electronic Materials
Risko C <University of Kentucky, USA>

16:40 2532 Polymer Structural Deformation Affects the UV-Vis Spectrum of p3HT:PCBM Dimers
Castillo-Alvarado FL <Instituto Politecnico Nacional, Edificio 9, Mexico>, Martinez JP, Goetz AW, Rodriguez JI

17:00 2533 Fast Treatment of Polarization in Condensed-phase Environments
Beran G <University of California - Riverside, USA>

17:40 End of Session

PT7 203B
Plasmonics for Chemistry and Biology
Organizer(s) - Gilbert Walker
Chair(s) - Gilbert Walker

13:40 2534 Plasmonic Stamps: Using Plasmons to Drive Nanopatterned Chemistry on Silicon
Liu F, Luber EJ, Olsen BC, Jin C, Buriak JM <University of Alberta>

14:20 2535 Plasmon-accelerated Electrochemical Synthesis
Moskovits M <University of California - Santa Barbara, USA>

15:00 2536 Plasmon-mediated Chemical Surface Functionalization at the Nanoscale

16:00 2537 Broadband Metasurface for Universal SERS Substrates
Zhang N, Song H, Gan Q <University of Buffalo, USA>

16:40 2538 Structural and Optical Properties of Self-assembled Chains of Plasmonic Nanocubes

17:00 2539Emergent Higher Order Plasmon Resonances in Disordered Nanoparticles: Quadrupole Enhanced Raman Scattering (QERS) and Strong Optical Magnetic Plasmons
Fakhraei Z <University of Pennsylvania, USA>, Hashtings S, Li C, Qian Z, Park S-J, Engheta N

17:40 End of Session

PT11 202D
Protein Machines and Allostery
Organizer(s) - Lewis Kay, Scott Prosser and Giuseppe Melacini
Chair(s) - Lewis Kay

13:40 2540 Birth of the Cool: Multi-temperature Crystallography Predicts Allosteric Response
Fraser JS <University of California - San Francisco, Predicta>

14:20 2541 Cyclic Nucleotide Binding and Facilitation of Opening by Membrane Potential in the Cardiac "Facemaker" Ion Channel
Accili EA <University of British Columbia>

14:40 2542 Structural and Functional Investigation of Disease-causing Mutations in Voltage-gated Sodium and Calcium Channels

15:00 2543 As Simple as Possible, but Not Simpler
Habibi M <University of British Columbia>, Rottler J, Plotkin SS

15:20 2544 Tapping the Translation Potential of cAMP-dependent Allostery
Melacini G <McMaster University>

15:40 Coffee Break

16:00 2545 Reprogramming Allosteric Regulations of G Protein-coupled Receptor Activity by Protein Design
Chen K-Y, Brown K, Campbell H, Barth P <Baylor College of Medicine, USA>

16:40 2546 Bidirectional Allosteric Activation of A2A, P by Cations

17:00 2547 Membrane Dependent Allolstry of the Oncoprotein RAS Structure and Function at Biological Membranes

17:40 2548 Theoretical Study on the Mechanism of Enzyme-catalyzed C-H Amination
Li Z <Dalhousie University>, Burnell DJ, Boyd RJ

18:00 End of Session

PT12 203D
Ultrafast Spectroscopy and Imaging of Molecular Processes
Organizer(s) - Dwayne Miller
Chair(s) - Dwayne Miller

13:40 2549 Coherent Two-dimensional Nanoscopy
Aeschlimann M <University of Kaiserslautern, Germany>

14:20 2550 Mapping the Structure of Photoinduced Phases, Momentum Dependent Electron-phonon Coupling and Nonequilibrium Phonon Relaxation with Ultrafast Electrons

15:00 2551 Shaped Cathodes for the Production of Sub-15 FS Multi-electron Bursts
Petruk A, Pichugin K, Sciaini G <University of Waterloo>

15:40 Coffee Break

16:00 2598 Synchronized Photochemical Ring Closure of a Spirooxazine Ring Opening in Thin Crystals to Uncover Ultrafast Dynamics
Murphy R.S., Siddiqui K.M., Cotrye G., Hayes S.A., Rossos A., Badali D.S., Xian R., Whitaker B.J., Miller R.J.D. <Department of Chemistry, University of Toronto, Toronto, Canada>

16:40 2553 Imaging Ultrafast Dynamics on the Nanoscale with Terahertz Scanning Tunneling Microscopy

17:20 End of Session
**Thursday AM**

### Analytical Chemistry

#### AN3 202B

**Applications of Nanomaterials in Analysis, Sensing and Imaging – joint with MT**

Organizer(s) - Russ Algar, Jennifer Chen, Juewen Liu

Chair(s) - Juewen Liu, Jennifer Chen

08:00 2565 Beyond Biomarkers: Array-based Profiling for Diagnostics and High-throughput Screening

Rotello VM  
University of Massachusetts-Amherst, USA

08:40 2566 SERS Optophysiology: Toward In Vitro Neurotransmitters Monitoring of Dopaminergic Neurons

Lussier F  
Université de Montréal, Brule T, Ducrot C, Bourque M-J, Trudeau L-E, Masson J-F

09:00 2567 Nanozymes as Biosensors

Liu J  
University of Waterloo, Liu B

09:20 2568 Low-cost Plasmonic Nanomaterials to Address Health and Environmental Issues in Developing Countries

Brolo AG  
University of Victoria

09:40 2569 Application of Nanohole Arrays in Sensing and in Surface-enhanced Spectroscopies

Masson JF  
Université de Montréal, Couture M, Poirier-Richard HP, Brulé T

10:00 Coffee Break

10:20 2570 Upconversion; Quo Vadis

Capobianco JA  
Concordia University

11:00 2571 Synthetic Design of Gold and Silver Nanoparticles for Sensitive Plasmonic and Surface Enhanced Raman Detection

Kitaev V  
Wilfrid Laurier University, Cathcart N, Hobbs K

11:20 2572 Interactions between Hemin-Graphene Nanosheets and Hemin-binding DNA Aptamers

Tabunag JS  
Simon Fraser University, Yu H-Z

11:40 2573 Point-of-care Diagnostics: Rapid Quantitative Detection of Biomarkers in Whole Blood

Mahshid SS  
University of Toronto, SO Kelley

12:00 End of Session

#### AN7 206C

**Teaching Analytical Chemistry**

Organizer(s) - Russ Algar, Chuck Lucy, Paul Pinnoo

Chair(s) - Russ Algar, Charles Lucy

08:00 2574 Charles David Keeling and the Story of Atmospheric CO₂ Measurements

Harris DC  
Naval Air Systems Command, USA

08:40 2575 Particulate Matters: Exploring Air Quality in the Third-year Classroom

Styler SA  
University of Alberta, Gao S

09:00 2576 Why Can’t You Just Tell Me the Answer! Giving the Responsibility of Learning to Students in the Analytical Laboratories

Rodriguez Nunez JR  
University of British Columbia, Maxwell EJ

09:20 2577 Use of a Student Self-assessment Test in Introductory Analytical Chemistry

Stone DC  
University of Toronto

09:40 2578 Teaching Analytical Chemistry without Lectures and without Grades. Can it Be Done?

Doucette A  
Dalhousie University, Chisholm R

10:00 Coffee Break

10:20 2579 Context is Everything: Facilitating Learning of Instrumental Analysis through the Context of Forensic Science

Watterson J  
Laurentian University

11:00 2580 An Inexpensive, 3D-Printable Demonstration Kit for the Teaching of the Operating Principles of Diffraction Gratings

Piuanno PAE  
University of Toronto at Mississauga

11:20 2581 Urinary Iodine Monitoring by Kinetic Spectrophotometry: An Integrative Analytical Chemistry Laboratory Experience in Quality Assurance, Nutrition and Population Health

Macedo AN  
Dalhousie University, Tsai S, Norai de Macedo A, Chaudhry A, Mathiapananaly S, Neuman K, Allan L, Britz-McKibbin P  
McMaster University

11:40 2582 The Arduino Platform in the Analytical Teaching Laboratory

Dryden MDM  
University of Toronto

12:00 End of Session

### General Session

Organizer(s) - Demian Ifa, Dajana Vuckovic

Chair(s) - Demian Ifa, Dajana Vuckovic

08:00 2583 Solid-phase Microextraction Procedure to Determine Fragrance Allergens in Personal Care Products

Wang C  
National Taiwan University, Taiwan

08:20 2584 Functionalized Porous Silicon Surfaces as Substrates to Optimize DESI-MS Performance

