Saturday PM

Plenary Lecture

PL ChedokeAB-HCC

Plenary Lecture

Organizer(s) - Brian McCarry
Chair(s) - Brian McCarry

19:00 Opening Ceremony and Introductory Remarks

19:15 0001 *Reinventing Chemistry* *$**Whitesides G.M.**

20:15 End of Session

Sunday AM

CIC Medal Lecture

CICML ChedokeC-HCC

CIC Medal Lecture

Organizer(s) - Brian McCarry
Chair(s) - William Leigh

Introduction of Dwayne Miller by William Leigh

11:25 0002 *"Making the Molecular Movie": Quest for the Structure-Function Correlation of Biology* *$**Miller R.J.D.**

12:15 End of Session

NSERC

NS AlbionB-HCC

NSERC Workshop

Organizer(s) - NSERC Staff
Chair(s) - NSERC Staff

12:15 0003 *Discovery Grants Program Update/Changements au programme de Subventions à la découverte* **NSERC Staff**

Analytical Chemistry

AN1 WebsterC-HCC

Biosensors and Bioaffinity Probes (joint with BM3)

Organizer(s) - Ulrich Krull and Maria DeRosa
Chair(s) - Ulrich Krull, Maria DeRosa

09:00 0004 *Smart Aptamers: Selection, Characterization and Analytical Utilization* **Krylov S.N.**

09:40 Coffee Break

10:00 0005 *Towards the Development of Targeted MRI Contrast Agents Using Aptamer-Gadolinium Conjugates* **Bernard E.D.**, *Beking M.A., $DeRosa M.C.

10:20 0006 *Aptamer-Based Detection of Epithelial Tumor Marker Mucin 1 with Quantum Dot-Based Fluorescence Readout* **Cheng A.K.H.**, *$Yu H.-Z.

10:40 0007 *Binding-Induced Hairpin Assay and its Application to Protein Analysis* **Zhang H.**, Li X.-F., $Le X.C.

11:00 0008 *Development of a Colorimetric Assay Using Allosteric DNAzyme-Coupled Rolling Circle Amplification* **Ali M.**, *$Li Y.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

AN5 Heritage-Sher

New Advances in Spectroscopy and Microscopy (joint with PT9)

Organizer(s) - Glynis de Silveira and François Lagugné-Labarthet
Chair(s) - François Lagugné-Labarthet

W.A.E. McBryde Award Lecture presented by Hans-Peter Loock

Introduction of Hans-Peter Loock by Cathleen Crudden

08:20 0009 *Chemical Sensing Using Fiber Optic Waveguides* *$**Loock H.-P.**

09:00 0010 *Single Molecule Fluorescence Mechanistic Studies on HCV RNA Polymerase (NS5B)* **Karam P.**, Mah W., Vasquez C., Powdrill M., $Cosa G., Gotte M.

09:20 0011 *Polymer Deformation by Polarized Planar Array Infrared Spectroscopy* *Pellerin C., Farbos B., Mauran D.

09:40 Coffee Break

Keith Laidler Award Lecture presented by Paul Wiseman

Introduction of Paul Wiseman by Bruce Lennox

Presentation of Keith Laidler Award to Paul Wiseman by Gilles Peslherbe, Chair, Physical, Theoretical and Computational Chemistry Division

10:00 0012 *Cellular Cartography: Mapping Protein Transport and Interactions in Living Cells with Image Correlation Spectroscopy* *$**Wiseman P.W.**

10:40 0013 *Accurate Measurements of Nanoscale Distances by Hyperspectral Single-Molecule FRET* *Samim M., Liu B., $Gradinaru C.

11:00 0014 *High-Pressure Micro-Raman Studies of Azobenzene Isomerization* Ramsay K.S., Barsan M.M., Barrett C.J., *Butler I.S.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

AN6 EBallrm-Sher

New Developments in Microfluidics

Organizer(s) - Aaron Wheeler and Ravi Selvaganapathy
Chair(s) - Aaron Wheeler, Ravi Selvaganapathy

08:00 0015 *Simple Solutions: Zero-Cost Diagnostics and Technology for the Developing World* *$**Whitesides G.M.**

08:40 0016 *Using Microfluidics to Study Dissolution of Carbon Dioxide* Park J.I., Nie Z., Kumachev A., Abdelrahman A.I., Binks B.P., Stone H.A., *__Kumacheva E.__

09:20 0017 *Microdroplet Generation by Electrokinetic Flow* *__Wu W.I.__, $Shinwary S., Selvaganapathy P.R.

09:40 Coffee Break

10:00 0018 *Development of Biocatalyst Based Microreactors for Lipid Transformations and Blood Profiling* *$**Mugo S.M.**

10:20 0019 *Proteomics: A Digital Microfluidic Platform for Protein Extraction and Processing* **Luk V.N.**, Jebrail M.J., $Wheeler A.R.

10:40 0020 *Covalent Protein Patterning in Microfluidic Channels* **Fiddes L.K.**, Chan H.K.C., Lau B., Kumacheva E., Wheeler A.R.

11:00 0021 *Microfluidics Based Tuneable Assembly of Nanowires into Functional Nanodevices* **Liu M.**, Chen Y., Li R, Sun A., *Yang J.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

AN7 AlbionB-HCC

Symposium on Frontiers of Electrochemistry (joint with PT12)

Organizer(s) - Jacek Lipowski and Gregory Jerkiewicz
Chair(s) - Sharon Roscoe, Alexandre Brolo

Joint with PT12 and SS3

08:00 0022 *Structure-Reactivity Relations in Electrochemistry* **Kolb D.M.**

08:40 0023 *Time-Dependent Fluctuations in SERS Intensities and Single-Molecule SERS in Electrochemical Conditions* *__Brolo A.G.__, Andrade G.F.S., Temperini M.L.A, dos Santos D.P.

09:00 0024 *Conjugated Polymer, Metal Oxide-Based Heterojunctions for Electronic Applications* *$**Freund M.S.**, Thomson D.J., Rahman G.M.A., Zhao J.H.

09:20 0025 *Design of SnO_2-Based Oxide Materials for Electrochemical Treatment of Wastewater* **Adams B.**, Tian M., *Chen A.

09:40 Coffee Break

10:00 0026 *Electron Transport in Strongly Coupled Molecular Electronic Junctions* **McCreery R.L.**, Bergren A.J., Jimenez S.

10:40 0027 *Single-Molecule Nanofabrication with Proteins and Enzymes Using Bias Assisted Scanning Tunnelling Microscopy* Zhou C., *$**Roscoe S.G.**

11:00 0028 *Mapping ROS Concentrations of Single Live Cells by Scanning Electrochemical Microscopy* Zhao X.C., Zhang M.N., *$**Ding Z.**

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

Biological & Medicinal Chemistry

BM3 WebsterC-HCC

Biosensors and Bioaffinity Probes (joint with AN1)

Organizer(s) - Ulrich Krull and Maria DeRosa
Chair(s) - Ulrich Krull, Maria DeRosa

09:00 See AN1

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

BM5 SBallrm-Sher

Enzymology

Organizer(s) - Paul Berti
Chair(s) - David Jakeman

08:40 0029 *Probing Synergy between two Catalytic Strategies in the Glycoside Hydrolase O-GlcNAcase Using Multiple Linear Free-Energy Relationships* Greig I.R., Macauley M.S., Williams I.H., *$**Vocadlo D.J.**

09:20 0030 *Oxidative Dealkylation Mechanism by Fe-Dependent AlkB Family of Enzymes: A DFT Study* *__Llano J.__, Liu H., $Gauld J.W.

09:40 Coffee Break

10:00 0031 *The Highly Versatile Thioesterase Domain from Zearalenone Biosynthesis Catalyzes Macrocyclization and Cross-Coupling with Alcohols and Amines* **Wang M.**, Wirz M., Zhou H., Tang Y., *Boddy C.N.

10:20 0032 *CmlS and Substrate Diversity in the Flavin Dependent Halogenase Family* Latimer R., Podzelinska K., Jia Z., *$**Zechel D.L.**

10:40 0033 *The Discovery of Odanacatib, a Selective Cathepsin K Inhibitor for the Treatment of Osteoporosis* **Oballa R.**

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

BM7 WebsterB-HCC

Natural Products (joint with OR6)

Organizer(s) - Paul Harrison
Chair(s) - Paul Harrison

08:00 0034 *Towards the Total Synthesis of the Phomoidrides* **Murphy G.K.**, $Wood J.L.

08:20 0035 *Progress Towards the Total Synthesis of Amphidinolide C* **Morra N.A.**, *Pagenkopf B.L.

08:40 0036 *Efficiency in Natural Product Synthesis: Utilizing a Domino Synthesis of trans-4,5-Diaminocyclopent-2-enones towards Agelastatin A* **Duspara P.A.**, *$Batey R.A.

09:00 0037 *Structure and Formation of Cyclic Antimicrobial Peptides from Bacteria* **Vederas J.C.**

09:40 Coffee Break

10:00 0038 *The Oxidative Step in the Biosynthesis of the Polyketide Usnic Acid* *$**Sorensen J.L.**

10:40 0039 *New Paradigms in Fungal Polyketide Biosynthesis* **Simpson T.**

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

BM8 WBallrm-Sher

Nucleic Acids (joint with OR7)

Organizer(s) - Tony Yan and Christopher Wilds
Chair(s) - Masad Damha, Robert Hudson

08:20 0040 *Towards Improving Potency of siRNAs* **Manoharan M.**

09:00 0041 *Towards Large Scale Synthesis of Oligoribonucleotides Using Ionic Soluble Supports* **Hassler M.**, $Damha M.J.

09:20 0042 *Phenylpyrrolocytosine: A Versatile, Intrinsically Fluorescent Nucleobase Analog* *$**Hudson R.H.E.**, Damha M.J., Wahba A., Wojciechowski F., Dodd D.W.

09:40 Coffee Break

10:00 0043 *Cyclodextrin-Oligoguanosine Conjugates: Self Assembling Molecular Recognition Systems Using Quadruplex DNA Scaffolds* *$**Linkletter B.A.**, Curran E.

10:20 0044 *The Replication Complexes of the Hepatitis C Virus is Disrupted by Inhibitors of Lipid Metabolism* **Lyn R.K.**, Kennedy D.C., Sagan S.M., Blais D.D., Rouleau Y., Pegoraro A., Xie X.S., Stolow A., $Pezacki J.P.

10:40 0045 *Intrinsically Photoluminescent and Electrochemiluminescent Cytidine Analogs Accessed via the Huisgen Cycloaddition* **Dodd D.W.**, Swanick K.N., Price J.T., Brazeau A.L., Ding Z., Jones N.D., *$Hudson R.H.E.

11:00 0046 *Synthesis of Interstrand Cross-Linked DNA and the Investigation of their Repair by Alkyl Guanine Transferases* *$**Wilds C.J.**

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

BM9 WebsterA-HCC

Peptides and Peptidomimetics

Organizer(s) - Kamaljit Kaur
Chair(s) - Kamaljit Kaur

08:00 0047 *Peptide Assembly and its Applications* **Chen P.**

08:40 0048 *Azobenzene-Based Photo-Switches for Biological Applications* **Beharry A.A.**, Woolley G.A.

09:00 0049 *Sulfahydantoin-Constrained Extended Peptide Structures* *$**Voyer N.**, Tremblay M., Dewynter G.

09:40 Coffee Break

10:00 0050 *Peptoids: Developing Structure-Function Relationships in Peptidomimetic Oligomers* $**Kirshenbaum K.**, Yoo B., Shin S.B.Y.

10:40 0051 *Promise of L-Aspartic Acid and L-Diaminopropionic Acid Derived beta-Peptidic Oligomers as Pharmaceutical Candidates* *$**Kaur K.**

11:00 0052 *Interaction of Antimicrobial 14-Meric Aromatic Amino Acid Analogs of Gramicidin S and Model Biological Membranes* **Hoang T.**, *$Jelokhani-Niaraki M.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

Chemical Education

CE4 AlbionA-HCC

Teaching-Faculty Positions: Roles and Rewards

Organizer(s) - Andrew Dicks, Cecilia Kutas and François Gauvin
Chair(s) - Cecilia Kutas

08:00 0053 *We Don't "Just" Teach! Lecturer Research and Outreach at the University of Toronto* **Dicks A.P.**

08:20 0054 *University Science Teaching in Transition: Realizing the Potential for Excellence* **Poe J.C.**

09:00 0055 *Opportunities and Challenges for Lecture-Track Faculty at a Research I Institution* **Morkin T.L.**

09:20 Questions from the audience

09:40 Coffee Break

10:00 Panel (David Farrar, Norman Hunter, Michael Mombourquette, Rashmi Venkateswaran and Mark Whitmore) Discussion chaired by François Gauvin.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

Inorganic Chemistry

IN2 ChedokeA-HCC

Multimetallic Complexes: New Molecules and Materials

Organizer(s) - Mark MacLachlan and Laurence Thompson
Chair(s) - Mark MacLachlan

08:20 0056 *Coordination Chemistry of Acid-Functionalized Schiff-Base Ligands* **Levy C.J.**, Desper J., Lalehzari A.

08:40 0057 *New Ferrocenyl Based Chalcogen Reagents for the Facile Preparation of Surface Functionalized Semiconductor Nanoclusters* MacDonald D.G., Ahmar S., Forbes J., Workentin M.S, *$**Corrigan J.F.**

09:00 0058 *Materials Properties of Ligand-free Metal Cyanoaurate Coordination Polymers* *Leznoff D.B.

09:20 0059 *Energy Migration across 1D Conjugated Organometallic Oligomers and Polymers* *$**Harvey P.D.**

09:40 Coffee Break

10:00 0060 *Engineering Magnetic Molecular Compounds: A Metallosupramolecular Approach* **Journaux Y.**, Pardo E., Lescouëzec R., Ruiz-García R., Cano J., Lloret F., Julve M., Chamoreau L.M., Filali Y., Pereira C., Novak M., Ottenwaelder X., Li Y

Strem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture presented by Hanadi Sleiman

Introduction of Hanadi Sleiman by Bruce Lennox

Presentation of the Strem Chemicals Award for Pure or Applied Inorganic Chemistry to Hanadi Sleiman by Peter Byrne, Strem Chemicals, Inc.

10:40 0061 *Assembling Materials with DNA as the Guide* *$**Sleiman H.**

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

IN3 ChedokeC-HCC

Novel Bonding and Structural Modalities in Main Group Chemistry. A Special Symposium Honouring Professor Ronald J. Gillespie

Organizer(s) - Ignacio Vargas-Baca, Hélène Mercier, Gary Schrobilgen and Robert Syvret
Chair(s) - Robert Thompson

08:00 0062 *VSEPR and the Origins of the Gillespie Ligand Close-Packing, LCP, Model* **Robinson E.A.**

08:40 0063 *Molecular Compactness, the Methyl Tilt, Molecular Conformations and the Anomeric Effect* *Gillespie R.J.

09:00 0064 *How Reciprocal VSEPR Enables the Prediction of Electron Density Transfers in Organic Reactions* *$**Silvi B.**

09:40 Coffee Break

10:00 0065 *When Does an Allene Become a Carbene?* *Tuononen H.M., Hänninen M., Peuronen A.

10:20 0066 *Redox and Nucleophile-Induced Transformations of S,N and C,N,S Cages* *Boeré R.T.

10:40 End of Session

REMINDER

10:40 Strem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture presented by Hanadi Sleiman in Chedoke A-HCC

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

IN5 AlbionC-HCC

Solid-State Materials: Structure, Bonding and Properties (joint with MT6)

Organizer(s) - Yurij Mozharivskyj
Chair(s) - Mario Bieringer

08:00 0067 *The Use of High Pressure in the Synthesis of Materials* *$**Alario-Franco M.Á.**

08:40 0068 *Investigations of Boron Hydride at High Pressures by Vibrational Spectroscopy* *$**Song Y.**

09:00 0069 *Structural and Spectroscopic Studies of Hydrotalcites containing Intercalated Dicarboxylic Anions* Wright J., Adebajo M.O., Barsan M.M., Gilson D.F.R., Frost R.L., $**Butler I.S.**

09:20 0070 *Structural and Magnetic Properties of Transition Metal Oxides $Ca_{2-x}Sr_xFe_{2-y}Mn_yO_5$: Brownmillerites and Disordered Perovskites* **Ramezanipour F.**, Greedan J.E., Cranswick L.M.D.

09:40 Coffee Break

10:00 0071 *$AA'BB'O_6$ Perovskites: Structure and Properties of Perovskites with Simultaneous A- and B-Site Cation Order* **Woodward P.M.**, King G.M., Garcia-Martin S.

10:20 0072 *Electronic and Magnetic Properties and Local Structural Differences in Nb-Substituted $EuTiO_3$, $SrTiO_3$ and $BaTiO_3$* *$**Kolodiazhnyi T.**

10:40 End of Session

REMINDER

10:40 Strem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture presented by Hanadi Sleiman in Chedoke A-HCC

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

Macromolecular Science & Engineering

MS2 CBallrm-Sher

Optical, Electronic and Photonic Materials (joint with MT5)

Organizer(s) - Tim Bender and Yuning Li
Chair(s) - Tim Bender

08:00 0073 *Control of the Formation of Magic-Sized Quantum Dots Exhibiting Bandgap Emission* *__Yu K.__

08:20 0074 *Photophysical Properties of Dye-Doped Silca Nanoparticles* *__Kell A.J.__, Jakubek Z., Barnes M., $Simard B.

08:40 0075 *Alignment Effects, Optical Characteristics and Electro-Optic Properties of Nematic LC, Chiral Dopant and Azo-Dye Decorated Gold Nanoparticles in Nematic LC Hosts* *$**Hegmann T.**, Qi H., Kinkead B.

09:00 0076 *Diazirine Modified Monolayer Protected Gold Nanoparticles (MPGNs): Precursor to Photoaffinity Labelling of MPGNs via Interfacial Carbene Chemistry* **Ismaili H.**, *Workentin M.S.

09:20 0077 *Hybrid Binary Silica Based Crosslinking System in Synthesis of Cadmium Sulphide Nanoparticles via Sol-Gel Process* **Tran T.T.**, *$Vreugdenhil A.J.

09:40 Coffee Break

CCUCC Chemistry Doctoral Award Lecture presented by Ludovico Cademartiri

Introduction of Ludovico Cademartiri by George Whitesides

10:00 0078 *Opportunities in the Grey Area between Polymers and Nanowires* *$**Cademartiri L.**

10:40 0079 *Novel Energy Transfer Sensitizers for the Dye Solar Cell* *$**Siegers C.**, Haag R., Winnik M.A., Hinsch A., Würfel U.

11:00 0080 *Transparent Upconverting $NaYF_4$ Nanoparticle-PMMA Polymer Composites* $**Boyer J.-C.**, *van Veggel F.C.J.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

Materials Chemistry

MT1 Beckett-Sher

Applications of Synchrotron Techniques in Materials Chemistry (joint with PT1)

Organizer(s) - Adam Hitchcock
Chair(s) - Adam Hitchcock

08:20 0081 *Chemical Microanalysis of Complex Surfaces by X-Ray Microscopy: Applications and New Developments* *$**Urquhart S.G.**

09:00 0082 *Local Structure and Electronic Property Elucidation of Sodium containing Silicon Clathrates Through X-Ray Absorption Studies* *__Ritchie A.__, Zhang P., $White M.A., Beekman M., Nolas G.S.

09:20 0083 *Experimental and Theoretical XAFS Studies of Multi-Component Nanostructures* *$**Zhang P.**

09:40 Coffee Break

10:00 0084 *Microdiffraction with Synchrotron X-Ray* **Tse J.S.**

10:40 0085 *Study of Residual Elastic/Plastic Deformation in Uniaxial Tensile Strained Nickel-Based Alloy 600 by Polychromatic X-Ray Microdiffraction (PXM) and Neutron Diffraction* *__Chao J.__, Mark A., Suominen Fuller M., McIntyre S., Holt R., Klassen R., Liu W.

11:00 0086 *A Synchrotron-Based Investigation of the Influence of Size and Surface Chemistry on the Electronic and Optical Properties of Silicon Nanocrystals* **Veinot J.G.C.**, Kelly J.A., Henderson E.J., Hessel C.M., Cavell R.G.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

MT5 CBallrm-Sher

Optical, Electronic and Photonic Materials (joint with MS2)

Organizer(s) - Tim Bender and Yuning Li
Chair(s) - Tim Bender

08:00 See MS2

09:40 Coffee Break

10:00 **CCUCC Chemistry Doctoral Award presented by Ludovico Cademartiri**

11:20 End of Session

REMINDER

11:25 **CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC**

MT6 AlbionC-HCC

Solid-State Materials: Structure, Bonding and Properties (joint with IN5)

Organizer(s) - Yurij Mozharivskyj
Chair(s) - Mario Bieringer

08:00 **See IN5**

10:40 End of Session

REMINDER

10:40 **Strem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture presented by Hanadi Sleiman in Chedoke A-HCC**

REMINDER

11:25 **CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC**

Organic Chemistry

OR6 WebsterB-HCC

Natural Products (joint with BM7)

Organizer(s) - Paul Harrison
Chair(s) - Paul Harrison

08:00 **See BM7**

11:20 End of Session

REMINDER

11:25 **CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC**

OR7 WBallrm-Sher

Nucleic Acids (joint with BM8)

Organizer(s) - Tony Yan and Christopher Wilds
Chair(s) - Masad Damha, Robert Hudson

08:20 **See BM8**

11:20 End of Session

REMINDER

11:25 **CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC**

OR8 ChedokeB-HCC

Organic Synthesis in Canada, Coast to Coast: Past, Present and Future

Organizer(s) - Tomas Hudlicky
Chair(s) - Gregory Dake

07:55 Introductory Remarks

08:00 0087 *The Canadian Front in Synthetic Organic Chemistry: Past, Present and Beyond* **Snieckus V.**

08:40 0088 *Catalysis for Organic Synthesis* **Alper H.**

09:20 0089 *Synthesis of Complex Carbocycles via Domino Reactions and Gold(I)-Catalyzed Cyclization* *$**Barriault L.**

09:40 Coffee Break

10:00 0090 *Synthesis of Natural Products and Natural Product Hybrids* *$**Gleason J.L.**

10:40 0091 *Exploring Flow Chemistry at Merck Frosst* *$**Fortin R.**

11:00 0092 *Synthesis of Aminocyclobutanes from β-Lactams* **Cheung L.**, $Yudin A.K.

11:20 End of Session

REMINDER

11:25 **CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC**

OR10 WebsterL-HCC

General

Organizer(s) - James McNulty
Chair(s) - Adrian Schwan

08:20 0093 *Developing Methodologies for the Synthesis of Heterocyclic Libraries: Parallel Synthesis of Isoquinolines and Flavones* **Awuah E.A.**, $Capretta A.

08:40 0094 *Tetraethylphosphorodiamidate: A Multitalented New Directed Metalation Group and Cross Coupling Partner* *$**Blackburn T.**, *Alessi M., Snieckus V.

09:00 0095 *Total Synthesis and Biological Evaluation of Amaryllidaceae Alkaloids: trans-Dihydrolycoricidine, 7-Deoxypancratistatin and C-1 Analogs of 7-Deoxypancratistatin* *$**Collins J.**, Druin M., *Hudlicky T., Pandey S.

09:20 0096 *Synthesis and Physical Properties of Substituted Indoloxanthones* **Dang A.-T.**, *Bodwell G.J.

09:40 Coffee Break

10:00 0097 *Cyclophanes from Bis(isobenzofuran)s* *$**Dibble P.W.**, Robbins S.J., Franz D., Fischer K., Thibault M.

10:20 0098 *$Sc(OTf)_3$-Catalyzed Conjugate Allylation of Alkylidene Meldrum's Acids* **Dumas A.M.**, *$Fillion E.

10:40 0099 *The Synthesis and Design of New, Explicit 3-D Siloxane Macro-Surfactants* **Grande J.**, $Brook M.A.

11:00 0100 *C-H Activation versus Directed ortho Metalation (DoM): Complementarity of Ir-Catalysed Borylation of Aromatics and Heteroaromatics* **Hurst T.**, Macklin T., Hartmann E., Kugel W., Parisienne-La Salle J.-C., Becker M., Marder T., *$Snieckus V.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

Physical, Theoretical and Computational Chemistry

PT1 Beckett-Sher

Applications of Synchrotron Techniques in Materials Chemistry (joint with MT1)

Organizer(s) - Adam Hitchcock
Chair(s) - Adam Hitchcock

08:00 See MT1

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

PT7 202-HCC

Materials and Magnetic Resonance

Organizer(s) - Gillian Goward and Alex Bain
Chair(s) - Alex Bain

08:20 0101 *Solid-State NMR of Functional Materials* **Spiess H.W.**

09:00 0102 *Probing Local Structures of Siliceous Zeolite Frameworks by Solid-State NMR and First-Principles Calculations of $^{29}SiO^{29}Si$ Scalar Couplings* *$^{\$}$**Brouwer D.H.**, Cadars S., Chmelka B.F.

09:20 0103 *Understanding the Role of Ionic Salts in Host Polymer Materials as a New Proton Exchange Membrane* **Traer J.W.**, $^{\$}$Goward G.R.

09:40 Coffee Break

10:00 0104 *Materials MRI with Pure Phase Encode Spin Echoes* *$^{\$}$**Balcom B.J.**

10:40 0105 *Rheo-NMR studies of Soft Materials* **Feindel K.W.**, Raudsepp A., Douglass B.S., de Vargas L., $^{\$}$Callaghan P.T.

11:00 0106 *A Study of the Polymeric Powder/Cement Interface Using Solid-State NMR* **MacDonald J.L.**, *$^{\$}$Zwanziger J.W., Werner-Zwanziger U., Chen B., Forgeron D.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

PT9 Heritage-Sher

New Advances in Spectroscopy and Microscopy (joint with AN5)

Organizer(s) - Glynis de Silveira and François Lagugné-Labarthet
Chair(s) - François Lagugné-Labarthet

08:20 See AN5

08:20 W.A.E. McBryde Award Lecture presented by Hans-Peter Loock

09:40 Coffee Break

10:00 Keith Laidler Award Lecture presented by Paul Wiseman

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

PT10 203-HCC

Quantum Chemical Dynamics

Organizer(s) - Randall Dumont and Ian Hamilton
Chair(s) - Randall Dumont, Steven Burger

08:00 0107 *Bipolar Bohmian Mechanics: An Overview* *$^{\$}$**Poirier B.**

08:40 0108 *Recent Results on Dynamics with Quantum Trajectories* **Wyatt R.E.**

09:20 0109 *Theoretical and Experimental Studies of the Reactions between Hyperthermal $O(^3P)$ and Graphite: Graphene-Based Direct-Dynamics and Beam-Surface Scattering Approaches* *$^{\$}$**Paci J.T.**, Upadhyaya H.P., Zhang J., Schatz G.C., Minton T.K.

09:40 Coffee Break

10:00 0110 *The Structure of the Electron* *$^{\$}$**Sanctuary B.C.**

10:40 0111 *Dynamics in Polymer Knots: Modelling the Stretching and Compression Behaviour of Grafted Polymer Tangles with Different Topologies* **Hjertenæs E.**, *$^{\$}$Arteca G.A.

11:00 0112 *Bifurcation and Chaotic Behavior of a Coupled Acetylcholinesterase/Cholineacetyltransferase Diffusion Reaction Enzymes System* *$^{\$}$**Mustafa I.**, Elkamel A., Chen P., Ibrahim G., Elnashaie S.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

PT12 AlbionB-HCC

Symposium on Frontiers of Electrochemistry (joint with AN7)

Organizer(s) - Jacek Lipowski and Gregory Jerkiewicz
Chair(s) - Sharon Roscoe, Alexandre Brolo

Joint with AN7 and SS3

08:00 See AN7

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC

Surface Science

SS3 AlbionB-HCC

Symposium on Frontiers of Electrochemistry

Organizer(s) - Jacek Lipowski and Gregory Jerkiewicz
Chair(s) - Sharon Roscoe, Alexandre Brolo

Joint with AN7 and PT12

08:00 **See AN7**

11:20 End of Session

REMINDER

11:25 **CIC Medal Lecture presented by Dwayne Miller in Chedoke C-HCC**

Sunday PM

NSERC

NS AlbionB-HCC

NSERC Workshop

Organizer(s) - NSERC Staff
Chair(s) - NSERC Staff

13:15 End of Session

Analytical Chemistry

AN1 WebsterC-HCC

Biosensors and Bioaffinity Probes (joint with BM3)

Organizer(s) - Ulrich Krull and Maria DeRosa
Chair(s) - Ulrich Krull, Maria DeRosa

13:20 0113 *Agile Development of Safeguard Biosystems' BioScan Diagnostic Platform* **Piunno P.A.E.**, Smit N.J., Klapproth H.

14:00 0114 *Colorimetric Paper-Based Bioassays Using Gold Nanoparticle Probes* **Aguirre S.D.**, Zhao W., Ali M.M., Brook M.A., *$Li Y.

14:20 0115 *Development of a Bioactive Paper Sensor for Detection of Neurotoxins Using Piezoelectric Inkjet Printing of Sol-Gel Derived Bioinks* Luckham R., ***$Hossain S.M.Z.**, Smith A.M., Lebert J., Davies L., Filipe C., $Brennan J.D.

14:40 0116 *A Fibre-Optic Fluorescence Probe Using SPME for Detection of E. coli and Coliforms in Water* ***$Brown R.S.**, Marcotte E.J.-P., Dunkinson C.E., Aston W.P., Gallant P.J., Wilton D.