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York University, Schwab NV, Eberlin MN, Morin S, Ifa DR
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<th>Time</th>
<th>Speaker(s)</th>
<th>Title</th>
<th>Location</th>
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<td>08:00</td>
<td>University of Windsor</td>
<td>Research and Other Forms of Experimental Learning</td>
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<td>Organizer(s) - Paul Piunno, Judith Poë</td>
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<td>Chair(s) - Jessica D'eon, Andy Dicks</td>
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<td>08:00 2616 Chemistry and Human Health: A SENCER Model Course</td>
<td>10:20 2617 Short-term Student-directed Research as a Vehicle for Learning the How and Why of Scientific Communication</td>
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<td>Grant E &lt;University of British Columbia&gt;, Stewart JJ, Stoodley R</td>
<td>10:40 2617 Introduction Research Integration into a Chemistry Classroom</td>
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<td>08:40 2618 Modelling an Authentic Research Experience: A “Plan-Your-Own” Alcohol Oxidation Laboratory</td>
<td>10:00 2619 Chemistry Students in the Museum of Antiquities. Humanities Students at the Synchrotron. What are the Learning Outcomes?</td>
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<td>Cho H, Dicks AP &lt;University of Saskatchewan&gt;</td>
<td>09:00 2620 Crossing Intersections in Experimental Learning in Environmental Science and Policy and STEM Education</td>
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<td>09:20 2621 Environmental Chemistry in the Real World: Casting Students as Industrial Consultants</td>
<td>10:00 Coffee Break</td>
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<td>Faust JA &lt;University of Toronto&gt;, D'eon JC</td>
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<td>10:40 2622 SURE, Science Undergraduate Research Experiences: A Vertical Peer Mentoring Program at the University of Windsor</td>
<td>11:00 Coffee Break</td>
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<td>Tranter JF &lt;University of Windsor&gt;</td>
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<td>11:00 2623 Enhancement of Student Engagement and Learning in Chemistry through Case Study Enrichment Projects</td>
<td>11:40 Coffee Break</td>
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<td>Dellii S &lt;University of Toronto at Scarborough&gt;, Fatih F</td>
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<td>11:20 2624 A Practical Guide to Introducing Research Integration into a Chemistry Laboratory Curriculum</td>
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<td>Gurney R &lt;Simmons College, USA&gt;, Lee N</td>
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<td>12:00 End of Session</td>
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<td><strong>General Session</strong></td>
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<td>Organizer(s) - Jessica D'eon, Andy Dicks</td>
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<td>Chair(s) - Jessica D'eon</td>
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<td>08:20</td>
<td>Communicating Chemistry: The Impact of Targeting Communication Skills in the Undergraduate Classroom</td>
<td>09:00 Organic ChemWare - HTML5 Interactives for Teaching and Learning Organic Chemistry</td>
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<td>Gillis E &lt;University of British Columbia; Carl Wieman Science Education Initiative&gt;, Grant E, Stewart JJ, Stoodley R</td>
<td>09:20 Putting Chemistry (Back) in Biochemistry</td>
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<td>08:26 Self-motion of Sodium Borosilicate Flakes on a Water Surface: A Demonstration of Molecular Forces at Play Darvesh K &lt;Mount Saint Vincent University&gt;, Martin E</td>
<td>10:20 Teaching Chemistry for a Sustainable Future</td>
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<td>09:00 2627 Organic ChemWare - HTML5 Interactives for Teaching and Learning Organic Chemistry</td>
<td>10:40 Expanding the Tool Box in Undergraduate Laboratory Sessions via Continuous Flow Synthesis</td>
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<td>Deslongchamps G &lt;University of New Brunswick&gt;</td>
<td>11:20 Transition and Training in Academia: A Discussion Gauthier F &lt;Université de Saint-Boniface&gt;</td>
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<td>09:20 2628 Putting Chemistry (Back) in Biochemistry</td>
<td>11:40 Cowboy Chemistry Meets the Occupational Health and Safety Act: Rebranding to Establish a Culture of Safety Reed RW, Stuttard K &lt;University of Guelph&gt;, Hulls M, Mills T</td>
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<td>09:40 2629 A Project Course in Medicinal Chemistry Based on Virtual Drug Design</td>
<td>11:20 GHS/WHMIS 2015 Transition and Training in Academia: A Discussion Gauthier F &lt;Université de Saint-Boniface&gt;</td>
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<td>Johnson AE &lt;Ryerson University&gt;</td>
<td>11:40 Cowboy Chemistry Meets the Occupational Health and Safety Act: Rebranding to Establish a Culture of Safety Reed RW, Stuttard K &lt;University of Guelph&gt;, Hulls M, Mills T</td>
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<td>10:00 Coffee Break</td>
<td>12:00 End of Session</td>
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<td><strong>EN1 206A</strong></td>
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<td>08:00</td>
<td>Predicting the Partitioning of Ions and Organics in Multicomponent, Multiphase Aerosols Zuend A &lt;McGill University&gt;, Ma J</td>
<td>Metachemistry in the Environment</td>
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<td>08:20</td>
<td>Modeling of Isoprene-derived Organic Aerosol Partitioning with Neutral and Acidic Seed Particles at Low and High RH Amaladasan DA &lt;McGill University&gt;, Zuend A, Hoyle CR, Fuchs C</td>
<td>11:40 Rethinking The Dithiothreitol Based PM Oxidative Potential: Measuring Antioxidant Consumption versus ROS Generation</td>
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<td>08:40</td>
<td>Organic ChemWare - HTML5 Interactives for Teaching and Learning Organic Chemistry</td>
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### Thursday AM 2646

**08:00 2646** Arsenic is Everywhere: Cause for Concern? Reimer KJ <Royal Military College of Canada>, Cullen WR

**08:40 2647** Natural and Anthropogenic Inputs of Arsenic and Selenium to the Environment in the Region of the Athabasca Bitumunous Sands, Alberta, Canada Donner MW <University of Alberta>, Javed MB, Cuss CW, Sholyk W, Sidiquire T

**09:00 2648** Release of Mercury from River Bank Sediments and Floodplain Soils under Environmentally Relevant Flooding and Drainage Conditions Wang AO <University of Waterloo>, Placek PJ, Blows DW, Landis RC, Dyer JA

**09:20 2649** Metals in Atmosphere and Atmospheric Interfaces: Are they Important on Oxidation, Ice Nucleation and Climate Change? Ariya PA <McGill University>, Ghodasastidar A, Kurien U, Eltouyin N

**10:00 Coffee Break**


**10:40 2651** Influence of Phytoplankton Dissolved Organic Matter on Mercury Bioavailability Mangal V <Trent University>, Stenzler B, Poulin AJ, Gueguen C

**11:00 2652** Stable Mercury Isotope Fractionation in Aerosols and Snow in the Arctic Chandan P <University of Toronto>, Bergquist BA, Steffen A, Stipple G, Zheng W, De Vera J

**11:20 End of Session**

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### Industrial Session

**IC7** 104A

**Life after the Lab: Unconventional Careers for Scientists - joint with CE**

**Organizer(s):** Molly Sung

**Chair(s):** Molly Sung, Samantha Smith

**08:20 2653** Entrepreneurialism and Academia – Why these Two Fields Should Not Be Mutually Exclusive Caputo CB <York University>

**08:40 2654** Money is a Prerequisite in any Career. So Why Not Make Money and Finance a Career? Vidyarthi S <WWW.VALUESCIENCES.COM>

**09:00 2655** From the Lab to the Law: Careers in Patents for Chemists Berenbaum A <Bereskin & Parr LLP>

**09:40 2656** How I Went from a Biochemistry Major to a Biomedical Communicator Wang M <Bridgeable>

**10:00 Coffee Break**

**10:20 2657** Unconventional Careers For Chemical Engineers Biksa AA <BASF>

**10:40 2658** Life After the Lab: From Scientist to Science Advocate Gibbs KE <Evidence for Democracy>

**11:00 2659** Life After the Lab: Becoming a Patent Specialist Little VR <GreenCentre Canada>

**11:20 2660** Panel Discussion: Life after the Lab - Unconventional Careers for Scientists Sung MMH, Smith SAM <Chemical Institute of Canada - Toronto Section>, Osten KM, Bayne JM

**12:00 End of Session**

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### Inorganic Chemistry

**IN3** 107

**Recent Advances in Sustainable Chemistry - joint with EN, IC**

**Organizer(s):** Kevin Szkop

**Chair(s):** Alex Waked

**08:00 2661** The Conversion of Alkynes to Selectively Substituted Primary Amines. Tandem Catalysis for the Formal Hydroamination with Ammonia Schafer LL <University of British Columbia>, Lui EKJ

**08:20 2662** Highly Active and Reusable Heterogeneous Catalysts and Their Path to Commercialization Djukic B <GreenCentre Canada>, Pasternak A, Thornton P, Nepal M, Kalapugama S, Bergens S

**08:40 2663** Highly Productive CO₂ Hydrogenation to Methanol: A New Tandem Catalytic Approach via Amide Intermediates Everett M <University of Bristol, UK>, Wass DF

**09:00 2664** Biguanides as Efficient and Recyclable Ligands for Heterogeneous and Micellar Catalysis in Water Fortun S <Université de Montréal>, Schmitzer AR, Beauchair P

**09:20 2665** The Guerbet Reaction for Ethanol Upgrading to Butanol and Higher Alcohols: A High-throughput Approach Hayes CE <University of Rochester, USA; University of Ottawa>, Jones WD, Baker RT

**09:40 2666** Reduction of Carbon Dioxide to Methanol Using a Metal-free Approach Fontaine F-G <Université Laval>, Courtemanche M-A, Légaré M-A, Rochette É

**10:00 Coffee Break**


**10:40 2668** Solid-state Reactivity for Simple, Environmentally-friendly Separation of Scandum and Synthesis of New Metal-Organic Materials Huskie I <McGill University>, Arhangelskis M, Frisic T

**11:00 2669** Let’s Make Chemicals Great Again: Recognizing Environmental Risks in Chemicals of Commerce De Silva AO <Environment and Climate Change Canada>

**11:20 2670** Can Ionic Liquids be Disruptive Enough to Save the World? Rodgers RD, Shamshina JL, Bertin P <McGill University>

**12:00 End of Session**

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### Advances in Solid State Chemistry

**IN5** 203A

**Advances in Solid State Chemistry**

**Organizer(s):** Holger Kleinkne, Venkataram Thangadurai

**Chair(s):** Holger Kleinkne

**08:00 2671** Synthesis of New Metal Hydrides, Carbides, and Nitrides from Calcium/Lithium Fluxes Latturner SE <Florida State University, USA>, Dickman M, Schwartz B

**08:40 2672** Quaternary Rare-Earth Transition-metal Germanides RE₄M₂CdGe₄ and RE₄M₂AgGe₄ Zhang D <University of Alberta>, Olijnyk AO, Iyer AK, Sparks TD, Ghadebeigi L, L An R

**09:00 2673** Syntheses, Crystal Structures, and Photocatalytic Properties of Two Ammonium-directed AgSbS Complexes Nie L <Nanyang Technological University, Singapore>, Zhang Q

**09:20 2674** Capabilities and Applications of the POWGEN Time-of-Flight Neutron Powder Diffractometer at SNS. Whitfield PS, Kimber SA <Oak Ridge National Laboratory, USA>, Kirkham MJ, Huq A

**10:00 Coffee Break**

**10:20 2676** Anisotropic Oxides: Potential Applications in Energy Conversion and Storage SkinnarSJ <Imperial College London, UK>

**11:00 2677** Suppressing Interface Impedance in All-solid-state Li Battery Thangadurai V <University of Calgary>, Pervez SA
11:20 2678 Assessing the Oxidation States and Structural Stability of CeO<sub>x</sub>–TiO<sub>1–x</sub> for Nuclear, Waste, Sequestration Applications
DeBackere JR, Bachi L, Grosevov AP
<University of Saskatchewan>, Forbes SH, Greedan JE

12:00 End of Session

ING2 201F

General Session 2
Organizer(s) - Robert Morris
Chair(s) - Jeremy Rawson

08:00 2679 On the Quest for Stability of Osaphosphoranes towards Closed-shell Valence Isomerization
Espinosa A
<University de Murcia, Spain>, Strebuel R

08:20 2680 Quantifying the Efficiency of CO<sub>2</sub> Capture by Lewis Pairs Using Microfluidics
Chi JJ <University of Toronto>, Johnstone TC, Volk D, Dielmann F, Kumaevcha E, Stephan DW

08:40 2681 Creating Functional Polymers with Inorganic Backbones
Leitao EM <University of Auckland, New Zealand>, Manners I

09:00 2682 New Developments in the Coordination Chemistry of Antimony(V) Cations
Fazee CM <University of Victoria>, Burford N

09:20 2683 Laser Flash Photolysis Studies of Dimesityltannylene in Solution
Duffy IR <McMaster University>, Leigh WJ, Woodard JC

09:40 2684 Towards Stereoregular Polyoxaphosphoborane Copolymers Generated by Chiral Iron Catalysts
Annibale VT <University of Bristol, UK>, Resendiz-Lara DA, Turner JR, Hailles RLC, Chitnis SS, Manners I

10:00 Coffee Break

10:20 2685 Synthesis and Characterization of a New Xenon(II) Oxide Cation. [CH<sub>3</sub>NC]<sup>+</sup>-MeO<sub>2</sub>-NCCH<sup>-</sup>
Bortolus MR <McMaster University>, DeBackere JR, Schrobilgen GJ

10:40 2686 Adducts between SF<sub>6</sub> and SF<sub>4</sub> with Oxygen-bases
Gerken M <University of Lethbridge>, Stuart D, Goettel JT, Wetmore SD

11:00 2687 Hybrid 1,4-Thiazinyl-1,2,3-Dithiazolyl Radicals via a Smiles Rearrangement
Mailman A <University of Jyväskylä, Finland>, Vasko P, Peuronen A, Huimalainen J, Tuononen HM, Clerac R

11:20 2688 Oxidative Addition of Tetracenelenes: Synthesis of Group 10 dioxoene Complexes
Heyer E <University of Windsor>, Zeine S, Rawson JM

11:40 2689 Exploring the Tunable Phosphorescence of Bismones
Parke SM <University of Alberta>, Boone MP, McDonald R, Ferguson MJ, Rivard E

12:00 End of Session

ING3 206D

General Session 3
Organizer(s) - Robert Morris
Chair(s) - Johanna Blaquier

08:00 2690 How Does N<sub>2</sub> Binding Free Energy Change with Metal Oxidation State? A Case Study Using Square Planar Fe<sup>2+</sup>, Fe<sup>3+</sup>, and Fe<sup>4+</sup> Complexes
Prokopchuk DE <Pacific Northwest National Laboratory, USA>, Wiedner ES, Walter ED, Piro NA, Kassel WS, Popescu CV, Bullock RM, Mock MT

08:20 2691 Structure Performance Relationships of Ru<sup>(II)Pt<sup>-</sup></sup><sup>(II)</sup> Cyclization Catalysts
Stubbins JM <University of Western Ontario>, Bridge BJ, Blaquier JM

08:40 2692 Titanium Hydrazido and Borylimido Complexes: New Stoichiometric and Catalytic Reactions of a Versatile Class of Metal-nitrogen Multiple Bonds
Mountford P <University of Oxford, UK>, Clough B, Mellino S, Slusarczyk M, Stevenson L, Xie B

09:00 2693 NH<sub>2</sub>Truncation Accelerates Decomposition of Olefin Metathesis Catalysts
Rufh SA <University of Ottawa>, Fogg DE

09:20 2694 Carbon Dioxide Reduction Using New Porphyrin-based Molecules and Materials
Warren JJ <Simon Fraser University>, Sinha S, Hoang R, Hanson S

09:40 2695 Cooperative C-H, C-S, C-C, and C-O Bond Activation by a Pentanuclear Ni Cluster
Johnson SA <University of Windsor>, Shoshani MM

10:00 Coffee Break

10:20 2696 Investigation of the Properties of a New Family of Anionic NHC Ligands Based on N-Sulfonyliminimidazolium Ylides
Guérin V <Université de Sherbrooke>, Ménard A, Gueron H, Legault CY

10:40 2697 An In-depth Study on the Activation of Orthophenylene-based PNPN Iron Precatalysts: How their cis–cis Structure Affects the Asymmetric Transfer Hydrogenation of Ketones
Demmans KZ <University of Toronto>, See SG, Lough AJ, Morris RH

11:00 2698 Iron Amine-phenolate Complexes as Catalysts for CO<sub>2</sub> Activation
Butler ED <Memorial University of Newfoundland>, Kozak CM

11:20 2699 Coordination Induced Bond Weakening as a Strategy for Hydrogen Release from Ammonia, Water and Ammonia Borane
Bazdek MJ <Princeton University, USA>, Guo S, Chink PJ

11:40 2700 Synthetic Control of Electronic Structure-function Relationships in Hexazirconium Clusters
Malbret EH <Harvard University, USA>, Betley TA

12:00 End of Session

Macromolecular Science and Engineering

MS3 202A

Supramolecular Assembly of Macromolecules and Nanoscale Materials
Organizer(s) - Alex Adronov
Chair(s) - Alex Adronov

08:00 2701 Biomimetic Light-harvesting Antenna Based on the Self-assembly of Conjugated Polyelectrolytes Embedded within Lipid Membranes
Calver CF <McGill University>, Schanje KS, Cosa G

08:20 2702 Engineering the Interface of Nanocarbons with Polymers
Thieren-Aubin H <Max Planck Institute for Polymer Research, Germany>

08:40 2703 Synthesis of Macroyclic Polyl(3-hexylthiophene) and Poly(3-heptylthiophene) by Alkyne Homocoupling
McKown GR <University of Toronto>, Fang Y, Obhi NK, Manion JG, Perepichka DF, Seferos DS

09:00 2704 Extending the Scope of "Living" Crystallization-driven Self-assembly: Well-defined 1D Micelles Based on Organic Block Copolymers
Finnegan JR <University of Bristol, UK>, X, Mans I

09:20 2705 Self-assembled Nanomaterials via Laterally-functionalized Phospholes
Bauhart T <University of Calgary>

10:00 Coffee Break

10:20 2706 Supramolecular Assembly of Nanocolloidal-based Materials and their Characterization
Moran-Mirabal JM <McMaster University>

11:00 2707 Bridging the Gap between the Mesoscopic Order-order Transition and Molecular-level Reorganization in LB Films of Block Copolymers
Pellerin C <Université de Montréal>, Richard-Lacroix M, Suidryman E, Baezüng CG

11:20 2708 Controlled Hierarchical Self-assembly of Gold Nanoparticles in Macroscopic Films: From Densely Packed Monolayers to Networks of Micropores and Nanohandles
Gravelins S <University of Toronto>, Hasham M, Lin Y, Yu K, Tieu M, Goh C, Dhirani A-A
**Thursday AM** 2709  
*Jun 01, 2017*