15:00 **Coffee Break**

15:20 0117 *Comparison of Antibody with Aptamer for the Biosensor Detection of Ovarian Cancer* **Thompson M.**, Saoud M., Romaschin A.

16:00 0118 *An in vivo Bioprobe to Detect Protein:DNA Recognition* **Shahravan S.H.**, Chen X., Li I., Chan I., *$Shin J.A., Truong K.

16:20 0119 *Bench to Bedside Development of [^{18}F]-Labelled Thiadiazolyltetrahydropyridine Analogues for Imaging Muscarinic Receptors with PET* **van Oosten E.M.**, Chio J., Wilson A.A., Yudin A.K., Houle S., *$Vasdev N.

16:40 End of Session

AN5 Heritage-Sher

New Advances in Spectroscopy and Microscopy (joint with PT9)

Organizer(s) - Glynis de Silveira and François Lagugné-Labarthet
Chair(s) - Jean-François Masson

13:20 0120 *Using a Combination of Optical and Molecular Modeling Approaches to Study Solvent and Adsorbate Structure at Solid Surfaces* ***Hore D.K.**, Hall S.A., Jena K.C., Trudeau T.

14:00 0121 *Probing the Molecular Conformation of Self-Assembled Monolayers at Metal/Semiconductor Interfaces by Vibrational Sum Frequency Generation Spectroscopy* **Asanuma H.**, Noguchi H., Uosaki K., *$Yu H.-Z.

14:20 0122 *Label-Free Imaging of Diseased Arterial Tissue Using a Multi-Modal Coherent Anti-Stokes Raman Scattering (CARS) Microscope* ***$Ko A.**, Ridsdale A., Pegoraro A., Smith M., Schattka B., Hewko M., Stolow A., Sowa M.G.

14:40 0123 *Raman Spectromicroscopy Reveals that Nature Uses Various Strategies to Spin the Different Silk Filaments Produced by Spiders* **Lefèvre T.**, Rousseau M.-E., Boudreault S., Cloutier C., Pézolet M.

15:00 **Coffee Break**

Chair(s) - Dennis Hore

15:20 0124 *Surface Chemistry and Nanomaterials for Surface Plasmon Resonance Biosensors* ***Masson J.-F.**, Live L.S., Murray-Méthot M.P., Bolduc O.R.

16:00 0125 *Plasmonic Nanosensors for Surface Enhanced Raman Scattering* **Galarreta B.C.**, Norton P.R., *$Lagugné-Labarthet F.

16:20 0126 *Probing the Plasmonic Properties of Coupled Nanostructures: Multimodal Spectroscopy and Microscopy Approach* ***$Tay L.**, Hulse J., Kennedy D.C., Pezacki J.P.

16:40 0127 *Enhanced Resonance Raman Scattering for Single-Molecule Detection of Tagged Phospholipids in Langmuir-Blodgett Monolayers Using Nanostructured Metallic Films* **Moula G.**, $Pieczonka N., *Aroca R.

17:00 End of Session

AN6 EBallrm-Sher

New Developments in Microfluidics

Organizer(s) - Aaron Wheeler and Ravi Selvaganapathy
Chair(s) - Aaron Wheeler, Ravi Selvaganapathy

13:20 0128 *Control of Microfluidic Devices* **Burns M.A.**

14:00 0129 *Chemical Analysis Performed on one Single Biological Cell Selected in a Microfluidic Biochip* *$**Li P.C.H.**, Li X.J., Chen Y.C.

14:40 0130 *Improved Accumulation of Anti-Cancer Drug in Single Leukemia Cells Selected within a Microfluidic Chip* **Chen Y.**, *Li P.C.H.

15:00 Coffee Break

15:20 0131 *Microscale Gas Chromatographs for Determinations of Complex Vapor Mixtures* ***Zellers E.T.**

16:00 0132 *Discretization and Digitization of Sample Volume* *$**Chiu D.T.**

16:40 0133 *Hybrid Microfluidics for Pre-Processing and Separations* **Watson M.W.L.**, Abdelgawad M., *$Wheeler A.R.

17:00 End of Session

AN7 AlbionB-HCC

Symposium on Frontiers of Electrochemistry (joint with PT12)

Organizer(s) - Jacek Lipowski and Gregory Jerkiewicz
Chair(s) - Ian Burgess, Mark McDermott

Joint with PT12 and SS3

13:20 0134 *Surfaces, Interfaces and Morphology Effects in Electrocatalysis* **Abruna H.D.**

14:00 0135 *Surface Enhanced Infrared Absorption Spectroscopy Studies of Nanoparticle Stabilizing Ligands Adsorbed on Gold* Rosendahl S.M., Danger B.R., Gore T., *$**Burgess I.J.**

14:20 0136 *Nanoscale Dimple Array Formation During Electropolishing* *$**Kruse P.**, Singh S., Wang Y., Barden W.R.T.

14:40 0137 *The Electrochemistry of Copper in Aqueous Sulphide Solutions* Smith J.M., ***Qin Z.**, $Shoesmith D.W., King F.

15:00 Coffee Break

Fred Beamish Award Lecture presented by Aicheng Chen

Introduction of Aicheng Chen by Jacek Lipkowski

15:20 0138 *Nanomaterials Design for Electrochemical Biosensing* *$**Chen A.**

16:00 0139 *Electrochemical Applications of Carbon Nanostructures* ***McDermott M.T.**, Du R., Yang N.

16:20 0140 *Surface Magnetic Properties of Ultrathin Electrodeposited Ni Films and Nanostructures* *$**Leach G.W.**, Xu T., Han J.

16:40 End of Session

Biological & Medicinal Chemistry

BM3 WebsterC-HCC

Biosensors and Bioaffinity Probes (joint with AN1)

Organizer(s) - Ulrich Krull and Maria DeRosa
Chair(s) - Ulrich Krull, Maria DeRosa

13:20 **See AN1**

16:40 End of Session

BM5 SBallrm-Sher

Enzymology

Organizer(s) - Paul Berti
Chair(s) - David Zechel

13:20 0141 *Wall Teichoic Acid Synthesis in Gram-Positive Bacteria: When Does the Wall Start Closing In?* *$**Brown E.D.**

14:00 0142 *Characterization of P. aeruginosa 4-Hydroxyproline Epimerase: The Virtues of Capillary Electrophoresis for Stereoselective Resolution in Enzyme Kinetic Studies* **Gavina J.M.A.**, White C., Finan T.M., *$Britz-McKibbin P.

14:20 0143 *Surprising Functional Divergence among Inositol Dehydrogenase-Related Proteins* ***Palmer D.R.J.**, Sanders D.A.R., Krol E.S., van Straaten K., Zheng H.

14:40 0144 *Binding Cooperativity Induced by a Linked Folding Event in Aminoglycoside 6' N-Acetyltransferase-Ii* **Freiburger L.A.**, Mittermaier A., *$Auclair K.

15:00 Coffee Break

15:20 0145 *The Role of Flexible Loops in Enzymatic Catalysis* *$**Richard J.P.**

16:00 0146 *Single Enzyme Molecule Kinetics* *$**Craig D.B.**, Haslam A.M., Coombs J.M.L., Nichols E.R., Eggertson M.J., Horwood C.A.

16:20 0147 *Probing the Basis for General Base, Acid and Electrostatic Catalysis in Ribozymes and RNaseA-Mimicking DNAzymes* *$**Perrin D.M.**, Thomas J.M.

17:00 End of Session

BM7 WebsterB-HCC

Natural Products (joint with OR6)

Organizer(s) - Paul Harrison
Chair(s) - Paul Harrison

13:20 0148 *The Biosynthesis of Ebelactone A: Mechanism of β-Lactone Ring Formation* **Ahilan Y.**, *$Harrison P.H.M.

13:40 0149 *Probing Detoxification Pathways of Plant Pathogenic Fungi with Plant Natural Products* **Hossain S.**, *Pedras M.S.C.

14:00 0150 *Chemical Constituents of Buxus natalensis and their Biological Activities* **Matochko W.**, James A., *$Ata A., Gengan R.

14:20 0151 *The "Arms Race" between Plants and their Pathogens: Boosting Plant Defenses and Inhibiting Pathogen Invasion* ***$Pedras M.S.C.**

15:00 Coffee Break

15:20 0152 *Metabolic Connections in the Anaerobic Bacterium Fusobacterium varium* **White R.L.**

16:00 0153 *Deciphering Desaturase Diversity: Application of Fluorine Tagging Methodology to Mechanistic Investigations* ***$Buist P.H.**, Tan N., Hodgson D., Dawson B., Muchall H.M., Ivanova E.V., Whittle E., Shanklin J., Tremblay A.E.

R.U. Lemieux Award Lecture presented by Raymond Andersen

Introduction of Raymond Andersen by Chris Orvig

16:20 0154 *Bioactive Marine Natural Products: Drug Leads and Cell Biology Tools* ***$Andersen R.J.**

17:00 End of Session

BM8 WBallrm-Sher

Nucleic Acids (joint with OR7)

Organizer(s) - Tony Yan and Christopher Wilds
Chair(s) - Barry Linkletter, Jean-Paul Desaulniers

13:20 0155 *RNA Interference (RNAi) without RNA? Synthesis and Gene Silencing Activity of siRNA and Oligonucleotide Analogues Based of β-D-Fluorofuranose Sugars* ***$Damha M.J.**, Deleavey G.F., Watts J.K., Hassler M., Lackey J.G., Johnsson R., Donga R., Chan T.K.

14:00 0156 *Chemogenetic Investigation of Nucleic Acid Structures and Functions via Atom-Specific Substitution of Oxygen with Selenium* Sheng J., Salon J., Jiang J., Caton-Wiliams J., Lin L., ***$Huang Z.**

14:20 0157 *Synthesis and Immunostimulatory Properties of cdiGMP and Analogues* **Wang X.L.**, Ellens K., Tram K., KuoLee R., $Chen W.X., *Yan H.B.

14:40 0158 *Strategies to Chemically Modify siRNA* **Desaulniers J.-P.**

15:00 Coffee Break

15:20 0159 *DNA Modification by Phenolic Toxins: Opportunities for Cancer Treatment?* **Manderville R.A.**

15:40 0160 *Assessing the Suitability of DNA as a Dopamine Receptor* **Walsh R.**, *$DeRosa M.C.

16:00 0161 *Synthesis and Characterization of siRNA Prodrugs for Enhanced Cellular Uptake and Prolonged Gene Silencing* **Lackey J.G.**, Johnsson R., *$Damha M.J.

16:20 0162 *Synthesis of Oligonucleotides Bearing C8-Aryl-deoxyguanosine Adducts* **Omumi A.**, *$Manderville R.A.

16:40 0163 *Identification of Nucleotide Sequences for DNA-Templated Synthesis of Quantum Dots with Optimal Spectral Characteristics* ***Tikhomirov G.**, $Kelley S.O.

17:00 End of Session

BM9 WebsterA-HCC

Peptides and Peptidomimetics

Organizer(s) - Kamaljit Kaur
Chair(s) - Kamaljit Kaur

13:20 0164 *Pan-Bombesin Analogues for Nanoparticle Conjugation Using Click Chemistry* **Hickey J.L.**, Martin A.M., Ablack A.L., Lewis J.D., Gillies E.R., *$Luyt L.G.

13:40 0165 *Self Assembling Peptides as Carriers for Hydrophobic Anticancer Drug Ellipticine Delivery* **Wang H.**, *Chen P.

14:00 0166 *Synthesis and Structure-Activity Relationships of Bacteriocins, Antimicrobial Peptides from Lactic Acid Bacteria* **Vederas J.C.**

14:40 0167 *Design and Evolution of Minimalist Protein:DNA Interactions* ***$Shin J.A.**

15:00 Coffee Break

15:20 0168 *Potent, Selective and Metabolically Stable Peptide Antagonists to the Calcitonin Gene-Related Peptide (CGRP) Receptor* ***$Miranda L.P.**

16:00 0169 *Post-Translationally Methylated Lysine as a Target for Small-Molecule Disruption of Signaling Pathways* ***$Hof F.**, Beshara C.S., Jones C., Lilgert B.

16:20 0170 *Computer-Aided Design, Synthesis and Biological Evaluation of POP Inhibitors* Lawandi J., Toumieux S., Juillerat-Jeanneret L., **Moitessier N.**

16:40 0171 *The Mechanism of Hydrogen Peroxide Production by Copper-Bound Amyloid Beta Peptide: A Theoretical Study* Hewitt N., ***Rauk A.**

17:00 End of Session

BM10 WebsterL-HCC

General

Organizer(s) - Yingfu Li
Chair(s) - Yingfu Li

13:20 0172 *New Glycosidase Inhibitors for the Treatment of Type-2 Diabetes from an Ancient Herbal Remedy* **Pinto B.M.**

13:40 0173 *Sensitization of Resistant Tumor Cells to Death Receptor Signalling with an Isoform-Selective Histone Deacetylase Inhibitor* **Wood T.E.**, *Batey R.A., Dalili S., $Schimmer A.D.

14:00 0174 *Small Molecules with Affinity for S100A7, a Breast Cancer-Related Protein* **Whiting A.L.**, Jana S., Murray J.I., $Hof F.

14:20 0175 *Small Molecule Inhibitors of Stat3: Disrupting Oncogenic Protein-Protein Interactions* **Page B.D.G.**, Fletcher S., Turkson J., *$Gunning P.T.

14:40 0176 *The Design of Hydroxylethylamine (HEA) Derived Inhibitors of BACE-1 Demonstrating Robust Oral PD Efficacy in Rodents* ***Monenschein H.**, Brown J., Cheng Y., Croghan M, Graceffa R., Harried S., Hitchcock S., Horne D., Huang H., Judd T., Kaller M., Kreiman C., La D., Lopez P., Nguyen T., Patel V., Pennington L., Weiss M., Xue Q., Yang B., Zhong W.

15:00 Coffee Break

15:20 0177 *Novel Fluorescent Analogues for Vitamin E Localization Integrating Dipyrromethene boron Difluoride* **West R.**, *Atkinson J.

15:40 0178 *The Synthesis of Carborane Based Selective Estrogen Receptor Modulators for Imaging and Treatment of Breast Cancer* **Beer M.**, *$Valliant J.F., Causey P.W., Lemon J.

16:00 0179 *Nitrite and Nitroglycerin Stimulate Adenosine Triphosphate Release from Erythrocytes: Chemical Physiology of a Key Vasodilatory Pathway* **Seabra A.B.**, Garcia J.I., Kennedy R., *English A.M.

16:20 0180 *Effect of Alteration of Translation Error Rate on Enzyme Microheterogeneity* **Nichols E.R.**, *$Craig D.B.

16:40 End of Session

Chemical Education

CE2 AlbionA-HCC

Interactive Engagement Strategies in the Chemistry Classroom

Organizer(s) - Pippa Lock
Chair(s) - Katherine Darvesh, Pippa Lock

Nelson Education Canada Lecture

13:20 0181 *Can We Change the Culture of Chemistry Education?* **Kelter P.B.**

14:00 0189 *Group Learning with Case Studies in Green Chemistry and Inorganic Chemistry* **Levy C.J.**

14:20 0183 *An Initial Assessment of Classroom Response Systems in Chemistry Courses at the University of Manitoba* Hunter N.R., **Sorensen J.L.**, Prentice S., Wilkinson L.A., Thomas J.

14:40 Coffee Break

15:20 0184 *Peer-Led Team Learning (PLTL)* **Hoffman M.Z.**

15:40 0185 *Building Bridges, Bunnies and Comic Strips: Interactive Analogies in Organic Chemistry* ***$Miller T.A.**

16:00 0186 *Lecture Skit Demonstrations* **Lock P.E.**

16:20 0187 *"Are You Sure We Can Learn and Teach in Here?" Adapting to and Embracing Teaching in an Integrated Learning Environment* **Morkin T.L.**

16:40 0188 *Guided Inquiry Learning in a Non-Majors Course* ***$Austen M.A.**

17:00 0182 *Promotion of Active Learning and Conceptual Understanding Through the Use of Classroom Response Systems and Lecture Demonstrations* ***$Exton D.B.PAPER WITHDRAWN**

17:00 End of Session

Inorganic Chemistry

IN2 ChedokeA-HCC

Multimetallic Complexes: New Molecules and Materials

Organizer(s) - Mark MacLachlan and Laurence Thompson
Chair(s) - Victoria Milway

13:40 0190 *3d/4f Single Molecule Magnets* ***$Powell A.K.**

14:20 0191 *Rational Design of Magnetic Materials Based on "Single-Molecule Magnet" Building-Blocks* ***$Clérac R.**, Ababei R., Kalisz M., Roubeau O., Lecren L., Li Y.-G., Coulon C., Mathonière C.

15:00 Coffee Break

Chair(s) - Stephen Loeb

15:20 0192 *Linking Rings for Fun and QIP* ***$Winpenny R.E.P.**

16:00 0193 *A Family of Flexible Ligands for Polynuclear Complexes and Molecular Nanomagnets* **Murrie M.**

16:20 0194 *A Route to High Blocking Temperature Single-Molecule Magnets: Lanthanide Only SMMs* ***$Murugesu M.**

16:40 0195 *Continued Investigations of Magnetic Ladders* Butcher R.T., Keith B., Landee C.P., Jornet J., Deumal M., Novoa J.J., ***Turnbull M.M.**, Dawe L.N.

17:00 End of Session

IN3 ChedokeC-HCC

Novel Bonding and Structural Modalities in Main Group Chemistry. A Special Symposium Honouring Professor Ronald J. Gillespie

Organizer(s) - Ignacio Vargas-Baca, Hélène Mercier, Gary Schrobilgen and Robert Syvret
Chair(s) - Stephen Hartman

13:20 0196 *Acid-Base Bonds in Solids and Liquids* ***$Brown I.D.**

14:00 0197 *Molecules in Symmetry* ***$Hargittai I.**

14:40 0198 *My Years with Ron Gillespie* **Bader R.F.W.**

15:00 Coffee Break

15:20 0199 *How Far Can We Go? Main-Group Ligands for Stabilizing High Oxidation States* **Riedel S.**

16:00 0200 *Hexafluoroarsenate: A weakly coordinating anion and a versatile ligand* **Mews R.J.**, *Lork E., $Petersen J., Wagner H., Zemva B

16:40 0201 *Electronic Structure and Reactivity of the CB_{11} Cage* *$**Michl J.**

17:00 End of Session

IN5 AlbionC-HCC

Solid-State Materials: Structure, Bonding and Properties (joint with MT6)

Organizer(s) - Yurij Mozharivskyj
Chair(s) - John Greedan

13:20 0202 *Redox Reactions for Preparation of Intermetallic Compounds* *Grin Yu.

14:00 0203 *Nanoscale Magnetic Ordering and Chemical Induced Spin Freezing in the 2D Langasites $Pr_3Ga_5XO_{14}$ (X = Si, Ge, Ti, Sn)* *$**Wiebe C.R.**, Zhou H.D., Jo Y.J., Balicas L., Gardner J.S.

14:20 0204 *Investigation of Novel Oxygen Defect Materials* **Shafi S.P.**, $Bieringer M., Hansen T.

14:40 0205 *Fluorine-Modified Piezo- and Ferroelectric Ceramics of the $K_{0.5}Na_{0.5}NbO_3$-Type* **Gronotte A.**, *Ye Z.-G.

15:00 Coffee Break

15:20 0206 *Nanomagnetism of NiO* *$**Harbrecht B.**, Petrik M.

16:00 0207 *Chemical Reactivity and Magnetic Ordering in Highly Compressed Perovskites* *$**Bieringer M.**, Shafi S.P., Castillo-Martinez E., Alario-Franco M.Á.

16:20 0208 *The New Fe-Based Superconductors* ***Sefat A.S.**, McGuire M.A., Jin R., Sales B.C., Mandrus D.

16:40 0209 *Evaluation of Poly(vinylidene fluoride) Fibres for Reinforcement of Concrete Using X-Ray Diffraction and Tensile Testing* **Trottier A.M.**, *$Zwanziger J.W., Forgeron D.

17:00 End of Session

INP WentABC-HCC

Posters

Organizer(s) - David Emslie
Chair(s) - David Emslie

From **17:00** until **19:00**

0210 *Silver Complexes with Seleno- and Telluroether Ligands* **Poropudas M.J.**, Vigo L., Oilunkaniemi R., Laitinen R.S.

0211 *Palladium and Platinum Complexes of Cyclic Selenium(II) Imides* **Risto M.**, Eironen A., Oilunkaniemi R., Laitinen R.S., Chivers T.

0212 *Synthesis and Redox Chemistry of the Dianionic, Heavy Chalcogen-Containing $[C(PR_2E)_2]^{2-}$ Ligands (E = Se, Te)* **Konu J.**, Chivers T.

0213 *Lanthanide Complexes of Boraamidinate Ligands* **Corrente A.M.**, $Chivers T.

0214 *Development of a Metal-Free Asymmetric Hydrogenation Catalyst* **Heiden Z.M.**, *Stephan D.W.

0215 *Pushing the Limits of Coordination: Silver(I) Complexes of the Weakly Coordinating Solvents SO_2 and CH_2Cl_2* Decken A., Knapp C., Nikiforov G.B., *Passmore J., **Rautiainen J.M.**, Wang X., Zeng X.

0216 *Sulfur Heterocycles Derived from α-Diimine Ligands* **Martin C.D.**, *$Ragogna P.J.

0217 *Mono- and Dianionic N,N'-Disubstituted Ligands Capable of Stabilizing Group 13 Amido, Hydrido, Halide and Hydrocarbyl Species* **Priem J.**, *Richeson D.S., Yap G.P.A., Burchell T.J.

0218 *Synthesis of Poly(oxothiazenes) $[N=S(O)R]_n$ via the Polycondensation of N-Silylsulfonimidoyl Chlorides* *$**McWilliams A.R.**, Gezahegn S., Quinn J.

0219 *Group 13 and 15 Diindolylmethane Complexes: Synthesis and Routes to Cations* **Mallov I.**, Richeson D.S., Burchell T.J., Yap G.P.A., Spinney H.A.

0220 *The Electronic Structures of Sulfur Allotropes Revisited* **Yang Q.**, *Vargas-Baca I.

0221 *An Investigation into the Mercuration of Push-Pull Azobenzenes* **Elder P.J.W.**, *Vargas-Baca I.

0222 *Expanding the Scope of Frustrated Lewis Pair Chemistry: Phosphinoboranes, Pyridines and Polyphosphines* **Geier S.J.**, *Stephan D.W.

0223 *Ladder-Type Dithieno-Thia(Sila)-Phosphinine Systems* **Ren Y.**, *$Baumgartner T.

0224 *Heteroleptic Amidinate Aluminum Hydrides for Atomic Layer Deposition of Aluminum Metal Thin Films* **Delahunt J.R.**, $Barry S.T.

0225 *The Thermodynamic Effects of Added Nucleophiles on the Dimerization of Acyclic and Cyclic Dialkyldialkoxystannanes* *$**Whittleton S.R.**, Grindley T.B., $Boyd R.J.

0226 *Ground-State Al Atom Activation of C-Cl Bonds: An EPR Spectroscopic Study* *$**Joly H.A.**, Levesque M.Y., Newton T., Yu E.

0227 *Low Oxidation State Indium Salts and their "Crowned" Complexes* **Cooper B.F.T.**, *Friedl W., $Macdonald C.L.B.

0228 *1,2,3-Dithiazolyl (DTA) o-Napthoquinone Radical and its Potential Magnetic Properties* **Smithson C.S.**, *Preuss K.E.

0229 *Reactivity of Polar Group 14 Metallenes towards Terminal Alkynes* **Pavelka L.C.**, Milnes K.K., *$Baines K.M.

0230 *Activation of H_2 by Frustrated Lewis Pairs Derived from Mono- and Bis-Phosphinoferrocenes and $B(C_6F_5)_3$* **Ramos A.**, Lough A.J., $Stephan D.W.

0231 *Precursor Design for Self-Directed Growth of Molecular Wires* **Gordon P.G.**, Johnson P.A., DiLabio G.A., *$Barry S.T.

0232 *Novel Diazaphospholes as Potential Building Blocks for Organic Electronics* **Linder T.**, Sutherland T.C., *$Baumgartner T.

0233 *Does Bent's Rule Work beyond the First Row? A DFT and NBO Analysis* ***Sirsch P.**, Burchell R.P.L., $McGrady G.S.

0234 *Expanding Frustrated Lewis Pair Reactivity: H-H and N-H Bond Rupture with N-Heterocyclic Carbene and Bully Lewis Acids* **Chase P.A.**, Gilbert T.M., $Stephan D.W.

0235 *Coinage Metal Complexes with Metastable Selenium* ***Köchner T.**, Schaefer J., $Krossing I.

0236 *Investigation of a Bidentate N,N'-1,2,3-Dithiazolyl Radical as a Potential Spin-Bearing Ligand for Magnetic Materials* ***$MacDonald D.J.**, *Preuss K.E., Britten J.F., Jennings M.C.

0237 *The Search for New Frustrated Lewis Pair Systems Capable of Small Molecule Activation* **Neu R.C.**, $Stephan D.W.

0238 *Synthesis and Reactivity of Acetylene-Linked Phosphonium-Borates* **Zhao X.**, $Stephan D.W.

0239 *Ring-Opening Polymerization of Lactide Catalyzed by Chiral Indium Complexes* ***Acosta-Ramirez A.**, Douglas A.F., Yan C., $Mehrkhodavandi P.

0240 *Solid State ^{73}Ge Nuclear Magnetic Resonace Studies of Organogermanes* **Hanson M.A.**, Sutrisno A., Huang Y., Baines K.M.

0241 *Addition Polymerization of a Silene* **Guo J.**, *Pavelka L.C., $Baines K.M.

0242 *Exploring the Reactivity and Coordination Chemistry of Novel Polydentate Schiff-Base Ligands* **Gumbau-Brisa R.**, *$Pilkington M.

0243 *Synthesis and Exploration of Functionalized BEDT-TTF Derivatives as Candidates for Novel Molecular Materials* **Wang Q.**, *Pilkington M., Wallis J.

0244 *The Design and Synthesis of Molecule-Based Magnetic and/or Electronic Materials from Tetrathiafulvalene Building Blocks* **Acha R.T.**, *Pilkington M.

0245 *Synthesis, Characterization and Coordination Chemistry of Novel Tetracarboxamide bis-Bipyridyl Ligands* **Zarrabi N.**, *Pilkington M.

0246 *Negatively Charged Pseudorotaxanes as Building Blocks for Dynamic Network Solids* $Loeb S.J., **Vukotic V.N.**

0247 *Manganese(II) and Cobalt(II) Trimethylsilylchalcogenolates: Precursors to Ternary Nanomaterials* **Khadka C.B.**, *Corrigan J.F., Powell A.K.

0248 *A Systematic Approach to Building Salen-Derivative Single Molecule Magnets* **Burrow C.E.**, Burchell T.J., Wernsdorfer W., Clérac R., *Murugesu M.

0249 *New Macrocyclic Complexes of Copper and Nickel towards the Nature of Mechanical Bond* Kaminski R., Domagala S., Bilewicz R., $Korybut-Daszkiewicz K., ***Wozniak K.**

0250 *Experimental Charge Density Studies of Ferrocene Derivatives* Makal A., Plazuk D., Zakrzewski J., Misterkiewicz B., ***Wozniak K.**

0251 *Synthesis, Structure, and Magnetic Properties of Copperbis(S-pyrazine)dihalide [S = Cl, CN, OCH_3, or OCH_2CH_3 and Halide= Cl or Br]* **Herringer S.N.**, *Longendyke A., $Turnbull M.M., Landee C.P., Wikaira J.L.

0252 *Exploring Interactions between Electrical Conductivity and Magnetic Switching in Hybrid Polythiophene Materials* **Djukic B.**, *$Lemaire M.T.

0253 *Mn(II) and Co(II) Halide Complexes with 2-Amino-3-methylpyridinium and 2-Amino-5-methylpyridinium* ***Carnevale D.**, $Turnbull M.M.

0254 *Nickel Dithiolene Chelate Rings in a New Role as η^5-Coordinating Ligands towards Electrophilic Metal Centers.* **Kerr M.J.**, Harrison D.J., De Crisci A.G., Lough A.J., $Fekl U.W.

0255 *Chemistry of the 2-Pyridone Copper Halide System* **Shortsleeves K.C.**, *Turnbull M.M., Landee C.P., Dawe L.N.

0256 *Insertion Reactions of Tin(II) Halide into the Pt-Halide Bond of Complexes $[Pt(Phosphine)_2(halide)_2]$: The Effect of the Chain Length and Halide* ***$Momeni B.Z.**, Kazmi H., Najafi A., Amiri F.

0257 *Progress in Xe(IV) Oxide Fluoride Chemistry and Examples of Novel VSEPR Arrangements* **Brock D.S.**, Mercier H.P.A., $Schrobilgen G.J.

0258 *XEE'Y (E=C, Si; E'=C, Si): Structural Isomers and the Effects of Substitution* **Field A.P.**, *$Mawhinney R.C.

0259 *A Theoretical Study of Silicon containing Analogs of Tetracyanoethylene: Monomers and Dimers* Esau C., *$**Mawhinney R.C.**

0260 *Divergent Reactivity of Terminal Alkynes with Frustrated Lewis Pairs* **Dureen M.A.**, $Stephan D.W.

1701 *Tin Pest: A Review* *$**Christian B.H.**

0261 *Group 11 Guanidinates as Precursors for Chemical Vapour Deposition* **Whitehorne T.J.J.**, Coyle J.P., *$Barry S.T.