**202C**

**Surfactants in Macromolecular Science**
Organizer(s) - Gerry Marangoni, Shawn Wettig  
Chair(s) - Shawn Wettig

08:00 2710 Macromolecular Assemblies of a New Series of Gemini Surfactants at the Air-water Interface  
Rehman J, Sowah-Kuma D

08:20 2711 Disruption of Model Membranes by Drug Delivery Surfactants - A Langmuir Monolayer Study  
Wettig SD

08:40 2712 The Interaction of Gemini Surfactants with Zwitterionic Surfactants  
3Marangoni DG, 2St. Francis Xavier University

09:00 2713 Characterization of Hydrophobically Modified Starch Nanoparticle by Pyrene Fluorescence  
Kim D

09:20 2714 Surface Active Polymers - Adsorption, Foaming and Adhesion  
3Pelton R

10:00 Coffee Break

10:20 2715 Microemulsions: A Modern Day Panacea?  
2Callender SP, 3Wettig SD

10:40 2716 Simple Approach to Oil/Water Separation using High-flux Large-pore Filters  
Mahn Z

11:00 2717 Pattern Formation in Phase-separated, Mixed Surfactant Monolayers  
2Paige MF, 3Rehman J, 4Sowah-Kuma D

11:20 2718 An NMR Investigation of Mixed Micelles Composed of Gemini and Zwitterionic Surfactants  
3Marangoni DG

11:40 2719 Fluorescence Study of the Interactions between a Pyrene-labeled Gemini Surfactant with Non-gemini Surfactants  
2Basalem A

12:00 End of Session

**203C**

**Electronic Materials and their Chemistry** (Organic, Inorganic and Hybrid Materials)
Organizer(s) - Tim Bender, Yuning Li  
Chair(s) - Simon Rondeau-Gagné, Loren G Kaake

08:00 2720 New B,N-embedded Polyaromatic Heterocycles  
Yang D-T, Shi Y-G, 3Wang S

08:40 2721 A Fully Characterized Pyrene Bridged Large N-heterocycle: 15 Annulated Rings Fused in a Line  
Wang ZL

09:00 2722 A Molecule like Beryllium  
Mailman A, Letch AA, Yong W, Steven E, Winter SM, Claridge RCM, Assoud A, Tse JS, Desgreniers S, Secco RA, Oakley RT

09:20 2723 Multifunctional Ternary Additive in Bulk Heterojunction OPV: Increased Device Performance and Stability  
Grant TM

10:00 Coffee Break

10:20 2725 Colloidal Semiconductor Metal Chalcogenide Nanocrystals: The General Mechanism of Precursor Conversation at Low Temperature  
2Yu K

10:40 2726 Thermally Activated Delayed Fluorescence Emitters in Electroluminescence Devices  
2Zysman-Colman E

11:00 2727 Quantum-chemical Modeling of Conducting Polymers and 2D Materials  
Kaloni TP, 2Schreckenbach G

11:20 2728 “Greener” Synthesis of p-Conjugated Semiconducting Polymers: From 1D Linear Narrow Bandgap Polymers to 2D/3D Conjugated Networks  
Wang M

11:40 2729 Stretchability and Self-healing of Conducting Polymer  
Cicloira F

12:00 End of Session

**MT2**

**Materials Session**

**MT6**

**201D**

**Nano/Hybrid Materials - joint with MS**
Organizer(s) - Mita Dasog, Rob Scott, Jon Veinot  
Chair(s) - Jonathan Veinot

08:00 2730 Simultaneous Sorting and Alignment of Single-walled Carbon Nanotubes  
Selmani S

08:20 2731 Bicyclohexylene-functionalized Gold Nanoparticles for Variable and Competitive Interfacial Strain-promoted Alkane Azide/Nitrone Cycladdition  
Gunawardene PN

08:40 2732 A Bench-top-bottom-up Synthesis of N-heterocyclic Carbene Protected Metal Nanoparticles  
3Padmos JD

09:00 2733 Engineered Particles  
2Farrugia V

09:20 2734 Self-healing, Stretchable Metal Films Using Liquid Metal-elastomer Nanocomposites  
Schlingman K

09:40 2735 Engineering Quantum Dots for Light Selective Polymer Films  
Charpentier PA

10:00 Coffee Break

10:20 2736 Atom Economy in Nanoscience: Biomass as an Avenue to Access Metal Nanoparticles  
2Moores A

11:00 2737 Triggered Gelation of Cellulose Nanocrystals  
Lewis L

11:20 2738 Functional Nanoplatelets from the Two-dimensional Self-assembly of Charge-capped Crystallizable Homopolymers  
Pearce S

11:40 2739 Patterned Hierarchies of Functional Materials: Hybrid Polymer-magnete Nanoparticle Composites  
Zhong T

12:00 End of Session

**MTG2**

**General Session 2**
Organizer(s) - Dwight Seferos  
Chair(s) - Joe Manion
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Organizer(s)</th>
<th>Chair(s)</th>
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<tbody>
<tr>
<td>08:20</td>
<td>2740</td>
<td>Compositional Engineering for the Stability of Perovskite Solar Cells</td>
<td>Poorkazem K</td>
<td>-</td>
<td>University of Saskatchewan, Kelly TL</td>
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<tr>
<td>08:20</td>
<td>2741</td>
<td>The Effects of the Ratio of Donor to Acceptor in Isoindigo-inspired Organic Semiconductors</td>
<td>Randall NM, Yang J, Radford CL, Quinn J, Hou D, Li Y</td>
<td>-</td>
<td>University of Saskatchewan, Kelly TL</td>
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<td>08:40</td>
<td>2742</td>
<td>Charge Generation in Hybrid P3HT-TiO2 Inverse Opals: Effects of Surface Passivation and Junction Thickness</td>
<td>Kerr C</td>
<td>-</td>
<td>York University, Chen J</td>
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<tr>
<td>09:00</td>
<td>2743</td>
<td>Synthesis and Properties of Silicon Nanocrystal/Graphene Aerogel Hybrid Materials</td>
<td>Aghajamali M</td>
<td>-</td>
<td>University of Alberta, Ott C, Javadi M, Mobarak MH, Nilges T, Veinot JGC</td>
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<tr>
<td>09:20</td>
<td>2744</td>
<td>A Facile Method to Prepare Sulfur Doped TiO2 for Environmental Applications</td>
<td>Yu C</td>
<td>-</td>
<td>University of Toronto, Zhu MS, Goh CM</td>
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<tr>
<td>09:40</td>
<td>2745</td>
<td>Design and Preparation of Highly Active Palladium Catalyst and Its Application as a Low Cost Fuel Cells Catalyst</td>
<td>Oseghale CI</td>
<td>-</td>
<td>University of Sheffield, England, UK, Hall PJ</td>
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<td>10:00</td>
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<td>Coffee Break</td>
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<tr>
<td>10:20</td>
<td>2746</td>
<td>Diarylindolium Salts as Hydroxylolation Initiators for Surface Functionalization of Silicon Nanomaterials and their Collaborative Effect as Ring Opening Polymerization Initiators</td>
<td>Helbig T</td>
<td>-</td>
<td>Technische Universität München, Knobel M, Sinelnikov R, Lyuleeva A, Veinot JGC, Rieger B</td>
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<tr>
<td>10:40</td>
<td>2747</td>
<td>Precise Plasmonic Tuning of Silver and Gold D3a Nanostructures</td>
<td>Cathcart N</td>
<td>-</td>
<td>Wilfrid Laurier University, V Kirby</td>
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<td>11:00</td>
<td>2748</td>
<td>Covalent Surface Modification of sp3 Hybridized Carbon Materials</td>
<td>Zhu J</td>
<td>-</td>
<td>McGill University, Lennox RB</td>
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<td>11:20</td>
<td>2749</td>
<td>Looking beyond the Nanoscale: Assessment of Nanoparticle Encapsulated Dyes' Ability to Produce Useful Singlet Oxygen</td>
<td>Kabanov V</td>
<td>-</td>
<td>McGill University, Uzarevic K, Howarth AJH, German Inn, Dinebier RED, Farha OKF, Friscic TF</td>
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<tr>
<td>11:40</td>
<td>2750</td>
<td>A Strategy for Targeted Synthesis of Mixed-metal Microporous Metal-organic Frameworks Enabled by Mechanochromery</td>
<td>Ayoub GA</td>
<td>-</td>
<td>McGill University, Uzarevic K, Howarth AJH, German Inn, Dinebier RED, Farha OKF, Friscic TF</td>
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**Organic Chemistry**

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<tr>
<th>OR3</th>
<th>206F</th>
<th>Reactivity in Organic and Biological Chemistry - joint with BM</th>
<th>Organiser(s) - Jason Hein, Ronald Kluger Chair(s) - Jason Hein</th>
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<tbody>
<tr>
<td>08:00</td>
<td>2751</td>
<td>Characterization of Glucose 6-Phosphate 3-Dehydrogenase, an Unusual Enzyme with an Unusual Product</td>
<td>Vetter ND, Palmer DRJ</td>
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<tr>
<td>08:20</td>
<td>2752</td>
<td>Reactivity at the Active Site of Mandelate Racemase</td>
<td>Beame SL, Douglas G, Nagar M, Aboushawabeb S</td>
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<td>08:40</td>
<td>2753</td>
<td>Mimicking and Modifying Lipid Membranes Using Chemosensitive Reactions</td>
<td>Devaraj NK</td>
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<td>09:00</td>
<td>2754</td>
<td>New Chemistry from the Sea: Enzymatic Cleavage of Phosphonate CP Bonds via CH Bond Activation</td>
<td>Zechel DL</td>
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<tr>
<td>09:40</td>
<td>2755</td>
<td>Biosynthesis in Marine Proteobacteria, Unusual or just Undescribed?</td>
<td>Ross AC</td>
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<td>10:00</td>
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<td>Coffee Break</td>
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<tr>
<td>10:20</td>
<td>2756</td>
<td>Using Mechanistic Tools to Solve a Phosphorus Stereochemistry Challenge</td>
<td>Ruck RT</td>
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<td>11:00</td>
<td>2757</td>
<td>On the Role of Lipid Peroxidation in Ferroptotic Cell Death</td>
<td>Pratt DA</td>
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<td>11:40</td>
<td>2758</td>
<td>Why an Enolate Is the Key Intermediate in the Fragmentation and Rearrangement of a Prototypical Breslow Intermediate</td>
<td>Bielecki M, Kluger R</td>
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<td>12:00</td>
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**General Session 1**

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<thead>
<tr>
<th>ORG1</th>
<th>206B</th>
<th>General Session 1</th>
<th>Organizer(s) - Eric Fillion Chair(s) - Eric Fillion</th>
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<tbody>
<tr>
<td>08:00</td>
<td>2759</td>
<td>Rhodamine-catalyzed Enantioselective Isomerization of meso-Oxabenzenornorbiadiones to 1,2-Naphthalene Oxides</td>
<td>Yen A</td>
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<tr>
<td>08:20</td>
<td>2760</td>
<td>Sulfonyl as Versatile Electrophiles in C–C Suzuki–Miyaura Cross-coupling Reactions</td>
<td>Ariki ZT, Wright TB, Evans PA</td>
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<td>08:40</td>
<td>2761</td>
<td>Enantioselective Rhodium-catalyzed Allylic Alkylation of Aldehyde Enoates</td>
<td>Minozzi C, Cruche C, Collins SK</td>
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<td>09:20</td>
<td>2763</td>
<td>Organic Transformations Using Photoredox Gold Catalysis</td>
<td>McCallum T</td>
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<td>10:00</td>
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<td>Coffee Break</td>
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<tr>
<td>10:20</td>
<td>2764</td>
<td>Mechanistic Insights in Iridium/Nickel Co-catalyzed Photoredox Cross-coupling Reactions</td>
<td>Jueana A</td>
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<td>11:00</td>
<td>2765</td>
<td>Methodology Development of the Pd-catalyzed Hydrohalogenation of 1,6-Enynes</td>
<td>Petrone DA, Fraga J, Rodriguez JF, Lautens M, Poblador-Bahamonde AI</td>
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<td>11:20</td>
<td>2766</td>
<td>Highly Efficient Dihedral Coabalt(III) Catalyst for the Cycloisomerization of Alkynoic Acids</td>
<td>Leconte N, Mancini RS</td>
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<tr>
<td>11:40</td>
<td>2767</td>
<td>Functionalization of Carbohydrate Hydroxyls through Boronic Ester Intermediates</td>
<td>Mantini RS, Taylor MS</td>
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<td>12:00</td>
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**General Session 2**

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<tr>
<th>ORG2</th>
<th>201C</th>
<th>General Session 2</th>
<th>Organizer(s) - Eric Fillion</th>
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<tbody>
<tr>
<td>08:00</td>
<td>2770</td>
<td>Pyrene as a Platform for Donor-acceptor Oligoarylenes</td>
<td>Walsh JC, Hogan DT, Bodwell GJ</td>
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<td>08:20</td>
<td>2771</td>
<td>Novel Synthesis of Heterocycles Containing a Benzoquinone or Benzoquinonimine Ring</td>
<td>Odens HH</td>
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**Thursday AM 2740 CSC 2017 2771 Thursday AM Jun 01, 2017**
08:40  2772  Simple Syntheses of Complex Systems by Condensations of Quinones. Gueorguiev NP <Université de Montréal>, Maris T, Wuest JD

09:00  2773  Furan-Maleimide exo-Adducts: A Versatile and Highly Selective Dienophile for Polymerizations and Click Reactions. St. Amant AH <University of California - Santa Barbara, USA>, Read de Alaniz J

09:20  2774  Enantioselective Diacrylate Carboxylyte Catalyzed Diels-Alder of Branched α,ω-Unsaturated Aldehydes. Häggman NO <McGill University>, Kaldre D, Zank B, Gleason JL

09:40  2775  The Synthesis of Biostable Acetal-free TF Antigens. Sadraei S <University of Windsor>, Desai A, Yousif G, Trant JF

10:00  Coffee Break

10:20  2776  New Reactivity of Donor-acceptor Cyclopropanes. Piotrowski ML <Western University>, Kerr MA


11:00  2778  Efficient and Selective Palladium-catalyzed Telomerization of 1,3-butadiene with Carbon Dioxide. Sharif M, Jackstell R, Al-Shihi B, Dastgir S <Hamad bin Khalifa University, Qatar>, Beller M


11:40  2780  Enol Ethers as Carbonyl Surrogates in a Modified Povarov Synthesis of Antiparansic 3-Aryl Quinolines. Brown CE <McMaster University>, Bordon C, Yolken, Jones-Brando L, McNulty J

12:00  End of Session

Physical, Theoretical and Computational Chemistry

PT5  206E

Noncovalent Interactions in Quantum Chemistry and Physics: Theory and Applications
Organizer(s) - Gino DiLabio, Alberto Otero de la Roza
Chair(s) - Gino DiLabio

08:00  2781  Large Datasets for Benchmarking Noncovalent Interactions. Burns LA, Smith DGA, Sherrill CD <Georgia Institute of Technology, USA>

08:40  2782  Development of a Fast and Efficient Hartree-Fock/Minimal-basis-set Based Approach for Accurate Prediction of Molecular Properties for Large Systems. Prasad VK <University of British Columbia>, DiLabio G

09:00  2783  Dispersion Interactions from the Exchange-hole Dipole Moment. Johnson ER <Dalhousie University>, Christian MS, Otero-de-la-Roza A


10:00  Coffee Break

10:20  2785  Noncovalent Interactions in Biology: Characterization of π-interactions between Nucleic Acids and Proteins. Wetmore SD <University of Lethbridge>

11:00  2786  Characterization of Noncovalent Interactions in RNA Tetraloop Motifs. Archambault P <Concordia University>, Muchall HM, Pesherbe GH

11:20  2787  Distinguishing Complexes of Isomeric Peptides: Structures and Energetics of Sodium Cation-coordinated ProLeu or LeuPro Trimmers in The Gas Phase. Jamil-Alahmadi Y <Memorial University of Newfoundland>, Fridgen TD

11:40  2788  Two Similar Steroid Hormones Dramatically Different Cocrysotallization Behavior: How Structural Nuances Control Interactions with Aromatic Molecules. Luo Z <McGill University>, Frisic T, Khallullin RZ

12:00  End of Session

PT11  202D

Protein Machines and Allostery
Organizer(s) - Lewis Kay, Scott Prosser and Giuseppe Melacini
Chair(s) - Giuseppe Melacini

08:00  2796  Allosteric Substrate Interactions in Aminoacylase Modifying Enzymes: Lessons from NMR and Calorimetry. Mittalaker AK <McGill University>

08:20  2797  Substrate Gating in the Membrane Revealed by Tryptophan Residues in the GpG Rhomboid Protease. Foo ACY, Burg ER, Uribe C, Ayed SH, Goto NK <University of Ottawa, >

08:40  2798  Allosteric Regulation of Rhomboid Intramembrane Proteases. Panigrahi R, Arutyunova E, Lemieux MJ <University of Alberta>


09:20  2800  Substrate Inhibition of a Homodimeric Enzyme. Mehrabi P <University of Toronto>, Kim TH, Slijoka A, Pai EF, Prosser RS

09:40  2801  Allosteric Control of Human Farnesyl Pyrophosphate Synthase: Implications for Drug Discovery. Park J <McGill University>, Leung CY, De Schutter JW, Tsantrizos YS, Berghuis AM

10:00  Coffee Break

10:20  2802  Mapping the Allosteric Thermodynamic Cycle of Protein Kinase G. VanSchouwen B <McMaster University>, Melacini G
## Thursday AM 1835

### Ultrafast Spectroscopy and Imaging of Molecular Processes

**Organizer(s)**: Dwayne Miller
**Chair(s)**: Brad Siwick

- **08:00** | **2005** | Detection of Reactive Modes in a Catalytic Molybdenum Complex for Nitrogen Fixation<br>**Scholes GD**<br>**Princeton University, USA**, Rafiq, S, Bezděk MJ, Koch M, Chirik PJ

- **09:00** | **2017** | Ultrafast X-ray Absorption Spectroscopy as a Probe of Coupled Electronic and Nuclear Dynamics<br>**Neville SP**<br>**University of Michigan, USA**, Chen L, Ernst OP, Prokhoronenko VI, Miller RJD