0262 *Metal-Metal Interactions in Binuclear Ni and Pd Complexes with N,S,S,N-Based Tetradentate Ligands* *$**Bierenstiel M.**, MacDonald K., Lavery C.

0263 *Nitrile-Functionalized N-Heterocyclic Carbene Complexes of Late Transition Metals; Observation of Metal-Mediated Ligand Hydrolysis and Routes to an Amino-Functionalized N-Heterocyclic Carbene Complex of Nickel(II)* **O W.W.N.**, Lough A.J., *$Morris R.H.

0264 *Reactions of Alkylidenecyclopropane and Related Olefins with Ruthenium and Osmium Complexes* Castro-Rodrigo R., Esteruelas M.A., Fuertes S., **López A.M.**, Mozo S., Oñante E.

0265 *Ligand-Centered Alkene Reactivity of Metal Bis- and Trisdithiolenes and Applications to Metal Dithiolene Synthesis* **Nguyen N.**, Harrison D.J., $Fekl U.W.

0266 *Synthetic Routes for Condensed-Phase* Ti_8C_{12} **Fraser A.W.**, *Baird M.C.

0267 *Carbene-Anchored, Pendent-Imidazolium Species as Precursors to Di-N-Heterocyclic Carbene-Bridged Mixed-Metal Complexes* **Zamora M.T.**, Ferguson M.J., McDonald R., *$Cowie M.

0268 *Organolanthanide Complexes Supported by a Novel Carbazole Ancillary* **Johnson K.R.D.**, $Hayes P.G.

0269 *Coordinatively Unsaturated Rhodium and Iridium Silyl Pincer Complexes: Applications in E-H Bond Activation Reactions* **Morgan E.**, MacLean D.F., *$Turculet L.

0270 *Novel Coordination Complexes of Phosphonium Indenylides* **Littlefield S.L.**, Brownie J.H., *Baird M.C.

0271 *Group 10 Metal Silyl Pincer Complexes: Synthesis and Applications in Si-H, Si-C and Si-X Bond Cleavage Reactions* **Mitton S.**, *$Turculet L.

0272 *The Synthesis of Titanium Metallocarbohedrenes* **Fowler K.G.**, Baird M.C.

0273 *Spin-Crossover Systems in a Dendritic Framework* **Farghal A.S.Z.**, Murugesu M., Richeson D.S.

0274 *Activation and Functionalization of Fluoroolefins by Adjacent Metal Centers* **Slaney M.E.**, Anderson D.J., *$Cowie M., McDonald R., Ferguson M.J.

0275 *Synthesis, Spectral Characterization, Properties and Structure of a Dinuclear Rhenium Complex containing the bis[4-(2-Pyridylmethyleneamino)phenyl]methane Ligand* *$**Mahmoudi A.**, Dehghanpour S., Khalaj M.

0276 *Density Functional Theory Study of the Bursten Ligand Additivity Model* *$**Graham J.P.**

0277 *An ab initio Investigation of Hydrogen Sulfate Hydration* *Pye C.C.**

0278 *Dehydrative Etherification of Alcohols in Ionic Liquids* **Kalviri H.A.**, Petten C.F., *Kerton F.M.

0279 *Cationic Magnesium Complexes as Lactone Polymerization Catalysts* **Ireland B.J.**, $Hayes P.G.

0280 *Novel Metal-Organic Frameworks as Superporous Materials for Gaseous Fuel Storage* **Crane A.K.**, Chong J.H., *MacLachlan M.J.

0281 *Selective Aromatic Carbon-Fluorine Activation Obtained with Ni(0) and a Nitrogen Ancillary Ligand with Donor Properties Comparable to N-Heterocyclic Carbenes* **Doster M.E.**, *Johnson S.A.

0282 *Reactivity of P,N and S,N Ligands with Group 13 and Early Transition Metals* **Thibault M.-H.**, *Fontaine F.-G.

0283 *Synthesis and Reactivity Studies of Phenyl and Fluoride Compounds with the CpCr(III) β-Diketiminato Framework* **MacLeod K.C.**, *$Smith K.M.

0284 *Dinuclear Dysprosium(III) Single-Molecule Magnets with a Large Anisotropic Barrier* **Lin P.-H.**, Burchell T.J., Clérac R., Murugesu M.

0285 *Coordination Chemistry of Borabenzene and Phospholyl Ligands* **Bélanger Chabot G.**, *Fontaine F.-G.

0286 *Immobilisation of First Generation Grubbs Catalyst on Porous Silica Materials* **Staub H.**, Fontaine F.-G., Kleitz F.

0287 *Design and Development of 1,2,3,5-Dithiadiazolyl Radicals as Ligands for Single Chain Magnets* $**Fatila E.M.**, *Preuss K.E.

0288 *Tantalum(V)-Boronate Metallocavitands: Tunable Hosts for Reactions* **Garon C.N.**, *Fontaine F.-G.

0289 *Synthesis of a Borylzirconocene Complex: A Target Reagent for 1,2-Addition on Alkynes* **Ferland P.**, $Fontaine F.-G., Burford R.J., Westcott S.A.

0290 *Synthesis, Redox Activity and Chemical Utility of Second-Generation Metal-Verdazyl Complexes* **Nowak B.M.**, McKinnon S.D.J., *Hicks R.G.

0291 *Activation of the C-H Bond of Tetrafluoropyridine by bis(Triethylphosphine) Ni(0) Complexes at Low Temperature: A Mechanistic and Theoretical Study of Rapid C-H and Slow C-F Activation* **Hatnean J.A.**, *Johnson S.A.

0292 *Redox and Boron Coordination Chemistry of Disubstituted 1,4-Hydroquinones* **Trefz T.**, *$Hicks R.G., Patrick B.O.

0293 *Organometallic Light-Harvesters for Nano-Crystalline Solar Cells* ***Robson K.C.D.**, Bomben P.G., Koivisto B.D., Sedach P.A., $Berlinguette C.P.

0294 *Synthesis and Reactivity of a Rh(III) Piano-Stool Complex Featuring the Ambiphilic Bifunctional Ligand $PMe_2CH_2AlMe_2$* **Boudreau J.**, Fontaine F.-G.

0295 *Coordination Chemistry of Soluble Chitosan Polyligands in the Design of Polymeric Asymmetric Catalysts* **Babin M.**, *$Gagnon J., Fontaine F.-G.

0296 *Cationic Zinc Complexes of Neutral Phosphinimine Ligands and their Efficacy for the Polymerization of Lactide* **Wheaton C.A.**, $Hayes P.G.

0297 *A Ditopic Ligand for "Needle and Thread" Coordination* **Frank N.C.**, $Loeb S.J.

0298 *Ferromagnetically-Coupled Linear Mn^{IV}_3 Complexes with Tuneable Oximate Ligands* **Pathmalingam T.**, Habib F., Gorelsky S, Burchell T.J., Bédard A.C., Loiseau F., Beauchemin A.M., Clérac R., Murugesu M.

0299 *Synthesis of Bicyclic Tetradentate Ligands as New Ligand Scaffold for Transition Metal Complexes* **Hossain D.**, *$Lavoie G.G.

0300 *The Development of Novel Low Oxidation State Nickel Catalyst Systems* **Sgro M.J.**, $Stephan D.W.

0301 *The Design of Cubane-Shaped Dumbbell Single-Molecule Magnets* **Savard D.**, Lin P.-H., Burchell T.J., Wernsdorfer W., Clérac R., *Murugesu M.

0302 *Groups X, XI and XII Transition Metal Coordination Complexes of 4,4-Dimethyl-2-(ortho-anilinyl)-2-oxazoline* ***$Gossage R.A.**, Quail J.W., MacInnis T.D., Jones R.C., Gardiner M.G., Jenkins H.A., Bucur R., Jolly L., Eisnor C.E., Boyd A.R.

0303 *Luminescence and Raman Spectroscopy of Square-Planar Pd(II) and Pt(II) Complexes* **Rodrigue-Witchel A.**, Genre C., *$Reber C.

0304 *Size and Shape Control of Silver Nanostructures: Studies into Icosahedron and Thick Prism Morphologies* **Cathcart N.**, Kitaev V.

0305 *Host-Guest Chemistry of Cadmium Dibenzoylmethanate Complex Coordinated with Quinoline or Isoquinoline* **Okeke E.B.**, Soldatov D.V.

0306 *The Synthesis and Characterization of New Palladium β-Diiminate Complexes* **Annibale V.T.**, Lund L., Tan R., Hadzovic A., *$Song D.

0307 *Square-Pyramidal Complexes Using Rigid Tetradentate Ligand Scaffolds* **Skrela B.C.**, *$Lavoie G.G.

0308 *Preparation of Hexagonal Particles of Synthetic Cobalt Clays by Hydrothermal Treatment of Cobalt Hydroxide Suspensions in Presence of Silicic Acid* **Scott B.**, *Villemure G.

0309 *Design of Supramolecular Ligands to Stabilize Reactive Mononuclear Metal Complexes* David F.G., Ottenwaelder X., ***Muchall H.M.**

0310 *Exploring the Chemistry of Ruthenium (II) Complexes Bearing Chelating Pyridine Ligand Systems* **Lummiss J.**, $Fogg D.E.

0311 *Novel Bulky Chelating Phosphines for Late Metal Catalysis* **Gwynne E.A.**, $Stephan D.W.

0312 *Late Transition Metal Complexes of Novel Cyclic Phosphinimines* **Brown C.C.**, $Stephan D.W.

0313 *Cellular Imaging Through Functionalized Carborane Gold Nanoparticles Utilizing Raman Spectroscopy* ***$Duguay D.R.**, Kennedy D.C., *Richeson D.S., Pezacki J.P.

0314 *The Development of a Luminescent-Probe Family for the Investigation of Aptamer-Target Binding* **Bernard E.D.**, $DeRosa M.C.

0315 *Exploring Charge Transfer in Ferrocene-Modified DNA Films* **Song H.**, *Kraatz H.-B.

0316 *Properties of Peptide Dendritic Modified Gold Nanoparticles* **Lataifeh A.**, *Kraatz H.-B.

0317 *Gallium Analogs of Hemozoin: Novel Approaches to Exploring the Structure and Drug Interactions of Malaria Pigment* **Dodd E.L.**, $Bohle D.S.

0318 *Lanthanide Complexes for the Treatment of Bone Density Disorders* **Mawani Y.**, Chang S., Sachs-Barrable K., Thompson K., Wasan K., $Orvig C.

0319 *Synthesis and Characterization of Chloroquine and Mefloquine Ferrocenyl Carbohydrate Conjugates* **Salas P.**, Adam M.J., *$Orvig C.

0320 *Cobalt Complexes that Inhibit Formation of Amyloid Plaques* **Gurley L.**, *$McNeil W.S., Klegeris A.

0321 *Enzyme Mediated Synthesis of Silsesquioxanes* **Frampton M.B.**, Simionescu R., $Zelisko P.M.

0322 *The Synthesis and Characterization of a Phosphino(Imino)Pyridine Ligand and the Transition Metal Complexes Thereof* **Manning K.**, *Wile B.M.

Macromolecular Science & Engineering

MS1 Beckett-Sher

Applications of Synchrotron Techniques in Polymer Chemistry (joint with MT2)

Organizer(s) - Adam Hitchcock and Christian Pellerin
Chair(s) - Christian Pellerin

Joint with MT2 and PT2

15:20 0323 *Quantitative Mapping of Protein Orientation in Spider Silk by Scanning Transmission X-Ray Microscopy* *$**Pézolet M.**, Lefèvre T., Rousseau M.-E., Hernandez Cruz D., Reid M.M., Obst M., Hitchcock A.P., Karunakaran C.

16:00 0324 *Synchrotron X-Ray Scattering of Polymer Nanocomposites* **Burger C.**, Hsiao B.S.

16:40 0325 *Photoemission Electron Microscopy and Atomic Force Microscopy of Phase-Separated Langmuir-Blodgett Monolayer Thin Films* $**Christensen S.L.**, Lanke U.D., Haines B.M., Qaqish S.E., Paige M.F., *Urquhart S.G.

17:00 End of Session

MS2 CBallrm-Sher

Optical, Electronic and Photonic Materials (joint with MT5)

Organizer(s) - Tim Bender and Yuning Li
Chair(s) - William Skene

13:20 0326 *A Strategy for Improved Quantum Yields in Heteroleptic Iridum Complexes Destined as Luminophores in Light-Emitting Electrochemical Cells (LEECs)* Ladouceur S., Fortin D., *$**Zysman-Colman E.**

13:40 0327 *Spontaneous Formation of Metallodielectric Structures due to Modulation Instability of White Light in a Ag-Nanoparticle-Doped Photopolymer* **Qiu L.**, *Saravanamuttu K.

14:00 0328 *New Rare Earth Precursors Compatible with Solution-Based Silicon Nanocrystal Doping* *$**Veinot J.G.C.**, Rodríguez Núñez J.R.

14:20 0329 *Looking Beyond Ru-Polypyridyl Complexes: A Strategy for Improving the Stability of Metal Chromophores in the Dye-Sensitized Solar Cell* Robson K.C.D., Bomben P.G., Sedach P.A., Koivisto B.D., *$**Berlinguette C.P.**

14:40 0330 *Engineering of Boronsubphthalocyanine Crystals for Photovoltaic Applications* *$**Bender T.P.**, Morse G.E., Paton A.

15:00 Coffee Break

15:20 0331 *NIR Direct Thermal Lithography of π-Conjugated Polymers (πCPs)* *$**Holdcroft S.**, Gordon T.J.

16:00 0332 *Optical and Electronic Properties of Monodisperse Poly(3,4-ethylenedioxythiophene)-Silica Microspheres* Kelly T.L., Yamada Y., Che S., Yano K., *Wolf M.O.

16:20 0333 *Tuneable Electrochromic Properties from Azomethine Building Blocks* Bolduc A., Dufresne S., *$**Skene W.G.**

17:00 End of Session

Materials Chemistry

MT1 Beckett-Sher

Applications of Synchrotron Techniques in Materials Chemistry (joint with PT1)

Organizer(s) - Adam Hitchcock
Chair(s) - Stephen Urquhart

13:20 0334 *Studies of Antiwear Films on 52100 Steel Using Synchrotron Light-Based Techniques* *$**Cutler J.N.**, Zhou J.G., Thompson J., Kasrai M., Bancroft G.M., Yamaguchi E.S.

13:40 0335 *Effects of Metal Substitution on the Electronic Structure and Bonding in Brownmillerite Phase Oxides as Studied by X-Ray Absorption Spectroscopy and Photoemission Spectroscopy* *Grosvenor A.P.**, Ramezanipour F., Derakhshan S., $Greedan J.E.

14:00 0336 *Synchrotron X-Ray Microscopy and Spectroscopy Analysis of Iron in Hemochromatosis Liver and Intestines* **Ko J.Y.P.**, $Sham T.-K., Chakrabarti S., Adams P.C.

14:20 0337 *Chemical Analysis of Polymers Using Soft X-Ray Spectromicroscopy* *$**Hitchcock A.P.**

15:00 End of Session

MT2 Beckett-Sher

Applications of Synchrotron Techniques in Polymer Chemistry (joint with MS1)

Organizer(s) - Adam Hitchcock and Christian Pellerin
Chair(s) - Christian Pellerin

Joint with MS1 and PT2

15:20 **See MS1**

17:00 End of Session

MT5 CBallrm-Sher

Optical, Electronic and Photonic Materials (joint with MS2)

Organizer(s) - Tim Bender and Yuning Li
Chair(s) - William Skene

13:20 **See MS2**

17:00 End of Session

MT6 AlbionC-HCC

Solid-State Materials: Structure, Bonding and Properties (joint with IN5)

Organizer(s) - Yurij Mozharivskyj
Chair(s) - John Greedan

13:20 **See IN5**

17:00 End of Session

Organic Chemistry

OR6 WebsterB-HCC

Natural Products (joint with BM7)

Organizer(s) - Paul Harrison
Chair(s) - Paul Harrison

13:20 **See BM7**

17:00 End of Session

OR7 WBallrm-Sher

Nucleic Acids (joint with BM8)

Organizer(s) - Tony Yan and Christopher Wilds
Chair(s) - Barry Linkletter, Jean-Paul Desaulniers

13:20 **See BM8**

17:00 End of Session

OR8 ChedokeB-HCC

Organic Synthesis in Canada, Coast to Coast: Past, Present and Future

Organizer(s) - Tomas Hudlicky
Chair(s) - Jean-François Paquin

13:20 0338 *Tinkering and Tampering with Metalated Aromatics and Heteroaromatics* *$**Snieckus V.**

13:40 0339 *Recent Advances in Pericyclic and Organoboron Chemistry* **Batey R.A.**

14:20 0340 *Exploiting Chlorohydrins in Natural Product Synthesis* *$**Britton R.**, Kang B., Mowat J., Chang S., Drapper J., Decker S., Pinter T.

15:00 Coffee Break

15:20 0341 *Neutral and Anionic Organometallic Complexes in Molecular and Non-Volatile Solvents* *__Clyburne J.A.C.__

16:00 0342 *Catalysis Studies: Ligand Development and Metal-Catalyzed Annulation* *$**Dake G.R.**

16:40 0343 *A Biomimetic Approach to the Indole Alkaloid Arboflorine* **Johansen M.B.**, $Kerr M.A.

17:00 End of Session

Physical, Theoretical and Computational Chemistry

PT1 Beckett-Sher

Applications of Synchrotron Techniques in Materials Chemistry (joint with MT1)

Organizer(s) - Adam Hitchcock
Chair(s) - Stephen Urquhart

13:20 **See MT1**

15:00 End of Session

PT2 Beckett-Sher

Applications of Synchrotron Techniques in Polymer Chemistry

Organizer(s) - Adam Hitchcock and Christian Pellerin
Chair(s) - Christian Pellerin

Joint with MS1 and MT2

15:20 **See MS1**

17:00 End of Session

PT7 202-HCC

Materials and Magnetic Resonance

Organizer(s) - Gillian Goward and Alex Bain
Chair(s) - Alex Bain

13:20 0344 *Investigating Structure, Order and Dynamics in the Solid State Using Multinuclear NMR and First-Principles Calculations* **Ashbrook S.E.**

14:00 0345 *New Applications of Phase-Modulated Pulses for Solid-State NMR of Quadrupolar Nuclei* **O'Dell L.A.**, Rossini A.J., *$Schurko R.W.

14:20 0346 *Barium Borate: A Combined Solid-State NMR and Computational Study* **Sutrisno A.**, Lu C., Lipson R.H., *$Huang Y.

14:40 0347 *Multinuclear and Double-Resonance NMR Studies of Phase Separation in Model Nuclear Waste Glasses* Martineau C., Svenda N.B., **Michaelis V.K.**, *$Kroeker S.

15:00 Coffee Break

15:20 0348 *Recent Developments in Solid-State ^{19}F NMR of Fluorine Containing Materials* *$**Hazendonk P.**, Montina T., Borisov A.S., Wilson L.D.

15:40 0349 *Ultrahigh-Field Solid-State ^{67}Zn NMR Spectroscopy and DFT Investigation of Several Zinc-Amino Acids Complexes* **Mroué K.H.**, *Power W.P.

16:00 0350 *Application of Solid-State ^{209}Bi NMR to the Structural Characterization of Bismuth-Containing Materials* **Hamaed H.**, Laschuk M.W., Terskikh V.V., *$Schurko R.W.

16:20 0351 *Solid-State Indium-115 NMR Studies of Solid Materials* *$**Wasylishen R.E.**, Chen F., Ma G., Cavell R.G., Terskikh V.V., Bernard G.M.

17:00 End of Session

PT9 Heritage-Sher

New Advances in Spectroscopy and Microscopy (joint with AN5)

Organizer(s) - Glynis de Silveira and François Lagugné-Labarthet
Chair(s) - Jean-François Masson, Dennis Hore

13:20 **See AN5**

17:00 End of Session

PT10 203-HCC

Quantum Chemical Dynamics

Organizer(s) - Randall Dumont and Ian Hamilton
Chair(s) - Randall Dumont, Steven Burger

13:20 0352 *A New Paradigm for Spectroscopy in the Century after Herzberg* [*$]**Le Roy R.**

14:00 0353 *Water Dimer Calculations in Full Dimensionality* **Leforestier C.J.**

14:40 0354 *Theoretical Studies of the Photochemistry of Iodide-Water Clusters* **Mak C.C.**, Timerghazin Q.K., Peslherbe G.H.

15:00 Coffee Break

15:20 0355 *On a Manifestly Covariant Quantum Mechanics* [*$]**Nooijen M.**, Upadhyay D., Huntington L.M.J., Akash M.

16:00 0356 *The Structure of the Singlet State* [*$]**Sanctuary B.C.**

16:20 0357 *A Quantum-Mechanical Description of the Lennard-Jones Potential between the Quantum and Classical Subsystems in Combined QM/MM Calculations* **Johnson E.R.**, Bulat F.A., Hu H., Yang W.

16:40 End of Session

PT12 AlbionB-HCC

Symposium on Frontiers of Electrochemistry (joint with AN7)

Organizer(s) - Jacek Lipowski and Gregory Jerkiewicz
Chair(s) - Ian Burgess, Mark McDermott

Joint with AN7 and SS3

13:20 **See AN7**

15:00 Coffee Break

15:20 **Fred Beamish Award Lecture presented by Aicheng Chen**

16:40 End of Session

PTP WentABC-HCC

Posters

Organizer(s) - Kalai Saravanamuttu
Chair(s) - Kalai Saravanamuttu

From **17:00** until **19:00**

0358 *Soft X-Ray Spectromicroscopy of Patterned Polymeric Surfaces as Candidate Protein Microarrays* **Leung B.O.**, [*$]Hitchcock A.P., Brash J.L., Weidner M.T., Castner D.G., Scholl A., Doran A.

0359 *Quantitation of Structural Defects in Carbon Nanotubes by Scanning Transmission X-Ray Microscopy* [$]**Najafi E.**, Wang J., [*]Hitchcock A.P., Felten A., Pireaux J.J.

0360 *X-Ray Spectroscopy of CaF_2 Encapsulated ZnO* [*$]**Sammynaiken R.**, Chen W., Joly A., Hoffmeyer R.E., Blyth R.I.R., Regier T.G., Brunet S.M.K., Vogt J., Bergstrom J.C., Dallin L., DeJong M.

0361 *Vanadium-51 NMR Study of Ionically Conducting Lithium Borovanadate Glass Systems* **Michaelis V.K.**, [*$]Kroeker S., Aguiar P.M., Feller S., Hegland S.

0362 *^{45}Sc Solid State NMR Studies of Polymer Supported Catalytic Systems* **Hildebrand M.P.**, Rossini A.J., [*$]Schurko R.W., Hazendonk P.

0363 *NMR Insights into Crystallization Products of Model Nuclear Waste Glasses* **Svenda N.B.**, Michaelis V.K., [*$]Kroeker S.

0364 *Ultra-Wideline ^{207}Pb NMR of Lead(II) Thiolates* **MacGregor A.W.**, Rossini A.J., O'Dell L.A., Briand G.G., Smith A.S., Tang J.A., Schatte G., [*$]Schurko R.W.**PAPER WITHDRAWN**

0365 *^{91}Zr and ^{35}Cl Solid-State NMR Studies of Heterogeneous Catalyst Precursors* **Rossini A.J.**, Hung I., [*$]Schurko R.W.

0366 *Structural Investigation of Lead Boroaluminates and Borogallates Using ^{11}B, ^{27}Al and ^{71}Ga MAS-NMR* **Wren J.E.C.**, Michaelis V.K., [*$]Kroeker S.

0367 *^{6}Li Solid State NMR Study of Li-Ion Mobility in $Li_3Fe_2(PO_4)_3$* **Davis L.J.M.**, Heinmaa I., [*]Goward G.R.

0368 *Solid-State ^{65}Cu and ^{31}P NMR Spectroscopy of Bis(triphenylphosphine) Copper Species* **Lucier B.E.G.**, Tang J.A., [*$]Schurko R.W., Bowmaker G.A., Healy P., Hanna J.V.

0369 *Boron-11 Solid-State NMR of Boronic Acids via DFS-Modified QCPMG and DFS-Hahn Echo Pulse Sequences* **Weiss J.W.E.**, [*$]Bryce D.L.

0370 *^{25}Mg Ultra-High Field Solid-State NMR and First Principles Calculations in Magnesium Salts* **Pallister P.J.**, [*]Moudrakovski I., [$]Ripmeester J.A.

0371 *Investigating Transport Processes with MRI* MacMillan B., Mastikhin I., Newling B., **Balcom B.J.**

0372 *Binding Interactions in Early and Late Stage Amyloids of $TTR_{105-115}$ by Saturation Transfer NMR* [$]**Liang Y.**, Zahedi Jasbi Sh., Haftchenary S., Morin S., [*]Wilson D.J.

0373 *Strategies for the NMR Chemical Shift Assignment of Intrinsically Disordered Proteins* *$**Buchko G.W.**, McAteer K., Reeves R., Shaw W.J.

0374 *Inter-Domain Communication in the Regulatory Subunit of PKA as Revealed by NMR* **McNicholl T.**, Das R., SilDas S., Alidina N., *$Melacini G.

0375 *^{1}H NMR Metabolomic Analysis of Freshwater Algae Chlamydomonas reinhardtii* **Ooms K.J.**, Westerhuis J.A., Bestman H.D.

0376 *Deciphering the Structural and Dynamical Basis of Allostery in EPAC by NMR Spectroscopy* **Selvaratnam R.**, Das R., Mazhab-Jafari M.T., Chowdhury S., SilDas S., McNicholl T., *$Melacini G.

Surface Science

SS3 AlbionB-HCC

Symposium on Frontiers of Electrochemistry

Organizer(s) - Jacek Lipowski and Gregory Jerkiewicz
Chair(s) - Ian Burgess, Mark McDermott

Joint with AN7 and PT12

13:20 **See AN7**

15:00 **Coffee Break**

15:20 **Fred Beamish Award Lecture presented by Aicheng Chen**

16:40 End of Session

Monday AM

Analytical Chemistry

AN1 WebsterC-HCC

Biosensors and Bioaffinity Probes (joint with BM3)

Organizer(s) - Ulrich Krull and Maria DeRosa
Chair(s) - Ulrich Krull, Maria DeRosa

09:00 0377 *Reagentless Sensors Based on Silicon Nanocrystalline Materials* *$**Bright F.V.**

09:40 **Coffee Break**

10:00 0378 *Quantum Dots and Fluorescence Resonance Energy Transfer (FRET) for the Multiplexed Detection of Two Sequences in a Solid Phase Hybridization Assay* **Algar W.R.**, *$Krull U.J.

10:20 0379 *Structure and Dynamics of Quantum Dot-Oligonucleotide Biosensor Systems Revealed by Single-Molecule Fluorescence Spectroscopy* *Prigozhin M., Liu B., Algar W.R, Gradinaru C., $Krull U.J.

10:40 0380 *Multifunctional Nanoparticle Platforms for the Isolation and Detection of Pathogens* *Paquet C., Kell A.J., $Simard B., Ryan S., Tanha J.

11:00 0381 *Development of a 'Molecular Switch' Optical Nucleic Acid Biosensor* **Massey M.**, *$Krull U.J.

11:20 0382 *Ultrasonic Response of pH Dependent Albumin Changes* **Kato M.**, Dion J.R., Burns D.H.

11:40 0383 *Surface Bioassays Using Antibody-Nanoparticle Conjugates* Grant C.F., Yang N., Nsiah F., *McDermott M.T.

12:00 End of Session

AN3 EBallrm-Sher

Frontiers of Separation Science

Organizer(s) - Philip Britz-McKibbin and Nicole Baryla
Chair(s) - Nicole Baryla

Maxxam Award Lecture presented by Liang Li

Introduction of Liang Li by Charles Lucy

Presentation of Maxxam Award to Liang Li by Terry Obal, Maxxam Analytics

08:20 0384 *Missing Links of Omics Technologies: Analytical Challenges in Large Scale Proteome and Metabolome Profiling* **Li L.**

09:00 0385 *Using DNA-Binding Proteins as Tools in Separation in Separation-Based Analyses* **Krylov S.N.**

09:20 0386 *Development and Characterisation of a Method for the Pre-Treatment of DNA by Capillary Affinity Gel Electrophoresis* **Chan A.**, *$Krull U.J.

09:40 **Coffee Break**

10:00 0387 *From 0 to 100,000 in 20 Min: Improving Sensitivity Through Isotachophoretic Stacking with a Counter Flow* *Breadmore M.C., Dawod M., Guijt R.M., Quirino J.P, Haddad P.R.

10:40 0388 *Novel Chemometric Approaches for the Identification of Ignitable Liquids in Arson Debris* *Harynuk J.J., Sinkov N.A., Sandercock P.M.L.

11:00 0389 *A Novel Micro Dual Flame Photometric Detector for Gas Chromatography* *Thurbide K.B., Hayward T.C.

11:20 0390 *How Capillary Electrophoresis Has Become a Mainstream Technique for the Analysis of Heparin Contamination* *$Girard M., Joly M.-A., Kane A., Boucher S., Lorbetskie B., Cyr T.D.

12:00 End of Session

AN7 AlbionB-HCC

Symposium on Frontiers of Electrochemistry (joint with PT12)

Organizer(s) - Jacek Lipowski and Gregory Jerkiewicz
Chair(s) - Daniel Bélanger, Gregory Jerkiewicz

Joint with PT12 and SS3

08:00 0391 *Ethanol Oxidation on Platinum Stepped Surface* *$**Tremiliosi-Filho G.**, Colmati F., Gonzalez E.R., Berná A., Herrero E., Feliu J.M.