### Surface Science

#### SS3 201A

### Surface Electrochemistry

**Organizer(s)**: lan Burgess, David Hall, Janine Mauzeroll
**Chair(s)**: Gregory Jerkiewicz/Steen Schougaard

- **08:00** | **2012** | Driving Chemistry at Photoelectrodes<br>**Li T**<br>**University of British Columbia**, Berlinguette CP

- **08:20** | **2013** | Measuring the Efficiency of Direct Ethanol Fuel Cells<br>**Pickup PG**<br>**Memorial University of Newfoundland**, Altarawneh RM, Brueckner T

- **09:00** | **2014** | LiMnFePO4 Structural Analysis<br>**Savignac L**<br>**Université du Québec à Montréal**, Liang G, Brian Schougaard S

- **09:20** | **2016** | In-Situ Observation of Positive Electrode-Electrolyte Interphase, using Spectroscopic Ellipsometry<br>**Ellis LD**<br>**Dalhousie University**, Sanderson RJ, Dahn JR

- **10:00** | **2017** | The Electrochemical Behavior of Highly Disordered Nickel Hydroxide<br>**Smith RDL**<br>**University of Waterloo**

### 10:00 Coffee Break

### 10:20 Coffee Break

### 10:20 Ultrafast Spectroscopy of Semiconductor Quantum Dots: From Transient Emission and Transient Absorption to Coherent Multidimensional Spectroscopy

**Kambhampati P**<br>**McGill University**


### 11:20 Ultrafast Dynamics in Hybrid Lead-halide Perovskite Nanocrystals by Two-dimensional Coherent Photoemission Excitation Spectroscopy<br>**Smrth Kandada AR**, Grégoire P, Petrozza A, Akkerman Q, Manna L, Silva C<br>**Université de Montréal**

### 12:00 End of Session

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## Thursday PM 2032

### Plenary Lectures

#### PL4 107

**17:00** | **2023** | 'Fake News' in Science<br>**Schwarz J**<br>**McGill University**

**17:30** | **2025** | Making Change: Shaping the Future of Medicine<br>**Shoichet M**<br>**University of Toronto**

**18:00** | **2826** | Hacking Healthcare in a Refugee Camp<br>**Wheeler G**<br>**University of Toronto**

**18:15** | **2827** | From Test-Tube to YouTube<br>**Poliakoff M**<br>**University of Nottingham, UK**

### 18:35 Closing Remarks

### 18:45 End of Session

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## Analytical Chemistry

#### AN7 206C

**13:40** | **2828** | Reflections from an Analytical Chemistry Textbook Author<br>**Harris DC**<br>**Naval Air Systems Command, USA**

**14:00** | **2829** | Teaching Assistant Experiences in Producing Videos for Undergraduate Analytical Chemistry Laboratories<br>**Popowich AK, Reid MS, Lin Y**<br>**University of Alberta**, Lucy CA

**14:20** | **2830** | Panel Discussion: What Does Industry Want from our Analytical Chemistry Training?<br>**Sears DN, Hatsis P, Ruparelia F, Obal T, Piunno PAE, Algar M**<br>**University of Alberta**, Lucy CA

### 15:00 Coffee Break

### 15:20 **2831** | Improving Student Learning in Large Lecture Courses<br>**Clark T, Stoltzfus M, Gustafson T, Olesik S**<br>**Ohio State University, USA**

**15:40** | **2832** | Threshold Concepts in Analytical Chemistry<br>**Vitha MF**<br>**Drake University, USA**
Thursday PM 2833  
Jun 01, 2017

16:00 2833 A Flipped Classroom Approach in a Senior Instrumental Analysis Course  
1Osthoff HD <University of Calgary>

16:20 2834 Teaching Analytical Chemistry in a Flipped Classroom  
1Harrison CR <San Diego State University, USA>

16:40 End of Session

ANG 104D

General Session
Organizer(s) - Demian Ifa, Dajana Vuckovic
Chair(s) - Demian Ifa, Dajana Vuckovic

13:40 2835 Exploring the Impact of Flavoured Electronic Cigarette Exposure on the Placental Metabolome  
Wild J <McMaster University>, Kleiboer S, Raez Villanueva S, Holloway A, Britz-Mckibbin P

14:00 2836 Investigating the Interactions of Hg(II) with T-T Mismatches in Hairpin Loop DNA  
Kamal A <University of Toronto at Scarborough>, She Z, Sharma R, Kraatz H-Ber

14:20 2837 In vitro Selection of a Silver-specific DNATmze and its Application for Ag' Detection  
Saran R <University of Waterloo>, Liu J

14:40 2838 Bench-top Fabrication of all-PDMS Microfluidic Electrochemical Sensors Integrating Micro/Nanostructured Electrodes  
Saem S <McMaster University>, Zhu Y, Moran-Mirabal J

15:00 Coffee Break

15:20 2839 Ethanol Determination in Beers Using Droplet Arrays Fabricated by Laser Micromachining Superhydrophobic (SH) Coated Glass  
Ghimire BC <Queen's University>, Bachus KJ, Mats L, Oleschuk RD

15:40 2840 Detection and Characterization of Natural Organic Matter in Surface Water Using a Size Exclusion Chromatography with Charged Aerosol Detector  
Park Y <Dalhousie University>, Hu L, Mackie A, Gagnon G

16:00 2841 Sample Preparation Methods for Top-down Proteomics on Fragilariaopsis cylindrus via Mass Spectrometry  
Unterlander N <Dalhousie University>, Doucette A

16:20 2842 How Much 'Fizz' Is actually in your Beer?  
Been R, Roman K <Dalhousie University>, Roy L, Doucette A, Chisholm R

16:40 End of Session

BMG1 201E

General Session 1
Organizer(s) - Drew Woolley
Chair(s) - Andrew Woolley

13:40 2843 Exploiting Thermosensitive Diels-Alder Linkages for the Delivery of Butylarenes Complexes to Cancer Cells  
Haghdost M <INRS>, Poulet S, Golbaghi G, Castonguay A

14:00 2844 Bifunctional Ligand Design for the Restoration of Wild-type Function in Mutant p53  
Miller JJ <Simon Fraser University>, Orvain C, Revriot Y, Jozi S, Gaiddon C, Warren J, Storl T

14:20 2845 Protein Engineering of Nanomembrane Multisubunit Proteins  
Gyamfi H <University of Waterloo>, van der Ven A, Feng D, Urquhart T, Daub E, Honen JK

15:00 Coffee Break

15:20 2846 Simulating Microbial Competition in the Laboratory as a Means to Accelerate Natural Products Discovery  
CS <Saint Mary's University>

15:40 2847 LC-MS Based Metabolomics for Natural Products Discovery  
Kerr RG <University of Prince Edward Island>

16:00 2848 Construction and Array of a Soil Metagenomic Library to Access Natural Product Biodiversity  
Gosse JT <University of Ottawa>, Hill P, Boddy C

16:20 2849 Easy to Use Capillary Columns for Fast Analysis of Complex Samples. How Do We Make it a Reality?  
Morin S, Toole E <Thermo Fisher Scientific>

16:40 End of Session

BMG2 201B

General Session 2
Organizer(s) - Drew Woolley
Chair(s) - Voula Kanelis

14:00 2850 Structural and Functional Analysis of Disease-causing Mutations in the Human Sulfuryltransferase Receptor  
Alvarez CP <University of Toronto; University of Toronto at Mississauga>, Stagglar M, Kanelis V

14:20 2851 Elucidating the Molecular Mechanisms by which the HNH Endonuclease gp74 Activates the Terminases in Bacteriophage HK97  
Weiditch S <University of Toronto; University of Toronto at Mississauga>, Kanelis V, Maxwell K

14:40 2852 Revisiting a Bacterial Membrane Permeabilization Assay for Quantitative Evaluation of Membrane Disrupting Agents  
Gravel J <Université de Montréal>, Paradis-Bleau C, Schmitzer AR

15:00 Coffee Break

15:20 2853 Direct Observation of Two Component Peptide Fibre Assemblies through MALDI Imaging  
West BJ <University of Auckland, New Zealand>, Medini K, Williams DE, Brimble MA, Gerrard JA

15:40 2854 Identification and Characterization of Bacillus subtilis Tranlglutaminase Peptide Substrates for Use in Bio-conjugation and Bio-catalytic Applications  
Oteng-Pabi SK <University of Ottawa>, Kellior J

16:00 2855 Metal Coordination as a Strategy for Improving the Aqueous Solubility of Chemotherapeutics  
Prosser KE <Simon Fraser University>, Leung A, Lewis AR, Harriersad S, Walsby CJ, Bally M

16:20 2856 Gadolinium-free Blood Pool MRI Contrast Agents for High Clinic Field (3T) Angiography  
Liu H <University of Toronto at Scarborough>, Patel S, Sathananthan R, Constantinescu V, Zhang X-A

16:40 End of Session

Chemistry Education 205D

CE8

First and Second Year Undergraduate Teaching Initiatives
Organizer(s) - Noel George, Anne Johnson
Chair(s) - Noel George, Anne Johnson

13:40 2857 Reshuffling the Deck II: Mechanistic Patterns Found in Non-traditional Organic Chemistry Organization Strengthens the Mechanistic Approach  
Ackroyd NC <Mount Royal University>

14:00 2858 Lecture Capture: Has the Future Finally Arrived?  
Rayner-Canham GW <Memorial University of Newfoundland>

14:20 2859 Exploring the Greenhouse Effect in the First Year Laboratory  
D'eon JC <University of Toronto>, Quinlan KB, Faust JA, Browning CS

14:40 2860 Creating a Culture of Sustainability in the Teaching Lab: Construction of a Water Recirculation System for Condensers and Other Ideas  
Pelletier S <University of Alberta>, Babooram K, Schoedert GA

15:00 Coffee Break

15:20 2861 Welcome to Grad School -- and Here's Your Class Cox Jr. CT <Stanford , USA>

15:40 2862 The Impact of Peer Instruction on Learning in a Large General Chemistry Classroom  
Thavarajah TN <University of Toronto at Scarborough>
Environment

EN1 206A Atmospheric Chemistry in a Changing Climate
Organizer(s) - Arthur Chan, Sarah Stylor, Chair(s) - Ryan Sullivan, Andreas Zuend
13:40 2863 Photolysis of Organic Pollutants in Environmental Condensed Phases *Kahan TF <Syracuse University, USA>
14:00 2864 From the Desert to the City: Dust as a Photochemical Radical Source *Stylor SA <University of Alberta>, Cote CD, Schneider SR, Mostafiz A
14:20 2865 Heterogeneous Oxidation of Glycerol in Aqueous Aerosol Faust JA <University of Toronto>, Abbatt JPD
14:40 2866 Reactivity of Criegee Intermediates in the Condensed-phase *Zhou S <University of Toronto>, Joudan S, Forbes M, Abbott J
15:00 Coffee Break
15:20 2867 Evolution of Particle Phase Reaction Products and Water in the Heterogeneous OH Oxidation of Aqueous Organic Droplets Chang MM, Cheng CT, Davies JF, Wilson KR, Berkemeier T, Shiraïwa M, Zuend Z, Chan MN <Chinese University of Hong Kong, Hong Kong>
15:40 2868 Efficient Formation of Light Absorbing Polymeric Nanoparticles from the Reaction of Soluble Fe(III) with trans-C4 and C6 Diacrylic Acids *Al-Abadleh HA <Wilfrid Laurier University>, Tran A, Williams G, Younus S, Ali N, Blair S, Nizkorodov S
16:00 2869 Interaction between SO2 and Criegee Intermediates in Monoterpene Ozonolysis and Effects on Secondary Organic Aerosol Formation Ye J <University of Toronto>, Abbatt JPD, Chan AWH
16:20 2870 The Effect of Secondary Organic Aerosol Material on Fenton and Photo-Fenton Chemistry Hems RF <University of Toronto>, Hsieh JS, Zhou S, Abbatt JPD
16:40 End of Session

EN2 205C Metals and Metalloids in the Environment
Organizer(s) - Hind Al-Abadleh, Bridget Bergquist, Chair(s) - Hind Al-Abadleh, Bridget Bergquist
13:40 2871 Metal Organic Frameworks as Highly Functional Catalytic Arrays *Farha OK <Northwestern University, USA>
14:40 2873 Precipitation of Iron with Diglycolamide Derivatives during the Liquid-liquid Extraction of Rare Earth Elements Michaud Paradis M-C <Univiersité de Montréal>, Rochefort D
15:00 End of Session

Inorganic Chemistry

IN5 203A Advances in Solid State Chemistry
Organizer(s) - Holger Kleinek, Venkataram Thangadurai Chair(s) - Zuo-Guang Ye
13:40 2874 Coloured Metallophosphenes Iyer AK, Zubek G, Bernard GM, Michaelis VK, Mar A <University of Alberta>
14:20 2875 Thermoelectric Properties of Quaternary Copper Chalcogenides Jafarzadeh P <University of Waterloo>, Kleinek H
14:40 2876 Earth-abundant Photovoltaic Materials with Ultra-large Absorption Coefficient *Poudou PF <University of Michigan, USA>, Chen E
15:00 Coffee Break
16:00 2878 Magnetic Frustration in Ln3ScNbO5, Pyrochlores, Crystal Growth and Analysis *Mauws C <University of Winnipeg; University of Manitoba, > Rutherford M, Duncan K, Chocchinov A, Wiebe CR
16:00 End of Session

ING3 206D General Session 3
Organizer(s) - Robert Morris Chair(s) - Robert Morris
13:40 2888 Analysis of Ru-catalyzed Hydrophosphination via Simple Kinetic and Graphical Methods Belli RG <University of Victoria>, Liles E, Rosenberg L
14:00 2889 A Comparative Study of Privileged Bisphosphine Ligands for Nickel Catalyzed (S)-N Cross Coupling Clark JSK <Dalhousie University>, Lavrie CM, MacQueen PM, Voth CN, Stradiotto M
14:20 2882 Electrochemical and Photophysical Studies of Red(II) Tricarbonyl Complexes of a-diimine Ligands Covalently Grafted on a Polyoxometalate *Auvray T <Université de Montréal>, Santoni MP, Hasenkopf B, Hanan GS
14:40 2883 Reliable Routes to the Synthesis of Adamantyl Anions Armstrong D <University of Toronto at Mississauga>, Taulajf L, Lough AJ, Fei U
15:00 Coffee Break
15:20 2884 Exploring the Effects of Phosphine Control on Metal Dithiolene Complexes Ahmed ZS <University of Windsor>, Wrixon JD, Arwar MU, Beldjoudi Y, Hamidouche N, Hayward JJ, Rawson JM
15:40 2885 Silyl and Stanlylphosphines as Versatile Ligands for Transition Metal Complexation *Montiel-Palma V <Universidad Autónoma del Estado de Morelos, Mexico>, Corona-González MV, Zamora-Moreno J, Salazar-Díaz JF, Muñoz-Hernández MA, Cuevas-Chávez C, Sabo-Etiene S, Grellier M
16:00 2886 Towards Control of Thermoo- and Photochromism in Cyanometalate Clusters *Holmes SM <University of Missouri-St. Louis, USA>, Zhang Y-Z, Mallik UP, Rath NP, Cléarc R, Siretanu D, Ababei R, Shaw MJ, Mathonie?re C
16:20 2887 Ruthenium Complexes as Anticancer Therapeutics *Castonguay A <INRS-Institut Armand-Frappier>, Haghdoost M, Golbagh G, Poulet S, Pitard I, Guard J
16:40 End of Session
### Thursday PM 2890

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<td>Comparison and Structural Modulation of Porphyrin Complexes for Capturing and Electrochemical Reduction of CO₂</td>
<td>Abidinejad M, Kraatz HB, Zhang X-A &lt;University of Toronto&gt;, Columbia</td>
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### Materials Chemistry

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<td>16:20</td>
<td>Self-assembly Behaviour of Siloxane Phosphocholines</td>
<td>Frampton MB, Sproule, Marquardt D, Zelisko</td>
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### MT2 203C

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<td>13:40</td>
<td>Liquid Crystal Engineering of Organic Semiconductors</td>
<td>Eichhorn SH, University of Windsor</td>
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<td>14:00</td>
<td>Organic Semiconductor Film Growth in Supercritical Fluids</td>
<td>Kaae LG, Simon Fraser University</td>
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<td>15:00</td>
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### MS3 202A

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<td>14:30</td>
<td>Macromolecular and Nanoscale Materials</td>
<td>Adamov, Rice</td>
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<td>14:00</td>
<td>Silicon-saccharide Complex Nanoparticles via Boronic Acid Linkages</td>
<td>MacPhail B, University of Windsor</td>
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<tr>
<td>14:20</td>
<td>Supramolecular Assembly of Macromolecules and Nanoscale Materials</td>
<td>Organizer(s): Alex Adronov, Chair(s): Nicole Rice</td>
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### MT6 201D

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<td>16:20</td>
<td>Nano/Hybrid Materials - Joint with MS</td>
<td>Organizer(s): Mita Dasog, Rob Scott, Jon Veinot, Chair(s): Zhenyu Yang</td>
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**Thursday PM 2890**

- **14:20** Comparison and Structural Modulation of Porphyrin Complexes for Capturing and Electrochemical Reduction of CO₂, Abidinejad M, Kraatz HB, Zhang X-A (University of Toronto, Columbia)
- **14:40** Accessing Bimetallic Complexes through Ligand Design: Synthetic Strategies for Small Molecule Activation, Burford RJ (Columbia)
- **15:00** Coffee Break
- **15:20** Coffee Break
- **15:40** Coffee Break
- **15:40** Coffee Break
- **15:00** Coffee Break
- **15:20** Coffee Break
- **15:40** Coffee Break
- **15:40** Coffee Break

**Thursday PM 2919**

- **14:20** Comparison and Structural Modulation of Porphyrin Complexes for Capturing and Electrochemical Reduction of CO₂, Abidinejad M, Kraatz HB, Zhang X-A (University of Toronto, Columbia)
- **14:40** Accessing Bimetallic Complexes through Ligand Design: Synthetic Strategies for Small Molecule Activation, Burford RJ (Columbia)
- **15:00** Coffee Break
- **15:20** Coffee Break
- **15:40** Coffee Break
- **15:40** Coffee Break
- **15:00** Coffee Break
- **15:20** Coffee Break
- **15:40** Coffee Break
- **15:40** Coffee Break