08:40 0392 *Physical Modeling of Catalyst Layers for PEM Fuel Cells: The Hierarchy of Structural Effects* *$**Eikerling M.H.**

09:20 0393 *Analysis of the Origin of Catalytic Activity of Platinum in Electrochemical Reactions Involving Hydrogen* *$**Jerkiewicz G.**

09:40 Coffee Break

10:00 0394 *New Developments in the Modification of Surfaces with the Diazonium Chemistry* $**Bélanger D.**, Vila N.

10:40 0395 *Towards Molecular Level Understanding of Electrocatalytic Hydrogenation of Organic Compounds: Adsorption of Benzene, Toluene, Ethylbenzene and Styrene on Pt(111) in Aqueous $HClO_4$* *$**Lessard J.**, Obradovic M., Jerkiewicz G.

11:00 0396 *High Temperature Acid Measurements via Electrodeless Conductivity* **Saini R.S.**, Huang M., *$Papangelakis V.G.

11:20 0397 *Evaluation of Passive and Crevice-Corroded Surfaces on a Ni-Cr-Mo-W Alloy Using Surface Analytical and Electrochemical Techniques* ***Zagidulin D.**, Jakupi P., Zhang X., Noël J.J., Shoesmith D.W.

11:40 0398 *Determination of Local Catalytic Reduction Kinetics and Sustainability on Hyper-Stoichiometric UO_{2+x} by SECM-Potentiodanamic Scanning (SECM-PDS)* **He H.**, Ding Z., Shoesmith D.W.

12:00 End of Session

Biological & Medicinal Chemistry

BM3 WebsterC-HCC

Biosensors and Bioaffinity Probes (joint with AN1)

Organizer(s) - Ulrich Krull and Maria DeRosa
Chair(s) - Ulrich Krull, Maria DeRosa

09:00 **See AN1**

12:00 End of Session

BM5 SBallrm-Sher

Enzymology

Organizer(s) - Paul Berti
Chair(s) - David Palmer

08:40 0399 *Keeping Artificial Blood Flowing: Enhanced Nitrite Reductase Activity of Chemically Altered Hemoglobins* *$**Kluger R.**, Lui F., Foot J., Hu D., Chen S.

09:20 0400 *Nitroglycerin Denitrosation by Glyceraldehyde-3-phosphate Dehydrogenase May Contribute to Vasorelaxation and Nitrate Tolerance* **Seabra A.B.**, Antonic M., Chrétien M.N., Garcia J.I., *English A.M.

09:40 Coffee Break

10:00 0401 *Feruloyl Esterases as Biotechnological Tools* **Fazary A.E.**, *Ju Y.-H.

10:20 0402 *Multiple Pathways for the Irrevesible Inhibition of Steroid Sulfatase by Quinone Methide-Generating Suicide Inhibitors* Ahmed V., Liu Y., *$**Taylor S.D.**

10:40 0403 *Insight into Enzymatic Glycosyl and Phosphoryl Transfer* *$**Jakeman D.L.**

Bernard Belleau Award Lecture presented by Andrew Bennet

Introduction of Andrew Bennet by Mario Pinto

11:20 0404 *Intrinsic Reactivity and Catalysis in Carbohydrate Chemistry* ***Bennet A.J.**

12:00 End of Session

BM8 WBallrm-Sher

Nucleic Acids (joint with OR7)

Organizer(s) - Tony Yan and Christopher Wilds
Chair(s) - Christopher Wilds, Tony Yan

08:20 0405 *Unusual DNA-DNA Crosslinks between a Deoxyribozyme and its Bound Oligonucleotide Substrate* **Sen D.**, Sekhon G.

09:00 0406 *Influence of Cleavage Site on Global Folding of a RNA-Cleaving DNAzyme: A 3-Color FRET Study* **Lam J.C.F.**, *$Li Y.

09:20 0407 *From Fundamentals to Applications in Aptamer-Based Biosensing* *$**DeRosa M.C.**, Sultan Y., Walsh R.

09:40 Coffee Break

10:00 0408 *Circumventing the Need for Mg^{2+}, a Highly Active RNaseA-Mimicking DNAzyme with Three Modified Nucleosides: Guanidinium Ions, Amines and Imidazoles* Hollenstein M., Lam C., Hipolito C., *$**Perrin D.M.**

10:40 0409 *In Vitro Selection of Thiamine Binding RNAs* **Cernak P.**, $Sen D.

11:00 0410 *Deciphering the Folding Pathway of a Catalytic RNA* *$**Perreault J.-P.**, Reymond C., Lévesques D., Bisaillon M.

11:40 0411 *Complexity of a Small DNA-Based Enzyme* *$**Li Y.**

12:00 End of Session

Chemical Education

CE1 AlbionA-HCC

Innovations in the Chemistry Laboratory

Organizer(s) - Jeff Landry and Michael Mombourquette

08:20 0412 *First-Year Chemistry Laboratories at the University of Ottawa* **Venkateswaran R.**

09:00 0413 *The "Black Box" is Orange: Using LabVIEW to Build a Fluorimeter and Demystify Analytical Instruments for Students* **Algar W.R.**, Massey M., *$Krull U.J.

09:20 0414 *Teaching Green Chemistry in the Undergraduate Organic Laboratory: The Biginelli Reaction* ***Dicks A.P.**, Aktoudianakis E., Styler S.

09:40 Coffee Break

10:00 0415 *Implementing a Research Module in General Chemistry: The Search for Nontoxic Inorganic Pigments* **Woodward P.M.**, Stoltzfus M.W., Clark T.

10:40 0416 *Superlab: Research Methods for Junior Chemistry Majors at Hamilton College* ***Wile B.M.**

11:00 0417 *Development and Assessment of First-Year Chemistry Laboratory Learning Goals* **Duis J.M.**, $Schafer L.L., Nussbaum S., Stewart J, Carlson M., Samozvanov Y.

11:20 0418 *This is Not Research* **Gauthier J.M.**

11:40 0419 *Experiments in Green and Sustainable Chemistry* ***$Kennepohl D.K.**

12:00 End of Session

Environmental Chemistry

EN3 202-HCC

Current-Use Pesticides in the Environment

Organizer(s) - John Struger and Ed Sverko
Chair(s) - Ed Sverko, John Struger

10:00 0420 *Mecoprop and Metolachlor in Ontario Streams and Great Lakes* ***$Kurt-Karakus P.B.**, Bidleman T.F., Muir D.C.G., Struger J., Sverko E., Dove A., Backus S., Cagampan S., Small J., Jantunen L.

10:20 0421 *In situ Exposures of Hyalella azteca: A Tool to Assess the Impacts of Pesticide Use on Freshwater Ecosystems* **Bartlett A.J.**, Struger J., Brown L.R., Palace V.P.

10:40 0422 *Toxicity of Nitrogenous Fertilizers and Pesticides to Snapping Turtles Eggs (Chelydra serpentina)* **Martin P.**, deSolla S.

11:00 0423 *Near-Field Study on Priority Current-Use Pesticides in PEI* **Yao Y.**, Garron C., *$Harner T., Ernst B.

11:20 0424 *A Comparison of Four Air Sampling Techniques: Results and Temporal Trends of Current-Use Pesticides in Rural Agricultural Ontario* **Hayward S.**, Gouin T., *$Wania F.

11:40 0425 *Development of High Performance Liquid Chromatography/Tandem Mass Spectrometry Methods for the Determination of Carbamate, Organophosphate and Phenylurea Pesticides in Environmental Matrices* **Yang P.**, Hao C., Nguyen B., Zhao X.

12:00 End of Session

Industrial Chemistry

IC1 WebsterL-HCC

Green Chemistry and Processes

Organizer(s) - Guerino Sacripante
Chair(s) - Guerino Sacripante

08:00 0426 *Novel Green Technology for Removal of Pollutants from Air Streams* ***$Ariya P.A.**, Gianfrancesco O., Deeds D., Eltouny N., Asmar C.

McGill University

08:20 0427 *Production of High Voltage Electricity from Waste Heat Using Polymeric Films* ***Ikura M.**, Kouchachvili L.

CANMET Energy Technology Centre

09:00 0428 *Development of Bio-Based Polymers: Fundamentals, Process Scale Up and Technology Challenges* ***Spence R.E.**, Xie T., Godbille F.D., Liang H., Muliawan E.B., Ng H., Harmer M.A., Hoffmann C.K., Minter A.R., Murphy E.R.

E.I. du Pont Canada Company

09:40 Coffee Break

10:00 0429 *Renewable Resources in BASF, in Polymers and in Polyurethanes in Particular* **Hinz W.**

BASF

10:40 0430 *Medium-Chain-Length Poly-3-hydroxyalkanoates: Production, Characteristics and some Colloidal Properties* ***Ramsay B.A.**

Polyferm Canada

11:20 0431 *Production of Bio-Based Succinic Acid by Fermentation* ***Huc J.-F.**

DNP Green Technology Canada

12:00 End of Session

Inorganic Chemistry

IN2 WebsterA-HCC

Multimetallic Complexes: New Molecules and Materials

Organizer(s) - Mark MacLachlan and Laurence Thompson
Chair(s) - Laurence Thompson

REMINDER

10:00 Rio Tinto Alcan Award Lecture presented by Chris Orvig in Webster B

10:40 0432 *Electronic Lability Incorporated within Oligo- and Polythiophene Materials: Hybrid Spin-Crossover or Valence Tautomeric Conductors* ***$Lemaire M.T.**, Djukic B., O'Sullivan T.J., Cheng H., Dube P.A., Seda T., Jenkins H.A.

11:00 0433 *Spin Crossover in Iron(II) Complexes: Recent Achievements* **Gütlich P.**

11:40 0434 *Thermal- and Photo-Induced Intramolecular Electron Transfer In Cyanobridged Cobalt-Iron Compounds: From Networks to Molecules* *$**Mathonière C.**, Clérac R., Le Bris R., Cafun J.-D., Li D., Holmes S.M., Bleuzen A.

12:00 End of Session

IN3 ChedokeC-HCC

Novel Bonding and Structural Modalities in Main Group Chemistry. A Special Symposium Honouring Professor Ronald J. Gillespie

Organizer(s) - Ignacio Vargas-Baca, Hélène Mercier, Gary Schrobilgen and Robert Syvret
Chair(s) - Peter Robinson

08:00 0435 *From Signal to Signal to Noise, an NMR Saga for Inorganic Chemists* **Brevard C.**

08:40 0436 *Reversible Dissociation of Solid $(Se_6I_2)[AsF_6]_2*2SO_2$ in Liquid SO_2* Brownridge S., Calhoun L., Jenkins H.D.B., **Laitinen R.S.**, Murchie M.P., Passmore J., Pietikäinen J., Rautiainen J.M., Sanders J.C.P., Schrobilgen G.J., Suontamo R.J., Tuononen H.M., Valkonen J.U., Wong C.-M.

09:00 0437 *Solid-State NMR Spectroscopy of Xenon Fluorides: Structural Characterization and Trends in Lewis Acidity* Chaudhary P., *$**Gerken M.**, Iuga A., Shank R.

09:20 0438 *Dicationic Chalcogen Centred Molecules: From Curiosity to Novel Chemistry* *$**Ragogna P.J.**, Dutton J.L., Martin C.D.

09:40 Coffee Break

REMINDER

10:00 Rio Tinto Alcan Award Lecture presented by Chris Orvig in Webster B-HCC

10:40 0439 *Recent Adventures in Low Coordinate, Low Valent Group 13 and Group 15 Chemistry* *$**Cowley A.H.**

11:20 0440 *New Aspects of Chalcogen-Chalcogen Bonding* **Chivers T.**, $Robertson S.D., Tuononen H.M.

12:00 End of Session

IN4 WebsterA-HCC

Organometallic Chemistry of the d- and f-Block Metals

Organizer(s) - Georgii Nikonov
Chair(s) - Robert Morris

08:00 0441 *Catalytic Transformations Based on C-H Bond Activation Reactions by Late Transition Metals* **Brookhart M.**

08:40 0442 *Geminal C-H Activation in α-Olefins Promoted by Adjacent Metals* *$**Cowie M.**, Samant R.G., Slaney M.E., McDonald R., Ferguson M.J.

09:20 0443 *Unexpected Coupling of Unsaturated Organic Molecules with N-Si···Mo Agostic Complex* **Khalimon A.Y.**, *Nikonov G.I.

09:40 End of Session

IN5 AlbionC-HCC

Solid-State Materials: Structure, Bonding and Properties (joint with MT6)

Organizer(s) - Yurij Mozharivskyj
Chair(s) - Bernd Harbrecht

08:00 0444 *Omelette Surprise* **Dronskowski R.**

08:40 0445 *Optimization of the Thermoelectric Properties of $Mo_3Sb_{7-x}Te_x$* **Kleinke H.**

09:00 0446 *Examination of the Metal Site Preference and Electronic Structure of Brownmillerite Phase Oxides by X-Ray Absorption Spectroscopy* *$**Grosvenor A.P.**, Ramezanipour F., Derakhshan S., $Greedan J.E.

09:20 0447 *Polyphenylbenzenes: Developing a Reliable New Motif for Controlling Packing in Molecular Materials* *$**Gagnon E.**, Maly K.E., Maris T., Wuest J.D.

09:40 Coffee Break

REMINDER

10:00 Rio Tinto Alcan Award Lecture presented by Chris Orvig in Webster B-HCC

10:40 0448 *The Role of Rare-Earth Atoms in Polar Intermetallic Compounds* **Miller G.J.**

11:20 0449 *The Polymorphism of the Polyselenide Ba_2SnSe_5* **Zelinska M.**, Assoud A., *Kleinke H.

11:40 0450 *Building on the $(U_{0.5}Ho_{0.5})_3Sb_7$–Type Structure: Ternary Rare-Earth Antimonides with Sb Ribbons* Bie H., Tkachuk A.V., Zelinska O.Ya., *__Mar A.__

12:00 End of Session

IN6 ChedokeA-HCC

Transition Metals in Synthesis and Catalysis (joint with OR9)

Organizer(s) - Costa Metallinos and James Green
Chair(s) - Costa Metallinos

08:20 0451 *Catalytic Hydrosilylation by Cationic Ruthenium and Iron Complexes* **Gutsulyak D.V.**, Nikonov G.I.

08:40 0452 *Cross Coupling of Aryl Halides with Ammonia Using a Copper-NHC Catalyst* *$**Thadani A.N.**, Ntaganda R., Dhudshia B., Macdonald C.L.B.**PAPER WITHDRAWN**

09:00 0453 *Boron in Organic Synthesis: First Report of Suzuki-Miyaura Coupling of Secondary Boronic Esters and Dual Catalysis in the Hydroboration Reaction* *__Crudden C.M.__

09:40 Coffee Break

10:00 0454 *Pt-Catalyzed Transformations of Polyfluoroarenes* *$**Love J.A.**

10:20 0455 *Catalytic Activity of M@Fe_xO_y@Fe Magnetic Core-Shell Nanoparticles* **Johnson M.**, Macdonald J.E., Veinot J.G.C.

10:40 0456 *Palladium-Catalyzed Intramolecular Vinyl Carboxylation of Olefins: A Formal [3+2] Cycloaddition* **Jardine K.J.**, *Li Y., $Song D., Dong V.M.

11:00 0457 *Palladium-Catalyzed C-H Bond Functionalization with Arylsulfonyl Chlorides* **Dimitrijevic E.**, *Zhao X., $Dong V.M.

11:20 0458 *Development and Mechanistic Study of Palladium-Catalyzed Direct Arylation Reactions* *$**Fagnou K.**

12:00 End of Session

IN8 WebsterB-HCC

General - Bioinorganic Chemistry

Organizer(s) - David Emslie
Chair(s) - Pierre Kennepohl

08:20 0459 *Cellular Lipid Metabolism is Influenced by the Coordination Environment of Copper* **Kennedy D.C.**, Lyn R.K., *Pezacki J.P.

08:40 0460 *Determining the Fate of Ruthenium Anti-Cancer Complexes in Human Serum* Webb M.I., Cetinbas N., *$**Walsby C.J.**

09:00 0461 *Fluorous Chemistry as a Rapid Purification and Screening Platform for Targeted Metal-Based Radiopharmaceuticals* **Hicks J.W.**, Causey P.W., *$Valliant J.F.

09:20 0462 *Metal-Substituted Anthrax Lethal Factor* ***Siemann S.**, Säbel C.E., Carbone R., St.-Denis S.

09:40 Coffee Break

Chair(s) - Charles Walsby

Rio Tinto Alcan Award Lecture presented by Chris Orvig

Introduction of Chris Orvig by Vincent Pecoraro

10:00 0463 *Medicinal Inorganic Chemistry* *$**Orvig C.**

10:40 0464 *Nitrogenase-Inspired Chemistry: Iron Clusters with Mixed Nitrogen Anion/Sulfide Cores* *$**Lee S.C.**, Duncan J.S., Dutta S., Chen X., Tan L.L.

11:00 0465 *Preparation of Organometallic Rhenium(I) and Technetium(I) Carborane Complexes for Targeted Radiopharmaceuticals* **Louie A.S.**, *$Valliant J.F.

11:20 0466 *Conformationally Restricted Ligands for Studying Reactive Metal Complexes* Chaloner L., Habibian M., Kutteh A., ***Ottenwaelder X.**

11:40 0467 *Redox Activation of Ruthenium(II) Arene Anticancer Complexes: A Direct Comparison of Thiolato, Sulfenato and Sulfinato Ligands* *$**Kennepohl P.**, Sriskandakumar T.

12:00 End of Session

Macromolecular Science & Engineering

MS2 CBallrm-Sher

Optical, Electronic and Photonic Materials (joint with MT5)

Organizer(s) - Tim Bender and Yuning Li
Chair(s) - Holger Eichhorn

The 2008 Macromolecular Science and Engineering Award Lecture presented by Mario Leclerc

Introduction of Mario Leclerc by Normand Voyer

08:00 0468 *Solar Cells Based on Poly(2,7-carbazole) Derivatives* ***Leclerc M.**

08:40 0469 *Exploiting Dual Fluorescence in Fluorene Copolymers for PLED Applications including White Light Emission* ***Bryce M.R.**, Kamtekar K.T., Li H., King S.M., Dias F., Vaughan H.L., Monkman A.P., Perepichka I.F., Perepichka I.I.

09:00 0470 *Aromatic-Ether Functionalized Polyfluorene: Convenient, Thermally Stable Blue-Emitting PLED Materials* *$**Veinot J.G.C.**, McFarlane S.L., Piercey D.G., Coumont L.S., Tucker R.T., Fleischauer M.D., Brett M.J.

09:20 0471 *π-Conjugated Polymers with Thermocleavable Substituents for Use as Active Layers in Organic Photovoltaics* **Brusso J.L.**, Lilliedal M.R., $Holdcroft S.

09:40 Coffee Break

10:00 0472 *Oligo- and Polymeric Pentacene Materials: Synthesis and Performance* *$**Tykwinski R.R.**, Lehnherr D., Gao J., Hegmann F.A.

10:40 0473 *Altering Mesomorphism and Electronic Properties of Discotic Semi-Conductors through Intra-Columnar H-Bonding* Demenev A., Fox N., Adavelli A., *$**Eichhorn S.H.**, Perepichka D.F., Patwardhan S., Grozema F.C., Siebbeles L.

11:00 0474 *Synthesis, Self-Assembly and OFET Applications of New Oligothiophene Semiconductors with Increased Dimensionality* Brusso J.L., Dadvand A., Ivasenko O., Shpachenko R., Rosei F., *$**Perepichka D.F.**, Nenajdenko V.G.

11:20 0475 *[2]Rotaxanes with Liquid Crystal Properties* **Suhan N.D.**, $Eichhorn S.H., Loeb S.J.

11:40 0476 *Novel Benzathiodiazole-Dithienosilole Based Small Molecules and their Lewis Acid Adducts as Light Harvesting Materials for Bulk HeteroJunction (BHJ) Solar Cell Devices* **Welch G.C.**, Coffin R.C., Peet J., $Bazan G.C.

12:00 End of Session

MS5 Beckett-Sher

Polymers in Nanoscale Composites and Assemblies

Organizer(s) - Alex Adronov
Chair(s) - Alex Adronov

08:00 0477 *Novel Nanostructures Through Block Copolymer Self Assembly* *$**Winnik M.A.**, Wang M.F., He F., Gädt T., Manners I., Scholes G.D.

08:40 0478 *Click-Silicones* $**Gonzaga F.**, Yu G., *Brook M.A.

09:00 0479 *A New Highly Efficient Route to Polymer-Silica Colloidal Nanocomposite Particles* ***Armes S.P.**

09:40 Coffee Break

10:00 0480 *Nano-Patterning and Chain Conformation of Acrylic Polymers Grafted from Silicon Wafer Surface via ATRP* **Zhu S.**

10:40 0481 *Intramolecular Phase Separation in Metal-Loaded Arborescent Copolymer Templates* ***Dockendorff J.**, $Gauthier M., Mourran A., Moeller M.

11:00 0482 *Self-Assembly of Monodisperse Nanocylinders from Polyferrocenylsilane-Based Diblock Copolymers* **Gilroy J.B.**, Gädt T., Leong N.S., Whittell G.R., Gwyther J., Fairus S., Winnik M.A., *Manners I.

11:20 0483 *Nanostructured Functional Liquid-Crystalline Assemblies* **Kato T.**

12:00 End of Session

Materials Chemistry

MT5 CBallrm-Sher

Optical, Electronic and Photonic Materials (joint with MS2)

Organizer(s) - Tim Bender and Yuning Li
Chair(s) - Holger Eichhorn

See MS2

08:00 The 2008 Macromolecular Science and Engineering Award Lecture presented by Mario Leclerc

12:00 End of Session

MT6 AlbionC-HCC

Solid-State Materials: Structure, Bonding and Properties (joint with IN5)

Organizer(s) - Yurij Mozharivskyj
Chair(s) - Bernd Harbrecht

08:00 See IN5

09:40 Coffee Break

REMINDER

10:00 Rio Tinto Alcan Award Lecture presented by Chris Orvig in Webster B-HCC

10:40 See IN5

12:00 End of Session

Organic Chemistry

OR7 WBallrm-Sher

Nucleic Acids (joint with BM8)

Organizer(s) - Tony Yan and Christopher Wilds
Chair(s) - Christopher Wilds, Tony Yan

08:20 See BM8

12:00 End of Session

OR8 ChedokeB-HCC

Organic Synthesis in Canada, Coast to Coast: Past, Present and Future

Organizer(s) - Tomas Hudlicky
Chair(s) - Frederick West

08:00 0484 *Inverse Electron Demand Diels-Alder Reactions in the Synthesis of Novel Aromatic Systems* Dang A.-T., Kudale A.A., Nandaluru P.R., Pottie I.R., *$**Bodwell G.J.**

08:40 0485 *Heteroatom-Centered Radical Cyclizations for Use in Natural Product Synthesis* *$**Sammis G.M.**, Zlotorzynska M., Zhai H.

09:00 0486 *Structure-Based Organic Synthesis: From Natural Products to Drug Prototypes* *$**Hanessian S.**

09:40 Coffee Break

10:00 0487 *Putting Boron to the Test en Route to a Total Synthesis of the Novel Antimelanoma Agent Palmerolide A* Penner M., Kaspar L., Rauniyar V., *$**Hall D.G.**

10:40 0488 *Development of Methodologies for the Synthesis of Molecules to Diagnose Alzheimer's Disease* *$**Pottie I.R.**, Martin E., Darvesh S.

11:20 0489 *Studies Toward the Total Synthesis of (+)-Peloruside A* **Derksen D.J.**, Atkinson S.J., $Paterson I.

11:40 End of Session

OR9 ChedokeA-HCC

Transition Metals in Synthesis and Catalysis (joint with IN6)

Organizer(s) - Costa Metallinos and James Green
Chair(s) - Costa Metallinos

08:20 See IN6

12:00 End of Session

Physical, Theoretical and Computational Chemistry

PT7 202-HCC

Materials and Magnetic Resonance

Organizer(s) - Gillian Goward and Alex Bain
Chair(s) - Darren Brouwer

08:20 0490 *Chlorine, Bromine and Iodine Solid-State NMR Spectroscopy* *$**Bryce D.L.**, Chapman R.P., Widdifield C.M.

09:00 0491 *Cadmium Chalcogenide Magic-Sized Nanoparticles* *$**Ratcliffe C.I.**, Leek D., Wang R., Yu K, Zaman M.B.

09:20 0492 *The Development of Solid-State NMR of ^{25}Mg and the Use of ^{17}O to Study Apatite-Based Oxygen Conductors* **Cahill L.S.**, $Smith M.E., Hanna J.V., Harris R.K., Yates J.R., Orera A., Slater P.R., Panchmatia P., Islam M.S.

09:40 End of Session

PT10 203-HCC

Quantum Chemical Dynamics

Organizer(s) - Randall Dumont and Ian Hamilton
Chair(s) - Ian Hamilton, Denise Koch

08:00 0493 *Using a Neural Network Based Method to Solve the Vibrational Schrödinger Equation* Manzhos S., Yamashita K., *Carrington T.

08:40 0494 *Controlling Quantum Dynamics in Polyatomic Molecules: The Optimal Control Theory Multi-Configurational Time-Dependent Hartree Approach* *Brown A., Schroeder M.

09:20 0495 *Dynamics of the Ground-State Green Fluorescent Protein Chromophore Z-E Isomerization* **Timerghazin Q.K.**, $Roy P.-N., Brown A., Campbell R.E.

09:40 Coffee Break

10:00 0496 *Quantum Dynamics of Chemical Reactions in Nano-Confined Environments* *Gray S.K., Goldfield E.M., Lu T.

10:40 0497 *The Use of Source and Sink Potentials to Impose Boundary Conditions* **Ernzerhof M.**

11:20 End of Session

PT12 AlbionB-HCC

Symposium on Frontiers of Electrochemistry (joint with AN7)

Organizer(s) - Jacek Lipowski and Gregory Jerkiewicz
Chair(s) - Daniel Bélanger, Gregory Jerkiewicz

Joint with AN7 and SS3

08:00 **See AN7**

12:00 End of Session

PT13 Heritage-Sher

Ultrafast Spectroscopy, Optical Energy Harvesting and Quantum Dots

Organizer(s) - Gregory Scholes
Chair(s) - Gregory Scholes

08:00 0498 *Time-Resolved Chemical Dynamics from the Molecule's Perspective* *$**Stolow A.**

08:40 0499 *Coherent Multidimensional Spectroscopies: The Search for "Life on Earth"* *$**Miller R.J.D.**

09:20 0500 *Structure and Dynamics in Nanoscale Confined Geometries: Water in Ordered Organic Monolayers* *$**Leach G.W.**, Johansson T.P.

09:40 Coffee Break

10:00 0501 *Investigating Photoprotective Photosynthetic Light Harvesting Complexes with 2D Electronic Spectroscopy* **Ginsberg N.S.**, Ballottari M., Bennett D.G., Bassi R., Fleming G.R.

10:40 0502 *Two-Dimensional Electronic Double-Quantum Coherence Spectroscopy* **Kim J.**, *$Scholes G.D.

11:00 0503 *Pathways of Ultrafast Energy Transfer in LHCII Revealed with 2D Electronic Spectroscopy* *Schlau-Cohen G.S., Calhoun T.R., Ginsberg N.S., Ballottari M., Bassi R., $Fleming G.R.

11:20 0504 *Unravelling Electronic Energy Transfer in Conjugated Polyelectrolytes* Ngo A.T., Karam P., Lau K.L., *$**Cosa G.**

11:40 0505 *Release of Molecules from Nanorods Using Light* *$**Gates B.D.**, Hsiao D., Patel R., Wu N.C.

12:00 End of Session

Surface Science

SS3 AlbionB-HCC

Symposium on Frontiers of Electrochemistry

Organizer(s) - Jacek Lipowski and Gregory Jerkiewicz
Chair(s) - Daniel Bélanger, Gregory Jerkiewicz

Joint with AN7 and PT12

08:00 **See AN7**

12:00 End of Session

Monday PM

Analytical Chemistry

AN1 WebsterC-HCC

Biosensors and Bioaffinity Probes (joint with BM3)

Organizer(s) - Ulrich Krull and Maria DeRosa
Chair(s) - Ulrich Krull, Maria DeRosa

13:20 0506 *Aptamers and their Use in Assay Development* *$**Li Y.**

14:00 0507 *Investigation of DNA Films Using Scanning Electrochemical Microscopy (SECM)* *Diakowski P.M., $Kraatz H.-B.

14:20 0508 *Surfaces for Tuning of Oligonucleotide Biosensing Selectivity Based on Surface-Initiated Atom Transfer Radical Polymerization on Silica Substrates* **Wong A.K.Y.**, $Krull U.J.

14:40 0509 *Development of a Biosensing Platform on Hydrogen Terminated Silicon* **Mischki T.K.**, Lopinski G.P., *$Wayner D.D.M.

15:00 Coffee Break

15:20 0510 *Control of Density of Randomly Grown OMCVD Gold Nanoparticles by Means of Ion Bombardment* [*$]**Mittler S.**, Rezaee A., Aliganga A.K.A.

15:40 0511 *Metallic Nanostructures Modified Optical Fibres for Biosensing* **Andrade G.F.S.**, Hayashi J.G., Rahman M.M., Cordeiro C.M.B., [*$]Brolo A.G.

16:00 0512 *SERS Nanoprobes in Cancer Detection* [*]**Nguyen C.T.**, Nguyen J.T., Wang C, [$]Walker G.C.

16:20 0513 *Peptide Modified Electrode for Biosensor Application* **Qian Z.**, [*]Chen P.

16:40 0514 *Label-Free Electrochemical Oxidation of Acetylcholinesterase Mutants for the Detection of Insecticides* **Dounin V.**, [*$]Kerman K.

17:00 End of Session

AN5 WBallrm-Sher

New Advances in Spectroscopy and Microscopy (joint with PT9)

Organizer(s) - Glynis de Silveira and François Lagugné-Labarthet
Chair(s) - Glynis de Silveira

13:20 0515 *Application Novel Microscopic Methods to Environmental Biogeochemical Processes* [*$]**Weisener C.G.**

14:00 0516 *Characterization of Fe_3O_4 Bacterial Nano-Crystals by Scanning Transmission X-Ray Microscopy and X-Ray Magnetic Circular Dichroism* **Lam K.P.**, [$]Hitchcock A.P., Obst M., Dynes J.J., Lawrence J.R., Swerhone G.D.W., Leppard G.G., Tyliszczak T., Karunakaran C., Kaznatcheev K., Wang J., Bazylinski D., [*]Lins U.

14:20 0517 *An Ab Initio and TD-DFT Study of Solvent Effect Contributions to the Electronic Spectrum of Nile Red* **Tuck P.**, [*$]Mawhinney R.C., Rappon M.

14:40 0518 *An Investigation of the Negative Thermal Coefficient of Expansion Behaviour of Some Cadmium Cyanide Clathrates by High-Pressure Raman Spectroscopy* Romao C., Barsan M.M., Gilson D.F.R., **Butler I.S.**

15:00 Coffee Break

15:20 0519 *Microscopy of Polymer-Carbon Nanotube Conjugates* [*$]**Adronov A.**, Botton G.A., Li H., Cheng F., Imin P.

15:40 0520 *Studying Biomolecular Interactions Using Atomic Force Microscopy* **Madwar C.**, Cuccia L.A., De Crescenzo G., Liberelle B.

16:00 0521 *Chemical Amplification of Defects in Self-Assembled Monolayers of Alkylsilanes* [*$]**Gates B.D.**, Jalali H.

16:20 0522 *Optical Spectroscopy for Characterization of Thin Molecular Layers Buried in Molecular Electronic Devices* **Mahmoud A.M.**, Bergren A.J., [*$]McCreery R.L.

16:40 0523 *Crevice Corrosion Damage Analysis via Confocal Scanning Laser Microscopy and Raman Spectroscopy* **Jakupi P.**, Zagidulin D., Noël J.J., Shoesmith D.W.

17:00 End of Session

AN7 AlbionB-HCC

Symposium on Frontiers of Electrochemistry (joint with PT12)

Organizer(s) - Jacek Lipowski and Gregory Jerkiewicz
Chair(s) - Sylvie Morin, Dan Bizzotto

Joint with PT12 and SS3

13:20 0524 *Studying the Nature of Lipid-Like Molecules in an Electric Field Using Fluorescence, Electrochemistry and FRET Methods* Casanova - Moreno J., Lorenz S., [*$]**Bizzotto D.**

14:00 0525 *Insights into the Charge Transport Properties of Molecular Junctions Derived from the Chemisorption of Diazonium Salts on Carbon Using Conducting Probe Microscopy* **Chisholm R.A.**, Bergren A.J., McCreery R.L., McDermott M.T.

14:20 0526 *Electrochemical and in-situ FTIR Study of Pt-Based Nanomaterials* **Asmussen R.M.**, [*]Chen A.

14:40 0527 *Corrosion Inhibition of Carbon Steel in 0.5 M HCl by 12-Aminododecanoic Acid as an Environmentally-Friendly Corrosion Inhibitor* [*]**Ghareba S.**, [$]Omanovic S.

15:00 Coffee Break

15:20 0528 *Photo-Sensitization of Nanocrystalline TiO_2 Thin Films with $CdSe_xS_{(1-x)}$ Quantum Dots* Sepehrifard A., Aushana A.M., [*$]**Morin S.**

16:00 0529 *Electrochromic Response of Ni-Al Layered Double Hydroxide (LDH) Films in Solutions of Electroactive Ions* **Mondal D.**, [*]Villemure G.

16:20 0530 *Developing an Electrochemical Method to Control the Arrangment of Mixed Capping Ligands on Gold Nanoparticles* **Lemay D.M.**, Smith S.R., [*]Shepherd J.L.

16:40 End of Session

Biological & Medicinal Chemistry

BM2 EBallrm-Sher

Biomolecular NMR (joint with PT4)

Organizer(s) - Giuseppe Melacini
Chair(s) - Richard Epand

13:40 0531 *Dynamical Structural Images of Membrane Proteins by NMR Spectroscopy* [*$]**Ramamoorthy A.**, Brender J., Soong R., Xu J., Yamamoto K., Smith P., Nanga R., Hartman K.

14:20 0532 *Progress towards Membrane Protein Structure Determination by Solid-State NMR* **Ladizhansky V.**, Shi L., Ahmed M.A., Zhang W., Lake E., Brown L.S., Bamm V., Harauz G., Whited G.

15:00 Coffee Break

15:20 0533 *Solid-State NMR Determination of the Mechanism of Action of Amphipathic Cationic Peptides in Model Membranes* Noël M., Lorin A., Provencher M.-E., Voyer N., *$**Auger M.**

16:00 0534 *Structure and Assembly of Fibril Forming Peptides by Solid State NMR* *$**Sharpe S.**

16:40 End of Session

BM3 WebsterC-HCC

Biosensors and Bioaffinity Probes (joint with AN1)

Organizer(s) - Ulrich Krull and Maria DeRosa
Chair(s) - Ulrich Krull, Maria DeRosa

13:20 **See AN1**

17:00 End of Session

Chemical Education

CE8 AlbionA-HCC

Toward National Learning Outcomes for Chemistry Curricula: Planning for Program Alignment

Organizer(s) - Maggie Austen and Leslie Barton
Chair(s) - Maggie Austen, Leslie Barton

13:20 0535 *Towards a National Quality Assurance Framework: UUDLEs and Constructive Alignment* **Webb R.A.**

13:40 0536 *Toward National Learning Outcomes* *$**Austen M.A.**

14:00 0537 *ACS Guidelines for Program Approval and Student Certification* **Hoffman M.Z.**

14:20 0538 *The Bologna Process: A Learning Experience with Learning Outcomes. Obstacles, Pitfalls and Opportunities* *$**Åkesson E.**, Elmgren M., Edström K.

15:00 Coffee Break

15:20 0539 *Infusing Leadership Instruction into the Curriculum of Chemical Engineering Students* *$**Evans G.J.**, Reed E., Reeve D., Satkunarajah A., Simpson A.

15:40 0540 *Understanding High School Science Curricula in the Context of Canada's Education Systems* **Bloch M.**

16:00 0541 *The Ontario Science Curriculum: Grades 9-12 - Curriculum Review* **Callan M.A**

16:20 0542 *Keepin' it Real, Relevant and Rigorous: What Students Need in High School Chemistry* **Jansen M.P.**

16:40 0543 *High School Chemistry Curricula in Canada* **Barton L.**

17:00 End of Session

Environmental Chemistry

EN5 203-HCC

Occurrence, Fate and Impacts of Contaminants on Canadian Ecosystems

Organizer(s) - Paul Helm and Gregg Tomy
Chair(s) - Paul Helm, Gregg Tomy

13:20 0544 *Polybrominated Diphenyl Ethers and Perfluorinated Alkyl Compounds in Surficial Sediment from Canadian Great Lake Tributaries* *$**Burniston D.A.**, Kraft J., Marvin C.H.

13:40 0545 *Source Apportionment of PAH in Hamilton Air Particulates Using Principal Component Analysis (PCA) and Positive Matrix Factorization (PMF) Factor Analytic Models* **Sofowote U.M.**, Allan L.M., *$McCarry B.E.

14:00 0546 *PolyFluorinated Chemicals in the Environment ~ What, Where and How* **Mabury S.A.**

14:40 0547 *Mercury in Canadian Great Lakes Fish and its Impact on Fish Consumption* *$**Bhavsar S.P.**, Gewurtz S.B., Awad E., Fletcher R., Moody R.

15:00 Coffee Break

15:20 0548 *Identification and Quantification of Pyrene Biotransformation Products in Snail Tissue Using Liquid Chromatography with Fluorescence and Mass Spectrometry Detection* **Beach D.G.**, *Hellou J., Quilliam M.A.

15:40 0549 *The Changing North: Arctic Contaminants and Climate Change* *$**Blais J.M.**

16:20 0550 *Three Methods for Quantifying Proximity of Air Sampling Sites to Spatially Resolved Emissions of Semivolatile Organic Contaminants* **Westgate J.N.**, Shunthirasingham C., Oyiliagu C.E., *$Wania F.

16:40 End of Session

Industrial Chemistry

IC2 WebsterL-HCC

Industry Best Practices and Emerging Trends

Organizer(s) - Murray Adams and Karen Temple
Chair(s) - Guerino Sacripante

13:20 0551 *Factors to Consider When Outsourcing R&D* *Sinclair A.

MaRS Innovation

13:40 0552 *Mining For Process Knowledge in a Data Rich Environment* *Adams M.

Air Academy Associates

14:20 0553 *Synchronizing Six Sigma and Design for Six Sigma to Survive and Thrive in a Downturn Economy* [*]**Pollock L.R.**

Air Academy Associates

15:00 Coffee Break

15:20 0554 *Rapid Development of New Products Based on Extracting Information from Company Databases* **Bruwer M.-J.**, [*]MacGregor J.

ProSensus Inc.

16:00 0555 *Low-Cost Fabrication of Flexible Devices Using Selective Electroless Metallization of Elastomeric and Polymeric Substrates* Filiatrault H.L., Miller M.S., [*$]**Carmichael T.B.**

University of Windsor

16:20 0556 *Convenient Precursors to Group IV Semiconductor Nanocrystals: Materials for Enabling Nanocrystal-Based Optical and Electronic Applications* [*$]**Veinot J.G.C.**, Hessel C.M., Henderson E.J.

University of Alberta

16:40 0557 *Novel Strategy in Designing Organic Nano-Objects* **Arseneault M.**, [*]Morin J.-F.

Université Laval

17:00 End of Session

ICP WentABC-HCC

Posters

Organizer(s) - Guerino Sacripante
Chair(s) - Guerino Sacripante

From **17:00** until **19:00**

0558 *Herbicide Sorption by Immersed Soils: Stoichiometry and the Law of Mass Action in Support of Predictive Kinetics* **Gamble D.S.**

0559 *Ammonia: Toxic Gas or Hydrogen Source?* **Alex S.**, Biasotto F.

0560 *Synergistic Influence of Pyridine and Potassium Iodide on Inhibition of Corrosion of Aluminium in 0.5 M HCl* [*$]**Baghaei Ravari F.**, Dadgarinezhad A.

0561 *Nano-Scale Stiffness, Adhesion and Friction of Lubricant Thin Film Engineered by Low-Energy Hydrogen Ion Beam Bombardment* **Liu Y.**, Yang D.Q., Nie H.-Y., Lau W.M., [*$]Yang J.

0562 *Synthesis of Quaternary Ammonium Polyoxyethylene Fatty Amines as Cationic Surfactants* [*$]**Khodabakhshiyan A.**, Kahrizi A., Najafi R., Adeeb M., Naseri A.

0563 *Synthesis of Solidified Detergents with n-Alkoxy Polyhydroxy Fatty Acid Amides and Alkoxylated Surfactants* [*$]**Kahrizi A.**, Khodabakhshiyan A., Mohammadi R., Rezaee M., Masoudi K.

0564 *Synthesis of Silver Micro- and Nano Crystals Using Wood as a Biological Template* [*$]**Gomez R.M.**, Sanchez-Mendieta V.

0565 *Polymer-Stabilized Nickel Nanoparticle Catalysts* **Nguon O.**, [*]Gauthier M., Ng F.T.T., Paserin V., Baksa S.

Inorganic Chemistry

IN2 WebsterB-HCC

Multimetallic Complexes: New Molecules and Materials

Organizer(s) - Mark MacLachlan and Laurence Thompson
Chair(s) - Mark Turnbull

13:20 0566 *Preparation of Chiral Compartments Through Complexation of Carboxylate Anions to 15-MC-5 Metallamacrocycles* [*$]**Pecoraro V.L.**, Lim C.-S., Jankolovits J., Mezei G., Kampf J.W.

14:00 0567 *Chelating Crown Ethers in the Synthesis of Metal Organic Rotaxane Frameworks, MORFs* [$]Loeb S.J., **Mercer D.J.**

14:20 0568 *Self-Assembly in Supramolecular Coordination Chemistry: Polymetallic [nxn] Grids by Design?* **Thompson L.K.**, Dawe L.N., Shuvaev K.V.

14:40 0569 *Chiral Induction via the Disassembly of Diruthenium(II,III) Tetracarboxylates* **Aquino M.A.S.**, Vadavi R., Conrad E.D., Arbuckle D.I.

15:00 Coffee Break

Chair(s) - Muralee Murugesu

15:20 0570 *Rational Design of Single-Molecule Magnets* [*$]**Glaser T.**

16:00 0571 *Towards Molecular Qubits: Functionalization of Cr_7Ni Wheel Clusters* **Milway V.A.**, Timco G.A., Carthy L., Winpenny R.E.P.

16:20 0572 *Novel Molecular Squares and Rectangles containing a Mixture of High Spin-Low Spin Fe(II) and Co(II) Centers* **Shuvaev K.**, Dawe L.N., Thompson L.

16:40 0573 *Metal-Organic Mesostructured Materials* [*$]**MacLachlan M.J.**, Roy X.

17:00 End of Session

IN3 ChedokeC-HCC

Novel Bonding and Structural Modalities in Main Group Chemistry. A Special Symposium Honouring Professor Ronald J. Gillespie

Organizer(s) - Ignacio Vargas-Baca, Hélène Mercier, Gary Schrobilgen and Robert Syvret
Chair(s) - Bev Christian

13:20 0574 *Crossing the Boundaries between van der Waals Interactions, Secondary Bonding Interactions and Hypervalent Bonds* [*$]**Vargas-Baca I.**

13:40 0575 *Non-VSEPR Structures from Sulfur-Fluorine Chemistry and Advances in Superacid Chemistry* [*$]**Thrasher J.S.**

14:20 0576 *Understanding some Group 16 and 17 Main Group containing Species with Geometries that Do Not Obey VSEPR Theory Rules* **Passmore J.**

15:00 Coffee Break

15:20 0577 *Recent Progress on the Christe/Dixon Quantitative Scale of Lewis Acidity* [*]**Christe K.O.**, Dixon D.A.

16:00 0578 *Preparation and Reactions of Compounds with Low Valent Elements of Carbon Analogues* **Roesky H.W.**

16:40 0579 *Recent Synthetic and Structural Developments in Krypton and Xenon Chemistry: From Linear NgF_2 (Ng = Kr, Xe) to Non-Octahedral XeF_6* [$]**Schrobilgen G.J.**, Brock D.S., Matsumoto K., Mercier H.P.A., Moran M.D., Paxon J.P.

17:20 End of Session

IN4 WebsterA-HCC

Organometallic Chemistry of the d- and f-Block Metals

Organizer(s) - Georgii Nikonov
Chair(s) - John Protasiewicz

13:20 0580 *Initiation Kinetics in 14 Electron Ruthenium Phosphonium Alkylidene Olefin Metathesis Catalysts* [*$]**Piers W.E.**, van der Eide E.F., Leitao E.M., Parvez M.

14:00 0581 *Terphenyl Isocyanides for the Stabilization of Reactive Metal Centers* [*$]**Figureroa J.S.**, Ditri T.B., Labios L.A., Millard M.D.

14:20 0582 *Novel Metal-Dioxygen Complexes: Electronic Properties and Implications for Reactivity* [*$]**Kennepohl P.**, Covelli D.

14:40 0583 *Synthesis of Neutral and Cationic Rhodium Dioxygen Complexes Featuring N-Heterocyclic Carbenes* **Praetorius J.M.**, Cipot-Wechsler J., Hearns N.G.R., [*$]Crudden C.M.

15:00 Coffee Break

Chair(s) - Martin Cowie

15:20 0584 *New Terminal Titanium Hydrazido Complexes: Exploring the Chemistry of the Ti=N-NR_2 Functional Group* [*]**Mountford P.**

16:00 0585 *N,N'-Disubstituted 1,8-Diaminonaphthalene Ligands Employed in the Synthesis of Early Transition Metal and Lanthanide Complexes* **Lavoie N.**, Yap G.P.A., Kell T., Gorelsky S.I., [*$]Richeson D.S.

16:20 0586 *Activation of the Lighter Group 15 Elements by Early Transition Metal Complexes* [*$]**Fryzuk M.D.**, Summerscales O.T., Ferreira M.J.G.

17:00 End of Session

IN6 ChedokeA-HCC

Transition Metals in Synthesis and Catalysis (joint with OR9)

Organizer(s) - Costa Metallinos and James Green
Chair(s) - Avinash Thadani

13:20 0587 *Iridium-Catalyzed Hydroamination of Unactivated Alkenes with Pendant Alkyl- and Arylamines* Hesp K.D., [*$]**Stradiotto M.**

13:40 0588 *Design, Synthesis and Applications of Chiral N-Heterocyclic and Organometallic Reagents* **Zaifman J.**, Du X., [*$]Metallinos C.

14:00 0589 *Olefin Difunctionalization via 2-Rhodaoxetanes* **Dauth A.**, Tsoung J., [*$]Love J.A.

14:20 0590 *Amidate Complexes of Early Transition Metal Complexes: New Developments in the Catalytic Synthesis of Amines and N-Containing Heterocycles* [$]**Schafer L.L.**

15:00 Coffee Break

15:20 0591 *Palladium-Catalyzed Enantioselective Arylation of Nitrogen Nucleophiles* [*$]**Viirre R.D.**, Porosa L., Matarazzo A., Kwok J.

15:40 0592 *Asymmetric Synthesis of All-Carbon Benzylic Quaternary Stereocenters via Copper-Catalyzed Conjugate Addition of Dimethylzinc Reagents to Alkylidene Meldrum's Acids* **Lou T.**, Wilsily A., [*$]Fillion E.

16:00 0593 *Rhodium-Catalyzed Conjugate Addition of Terminal Alkynes to Meldrum's Acid Acceptors* **Zorzitto A.K.**, [*$]Fillion E.

16:20 0594 *Gold(I) Catalysts for Organic Synthesis: Development, Applications and Asymmetric Catalysis* [*]**Toste F.D.**

17:00 End of Session

Macromolecular Science & Engineering

MS2 CBallrm-Sher

Optical, Electronic and Photonic Materials (joint with MT5)

Organizer(s) - Tim Bender and Yuning Li
Chair(s) - Ye Tao

13:20 0595 *Development of Polymer Based Low Cost Solar Cells* Chu T.-Y., Alem S., Wakim S., Lu J., Verly P., [*$]**Tao Y.**, Beaupré S., Leclerc M., Bélanger F., Désilets D., Rodman S., Waller D., Gaudiana R.

13:40 0596 *Enabling Materials for Printed Electronics* **Ong B.S.PAPER WITHDRAWN**

14:00 0597 *Polymers with Donor-Acceptor Structures for Solar Cell Application* $Lu J., Tao Y., Li Z., Chen K., Song N., *__Ding J.__

14:20 0598 *High Resolution Cross-Sectional Imaging of Organic Devices and Molecularly Assembled Nanostructures* *__Steuerman D.W.__, Garcia A., Yang R., Seferos D.S., Wu H., Korystov D., Mikhailovsky A., Lofvander J.P., Bazan G.C., Awschalom D.D.

14:40 0599 *Resolving Electronic Energy Transfer in Single Water Soluble Conjugated Polymer Encapsulated in Liposome Nanocontainers* **Karam P.**, Ngo A.T., $Cosa G.

15:00 Coffee Break

15:20 0600 *Low Volatility Molecular Memory Based on Dynamic Doping of Conducting Polymers* **McCreery R.L.**, Barman S., Bonifas A., Shoute L.C.T.

16:00 0601 *Exciton Dynamics in Organic Light Emitting Devices* *__Luo Y.__, Aziz H.

16:20 0602 *Controlled Self-Assembly of Perylene Diimide by Modulating Hydrophobic and Hydrophilic Interactions* **Islam R.M.**, *$Sundararajan P.

16:40 0603 *Scaling Behaviour of Field Induced Carrier Generation In Conducting Polymers* **Pilapil M.A.**, Zhao J.H., Freund M.S., Thomson D.J.

17:00 End of Session

MS5 Beckett-Sher

Polymers in Nanoscale Composites and Assemblies

Organizer(s) - Alex Adronov
Chair(s) - Kenneth Maly

13:20 0604 *Towards SWCNT-Based High Performance Materials* *$__Simard B.__, Guan J., Martinez-Rubi M., Anderson R., Kingston C., Denommee S., Ruth D., Dayan H., Barnes M., Bourne O., White M.A., Jakubinek M.B., Hubert P., Mirjalili V., Johnston A., Ashrafi B., Zhang Y.

14:00 0605 *Thermal Transport in Nanoscale Composites* *$__White M.A.__, Jakubinek M.B., Tremblay L.P.

14:20 0606 *Dynamic Cellulose Nanocomposites* *$__Rowan S.J.__, Weder C., Capadona J.R., Tyler D.J., Shanmuganathan K.

15:00 Coffee Break

15:20 0607 *A Novel Synthetic Route to Mechanically Robust and Chemically Stable Alkaline Anion Exchange Membranes* **Clark T.J.**, *$Coates G.W.

15:40 0608 *Conjugated Polyelectrolyte-Surfactant Interactions Studied via Fluorescence* **Ngo A.T.**, *$Cosa G.

16:00 0609 *Analysis of Block-Copolymer Thin Film Ordering Through a Moving Thermal Zone* *__Yager K.G.__, Fredin N., Jones R.L.

16:20 0610 *Controlling Architectures in Fuel Cell Membranes* *$__Holdcroft S.__, Tsang E.M.W., Zhang Z., Shi Z., Yang A., Sobeleva T

17:00 End of Session

MSP WentABC-HCC

Posters

Organizer(s) - Alex Adronov
Chair(s) - Alex Adronov

From **17:00** until **19:00**

0611 *Electrospinning of Oriented Inclusion Complexes* **Antaya H.**, Pellerin C.

0612 *Controlling Polymer Microstructure through the Coherence of Light* **Shimmell W.E.**, *Saravanamuttu K.

0613 *Drug Release from Chitosan and Carboxymethyl Starch Excipients* **Assaad E.**, *Mateescu M.A.

0614 *Freeze-Dried Silk Fibroin Scaffolds: Structural and Molecular Insights* *Byette F., Marcotte I., Pellerin C., **Mateescu M.A.**

0615 *Synthesis and Characterization of Modified Polyisobutylene Succinimide Dispersants* **Wang Y.**, *Duhamel J.

0616 *Adhesion of Copper to Polyimide Surfaces Modified by UV Photo-Oxidation* *__Razdan M.__, Entenberg A., Debies T., $Takacs G.

0617 *Comparison of the Long Range Polymer Chain Dynamics of Polystyrene and an Ethylene-Propylene Copolymer Conducted with the Fluorescence Blob Model* Rafati A., **Can V.**, *Duhamel J.

0618 *Internal Dynamics of a Series of Pyrene-Labeled Dendrons Characterized by Fluorescence* **Yip J.**, *$Duhamel J., Bahun G.J., Adronov A.

0619 *Micropatterned Functionalization of Poly(dimethyl siloxane) for Assay Applications* **Séguin C.**, *Norton P.R., $Lagugné-Labarthet F.

0620 *Probing the Long-Range Chain Dynamics of a Polypeptide in Aqueous Solution by Fluorescence* *$__Aslam H.__, Duhamel J.

0621 *Positional Encoding of Cells and Integration with Optical Sensors* **Leclair A.**, Varma S., *$Lagugné-Labarthet F.

0622 *Gelatin Nanoencapsulation of Protein Drugs Using a Modified Micro-Emulsion Method* *$__Zhang J.__, Zhang Y.

0623 *Towards Cationic Antimicrobial Surfaces via Hyperthermal Hydrogen Bombardment* **Karamdoust S.**, Liu Y., Yang J., Davidson G., Stojcevic G., Lau W.M., *$Gillies E.R.

0624 *Soft X-Ray Spectromicroscopy of Protein Interactions with Polymeric Biomaterials* **Leung B.O.**, *$Hitchcock A.P., Brash J.L., Scholl A., Doran A.

0625 *Poly(ester amide)s with Pendant Functional Groups* **Atkins K.M.**, Lopez D.L., Knight D.K., Mequannint K., *$Gillies E.R.

0626 *Interaction between Functionalized Microspheres and Calcium Alginate Beads* **Kleinberger R.**, Burke N.A., *$Stöver H.D.H.

0627 *Surface Functionalized Iron Oxide Nanoparticles for Magnetic Resonance Imaging* **Perrier-Cornet R.**, $Gillies E.R.

0628 *Iron Oxide Nanocarriers for Brain Drug Delivery* **Yathindranath V.**, *Hegmann T., van Lierop J., Moore D.F.

0629 *Molecularly Imprinted Hydrogels for Drug Delivery* **McBain K.**, *$Evans C.H.

0630 *Slow Release of 2,4-Dichlorophenoxyacetic Acid Herbicide in Porous poly(Acrylamide) Hydrogels* *$Mahdavinia G.R., Karimi F., Bagheri Marandi G., Shahabivand S., Mousavi S.B., **Harati M.**

0631 *Silica-Bead-Supported Conjugated Polyelectrolyte as a Tool for Biological Sensing and Imaging* **Ngo A.T.**, Lau K.L., Karam P., *$Cosa G.

0632 *Metal Chelating Polymers for Use in Tags for ICP-MS Bioassays* ***Majonis D.**, Schulze M., Herrera I., Lou X., Kinach R., Ornatsky O., Baranov V., Nitz M., $Winnik M.A., Tanner S.D.

0633 *Influence of PEO-Modified Silicone on Viscosity* **So H.**, *Brook M.A.

0634 *Rigidification of Macromolecular and Polymeric Gd^{3+} Based MRI Agents for Increased Relaxivity and Signal Intensity* **Maris M.W.L.**, $Gillies E.R.

0635 *Amphiphilicity-Driven Self-Assembly of Polymer-Coated Quantum Dots into Morphologically-Tunable Aggregates* **Guo Y.Y.**, *Moffitt M.G.

0636 *Supramolecular Functionalization of Carbon Nanotubes Using Poly(2,7-carbazole)s* **Rice N.**, *$Adronov A.

0637 *Polystyrene Functionalized Single Walled Carbon Nanotubes (SWNTs) as a Strengthening Agent in Polystyrene* **Chadwick R.C.**, *$Adronov A.

0638 *Porous Cellulose Films and Cellulose-PMMA Blends Using Ionic Liquids* **Dahan E**, *$Sundararajan P.

0639 *Highly Conductive Nanocomposites of Polyurethanes and Gold Nanoparticles* **Iqbal M.**, *Eichhorn S.H.

0640 *Dialkyl Diselenide Functionalized Gold Nanoparticles* **Iqbal M.**, San Juan R.R., Mueller J., Carmichael T.B., *Eichhorn S.H.

0641 *Peptide Nanotube-Assisted Assembly and Patterning of Carbon Nanotubes* ***Su Z.**, $Honek J.

0642 *Self-Assembled Polystyrene-Block-Polyferrocenylsilane Thin Films for Nanoscale Electronic Devices* ***Li J.K.**, Protsiv O., Eloi J.C., Manners I., $Walker G.C.

0643 *Integration of Carbon Nanotube Composite Films and GaAs Nanowires: Toward Flexible Nanodevices* **Lawson G.**, Mohseni P.K., LaPierre R.R., *$Adronov A.

0644 *Novel 1,3-Dipolar Cycloaddition Polymerizations from 6-Oxoverdazyl-Derived Azomethine Imines* **Lukkarila J.L.**, Teertstra S.J., Yang A., *Georges M.K.

0645 *Solubilizing Single Walled Carbon Nanotubes Through Pyrene Containing Polymers of Varying Architectures* **Bahun G.J.**, *Adronov A., Yip J., Duhamel J.

0646 *Self-Assembly of Amphiphilic Alternating Copolymer: Application to Nanotechnology* **Chan A.**, Groves M.N., *$Malardier-Jugroot C.

Materials Chemistry

MT5 CBallrm-Sher

Optical, Electronic and Photonic Materials (joint with MS2)

Organizer(s) - Tim Bender and Yuning Li
Chair(s) - Ye Tao

13:20 **See MS2**

17:00 End of Session

MTP WentABC-HCC

Posters

Organizer(s) - Yurij Mozharivskyj and Harald Stöver
Chair(s) - Yurij Mozharivskyj, Harald Stöver

From **17:00** until **19:00**

0647 *Dithienophosphole-Capped, pi-Conjugated Oligomers* **Durben S.**, *$Baumgartner T.

0648 *Physical and Optical Characterization of Metallic Nanopatterns* **Galarreta B.C.**, Rupar I.C., Norton P.R., *$Lagugné-Labarthet F.

0649 *β-Phase Formation and Thermo-Oxidative Stability in Aromatic Ether/PFO Blends* **Sirtonski M.R.**, McFarlane S.L., *$Veinot J.G.C.

0650 *Laser-Induced Self-Action Phenomena in a Photopolymerisable Medium* **Villafranca A.**, *Saravanamuttu K.

0651 *Metal Catalyzed Insertion of Alkynes into the Backbone of Polystannanes* **Khan A.**, *Miles D., $Foucher D., Gossage R.A.