**Materials Chemistry**

- **16:20** Self-assembly Behaviour of Siloxane Phosphocholines, Frampton MB, Marquardt D, Zelisko
- **16:40** End of Session

**MT2 203C**

- **13:40** Liquid Crystal Engineering of Organic Semiconductors, Eichhorn SH, University of Windsor
- **14:00** Organic Semiconductor Film Growth in Supercritical Fluids, Kaae LG, Simon Fraser University

**MS3 202A**

- **14:30** Macromolecular and Nanoscale Materials, Organizer(s): Alex Adronov, Chair(s): Nicole Rice
- **14:00** Silicon-saccharide Complex Nanoparticles via Boronic Acid Linkages, MacPhail B, University of Windsor
- **14:20** Supramolecular Assembly of Macromolecules and Nanoscale Materials, Organizer(s): Alex Adronov, Chair(s): Nicole Rice
- **14:40** Coffee Break

**MT6 201D**

- **16:20** Nano/Hybrid Materials - Joint with MS, Organizer(s): Mita Dasog, Rob Scott, Jon Veinot, Chair(s): Zhenyu Yang
13:40 2920 A New Paradigm in Nanoparticle - Protein Interactions *Cramb DT <University of Calgary>, Li R, Bishop A

14:20 2921 Exploring Surface-capped Transition Metal Ferrite Nanostructures for Application in Magnetic Resonance Imaging Banerjee A <University of Calgary>, Trudel S

14:40 2922 Surface Modification of Aqueous-stable Superparamagnetic Iron Oxide Nanoparticles to Produce Clickable Platforms Cross SN <McGill University>, Koppany KV, Majewski D, Blum AS

15:00 Coffee Break

15:20 2923 Shining a Light on Lanthanide-based Nanoparticles: Synthesis Pathways and Potential Applications Hemmer E <University of Ottawa>


16:00 2925 Plastic Antibodies on Inorganic Nanozymes for Hundred-fold Specificity Zhang Z <University of Waterloo>, Liu J

16:20 2926 Surface Functionalized Boron Nitride Nanotubes as Nanocarriers Niskanen J <Université de Montréal>, Zhang I, Yanning X, Golberg D, Maysinger D, Winnik FM

16:40 End of Session

MTG2 205A

General Session 2
Organizer(s) - Dwight Seferos Chair(s) - Andrew Tilley

13:40 2927 Toward an All-organic Redox Flow Battery Based on Temporal and Bispyridinylidene Alkayri FM <University of New Brunswick>, Dyker CA

14:00 2928 Stability of Silver Nanowires Deignan G <University of Waterloo>, Goldthorpe IA

14:20 2929 Should We Sugarcoat it? Pullulan-doped Silicone Elastomers Amaral NM <McMaster University>, Khan M, Chen Y, Brook M

14:40 2930 UV-photoluminescence for Defence some Printing Production Oliferenko I <Ukrainian Academy of Printing, Ukraine>

15:00 Coffee Break

15:20 2931 Curable Antimicrobial Aminomethylation Coatings for High-risk Surfaces Caschera A <Ryerson University>, Ronan E, Mistry K, Wolfaardt G, Foucher D

15:40 2932 Synthesis and Characterization of a Novel Mesoporous Zeolite BEA and their Application in Esterification of Levulinic Acid Kalpana M <S. V. National Institute of Technology, India; University of Saskatchewan>, Mistry S, Kozinski J, Dalai AA

16:00 2933 Effect of Ge/Te Ratio on the Thermoelectric Performance of CoGe2Te5, Skutterudite Aminzare M <McMaster University>, Mozharivskiy Y

16:20 2934 Pdt(H)-tethered N-heterocyclic Carbene MOF as An Active Heterogeneous Catalyst for Sonogashira Cross-coupling Reactions and Knoevenagel Condensation Reactions Ezugwu CI <Wuhan University of Technology, China>, Asraf MDA, Verpoort F

16:40 End of Session

Organic Chemistry

OR3 206F

Reactivity in Organic and Biological Chemistry - joint with BM
Organizer(s) - Jason Hein, Ronald Kluger Chair(s) - Ronald Kluger


14:00 2936 2-Formylphenylboronate, a Potent Inhibitor of Mandelate Racemase Bearne SL

14:20 2937 Chemoselective Fluorescence Imaging of Nucleophiles, ROS and Redox Processes: From High Throughput to Single Particle to Single Molecule Events Cossa G <McGill University>

15:00 Coffee Break

15:20 2938 Maleimide-based Protein Labelling Keillor JW <University of Ottawa>

15:40 2939 Engineered Aminotransferases for the Production of D-phenylalanine Derivatives Using Biocatalytic Cascade Reactions Walton CJW <University of Ottawa>, Parmeggiani F, Barber JEB, McCann JL, Turner NJ, Foucher D

16:00 2940 Host-guest and Bioconjugation Strategies Applied to Multisubunit Proteins and Bacteriophage Honke JF <University of Waterloo>

16:20 2941 Design of a 2nd Generation Boronate System for Rapid and Irreversible Bioorthogonal Conjugation Akgun B <University of Alberta>, Guzman VT, Derda R, Hall DG

16:40 End of Session

ORG1 206B

General Session 1
Organizer(s) - Eric Fillion Chair(s) - Eric Fillion

13:40 2942 Application of Phase Separation Strategy and Continuous Flow Chemistry for the Synthesis of Complex Macrocycles Godin E <Université de Montréal>, Collins SK

14:00 2943 Access to 3-substituted Indoles Using Flow Chemistry Cifra C <Université de Montréal>, Lubell WD

14:20 2944 Teaching Existing Technologies New Tricks in Continuous Flow Systems Lummiss JAM <Massachusetts Institute of Technology, USA>, Hicklin RW, Morse PD, Jamison TF

14:40 2945 Reactivity Inversion of Cyclopropanols for the Synthesis of Cyclopropylamines Using Zinc(II) Salts Mills R <University of Toronto>, Barrera-Arbelaez L, Daponte J, Rousseaux S

15:00 Coffee Break

15:20 2946 Oxylayl Boronates Enable Modular Synthesis of Bioactive Imidazoles Lee CF <University of Toronto>, Holownia A, Bennett JM, Elkins JM, Yudin AK

15:40 2947 Ferrocenium Boronic Acid Catalysed Coupling of Alcohols with Alkenyl and Alkynyl Trifluoroborates Blackner JJ <University of Winnipeg>, McCubbin JA

16:00 2948 Total Synthesis of Isoxeniolide A Betschart L <University of British Columbia>, Altmann K-H

16:20 2949 Biomass Furan Derivatives as Building Blocks for Organic Synthesis: Application of Decarboxylative Cross-coupling Methodologies Chacon-Huete F <Concordia University>, Forgie P

16:40 End of Session

ORG2 201C

General Session 2
Organizer(s) - Eric Fillion Chair(s) - Graham Murphy

13:40 2950 The Stereoellective Cyclization of 1-Alkenyl p-Aminoalkyl Sulfoxides and Sulfones: Thiomorpholine S-Oxides with Three Chiral Atoms in the Ring Schwan AL <University of Guelph>, Soderman SC, Kulak MR, Mook T, Mawhinney RC, Gagnon KM
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<td>Synthesis and SAR of Veranamine</td>
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15:40 2979 Pushing FCI to its Present Day Limits  *Dattani N  <McMaster University>

16:00 2980 Effects of Electron Correlation on the Photoionization of Atomic Beryllium  *Omiste JJ  <University of Toronto>, Madsen LB

16:20 2981 Learning the Schrödinger Equation with Deep Neural Networks  Mills K  <University of Ontario Institute of Technology>, *Spanner M, $Tamblyn I

16:40 End of Session

Surface Science

SS3 201A

Surface Electrochemistry
Organizer(s) - Ian Burgess, David Hall, Janine Mauzeroll
Chair(s) - Nicholas Senior/David Shoesmith

13:40 2982 Hydrogen Peroxide Decomposition on Simulated Spent Nuclear Fuel (SIMFUEL) in Aqueous Carbonate Solutions  Zhu Z  <Western University>, Noël J, Shoesmith DW

14:00 2983 Effect of Surface Area to Volume Ratio on Iron Oxidation Behaviour  Guo D  <University of Western Ontario>, Wu L, Joseph JM, Hall DS, Wren JC

15:00 Coffee Break

15:20 2985 Physical and Electrochemical Evidence for the Involvement of Mg Hydrides in Mg Alloy Corrosion  Binns WJ  <University of Western Ontario>, Dehnavi V, Chen J, Shoesmith DW

15:40 2986 Identifying and Characterizing Problematic Microstructural Features Contributing to the Initiation of Hydrogen Induced Cracking in Linepipe Steel  Felice S  <McMaster University>, Fazeli F, Kish J

16:00 2987 Investigation of Humid Air Corrosion of Carbon Steel Stainless Steel Welds in the Presence of γ-Radiation  Zakeri M  <University of Western Ontario>, Momeni M, Joseph J, Yong O, Wren JC

16:20 2988 Corrosion Studies of Titanium Stabilized Stainless Steel using Scanning Electrochemical Microscopy for Hydropower Applications  Gateman SM  <McGill University>, Lacasse R, Mauzeroll J

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