0652 *Lanthanide-Labeled Polymer Microspheres for Highly Multiplexed Bioassays* Abdelrahman A.I., *__Thickett S.C.__, Dai S., Ornatsky O., Bandura D., Baranov V., $Winnik M.A.

0653 *Crystal Engineering of Boron Subphthalocyanine* $__Morse G.E.__, Paton A., *Bender T.P.

0654 *Dithienophosphole-Thiophene Copolymers for Organic Solar Cells* __Krueger R.A.__, *Sutherland T.C., $Baumgartner T.

0655 *Novel Porphyrins as Liquid Crystals* __Krueger R.A.__, *$Sutherland T.C.

0656 *Synthesis and Materials Properties Trisubstituted Benzotrithiophenes* $__Kayal H.__, Demenev A., *Eichhorn S.H.

0657 *Synthesis and Characterization of New C_{60} Derivatives for Photovoltaic Applications* __Rondeau S.__, *Morin J.-F.

0658 *Alignment and Electro-Optic Effects of Functionalized Gold Nanoparticles and CdTe Semiconductor Quantum Dots in Nematic Hosts* *$Hegmann T., Qi H., __Kinkead B.__

0659 *Synthesis and Modeling of Oligothiophene-Bearing Stable Radicals* __Riopel R.Y.__, Arteca G.A., *$Chahma M.

0660 *Non-Injection One-Pot Syntheses to High-Quality Colloidal Photoluminescent PbS, PbSe and PbSeS Nanocrystals* __Ouyang J.__, Liu T., Li M., *Yu K.

0661 *Enhanced Europium Complex Luminescence by Silver Nanoparticles* $__Liu F.__, Aldea G., *Nunzi J.M.

0662 *Synthesis, Photophysical and Photochemical Properties of New C^N Chelate Boron Complexes* __Amarne H.__, $Wang S.

0663 *The Synthesis and Characterization of Oligonucleotides/Peptides Functionalized Conducting Materials* __McTiernan C.D.__, *$Chahma M.

0664 *Photo-Polymerization of Nematic Liquid Crystals Doped with Functionalized Gold Nanoparticles and the Optical as well as Electro-Optic Properties thereof* *$Hegmann T., __Tansley J.__, Kinkead B., Willcock M.D.

0665 *Synthesis and Electrochemical Study of Ferrocene Oligopeptide Tweezers with Bio-Inspired Metal Binding Sites* __Cheng L.__, *Kraatz H.-B.

0666 *Novel Magic-Sized Cadmium Phosphide Nanocrystals* __Wang R.__, Ratcliffe C.I., Wu X., *Yu K.

0667 *Chiral Periodic Mesoporous Organosilicates (PMOs): Bis(triethoxysilyl)-Stilbenes as Versatile Precursors to Tailored Materials* __Dickson S.E.__, *$Crudden C.M.

0668 *Photochemical Stabilization of the Tetrahedral Boron Chromophore in Conjugated Polyboron Compounds* __Baik C.__, $Wang S.

0669 *Non-Injection One-Pot Approach to Colloidal Photoluminescent CdTeSe Alloyed Quantum Dots* $__Cui Y.__, Ouyang J., Wu X., Li C., *Yu K.

0670 *Interface Characterization and Electron Band Alignment in Ultra-Thin Metal-Oxide/Si and Oxide/SiGe/Si Structures* *__Goncharova L.V.__, Yundt N.P., Barbagiovanni E.

0671 *Synthesis and Mesomorphism of Board-Shaped Liquid Crystals* __Chen S.__, Kaafarani B., *Eichhorn S.H.

0672 *Synthesis and Characterization of Highly Fluorescent Silver Nanostructures* __Billone P.S.__, Maretti L., *Scaiano J.C.

0673 *$GdFe_{7.7}Si_{1.3}$, A Soft Magnet with Disordered Structure* __Svitlyk V.__, Cheung Y.Y.J., *Mozharivskyj Y.

0674 *A Three-Dimensional Extended Titanium Network in the Polar Intermetallic $Ba_5Ti_{12}Sb_{19+x}$* __Bie H.__, *Mar A.

0675 *A High-Pressure Investigation of Siliceous Zeolite ZSM-5 by Vibrational Spectroscopy* __Fu Y.__, *Huang Y.

0676 *Structures and Magnetic Properties of Yb_5Sb_3-Type Phases $RE_5Tt_xBi_{3-x}$ (RE = La-Nd; Tt = Si, Ge), Different from the Mn_5Si_3-Type Structure of the Parent Binary* __Barry S.D.__, Tkachuk A.V., Bie H., *Mar A.

0677 *The Y-Ni-As System at 973 K* __Stoyko S.S.__, *Oryshchyn S.

0678 *Structure and Composition of the RE-Sb-O-C Phases* __Wang P.__, Svitlyk V., *Mozharivskyj Y.

0679 *Spin Cages and Cages for Spins* __Hassan R.__, *$Boeré R.T.

0680 *Thermoelectric Properties of the New Telluride $Tl_{10-x}La_xTe_6$* __Bangarigadu S.__, Sankar C.R., *Kleinke H., Salvador J.R., Yang J.

0681 *Investigation of Oxide Based Photocatalysts for Water Splitting with Sunlight* __Tabaku E.__, *$Bieringer M.

0682 *Solid State Reductions of AVO_4 (A = Sc, Lu, In) Transition Metal Oxides Using Low Temperature Reductions* __Hernden B.__, *$Bieringer M.

0683 *Mixed-Metal Li_3N-Based Systems for Hydrogen Storage: Li_3AlN_2 and Li_3FeN_2* *__Langmi H.W.__, Culligan S.D., $McGrady G.S.

0684 *New M-X-Q (M = Ti, Zr, Hf; X = P, As, Sb; Q = S, Se, Te) Compounds with Distorted Square Net Layers* __Graf C.__, Guch M., *Kleinke H.

0685 *Magnetic Properties of Lithiated Spinel $Li_2V_2O_4$* **Mitchell J.E.**, Greedan J.E.

0686 *Structure and Magnetic Properties of the Double Perovskite Ba_2YMoO_6: A S=1/2 Ion on a Geometrically Frustrated Lattice* **Aharen T.**, Greedan J.E., Imai T., Kroeker S., Michaelis V.K.

0687 *Geometric Magnetic Frustration in NaCl Type $Li_3Mg_2OsO_6$* *__Derakhshan S.__, $Greedan J.E., Barbier J., Cranswick L.M.D.

0688 *Preparation of BINAP Supported Periodic Mesoporous Organosilica for the Development of New Heterogeneous Catalysts* McEleney K., **Seki T.**, MacQuarrie S., *$Crudden C.M.

0689 *Structure/Properties Relationships of Dibenzo[a,c]phenazine Derivatives Forming Liquid Crystalline Phases* **Voisin E.**, Foster J.E., *Williams V.E.

0690 *Cyclodextrin-Based Microsphere Sorbent Materials* Rui G., Fernandez H., *$**Wilson L.D.**

0691 *Surface Modification of a Silver Impregnated Activated Carbon with a Grafted Polysaccharide* Kwon J.H., Sammynaiken R., *$**Wilson L.D.**

0692 *Using Derivatives of Pentaerythrityl Tetraphenyl Ether to Study Halogen-Halogen Interactions in the Solid State* *$**Gagnon E.**, Laliberté D., Maris T., Wuest J.D.

0693 *Nanostructured Materials from the Co-Intercalation of an Insect Pheromone with Organic Solvents in Sepiolite* *__Blank K.__, Frechette J.-M., Hubbard B., Letaief S., Detellier C.

0694 *X-Ray Spectroscopic Study of Ternary Phosphides $(Ni_{1-x}M'_x)_2P$ and Arsenides $Zr(As_{1-x}Si_x)As$* **Blanchard P.E.R.**, Grosvenor A.P., Gaultois M.W., $Cavell R.G., *Mar A.

0695 *$Ba_2GaB_4O_9Br$ and $Ba_2GaB_4O_9F.xH_2O$, Two Novel Non-Centrosymmetric Hilgardite Derivatives* *$**Barbier J.**, Britten J.F., Mitchell J.

0696 *Spherical and Dense NMC Hydroxides as Precursors to Positive Electrode Materials in Lithium-Ion Batteries* $**van Bommel A.**, *Dahn J.R.

0697 *Structure-Property Relationships of Proton Exchange Membranes: Effects of Acid and Water Content upon Proton Conductivity* **Peckham T.J.**, Schmeisser J., Rodgers M., *$Holdcroft S.

0698 *Sulfonated Polysiloxane Proton Exchange Membranes for Fuel Cell Systems* **De Almeida N.E.**, *$Easton E.B.

0699 *Fuel Cell Electrode Structures containing Organosilane-Based Proton Conductors* **Eastcott J.I.**, *$Easton E.B.

0700 *Quantifying the Decomposition of Light Metal Hydrides with MRI* MacMillan B., Uncharat G.S., *$McGrady S., **Balcom B.J.**

0701 *A Chemisorption Approach to Non-Precious Metal Oxygen Reduction Reaction Catalysis* **Pauric A.D.**, *$Easton E.B.

0702 *Sulfonated Polybenzimidazoles as Proton Exchange Membranes and Acid-Base Cross-Linkers* **Thomas O.D.**, Peckham T.J., Thanganathan U., Yang Y., *$Holdcroft S.

0703 *Interactions of the I^-/I_3^- Redox Couple with the TiO_2 Electrode in Dye-Sensitized Solar Cells: A Density-Functional Study* $**Asaduzzaman A.**, *Schreckenbach G.

0704 *The Development of Liquid Polymers as Alternative Energy Carriers* **Little V.R.**, *$Jessop P.G.

0705 *Electrostatic Layer-by-Layer Assembly of CdSe/Polymer Nanocomposite Thin Films for 3rd Generation Photovoltaics* *__McClure S.A.__, $Buriak J.M., Brett M.J., Tucker R.T., Bruce J., Worfolk B.

0706 *Physical and Electrical Properties of Arrays of Indium-Tin Oxide Nanostructures from Glancing Angle Deposition and their Application as Transparent Anodes in Excitonic Photovoltaic Solar Cells* **Rider D.A.**, Harris K.D., Brett M.J., $Buriak J.M.

0707 *An Efficient Combinatorial Approach towards the Discovery of New Nanoparticle Catalyst Arrays for Arene Hydrogenation* **Dehm N.A.**, $Buriak J.M.

0708 *AFM Studies of the Irreversible Changes in the Local Properties of Conducting Polymer Films Following their Doping-Undoping* **O'Neil K.D.**, Smith A., *Semenikhin O.A.

0709 *Theory and Modelling of Carrier Transport Properties in Thiophenes Using Density Functional Theory with Dispersion Corrections* **McClure S.A.**, *Buriak J.M., $DiLabio G.A.

0710 *Understanding the Degradation Mechanism of Nafion-Manganese/Cerium Oxide Composites Attacked by Free Radicals* **Ma C.Y.**, $Goward G.R.

0711 *Low Power Photon Upconversion in Blue Emitting Molecules for Solar Energy Harvesting* **Sugunan S.K.**, Paige M.F., *$Steer R.P.

0712 *Small Angle Neutron Scattering (SANS) Study on the Morphological Transformation of Rhamnolipid Aggregates Induced by Styrene* *$**Nieh M.-P.**, Yuan G., Mulligan C.N.

0713 *Investigation of a Water-Soluble Azobenzene Derivative as a Sol Gel Crosslinking Agent* **Singleton T.A.**, *Vreugdenhil A.J.

Organic Chemistry

OR8 ChedokeB-HCC

Organic Synthesis in Canada, Coast to Coast: Past, Present and Future

Organizer(s) - Tomas Hudlicky
Chair(s) - Graham Bodwell

13:20 0714 *Medium-Sized Rings from Bicyclic Precursors: Lessons from the Taxinine and Phorbol Problems* *$**West F.G.**

14:00 0715 *Novel Hydroamination and Diamination Methodologies Providing Access to Various Saturated and Unsaturated Nitrogen Heterocycles*
***Beauchemin A.M.**

14:20 0716 *Total Synthesis and SAR Investigation of Anti-Austerity Active Natural Product (+)-Angelmarin* **Magolan J.**, Adams N.P.B., $Coster M.J.

14:40 0717 *A Direct Synthesis of Vinylphosphonium Salts from Trimethylsilyl Ylides and Non-Enolizable Aldehydes* ***Das P.**, $McNulty J.

15:00 Coffee Break

15:20 0718 *Exploiting the Cyclopropane-Heterocycle Nexus for the Total Synthesis of Alkaloids* *$**Kerr M.A.**

16:00 0719 *Functionalized Cyclopent-2-enones from Allenyl Vinyl Ketones via Interrupted Nazarov Pathways* **Marx V.M.**, *$Burnell D.J.

16:20 0720 *Synthesis of the Phorbol Ring Skeleton via an Oxygen-Directed Stevens [1,2]-Shift* **Stewart C.**, $West F.G.

16:40 End of Session

OR9 ChedokeA-HCC

Transition Metals in Synthesis and Catalysis (joint with IN6)

Organizer(s) - Costa Metallinos and James Green
Chair(s) - Avinash Thadani

13:20 **See IN6**

17:00 End of Session

Physical, Theoretical and Computational Chemistry

PT4 EBallrm-Sher

Biomolecular NMR (joint with BM2)

Organizer(s) - Giuseppe Melacini
Chair(s) - Richard Epand

13:40 **See BM2**

16:40 End of Session

PT8 AlbionC-HCC

Nanostructured Surfaces - Surfaces of Nanostructures (joint with SS2)

Organizer(s) - Byron Gates and Matthias Geissler
Chair(s) - Byron Gates, Matthias Geissler

13:20 0721 *Programing Matter: The Preparation and Properties of Multicomponent Nanocrystal Superlattices*
*$**Murray C.B.**, Dong A., Chen J., Ko D., Ha D., Ye X., Koh W., Kang Y.

14:00 0722 *New MoS_2 Based Nano-Inclusion Materials* *$**Leach G.W.**, Cetnarowski G.

14:20 0723 *Mesoporous Polymer-Silica Nanocomposites: Principle, Characterization and Properties* ***Kleitz F.**, Wainer M., Marcoux L.

14:40 0724 *Preparation of Nano Fe_2O_3 in Different Media* *$**Shekarriz M.**, Taghipoor S., Saffar A., Hajialiakbari F., Soleymani M.**PAPER WITHDRAWN**

15:00 Coffee Break

15:20 0725 *Surface-Based Defect Engineering in Semiconductor Nanostructures* *$**Seebauer E.G.**

16:00 0726 *Control of Coupled Silicon Atomic Quantum Dots for Nano-Electronic Computing Architectures* **Pitters J.L.**, Haider M.B., DiLabio G.A., Livadaru L., Mutus J.Y., Wolkow R.A.

16:20 0727 *Interfacial Characterization of Various Metal-Semiconductor Interfaces* **Sayed S.Y.**, Wang F., Malac M., Egerton R., *$Buriak J.M.

16:40 0728 *The Impact of Sonication on Single-Wall Carbon Nanotubes Chemistry*
Moonoosawmy K.R., *$Kruse P.

17:00 End of Session

PT9 WBallrm-Sher

New Advances in Spectroscopy and Microscopy (joint with AN5)

Organizer(s) - Glynis de Silveira and François Lagugné-Labarthet
Chair(s) - Glynis de Silveira

13:20 **See AN5**

17:00 End of Session

PT10 202-HCC

Quantum Chemical Dynamics

Organizer(s) - Randall Dumont and Ian Hamilton
Chair(s) - Ian Hamilton, Denise Koch

13:20 0729 *Iterative Path Integral Simulation of Nonequilibrium Quantum Transport and Dissipation* **Segal D.**, Reichman D.R., Millis A.J.

14:00 0730 *Quantum Free Energy Differences from Path-Integral Methods: Application to Ionic Aqueous Clusters*
Hernández de la Peña L., Koch D.M., *$**Peslherbe G.H.**

14:40 0731 *Analytic Potential Energy Surface for the Weakly Bound CO_2-H_2 System, and Quantum Monte Carlo Study of Superfluidity in para-Hydrogen Clusters: Towards the Nanodroplet Regime* **Li H.**, Roy P.-N., Le Roy R.J.

15:00 Coffee Break

15:20 0732 *Imaginary and Real Time Quantum Dynamics with Applications to Weakly Bound Clusters* *$**Roy P.-N.**

16:00 0733 *Using a Through-Space Modeling of Substituent Effects to Study the Dissociation of Moderately Strong Acids in Water by Means of First-Principles Molecular Dynamics Simulations* *$**Iftimie R.**, Maurer P.

16:20 0734 *Simulation Studies of Arabinanase-Ligand Complexes: The Challenge of Oligofuranosides* *$**Islam S.M.**, Castillo N., Lowary T.L., Roy P.-N.

16:40 End of Session

PT11 SBallrm-Sher

Static Electron Correlation

Organizer(s) - Paul Ayers and Marcel Nooijen
Chair(s) - Garnet Chan

13:20 0735 *Electron-Correlation Methods for Molecules and Crystalline Solids* *$**Hirata S.**, Keceli M., Shiozaki T., Sode O., Valeev E.F., Yagi K.

14:00 0736 *On the Wavefunction Quality of Various Multi-Reference Coupled Cluster Methods* *Hanrath M.

14:20 0737 *Recent Developments and Applications of the Renormalized Coupled-Cluster Methods* **Wloch M.**, Piecuch P., Gour J.R.

14:40 0738 *Electronic Excitations in the Condensed Phase* *Slipchenko L.V.

15:00 Coffee Break

15:20 0739 *Capturing Static and Dynamic Correlation Effects Using Quantum Monte Carlo Methods* *Umrigar C.J., Toulouse J., Nightingale M.P.

16:00 0740 *Aspects of Spin-Adaptation in State-Specific Multi-Reference Coupled Cluster Formalism: Various Approaches* Maitra R., Datta D., *Mukherjee D.

16:40 0741 *Complexity and Electronic Stucture Theory* **Braams B.J.**

17:00 End of Session

PT12 AlbionB-HCC

Symposium on Frontiers of Electrochemistry (joint with AN7)

Organizer(s) - Jacek Lipowski and Gregory Jerkiewicz
Chair(s) - Sylvie Morin, Dan Bizzotto

Joint with AN7 and SS3

13:20 **See AN7**

16:40 End of Session

PT13 Heritage-Sher

Ultrafast Spectroscopy, Optical Energy Harvesting and Quantum Dots

Organizer(s) - Gregory Scholes
Chair(s) - Jeongho Kim

14:00 0742 *Surface Electronic States of a Buried Conjugated Polymer Interface Studied by 2D IR-Visible Sum Frequency Generation Spectroscopy* *Chou K.C.

14:40 0743 *Nonlinear Spectroscopic Investigation of Exciton Dephasing in Single-Walled Carbon Nanotubes* *Graham M.W., Ma Y.-Z., $Fleming G.R., Green A.A., Hersam M.C.

15:00 Coffee Break

15:20 0744 *State-Resolved Exciton Dynamics in Quantum Dots* *$Kambhampati P.

16:00 0745 *Fast Upper Singlet State Relaxation in Metalloporphyrins: Implications for NIR Solar Energy Harvesting* **Steer R.P.**, Liu X., Sugunan S.K., Tripathy U., Paige M.F.

16:40 0746 *Effect of the Mode of Excitation on the Luminescence Lifetimes of ZnO* *$**Sammynaiken R.**, Brunet S.M.K., Maley J.M., Hoffmeyer R.E., Sham T.-K., Chen W., Woo B.K., Blyth R.I.R., Regier T.G., Vogt J., Bergstrom J.C., Dallin L., DeJong M.

17:00 End of Session

Surface Science

SS2 AlbionC-HCC

Nanostructured Surfaces - Surfaces of Nanostructures (joint with PT8)

Organizer(s) - Byron Gates and Matthias Geissler
Chair(s) - Byron Gates, Matthias Geissler

13:20 **See PT8**

17:00 End of Session

SS3 AlbionB-HCC

Symposium on Frontiers of Electrochemistry

Organizer(s) - Jacek Lipowski and Gregory Jerkiewicz
Chair(s) - Sylvie Morin, Dan Bizzotto

Joint with AN7 and PT12

13:20 **See AN7**

16:40 End of Session

SSP WentABC-HCC

Posters

Organizer(s) - Peter Kruse
Chair(s) - Peter Kruse

From **17:00** until **19:00**

0747 *Effect of Hydrogen on the Corrosion and Stress Corrosion Cracking Behaviors of AZ91 Alloy* **Chen J.**, Wang J., *Han E.-H., Ke W.

0748 *The Determination of Local Corrosion Kinetics Using Scanning Electrochemical Microscopy* **He H.**, Qin Z, Ding Z., Shoesmith D.W.

0749 *Crevice Corrosion Behaviour of Corrosion Resistant Nickel-Based Alloys in Hot Saline Solutions* *$**Mishra A.K.**, $Shoesmith D.W.

0750 *Structures of Hydrated Metalated and Proton-Bound Dimer Adenine by IRMPD Spectroscopy* *$**Rajabi K.**, Gillis E., $Fridgen T.

0751 *Kinetics of O_2 Reduction and Film Transformations on Oxide-Covered Ni-Cr-Mo (W) Alloys* **Zhang X.**, Zagidulin D., Noël J.J., Shoesmith D.W.

0752 *Study on Scanning Electrochemical Microscopy of Single Live Bladder Cells* $**Zhang M.N.**, Zhao X.C., *Ding Z.

0753 *Photoelectrochemical Study of Titanium Dioxide Based Nanomaterials* **Wu G.**, *Chen A.

0754 *Thiourea Stabilizes n-GaAs for Solar Energy Conversion* **Khader M.**, Algaber A.

0755 *Film Conversion and Breakdown on Carbon Steel in the Presence of Halides* **Yazdanfar K.**, Keech P.G., Zhang X., Shoesmith D.W., Wren J.C.

0756 *Modeling Degradation Phenomena in the Cathode Catalyst Layer of a Polymer Electrolyte Fuel Cell* *$**Rinaldo S.**, Eikerling M.H.

0757 *Thermodynamics of Calcium Sulphate in Hydrometallurgical Solutions* *$**Azimi G.**, Papangelakis V.G.

0758 *Finite Element Modelling of Electrochemical Systems and Processes* *$**Qin Z.**, Shoesmith D.W.

0759 *The Effect of Gamma-Radiation on Reactions and Charge Transport at Aqueous/Ionic Liquid Interfaces* **Howett S.**, Joseph J.M., Peiris S., Wren J.C., Ding Z.

0760 *Electrochemical Oxidation and Reduction of H_2O_2 on Single-Phase γ-FeOOH/ITO Electrodes* $**Fu D.**, Keech P.G., Zhang X.Y., Shoesmith D.W., *Wren J.C.

0761 *Characterizing Zirconium Alloy Surfaces Using Scanning Electrochemical Microscopy* **Nowierski C.**, *Ding Z., Noël J.J., Shoesmith D.W.

0762 *Spectroelectrochemical Studies of the Gold-Electrolyte Interface under Thiosulfate Based Leaching Conditions* **Baron J.Y.**, Mirza J., Szymanski G., Lipkowski J.

0763 *Electrochemical and Surface Analytical Investigation of the Solid-Aqueous Phase Reaction Kinetics for the Conversion of Ag_2O to AgI in Aqueous Iodide Solutions* **Pretty S.**, Zhang X., Keech P.G., *Shoesmith D.W., $Wren J.C.

0764 *An Electrochemical and Surface Analytical Study of Carbon Steel Corrosion in the Presence of Either Radiolytically-Produced or Chemically-Added Oxidants* **Daub K.**, Zhang X., Noël J.J., Shoesmith D.W., Wren J.C.

0765 *Improving the Photovoltaic Properties of Polybithiophene-Based Polymers* **Kantzas-Pontes T.**, *Semenikhin O.A.

0766 *Electrochemical and STM Studies of the Adsorption of 1-Thio-β-D-glucose on Au(111): Foundation for the Design of a Tethered-Lipid Bilayer Membrane* **Kycia A.H.**, Sek S., Lipkowski J.

0767 *Studies of Amorphous Carbon Nitride Films on Polybithiophene* **Byers J.C.**, Tamiasso-Martinhon P., Pailleret A., Deslouis C., *$Semenikhin O.A.

0768 *Study of Bi UPD and OPD Structures on Au(100) Using in situ Surface X-Ray Scattering* **Zheng S.H.**, Krug K., Golks F., Kaminski D., *Morin S, Magnussen O.M.

0769 *Design of Photoelectrochemical Oscillators* **Feng J.**, Gao Q., *Wang J.

0770 *Electrochemical Properties of Sintered Magnetite Electrode in LiOH Solution* *$**Jung K.-S.**, Feicht A., de Pierrefeu L., Lister D.H.

0771 *Corrosion Behavior of Carbon Steel in Sulfuric Acid containing Carbon Nanotubes* **Abdel Salam M.**, Obaid A.Y., Al-Thabaiti S.A., *$Hermas A.A.

0772 *Preparation and Characterization of Multi-Walled Carbon Nanotubes/Chitosan Derivatives Nanocomposites and their Application as Ion Exchanging Materials* *$**Abdel Salam M.**, Abdelaal M.

0773 *Preparation and Characterization of Magnetic Multi-Walled Carbon Nanotubes/Ferrite Composite and their Application for the Removal of Organic Pollutants from Aqueous Solution* *$**Abdel Salam M.**, Gabal M.A., Al-Thabaiti S.A., Obaid A.Y., Al-Youbi A.O.

0774 *Nano-Pattern on Silicon Substrate for Hetero-Epitaxial Growth of $Ca_xBa_{1-x}Nb_2O_6$ Thin Films* **Stateikina I.**, Delprat S., Chaker M.

0775 *Enhanced Silicon Nanocrystal Surfaces by Secondary Etching and Functionalization* $**Dang M.K.M.**, Clark R.J., *Veinot J.G.C.

0776 *Fabrication of Gold Nanorods with Controlled Length for Use as SERS Substrates* **Mirza J.**, Baron J.Y., *$Lipkowski J.

0777 *Measurement and Prediction of Electronic Properties of Discotic Liquid Crystalline Compounds* **Ahmida M.M.**, Mahoney S., *Eichhorn S.H.

0778 *Self-Assembled Monolayers of Tetraazaporphyrins* **Ahmida M.M.**, Dufour S., *Eichhorn S.H., Schmidt R., DeWolf C.E.

0779 *Investigation of Protein Adsorption at Modified Silicon Surfaces Using AFM* **Zahedi Jasbi Sh.**, *Morin S.

0780 *In-situ Observation of Mechanism and Dynamics of Bismuth Electrodeposition by Video STM* **Lin E.**, Matsushima H., *$Morin S., Magnussen O.M.

0781 *Dithiophosphinic Acids as New Ligands for the Formation of Self-Assembled Monolayers (SAMs) on Au(111) and for the Stabilization of Gold Nanoparticles* **San Juan R.R.**, Müller J., Mohammad I., Ala V., Eichhorn S.H., $Carmichael T.B.

0782 *Gold Nanoparticle-Based Single Base-Pair Mismatch Discrimination on a Microfluidic Microarray Device* **Wang L.**, *Li P.C.H.

0783 *Influence of Doping on the Pt-Carbon Nanotube Interaction: Improving Catalytic Efficiency for Fuel Cell Application* **Groves M.N.**, Chan A,, *$Malardier-Jugroot C., Jugroot M.

0784 *Characterization of Palladium Loaded SBA-15-SH Cross Coupling Catalysts by X-Ray Photoelectron Spectroscopy and X-Ray Induced Auger Spectroscopy* **McEleney K.**, Horton J.H., $Crudden C.M.

0785 *Ethylbenzene Lines on Si(100) as Molecular Wires* **Smeu M.**, Wolkow R.A., Guo H.

0786 *Calculations of Electron Transport Through Radicals* **Smeu M.**, DiLabio G.A.

0787 *Ab initio Alkyl Ions: Open and Closed (PCP^+) Structures* ***Wagaye A.M.**, $East A.L.L.

0788 *Effect of Surface Mechanical Attrition Treatment (SMAT) on the Electrochemical and Surface Properties of Alloy 600 and 800 Steam Generator Tubing* **Faichuk M.**, *Ramamurthy S., Lau L.

0789 *Entropy Contributions in pK_a Computation: Application to Alkanolamines and Piperazines* *$**East A.L.L.**, Khalili F., Henni A.

0790 *Theoretical Study of Dispersion Binding of Hydrocarbon Molecules to Hydrogen-Terminated Silicon(100)-2×1* **Johnson E.R.**, DiLabio G.A.

0791 *Complexation of Cavitands with a Fluorescent Guest Molecule* **Yundt N.P.**, *$Lagugné-Labarthet F.

Tuesday AM

Montreal Medal Lecture

MML ChedokeC-HCC

Montreal Medal Lecture

Organizer(s) - Brian McCarry
Chair(s) - William Leigh

Introduction of Russell Boyd by Neil Burford

11:25 0792 *Computers, Concepts and Chemistry* **Boyd R.J.**

12:15 End of Session

Science Policy Forum

SP WebsterC-HCC

Science Policy Forum

Organizer(s) - Bruce Lennox
Chair(s) - Bruce Lennox

12:15 0793 *Chemistry and the Government of Canada's Science and Technology Strategy* **Lennox R.B.**, Shoichet M.S., Wayner D.D.M.

Analytical Chemistry

AN3 CBallrm-Sher

Frontiers of Separation Science

Organizer(s) - Philip Britz-McKibbin and Nicole Baryla
Chair(s) - Charles Lucy

08:20 0794 *Metabolite Profiling by Capillary Electrophoresis Mass Spectrometry for Enzyme Discovery* **Robert M.**, Saito N., Kochi H., Soga T., Tomita M.

09:00 0795 *Virtual Metabolomics by Capillary Electrophoresis-Electrospray Ionization-Mass Spectrometry: De Novo Identification and Quantification of Metabolites without Chemical Standards* Lee R., Chalcraft K., Janson N., D'Agostino L.A., *$**Britz-McKibbin P.**

09:20 0796 *Desalting and Concentration of Proteins with Capillary Isoelectric Trapping* Booker C.J., Mejia J., **Yeung K.K.-C.**

09:40 Coffee Break

10:00 0797 *Extending the CE-MS Portfolio with APPI and APCI* $Hommerson P., Mol R., Khan A.M., de Jong G.J., ***Somsen G.W.**

10:40 0798 *Decoupling Capillary Electrophoresis and Electrospray Ionization Processes to Build a more Robust Interface with Mass Spectrometry* Maxwell E.J., Zhong X., Hong Z., *$**Chen D.D.Y.**

11:00 0799 *Direct Analysis of Enzyme-Catalyzed DNA Demethylation* ***Krylova S.M.**, Karkhanina A.A., Mecinovic J., Musheev M.U., Petrov A.P., Hewitson K.S., Flashman E., Schofield C.J., $Krylov S.N.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

AN8 SBallrm-Sher

General

Organizer(s) - Philip Britz-McKibbin
Chair(s) - Wojciech Gabryelski

08:00 0800 *Monitoring the Composition of Alcohol Mixtures by Ultrasound* **Dion J.R.**, Burns D.H.

08:20 0801 *Holographic Filters for Simplified Optical Property Estimation in Colloidal Samples* **Pandozzi F.**, *Burns D.H.

08:40 0802 *The Effect of Dissolved Metal Ions on Steady-State Water Radiolysis: Experimental and Model Analyses* **Joseph J.M.**, Yakabuskie P., Glowa G.A., *Guzonas D., $Wren J.C.

09:00 0803 *The Influence of Coating Bath Chemistry on the Corrosion Resistance of 3-Mercaptopropyltrimethoxysilane Films Deposited on Magnesium Alloy Surfaces* **Scott A.**, *Gray-Munro J., Shepherd J.L.

09:20 0804 *Oxide Formation and Conversion on Carbon Steel in Mildly Basic Solutions* **Zhang X.**, *Wren J.C., Xu W., Daub K., Noël J.J., Shoesmith D.W.

09:40 Coffee Break

10:00 0805 *Quadrupole Ion Trap as a Reaction Chamber for Studying Gas-Phase Chemistry of Extremely Reactive Ions with Water Molecules* *$**Gabryelski W.**, Kulikova N., Baker M., Rabson L.

10:20 0806 *A New Binary Matrix for Visible-MALDI* **Yang C.Y.**, Hu X.K., Loboda A.V., *$Lipson R.H.

10:40 0807 *Molecularly Imprinted Polymer Nanoparticles Specifically Tailored for Pre-Concentration of Estrogenic Compounds in Waste Water Analysis and Treatment* **De Maleki Z.**, *Lai E.P.C.

11:00 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

Biological & Medicinal Chemistry

BM1 202-HCC

Biological Surfaces and Interfaces (joint with SS1)

Organizer(s) - Christopher Yip
Chair(s) - Christopher Yip

08:00 0808 *Apertureless Near-Field Scanning Infrared Microscopy of #21-31 Peptide Fragment of β_2-Microglobulin* *$**Paulite M.**, $Walker G.C., Fakhraai Z., Gunari N., Tanur A.

08:20 0809 *Soft X-Ray Spectromicroscopy of Protein Interactions with Candidate Biomaterials* **Leung B.O.**, *$Hitchcock A.P., Brash J.L., Scholl A., Doran A.

08:40 0810 *Scaffolded Vesicles as a Model Membrane System* **Grossutti M.**, Leitch J., *Lipkowski J.

09:00 0811 *Insulin-Induced Area Expansion of Poly(ethylene glycol)-Grafted Phosphoethanolamine Monolayers* **Nosrati N.**, Mottaghi K., *$Tsoukanova V.

09:20 0812 *Deamidation Weakens Membrane Binding Properties of Antimicrobial Peptide Anoplin* **Won A.**, *$Ianoul A.

09:40 Coffee Break

10:00 0813 *Near Field Microscopy Studies of Membrane Protein Partitioning between Lipid Rafts and Caveolae* *$**Johnston L.J.**, Vobornik D., Lu Z., Abulrob A., Stanimirovic D.

10:20 0814 *Direct Correlation of Structures and Nanomechanical Properties of Multicomponent Lipid Bilayers* **Sullan R.M.A.**, Li J.K., *$Zou S.

10:40 0815 *Evanescent Field Waveguide Fluorescence Microscopy* *$**Mittler S.**, Hassanzadeh A., Armstrong S., Dixon S.J.

11:00 0816 *Nanoscale Aggregation of Cell Surface Receptors as Observed Using Functionalized Nanoparticles* **Kennedy D.C.**, Rouleau Y., Tay L., *Pezacki J.P.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

BM2 EBallrm-Sher

Biomolecular NMR (joint with PT4)

Organizer(s) - Giuseppe Melacini
Chair(s) - Giuseppe Melacini

08:20 0817 *Role of Ubiquitin Binding Domains in Protein Trafficking* *$**Gehring K.**, Kozlov G., Trempe J.-F.

09:00 0818 *Mechanism of Lysine-63 Polyubiquitin Chain Formation and Recognition by the DNA Repair Protein RAP80* $**Spyracopoulos L.**, Markin C.J., Kean M.J., Saltibus L.F.

09:40 Coffee Break

10:00 0819 *Characterizing Functional Dynamics in Proteins Using NMR and Calorimetry* *$**Mittermaier A.**

10:40 0820 *The Dynamic Energy Landscape of Enzyme Catalysis* **Boehr D.D.**, Dyson H.J., Wright P.E.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

Chemical Education

CE7 AlbionA-HCC

The Public Understanding of Chemistry

Organizer(s) - Geoffrey Rayner-Canham
Chair(s) - Geoffrey Rayner-Canham

08:00 0821 *Chemical Knowledge, Chemical Ignorance and Pseudo-Chemistry* *__Rayner-Canham G.W.__

08:20 0822 *The Public Understanding of Chemistry: Experiences with Public Broadcasting* *$__White M.A.__

08:40 0823 *Understanding of Chemistry and the General Public: Are they Compatible?* **Abhyankar S.**

09:00 0824 *Chemistry: The Frightening Science* *__Cherkas A.A.__

09:20 0825 *Building Learning Communities to Support the Professional Development of Science Teachers: A Role for Departments of Chemistry* *__Brydges S.__, Meier E., Moore F.M.

09:40 Coffee Break

CIC Award for Chemical Education Lecture presented by Normand Voyer

Introduction of Normand Voyer by Michèle Auger

10:00 0826 *Promoting Chemistry and Improving Chemistry Curriculum* *$__Voyer N.__

10:40 0827 *Can Chemistry Outreach Also Be for Adults?* **Lavieri S.**

11:00 0828 *The McGill Office for Science and Society* **Schwarcz J.A.**

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

Industrial Chemistry

IC3 203-HCC

Life Sciences

Organizer(s) - Rina Carlini
Chair(s) - Rina Carlini, Guerino Sacripante

08:00 0829 *Polymeric Delivery Strategies with Commercial Appeal* *$__Shoichet M.S.__

University of Toronto

08:40 0830 *Current Applications of NMR in the Pharmaceutical Industry* **Fahie B.J.**

Eli Lilly Canada Inc.

09:00 0831 *Innovative Therapeutics through Groundbreaking Scientific Research* *__Ducharme Y.__

Merck Frosst Centre for Therapeutic Research

09:40 Coffee Break

10:00 0832 *Polymeric Micelles for Oral Delivery of Insoluble Drugs* **Lessard D.**, Le Garrec D., Kujawa P., Baille W., Benquet C., Courtemanche L., Palusova D., Gori S., Parisien M., Taga S., Smith D.

Labopharm Inc.

10:40 0833 *From The Bench to Clinic: The Development of Molecules Targeting the Inhibitor of Apoptosis Proteins (IAPs) for the Treatment of Cancer* **Jaquith J.B.**

Aegera Therapeutics Inc.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

Inorganic Chemistry

IN1 ChedokeC-HCC

Main Group Chemistry

Organizer(s) - Charles Macdonald and Kathryn Preuss
Chair(s) - Kathryn Preuss

08:00 0834 *New Highly Fluorinated and Weakly Nucleophilic Anions of the CB_{11} Family* Fete M.J., King R.B., Valásek M., *$__Michl J.__

08:40 0835 *$[B_{12}Cl_{12}]^{2-}$: A Weakly Coordinating Dianion* Geis V., Kessler M., *$__Knapp C.__, Scherer H., Uzun R.

09:00 0836 *Syntheses and Characterizations of the $F_4S{=}NXe^+$ and $F_4S{=}NH_2^+$ Cations: Intermediates in the Rearrangement and HF Solvolysis of $F_3S{\equiv}NXeF^+$* **Smith G.L.**, Mercier H.P.A., *Schrobilgen G.J.

09:20 0837 *Phosphonium Ionic Liquids as Novel Superhydrophobic Coatings* *$__Ragogna P.J.__, Tindale J.J.

09:40 Coffee Break

Chair(s) - Roland Roesler

10:00 0838 *The Kinetics and Thermodynamics of the Monomer-Dimer Equilibria of Dialkoxydibutylstannanes* *$__Grindley T.B.__, Whittleton S.R., Rolle A.J., Thangarasa R., Boyd R.J.

10:20 0839 *Synthesis and Characterization of Group 14 Pyrrolides and Indolides* Poisson J., Wharf I., Barsan M.M., **Butler I.S.**

10:40 0840 *Charged Distannoxanes for the Study of Catalytic (Trans)esterification* Crawford E.C., Lohr T., Kwok S., Leitao E., *$__McIndoe J.S.__

11:00 0841 *Chiral Lewis Acidic Catalysts for Controlled Polymerization of Lactide* *$__Mehrkhodavandi P.__, Acosta-Ramirez A., Douglas A.F., Labourdette G.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

IN2 WebsterB-HCC

Multimetallic Complexes: New Molecules and Materials

Organizer(s) - Mark MacLachlan and Laurence Thompson
Chair(s) - Daniel Leznoff

08:20 0842 *Ferrocenylsilane Macrocycles* **Herbert D.E.**, Chan W.Y., Gilroy J.B., Chabanne L., *Manners I.

08:40 0843 *Synthesis, Characterization and Electrochemistry of Mixed Sulphur-Containing Alkoxide Ti^{IV} Complexes* $**Donzelli A.**, *Potvin P.G.

09:00 0844 *From Monometallic to Multimetallic Cobalt and Chromium Complexes of Amine-bis(phenolate) Ligands* *$**Kozak C.M.**, Das U.K., Dean R.K., Bobak J., Fowler C., Granville S.L., Hann S.E., Kerton F.M.

09:20 0845 *Carbon Aurides and Hyper-Aurides: Unusual Hybridization in Carbon and other Properties* Kochhar G., McNelles P., *$**Naumkin F.Y.**

09:40 Coffee Break

Chair(s) - Chris Kozak

Inorganic Chemistry Division Award for Graduate Work in Inorganic Chemistry Lecture presented by Michael Katz

10:00 0846 *A Structure-Property Investigation on Highly Birefringent Coordination Polymers and the Pb(II) Lone Pair* **Katz M.J.**, *Leznoff D.B.

10:40 0847 *The Design of Organoiron Polynorbornene(s) containing Alkynes* **Winram D.J.**, Shipman P.O., *$Abd-El-Aziz A.S.

11:00 0848 *Synthesis of V and Cr Complexes of Amine-bis(Phenolate)-Donor Ligands for Polymerization Catalysis* **Dean R.K.**, Granville S.L., *$Kozak C.M.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

IN4 WebsterA-HCC

Organometallic Chemistry of the d- and f-Block Metals

Organizer(s) - Georgii Nikonov
Chair(s) - Maurice Brookhart

08:00 0849 *Catalytic Organometallic Carbon-Heteroatom Bond Formation* *$**Hartwig J.F.**

08:40 0850 *New Cationic and Zwitterionic Late Metal Complexes: Ancillary Ligand Participation in E-H Bond Activation Chemistry* Hesp K.D., *$**Stradiotto M.**

09:00 0851 *Selective CF Bond Activation of Partially Fluorinated Arenes by Nickel(0) with a Nitrogen Ancillary Ligand with Donor Properties Comparable to N-Heterocyclic Carbenes* **Johnson S.A.**, Doster M.E.

09:20 0852 *$Cp_2Zr(H)OR$: Looking for Alternatives to Schwartz' Reagent* Perrotin P., Oguadinma P.O., *Schaper F.

09:40 Coffee Break

10:00 End of Session

REMINDER

10:00 Inorganic Chemistry Division Award for Graduate Work in Inorganic Chemistry Lecture presented by Michael Katz in Webster B-HCC

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

IN6 ChedokeA-HCC

Transition Metals in Synthesis and Catalysis (joint with OR9)

Organizer(s) - Costa Metallinos and James Green
Chair(s) - Russell Viirre

08:00 0853 *Recent Applications of the Rhodium-Catalyzed Hydroacylation of Ketones* **Khan H.A.**, $Dong V.M.

08:20 0854 *Palladium-Catalyzed Olefin Dioxygenation: Scope and Mechanistic Studies* **Antonic M.**, *Li Y., Song D., $Dong V.M.

08:40 0855 *Pd-PEPPSI-iPent: An Active, Sterically Demanding Cross-Coupling Catalyst and its Application in the Synthesis of Tetra-Ortho-Substituted Biaryls* *$Organ M.G., **Sayah M.**, Çalimsiz S., Hoi K.H., Hunter H.N.

Merck Frosst Centre for Therapeutic Research Award Lecture presented by Hélène Lebel

Introduction of Hélène Lebel by André Charette

09:00 0856 *Toward the Formation of C-C and C-N bonds via Transition Metal-Catalyzed Processes* **Lebel H.**

09:40 Coffee Break

10:00 0857 *Expanding the Repertoire of Olefin Metathesis Catalysts: The Case for Chelating Aryloxide Ligands*
Blacquiere J.M., $Fogg D.E.

10:20 0858 *Asymmetric α-Alkylation of Amines Catalyzed by Chiral Tantalum Biphenyl Amidate Complexes* **Ayinla R.O.**, $Schafer L.L.

10:40 0859 *Ring-Expanding Enyne Metathesis: Recent Developments* *$**Diver S.T.**

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

IN7 WebsterC-HCC

General and Coordination Chemistry

Organizer(s) - David Emslie
Chair(s) - Christian Reber

08:00 0860 *Density Functional Theory Approaches to Understanding Non-Innocent Complexes of Ruthenium and Rhodium*
Dodsworth E.S., **Lever A.B.P.**

08:20 0861 *A Novel Zinc-Diradical Complex that Exhibits Unusual Electrochemical Behaviour*
Anderson K.J., Gilroy J.B., $Hicks R.G., Patrick B.O., Ferguson M.J., McDonald R.

08:40 0862 *Ligand Non-Innocence in Oxidized Metal Salen Complexes* *Storr T., Shimazaki Y., Wasinger E.C., Stack T.D.P.

09:00 0863 *Self-Assembly of a Cu(I)-Pyridyl-Imine-Poly(dimethylsiloxane) Cyclopolymer* *Kerton F.M., Hu Z., Price C.N., Pye W.M., Schneider C.

09:20 0864 *Biodegradable Polymer Stars: Catalyst Design, Synthesis, and Stereocontrol*
*Shaver M.P., Cameron D.A., Moore A.E.J., Callaghan L.M.

09:40 Coffee Break

REMINDER

10:00 Inorganic Chemistry Division Award for Graduate Work in Inorganic Chemistry Lecture presented by Michael Katz in Webster B-HCC

Chair(s) - Serge Gorelsky

10:40 0865 *From Uncomfortable Molecular Geometries to Porous and Inclusion Materials* **Soldatov D.V.**

11:00 0866 *The Impact of Metallophilicity on Colossal Thermal Expansion in Dicyanometallate Coordination Polymers* **Korcok J.L.**, *Leznoff D.B.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

Macromolecular Science & Engineering

MS3 Beckett-Sher

Polymer Characterization and Physics

Organizer(s) - Christian Pellerin
Chair(s) - Christian Pellerin

08:40 0867 *Organisation of Metallic Nanoparticles with Interfacial Films of Block Copolymers* **Ritcey A.M.**, Lamarre S., Lemay C.

09:20 0868 *Effect of pH on the Solution Behaviour of a Series of Amphiphilic Polypeptides* **Fowler M.A.T.**, *$Duhamel J.

09:40 Coffee Break

10:00 0869 *Nonlinear Light Propagation in Photopolymers* Qiu L., Villafranca A., Kasala K., Shimmell W.E., Ponte M.R., Burgess I.B., Welch R., *Saravanamuttu K.

10:20 0870 *Pressure Induced Polymerization in Acrylic Acid* **Murli C.**, *$Song Y.

10:40 0871 *Vibrational Spectroscopy in Polymer Science* **Lagugné-Labarthet F.**

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

Materials Chemistry

MT3 Heritage-Sher

Energy Storage and Conversion (joint with PT5)

Organizer(s) - Gillian Goward and Linda Nazar
Chair(s) - Linda Nazar

08:00 0872 *The Impact of Surface and Interface Energy on Nano-Sized Insertion Compounds* *$**Wagemaker M.**, Mulder F.M., van der Ven A.

08:40 0873 *Focused Ion Beam, Electron Microscopy and Electrochemical Characterization of Nickel-Containing Metallic Foams*
van Drunen J., Grden M., *$**Jerkiewicz G.**

09:00 0874 *Lithium Diffusion in Cubic Rocksalt Type Li-Ti-O System Probed ^{7}Li Stimulated Echo and Spin-Lattice Relaxation NMR Spectroscopy* *Vijayakumar M., $Jianzhi H.

09:20 0875 *Enthalpy of Solution of CO_2 in Aqueous Amine Solutions* $**Arcis H.**, Rodier L., Ballerat-Busserolles K., *Coxam J.-Y.

09:40 Coffee Break

10:00 0876 *Nanoscale Materials: A Second Life for the Li-Ion Battery Technology?* *Larcher D.

10:40 0877 *$^{6/7}$Li and ^{31}P Solid State NMR Studies of the Phosphate Family of Li-Ion Cathode Materials*
Davis L.J.M., Cahill L.S., *Goward G.R.

11:00 0878 *Electrochemical Behavior of a New Type Energy Storage Battery: Ce-V Redox Flow Cell* *Liu Y., $Xia X.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

Organic Chemistry

OR8 ChedokeB-HCC

Organic Synthesis in Canada, Coast to Coast: Past, Present and Future

Organizer(s) - Tomas Hudlicky
Chair(s) - Ian Pottie

08:00 0879 *Discovery of New Reactions Catalyzed by N-Heterocyclic Carbenes* Wang L., Thai K., Sanchez-Larios E., *__Gravel M.__

08:40 0880 *Total Synthesis of Planar Chiral Macrocyclic Natural Products* **Collins S.K.**

09:20 0881 *The Development of a Rhodium(III)-Catalyzed Indole Synthesis via the Direct Coupling of Acetanilides and Internal Alkynes* **Stuart D.R.**, Bertrand-Laperle M., Alsabeh P., Burgess K.M.N., *$Fagnou K.

09:40 Coffee Break

10:00 0882 *New Synthetic Approaches to Organofluorine Compounds* **Paquin J.-F.**

10:40 0883 *Chiral and Thermally Stable Versions of the Burgess Reagent* **Metcalf T.**, Leisch H., Sullivan B., Gilmet J., *$Hudlicky T.

11:00 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

OR9 ChedokeA-HCC

Transition Metals in Synthesis and Catalysis (joint with IN6)

Organizer(s) - Costa Metallinos and James Green
Chair(s) - Russell Viirre

08:00 See IN6

09:00 Merck Frosst Centre for Therapeutic Research Award Lecture presented by Hélène Lebel

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

OR10 AlbionC-HCC

General

Organizer(s) - James McNulty
Chair(s) - Cathleen Crudden

08:00 0884 *Approaches towards the Total Synthesis of Isatisine A* **Karadeolian A.**, $Kerr M.A.

08:20 0885 *Synthesis of Novel Polycyclic Aromatic Hydrocarbons via Palladium-Catalyzed Aryne Cyclotrimerization* *__$Maly K.E.__, Halperin S.D., Lynett P.T., MacKinnon M.R.

08:40 0886 *The Application of [3+2] Dipolar Annulation and Alkylation Reactions Involving Donor-Acceptor 2-Alkoxycyclopropanoate Esters in Total Synthesis* **Bajtos B.**, *Pagenkopf B.L.

09:00 0887 *The Baeyer-Villiger Reaction: Ionic or Neutral?* *__$Mora-Diez N.__, Keller S., Alvarez-Idaboy J.R.

09:20 0888 *Ligand-Free, Copper and Palladium-Catalyzed Direct Functionalization of N-Iminopyridinium Ylides: Facile Access to 2-Vinyl and Pyrazolo-Pyridines* **Mousseau J.J.**, *Fortier A., $Charette A.B.

09:40 Coffee Break

10:00 0889 *An ab initio Investigation of cis-5,6-Disubstituted 1,3-Cyclohexadienes* *__Pye C.C.__, Poirier R.A., Burnell D.J., Klapstein D.

10:20 0890 *Synthesis of 1-Methylphenanthrene Metabolites by Directed Metalation Strategies* Jørgensen K.B., $__Rantanen T.__, *Snieckus V.

10:40 0891 *A Formal [3+3] Annulation of Cyclopropanediesters toward Functionalized exo-Methylenecyclohexanes: Progress toward the Total Synthesis of Tronocarpine* **Sapeta K.**, $Kerr M.A.

11:00 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

Physical, Theoretical and Computational Chemistry

PT4 EBallrm-Sher

Biomolecular NMR (joint with BM2)

Organizer(s) - Giuseppe Melacini
Chair(s) - Giuseppe Melacini

08:20 See BM2

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

PT5 Heritage-Sher

Energy Storage and Conversion (joint with MT3)

Organizer(s) - Gillian Goward and Linda Nazar
Chair(s) - Linda Nazar

08:00 See MT3

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

PT8 AlbionB-HCC

Nanostructured Surfaces - Surfaces of Nanostructures (joint with SS2)

Organizer(s) - Byron Gates and Matthias Geissler
Chair(s) - Byron Gates, Matthias Geissler

08:00 0892 *Facile Ligand Exchange to Obtain Water-Dispersible Upconverting Nanoparticles* $__Boyer J.-C.__, Pichaandi J., *van Veggel F.C.J.

08:20 0893 *Aqueous Solution Dynamics of Acid Functionalized Silicon Nanocrystals* [$]**Clark R.J.**, Dang M.K.M., [*]Veinot J.G.C.

08:40 0894 *Thiophene Chemisorption on Si(111)-7x7: Binding Energies and Site Occupancy* **Weymouth A.J.**, Miwa R.H., Srivastava G.P., [*$]McLean A.B.

09:00 0895 *New Self-Assembled Monolayers (SAMs) on Gold with Nanoscale Structural Control* [*$]**Carmichael T.B.**, San Juan R.R., Mueller J.

09:20 0896 *Molecular Switching in Mixed Azobenzene/Alkylthiol Monolayers: A Theoretical Study* Chapman C., [*$]**Paci I.**

09:40 Coffee Break

10:00 0897 *Bowtie Nano Aperture on Gold Film for Surface Enhanced Raman Spectroscopy* [*]**Rahman M.M.**, [$]Brolo A.G.

10:20 0898 *Probe Specific Surface Enhanced Raman Scattering (SERS) Enhancement in Au:Ag Nanoparticle Alloys* **Fan M.**, [*]Brolo A.G.

10:40 0899 *Tuning Plasmons and SERS Enhancement Factor in Multilayer Metal-Spacer-Silver Nanostructured Film Substrates* McCreery R.L., **Shoute L.C.T.**

11:00 0900 *Biocatalysis by Peroxidase Heterogeneous Nanostructures Based on Mesoporous Material, FSM16* [*$]**Nazari K.**, Haghighian Z., Gholami N., Soleymani-Jamarani M.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

PT11 WBallrm-Sher

Static Electron Correlation

Organizer(s) - Paul Ayers and Marcel Nooijen
Chair(s) - Paul Ayers

08:00 0901 *New Wavefunctions for Strongly Correlated Electrons* [*$]**Chan G.K.L.**

08:40 0902 *DMRG for Spatially Non-Extended Molecules* [*]**Reiher M.**

09:20 0903 *High-Performance Implementations of Density Matrix Renormalization Group and Canonical Transformation Theory* [*$]**Yanai T.**, Kurashige Y., Chan G.K.L., Newscamman E.

09:40 Coffee Break

10:00 0904 *The Reduced Density Matrix Method: Current Status and Open Problems* **Nakata M.**

10:40 0905 *Capturing Static Electron Correlation with Natural Orbital Functionals* [*]**Pernal K.**, Rohr D.R., Gritsenko O.V., Baerends E.J.

11:00 0906 *How Quantum Chemistry Methods Can Be Used to Treat Strongly Correlated Solids without the Burden of Explicit Treatment of Periodic Boundary Conditions* **Zgid D.**, Chan G.K.L.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

Rubber Chemistry

RB1 WebsterL-HCC

Recent Advances in Rubber Technology

Organizer(s) - Richard Pazur and Marvin Myhre
Chair(s) - Richard Pazur, Marvin Myhre

08:00 0907 *Chemical Modification of Elastomers: Influence on Dispersive and Distributive Mixing* **Parent J.S.**

08:40 0908 *Characterizing the Physical Effects of Hyperthermal Hydrogen Bombardment on Butyl Rubber Surfaces* **Crewdson P.**, [*$]Lau W.M., Yang J., Stojcevic G., Nie H-.Y.

09:00 0909 *Tandem Batch Mixing* **McNabb Jr. R.W.**

09:40 Coffee Break

10:00 0910 *Compounding and Processing of TPE and TPV Materials in an Internal Mixer* **McNabb Jr. R.W.**

10:40 0911 *Development of Fluorinated Elastomer (FKM) Based TPV Materials and their Applications* **Park E.H.**

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

Surface Science

SS1 202-HCC

Biological Surfaces and Interfaces (joint with BM1)

Organizer(s) - Christopher Yip
Chair(s) - Christopher Yip

08:00 See BM1

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

SS2 AlbionB-HCC

Nanostructured Surfaces - Surfaces of Nanostructures (joint with PT8)

Organizer(s) - Byron Gates and Matthias Geissler
Chair(s) - Byron Gates, Matthias Geissler

08:00 See PT8

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Russell Boyd in Chedoke C-HCC

Tuesday PM

Science Policy Forum

SP WebsterC-HCC

Science Policy Forum

Organizer(s) - Bruce Lennox
Chair(s) - Bruce Lennox

14:00 End of Session

CIC Chair's Event

CE WebsterC-HCC

CIC Chair's Event

Organizer(s) - David Dolphin
Chair(s) - David Dolphin

14:20 0912 *The Changing Face of Chemical Enterprise* **West B.**

16:00 End of Session

Analytical Chemistry

AN3 CBallrm-Sher

Frontiers of Separation Science

Organizer(s) - Philip Britz-McKibbin and Nicole Baryla
Chair(s) - Karen Waldron

13:20 0913 *Droplets in Chemical Separation* *$**Chiu D.T.**

14:00 0914 *Practical Evaluation of Sub 3 µm Particles for Pharmaceutical Analysis* **Maloney T.D.**

14:20 0915 *A New Liquid Chromatography Tandem Mass Spectrometry Method for the Assessment of Glomerular Filtration Rate Using Iohexol* *Ptolemy A.S., Sullivan P., Law T., Kellogg M.

14:40 0916 *Carbonaceous Phases for Ion Chromatography* *Lucy C.A., Chambers S.D.

15:00 Coffee Break

15:20 0917 *Capillary Electrophoresis of Carbon Nanoparticles* Baker J.S., *$**Colon L.A.**

16:00 0918 *Novel Capillary Column Separations in Subcritical Water Chromatography* **Fogwill M.O.**, *Thurbide K.B.

16:20 0919 *Preparation, Characterization and Ion Exchange Behavior of Silica Polyaniline Composite Ion Exchanger* *Khan A.M., Nabi S.A.

16:40 End of Session

AN4 SBallrm-Sher

Metal Speciation in the Environment (joint with EN4)

Organizer(s) - Ian Brindle
Chair(s) - Ian Brindle

13:20 0920 *Arsenic Speciation Analysis by High Performance Liquid Chromatography/Inductively Coupled Plasma Mass Spectrometry* **Chen L.**, *Lu X., $Le X.C.

13:40 0921 *Detection of Inorganic Arsenic and its Metabolites in Biological and Environmental Samples Using HPLC-ESI-MS* $**McKnight-Whitford A.N.**, *Le X.C.

14:00 0922 *Arsenic Speciation in the Freshwater Environment* *Cullen W.R., Lai V.W.-M., Kanaki K., Pergantis S.A., Reimer K.J.

14:40 0923 *Arsenic Speciation in a Uranium Mill Tailings Management Facility Determined by X-Ray Absorption Near-Edge Structure (XANES) Spectroscopy* **Cutler J.N.**, *Warner J.A., $Rowson J.

15:00 Coffee Break

15:20 0924 *Surface Speciation of p-Arsanilic Acid on Model Inorganic Soil Components Studied by ATR-FTIR* *$**Al-Abadleh H.A.**, Hoang T., Chabot M.

15:40 0925 *Characterization of the Natural Organic Matter (NOM) in Urban- and Nuclear-Waste Impacted Waters Using Fluorescence* *$**Caron F.**, Smith D.S., Scott A., Smith S.

16:00 0926 *Kinetic Study of Metal Binding in Diffusive Gradients in Thin films (DGT) Using Competitive Ligand Exchange Method (CLEM)* **Zhao J.**, Murimboh J., Boca S., *Chakrabarti C., Li C., Cornett J.

16:20 End of Session

ANP WentABC-HCC

Posters

Organizer(s) - Philip Britz-McKibbin
Chair(s) - Philip Britz-McKibbin

From **17:00** until **19:00**

0927 *Rapid Quantification of Caffeine and Theobromine in Multiple Human Biofluids via UPLC-MS/MS* *Ptolemy A.S., Tzioumis E., Thomke A., Rifai S., Kellogg M.

0928 *Label-Free Assay for Thermodynamic Analysis of Protein-Ligand Interactions: A Multivariate Strategy for Allosteric Ligand Screening* **Gavina J.M.A.**, *$Britz-McKibbin P., Mazhab-Jafari M.T., Melacini G.

0929 *Integrative Strategy for Biomarker Discovery in Metabolomics by Capillary Electrophoresis-Electrospray Ionization-Mass Spectrometry* **Janson N.**, *$Britz-McKibbin P.

0930 *Label-Free Analysis of Thyroid Hormones for Prognosis of Congential Hypothryoidism by Micellar Electrokinetic Chromatography* **D'Agostino L.A.**, *Britz-McKibbin P.

0931 *In-Capillary Protein Derivatization: Methyl Esterification Phosphopeptides* **St. Pierre A.N.**, *Yeung K.K.-C.

0932 *Thermodynamic Study of Structure-Retention Relationships in Gas Chromatography* **Karolat B.**, *$Harynuk J.J., McGinitie T.

0933 *A Chip-Based Proteolytic Reactor for ESI-MS Analysis* **Rob T.**, *Liuni P., $Wilson D.J.

0934 *Analysis of [^{11}C]Raclopride Synthesis on Two Microfluidic Devices* **Haroun S.**, Jivan S., Ruth T.J., $Li P.

0935 *Can UV Resonance Raman Spectroscopy Provide Fast Detection of Bisphenol A Contamination?* **Galway G.**, *$Anatoli I.

0936 *Radiation-Induced Reactions of Nitrogen-Containing Species* **Yakabuskie P.**, Joseph J.M., Ball J.M., Stuart C., *Wren J.C.

0937 *Chemical Analysis of Pyrolysis Bio-Oils for Pesticide Activity* **Booker C.J.**, Bedmutha R., Harden P., Scott I.M., Conn K.L., Berruti F., Briens C., *Yeung K.K.-C.

0938 *A Method for the Direct and Simultaneous Spectrophotometric Determination of Zinc and Cobalt Ions in Metalloproteins Using 4-(2-Pyridylazo)resorcinol* **Säbel C.E.**, *Siemann S.

0939 *Assisted Transfer of Dioxouranium Ions by 2-Acetylpyridine-4-phenyl-3-thiosemicarbazone Liquid/Liquid Micro-Interfaces* **Stockmann T.J.**, Lanjwani S.N., Benvid A., $Ding Z.

0940 *Sampling and Determination of Transition Metals in Iron Gall Ink* *$**Goltz D.M.**, Chin J.

0941 *Formation of Distonic Ion of Prodigiosin in Electrospray: Is Distonic Carbon Centered Radical Ion Responsible for Prodigiosin's Biological Properties?* *Baker M., Manderville R.A., $Gabryelski W.

0942 *Structure Analysis of the $C_2H_2N_2$ Family of Cations and their Neutral Counterparts Using Mass Spectrometry and Model Chemistry Calculations* **Hanifa M.R.**, *Jobst K.J., $Terlouw J.K.

0943 *A Polymer to Detect Explosives: Towards an Effective Sensor Material* **Katic S.**, *$Evans C.H.

0944 *Pressurized Solvent Extraction of Low Concentration PCB Congeners from Small Volumes of Avian Blood Using Modified Extraction Vessels* $**Haskins S.D.**, *Kelly D.G., Weir R.D.

0945 *Determination of Phosphoamino Acids by Capillary Electrophoresis Coupled with Laser Induced Fluorescence Detection Using a New Fluorescent Reagent for Pre-Column Derivatization* *$**Zhang H.**, Fu N., Guo Y., Zhang Z., Hong W.

0946 *A Novel Fluorescent Derivatizing Reagent and its Application for Simultaneous Determination of Thiols in Physiological Fluids by HPLC* *$**Zhang H.**, Guo X., Guo Y., Zhang Z., Hong W.

0947 *RNA Structure-Switching Signaling Aptamers* **Lau P.**, *$Li Y.

0948 *Direct Electrochemical Detection of Prostate Cancer-Related Gene Fusions* **Fang Z.**, Soleymani L., $Sargent E.H., *Kelley S.O.

0949 *Electrochemical Detection of Chemical Warfare Agent Mimics* **Xiao Y.**, Milne M., Petryk M., *Kraatz H.-B.

0950 *Probing the Dynamics of HSA Entrapped in Sol-Gel Derived Silica Glass Using Fluorescence Anisotropy Methods* **Eleftheriou N.M.**, $Brennan J.D.

0951 *Functional Sol-Gel-Derived Protein Microarrays for Inhibitor Screening* **Lebert J.M.**, *Brennan J.D.

0952 *Immobilization of Functional DNA Aptamers onto Sol-Gel Derived Silica for Solid-Phase Biomolecular Detection* **Carrasquilla C.**, Li Y., *Brennan J.D.

0953 *Interaction of Metal Ions and DNA Films on Gold Surfaces: An Electrochemical Impedance Study* **Bin X.**, *$Kraatz H.-B.

0954 *Development of Hybrid Super Luminescent Nanoparticles as Optical Probes in Cell Imaging* **Rioux M.**, *Lessard-Viger M., $Boudreau D.

0955 *Using Magnetic Nanoparticles to Screen Small Molecule Mixtures for the Disruption of Protein-Protein Interactions* **McFadden M.J.**, Junop M.S., *Brennan J.D.

0956 *Single-Nucleotide Mismatches Detection Using an Electrode Microchip* **Shamsi M.H.**, *$Kraatz H.-B.

0957 *Synthesis of Ferrocene-ATP Conjugates for the Electrochemical Detection of Kinase-Catalysed Phosphorylation* **Bondy-Davidson C.R.**, Song H., *Kraatz H.-B.

0958 *Connecting Dynamic Changes in Biomolecular Structure with Function Using Dual Polarization Interferometry* **Gostock M.S.**

0959 *Towards the Synthesis of uPA Inhibitors as Molecular Imaging Agents* *$**Albu S.A.**, Capretta A., Valliant J.F.

0960 *Strategies for Using Gold Nanoparticles to Detect E. coli on Silica Surfaces Modified with Bacteriophage* **Vanderkooy A.**, *Brook M.A.

0961 *Radiolabeling Proteins and Hormones. The Preparation and Characterization of Radiolabeled and Fluorescent Insulin Probes* **Sundararajan C.**, Besanger T.R., Valliant J.F.

0962 *Supported Lipid Bilayers for Biosensor Development: The Bolalipid-POPC System* **Mulligan K.M.**, Carnini A., Holland D., Thompson D., Johnston L.J.

0963 *Detecting Differential Regulation within Operons Using a Two-Colour Fluorescent Reporter* **Kuryllo K.**, *$Li Y.

0964 *Surface Functionalization of Multi-Walled Carbon Nanotubes and their Application as Novel Materials for Solid Phase Extraction of Different Persistence Organic Pollutants from Freshwater Samples* ***Abdel Salam M.**, $Burk R.

Biological & Medicinal Chemistry

BM2 EBallrm-Sher

Biomolecular NMR (joint with PT4)

Organizer(s) - Giuseppe Melacini
Chair(s) - Giuseppe Melacini

13:20 0965 *Structural Studies of Intrinsically Disordered Proteins and their Interactions with Targets* Mokhtarzada S., Khan H., Brickenden A., **Choy W.Y.**

14:00 0966 *Structural and Functional Characterization of the Intrinsically-Disordered Dehydrin Proteins* ***$Graether S.P.**, Livernois A.M., Hnatchuk D.J., Findlater E.E.

14:40 0967 *Towards Using Pressure as a Means of Effecting H_2O Back-Exchange in Proteins* **Al-Abdul-Wahid M.S.**, $Prosser R.S.

15:00 Coffee Break

15:20 0968 *Structural Elucidation of Thuricin, a Two-Component Antimicrobial Peptide* **Sit C.**, *$Vederas J.C., Rea M.C., O'Connor P.M., Ross R.P., Hill C.

15:40 0969 *Probing the Inhibition of Amyloid Formation Using ^1H NMR Spectroscopy* **Milojevic J.**, *$Melacini G.

16:00 0970 *Structure, Dynamics and Function of the Calcium-Sensing Region of Stromal Interaction Molecule-1 (STIM1)* ***Stathopulos P.B.**, Zheng L., Li G.-Y., $Ikura M.

16:40 End of Session

BMP WentABC-HCC

Posters

Organizer(s) - Yingfu Li
Chair(s) - Yingfu Li

From **17:00** until **19:00**

0971 *Multiplex SERS microscopy Using Differentially Functionalized Silver Nanoparticles for Imaging Cardiac Myocytes* **Hoop K.A.**, Kennedy D.C., Tay L., *$Pezacki J.P.

0972 *Partial Conformation and Phase Transition in Poly(Ethylene Glycol)-Grafted Phospholipid Monolayers Spread on Phosphate Buffered Saline* **Shahid N.**, *$Tsoukanova V.

0973 *Synthesis and Characterization of Fluorescent Nanoparticles* **Abdul M.M.**, Gardiner R.B., Wang D., *Zhang J.

0974 *Ordered Nano-Scale Pattern Formation on Biomedical Alloy (Ti-6Al-4V) via Electropolishing* **Wang Y.**, *$Kruse P.

0975 *Stability of Functionalized SiO_2 Nanoparticles in Simulated Blood Plasma and Pig Blood* **Cooper A.M.**, Wright V.A., Daly B., Meloncelli P.J., Mylvaganam J., Buriak J.M., Lowary T.L., West L.J.

0976 *Lateral Distribution of a PEG-Grafted Phospholipid and Condensed Phase Formation in Phosphocholine Monolayers* **Tanwir K.**, *$Tsoukanova V.

0977 *Surface Induced Denaturation of Fibronectin* **Shi W.**, *Walker G.C., Li I.

0978 *Signature of Hydrophobic Polymer Collapse in Water* ***Li I.T.S.**, Gunari N., $Walker G.C.

0979 *Self Assembled Artificial Phospholipid Bilayers on Gold Nano-Hole Arrays for Biosensing* ***Ip S.**, $Walker G.C.

0980 *Isolation of Butyrylcholinesterase and Acetylcholinesterase from Human Brain Tissues and Determination of their Inhibition Characteristics by Alzheimer's Drugs* ***$Darvesh S.**, Reid G.A., Martin E.

0981 *Influence of Chemical Denaturants on the Activity, Folding and Metal Ion Accessibility of Anthrax Lethal Factor* **Säbel C.E.**, Carbone R., *Siemann S.

0982 *Insight on Important Proteins in the Pactamycin Biosynthetic Pathway, PctE and PctP* **McSorley F.R.**, $Zechel D.L.

0983 *Studies of the Full-Length and Δ81 Variant of the Bifunctional Chorismate Mutase-Prephenate Dehydrogenase (CM-PD) from Haemophilus influenzae* **Quashie P.K.**, $Turnbull J.

0984 *Active Site Studies of a Thermophile Dehydrogenase* **Hotz N.**, $Turnbull J.

0985 *Horseradish Peroxidase in Water Remediation: Purification, Characterization and Removal of Toxic Aromatics in Raw Drinking and Waste Waters* ***$D'Cunha G.B.**, Spencer C.A., Burke A.A, Bussey-Williams J.

0986 *Tyrosine-Insensitive Mutants of Escherichia coli Chorismate Mutase-Prephenate Dehydrogenase* **Hassounah S.**, Quashie P.K., McManus F., $Turnbull J.

0987 *Development of a Novel Class of Inhibitor against α-Carboxyketose Synthases* **Balachandran N.**, $Berti P.J.

0988 *A Mechanistic Study of the DNA Repair Enzyme MutY* **Changalov M.M.**, $Berti P.J.

0989 *Inhibition of Myeloperoxidase Activity by Tryptophan Derivatives* ***Sliskovic I.**, Sharma M., Abdulhamid I., $Abu-Soud H.

0990 *Biochemical Characterization of the Bacillus subtilis 168 Wall Teichoic Acid Polymerase TagF* **Sewell E.W.C.**, Pereira M.P., *$Brown E.D.

0991 *Investigating RebC-Mediated Chemoselective Oxidation During Rebeccamycin Biosynthesis* *$**Groom K.A.**, Snieckus V., Zechel D.L.

0992 *Mechanistic Investigation of CmlS, a Flavin Dependent Halogenase* **Latimer R.**, $Zechel D.L.

0993 *Recognition and Repair of Alkylated DNA Duplexes by O^6-Alkylguanine-DNA-alkyltransferase* **Schoonhoven N.M.**, Wilds C.J., Kornblatt M.J.

0994 *Dimeric vs Octameric Enolases: The Role of H4-S4 Loop in Determining Quaternary Structure* **Quiros V.P.**, Kornblatt M.J.

0995 *Harnessing Mitochondria-Penetrating Peptides for Delivery of Nucleic Acids and Mitotoxic Compounds* **Fonseca S.B.**, Pereira M.P., *$Kelley S.O.

0996 *Engineering Peptides Based on P160 and NGR Sequences as Cancer Targeting Agents* **Ahmed S.**, *$Kaur K.

0997 *Characterization of the IbsC Toxin in Escherichia coli* **Mok W.W.K.**, *$Li Y.

0998 *Identification of gcd, a Lethal Peptide Derived from the Non-Toxic Protein Glucose Dehydrogenase in Escherichia coli* **Sawchyn B.L.**, $Li Y.

0999 *The bZIP Proteins Achieve DNA Binding by Delocalizing their Basic Regions at the ProteinDNA Interface* **Chan I-S.**, *Al-Sarraj T., $Shin J.A.

1000 *Design and Synthesis of Highly Effective Peptidomimetic Inhibitors of STAT3* **Shahani V.M.**, Fletcher S., Turkson J., *$Gunning P.T.

1001 *In vivo Directed Evolution and Engineering of Protein-DNA Interactions* **De Jong A.T.**, $Shin J.A.

1002 *The Heterodimeric bHLHZ-Like AhRJunD/ArntFos Complex Targets the XRE DNA Site in a Modified Yeast One-Hybrid System* **Chen G.**, De Jong A.T., *Shin J.A.

1003 *The Role of Fluorous Soluble Support in Preparing Molecular Imaging and Therapeutic Agents* **Dzandzi J.P.**, Donovan A., Sundararajan C., *$Valliant J.F.

1004 *Design and Characterization of Mitochondria-Penetrating Peptides* **Stewart K.M.**, *Horton K.L., $Kelley S.O.

1005 *Mitochondria-Penetrating Peptides: Sequence Effects and Cargo Transport* **Yousif L.**, $Kelley S.O.

1006 *The Disruption of Stat3 Dimer Using Rationally Designed Homo-dinuclear Cu^{2+} Complexes* **Drewry J.A.**, Turkson J., *$Gunning P.T.

1007 *Synthetic Analogues of a Known Protease Inhibitor Used in Developing Molecular Imaging Agents for Cathepsin B* **Edem P.E.**, Valliant J.F.

1008 *Investigation of Protein-DNA Complex Formation on Mica Using Atomic Force Microscopy* **Ore M.**, Belcheva A., Golemi-Kotra D., Morin S.

1009 *Synthesis of a Small Family of Novel Unnatural Amino Acids* **Legault M.C.B.**, *$Pezacki J.P.

1010 *Understanding the Inhibition of the Alzheimer's Aβ Peptide Oligomerization by Transferrin Using NMR Spectroscopy* **Raditsis A.V.**, $Melacini G.

1011 *Visualizing Copper Localization in the Murine Brain at Differing Prion Protein Expression Levels* **Pushie M.J.**, Jirik F.R., Tsutsui S., Pickering I.J., *$George G.N.

1012 *Is Copper Binding to the Prion Protein Linked with the Pathogenesis of Certain Prion Diseases?* **Pushie M.J.**, Jirik F.R., Rauk A., *$Vogel H.J.

1013 *A Theoretical Investigation on the Possible Mechanism of URODD* **Bushnell E.**, Erdtman E., Llano J., Eriksson L., Gauld J.W.

1014 *Development of a High-Throughput Assay to Identify L-Glutamine: D-Fructose-6-phopshate Amidotransferase Inhibitors* **Walter L.A.**, Werstuck G.H., *$Capretta A.

1015 *Design, Synthesis and Biological Evaluation of C_2-Symmetric Testosterone Dimers as Potential Antiandrogens for the Treatment of Prostate Cancer* **Hanna R.**, Bastien D., Leblanc V., Descôteaux C., Asselin É., *$Bérubé G.

1016 *Synthesis and Magnetic Properties of PEG-Modified Eu^{3+} DOTAM-Gly-L-Phe-OH: A New PARACEST MRI Contrast Agent* *$**Suchy M.**, Li A.X., Bartha R., $Hudson R.H.E.

1017 *DOTA-Based Heterometallic Lanthanide(III) Complexes: A Preliminary Synthetic Study* *$**Suchy M.**, Li A.X., Bartha R., $Hudson R.H.E.

1018 *Synthesis and Study on Chronic Pain of 1-Tetralone Derivative of Phencyclidine by the Formalin Test* *$**Ahmadi A.**, Khalili M., Mihandoust F., Barghi L.

1019 *Synthesis and Study on Analgesic Effects of Two New Phencyclidine Derivatives* *$**Ahmadi A.**, Khalili M., Javadi M., Abbassi S., Mahmoudi A., Hajikhani R.

1020 *Synthesis and Study on Acute Thermal Pain of (1-[1-(3-methoxylphenyl)(tetralyl)]piperidine) as a Derivative of Phencyclidine by Tail Immersion Test* *$**Ahmadi A.**, Khalili M., Barghi L., Mihandoust F.

1021 *Mechanism-Based Suicide-Peroxide Inactivation of Peroxidases: Kinetic Analysis and Practical Procedures to Protect Biocatalyst* [*$]**Nazari K.**, Mahmoudi A.

1022 *Biocatalytic Polymerization of Phenolic Compounds in Micellar Media Using Peroxidase Enzyme* [$]**Safari A.N.**, [*]Nazari K., Adhami F., Salmani S.

1023 *Gallidermin-Siderophore Conjugates: Antimicrobial Agents against Gram Negative Bacteria* **Yoganathan S.**, Martin-Visscher L.A., Dong V., Pattabiraman V.R., Cobb S.L., Sit C., [*$]Vederas J.C.

1024 *Investigating Bacterial Lipoprotein Targeting as the Mechanism of Action for a Lead Series of Synthetic Small Molecules* **Barker C.**, Pathania R., Das R., Allison S., Melacini G., Capretta A., [*$]Brown E.D.

1025 *Sol-Gel Derived 3D Reporter Gene Cell Microarrays* **Eleftheriou N.M.**, [*]Ge X., [$]Brennan J.D.

1026 *The Seattle Structural Genomics Center for Infectious Disease: The Role of NMR in Solving the Structure of Proteins that Fail to Crystallize* [*$]**Buchko G.W.**, Varani G., Leeper T.C, Napuli A.J., Hewitt S.N., Phan I., van Voorhis W.C., Staker B.L., Myler P.J., Stewart L.J.

1027 *Elucidating the Mechanism of Action of Novel Antibacterial Molecules through Chemical-Chemical Interaction Profiling with Known Bioactives* **Farha M.A**, [*$]Brown E.D

1028 *A Chemical-Genomic Approach towards Understanding Biosynthetic Pathways in Escherichia coli* **Zlitni S.**, [*$]Brown E.D.

1029 *Genome Guided Discovery of Pyrazinone containing Cyclic Peptides from Methicillin Resistant Staphylococcus aureus* **Wyatt A.M.**, Wang W., [*$]Magarvey N.A.

1030 *The Synthesis and Biological Analysis of Maleimide and Related Lactam Based Inhibitors on Glycogen Synthase Kinase 3 (GSK-3)* [$]**Gerritsma D.A.**, Brennan J.D., Werstuck G.H., [*]Capretta A.

1031 *Identification of a Putative Lysophosphatidic Acyl Transferase (PlsC) in Sinorhizobium meliloti Using Shotgun Lipidomics* **Saborido Basconcillo L.**, Zaheer R., Finan T.M., McCarry B.E.

1032 *Chemically Modified siRNA: Combining 2'F Nucleoside Analogues to Enhance the Therapeutic Potential of Oligonucleotides* **Deleavey G.F.**, Watts J.K., Robert F., Pelletier J., Alain T., Sonenberg N., [$]Damha M.J.

1033 *Towards an Aptamer for Fumonisin B_1* **McKeague M.**, DeRosa M.C.

1034 *Structure Probing of Thymine Dimer Repairing DNAzyme, UV1C, Using a Novel Phosphorothioate Crosslinking Technique* [*]**Sekhon G.**, [$]Sen D.

1035 *Structure and Stability of 8-Aryl-2'-Deoxyguanosine Adducts* **Millen A.L.**, Navarro-Whyte L., Schlitt K.M., Manderville R.A., [*]Wetmore S.D.

1036 *A Structural Study of a DNA Enzyme with Peroxidase Activity* **Poon L.C.H.**, [*]Sen D.

1037 *Study on Charge Transfer in Different Duplex/G-Quadruplex DNA Assembled Structures* **Huang Y.C.**, [*$]Sen D.

1038 *A Deoxyribozyme with a Novel Guanine Quadruplex/Helix Pseudoknot Structure* [*]**McManus S.A.**, [$]Li Y.

1039 *C8-Heterocyclic-2'-Deoxyguanosine Adducts as Fluorescent Probes* **Schlitt K.M.**, [*$]Manderville R.A.

1040 *Biomimetic Aminoacylation of Ribonucleosides, Nucleotides and RNA: Determining the Effect of Amino Protection on Aminoacylating Reagents* **Andrusiak T.L.**, Her S., [*]Kluger R.

1041 *Synthesis and Characterization of O^6-2'-Deoxyguanosine-alkyl-O^6-2'-deoxyguanosine -GNC- Motif Cross-Links* **McManus F.P.**, Booth J.D., Noronha A.M., [*$]Wilds C.J.

1042 *Nucleobase Azo Compounds as Analogs of DABCYL: New Fluorescence Quenchers* **Moustafa M.A.**, [*]Hudson R.H.E.

1043 *Fast Deprotection of Synthetic Oligodeoxyribonucleotides Using Standard Reagents under Microwave Irradiation* [*$]**Culf A.S.**, Cuperlovic-Culf M., Tardiff B.J., LaFlamme M., Ouellette R.J.

1044 *Chemical Exchange in Novel Spirobicyclic Zwitterionic Janovsky Complexes Using Dynamic ^{1}H NMR Spectroscopy* [*$]**Culf A.S.**, Cuperlovic-Culf M., Ouellette R.J.

1045 *Polymeric and Polymer-Ligated Spirobicyclic Zwitterionic Janovsky Complexes* [*$]**Culf A.S.**, Werner-Zwanziger U., Robertson K.N., Chen B., Cuperlovic-Culf M., Ouellette R.J., Barnett D.A.

1046 *New Strategies to Modify the Backbone of RNAs* **Efthymiou T.E.**, [$]Desaulniers J.-P.

1047 *Synthesis of a Dimeric Lewis X Hexasaccharide Anaolgue* [$]**Hendel J.L**, [*]Auzanneau F.-I.

1048 *Controlling Stereoselectivity Using Protecting Group-Free Glycosidation* **Paul C.E.**, [$]Nitz M.

1049 *ICP-MS-Based Multiplex Profiling of Glycoproteins Using Lectins Conjugated to Lanthanide-Chelating Polymers* **Leipold M.D.**, Herrera I., Ornatsky O., Baranov V., Nitz M.

1050 *Functional Glycomics of Clostridium difficile* **Reid C.W.**, Vinogradov E., Jarrell H., [*$]Logan S.M.

1051 *The Synthesis of LeA-lacNAc and LeX-LacNAc Pentasaccharides as Ligands for Clostridium difficile TCDA Toxin* **Zhang P.**, Ng K., [$]Ling C.-C.

1052 *Design, Synthesis and Testing of a Highly Potent and Selective Inhibitor of O-GlcNAcase that Modulates Tau Phosphorylation.* **Heinonen J.E.**, Yuzwa S.A., Macauley M.S., Shan X., Dennis R.J., He Y., Whitworth G.E., Stubbs K.A., McEachern E.J., Davies G.J., *$Vocadlo D.J.

1053 *α(2,8)-Sialylations Using α-Thiosialosides as Substrates* **Li W.L.**, *$Ling C.-C.

1054 *New Developments in Cyclodextrin Chemistry Leading to Novel Architectures* **Rawal G.**, *$Ling C.-C.

1055 *Regioselective Glycosylation Mediated by Directing/Protecting Groups* **Lawandi J.**, *Moitessier N.

1056 *Synthesis of a Glycolipid Analogue as a Tool of Cell Membranes Study* $**Guillemineau M**, *Auzanneau F.-I.

1057 *Structure Proof and Synthesis of Kotalanol and De-O-sulfonated Kotalanol, Glycosidase Inhibitors Isolated from an Herbal Remedy for the Treatment of Type-2 Diabetes* **Kumarasamy J.**, Mohan S., *Pinto B.M.

1058 *Solution Behaviours of Dimeric Lewis^X, Lewis^A-Lewis^X and Related Oligosaccharide Fragments* **Jackson T.A.**, Auzanneau F.-I.

1059 *Positron Emission Tomography for Monitoring the Biodistribution of Mannose-Terminated Glucocerebrosidase, the Therapeutic Protein used for Treatment of Gaucher Disease* **Phenix C.P.**, Rempel B.P., Adam M.J., $Withers S.G.

Chemical Education

CE5 AlbionA-HCC

Technological Tools for Learning and Teaching Chemistry

Organizer(s) - Noel George and Peter Mahaffy
Chair(s) - Noel George, Peter Mahaffy

13:20 1060 *Avoiding the 'Cult of the Single Molecule': Molecular Dynamics Simulations in Chemistry Education* **Schnitker J.**, *Mahaffy P.G.

14:00 1061 *The Benefits and Drawbacks of Electronic Homework Platforms* **George N.A.**

14:20 1062 *From Stubborn Skeptic to Surprised Fan: My Experience with the MasteringChemistry^{tm} Online Homework System* *$**Darvesh K.V.**

14:40 1063 *Development of Learning Tools for In-Class and Online Versions of the University of Manitoba CHEM 0900 Preparatory Chemistry Course* *$**Gauvin F.**, Luterbach B.M., McLean C.

15:00 Coffee Break

15:20 1064 *The Integration of Different Types of Technology to Assess and Enhance Student Learning in Large Organic Chemistry Classes* *__Flynn A.B.__

15:40 1065 *Tools of Engagement: Perspectives on Clicker Use in 1st Year Chemistry Courses* *$**McWilliams A.R.**, George N.A.

16:00 1066 *Flex(time), Cries and Videotape: Are Recorded Exam Review Sessions a Good Idea?* *$**Miller T.A.**, Smith M.B.

16:20 1067 *UBCMol: A User-Friendly Student Tool for Exploration and Visualization of Protein and Molecular Structure* *$**McNeil W.S.**, Shipley P.R.

16:40 1068 *Hands-On Workshop on Molecular Modeling: Teaching More Effectively with Modern Simulation Software* *__Schnitker J.__

17:40 End of Session

CEP WentABC-HCC

Posters

Organizer(s) - Pippa Lock
Chair(s) - Pippa Lock

From **17:00** until **19:00**

1069 *Learning and Teaching Chemistry without Frontiers* **Olifirenko I.**

1070 *eBook: Physical Chemistry by Laidler, Meiser and Sanctuary* *$**Sanctuary B.C.**, Meiser J.

Environmental Chemistry

EN1 202-HCC

Atmospheric Chemistry

Organizer(s) - Robert McLaren
Chair(s) - Robert McLaren

Emerging Trends

13:20 1071 *Chemistry at Atmospheric Interfaces* *$**Ariya P.A.**, Raofie F., Kos G., Hudson E.D., Snider G., Lin S., Guerette E.-A., Kathasami V., Mortazavi R.

14:00 1072 *Heterogeneous Reactions of NO_3 and N_2O_5 with a Range of Organic Substrates* Gross S., Knopf D.A., Mak J., Iannone R., **Bertram A.K.**

14:40 1073 *Laboratory Studies of the Uptake of Ambient Gas Mixtures to Acidic Sulfate: Implications for Secondary Organic Aerosol* *$**Liggio J.**, Li S.-M.

15:00 Coffee Break

15:20 1074 *Compound Specific Stable Isotope Ratio Measurements of Volatile Organic Compounds in the Atmosphere: Recent Progress and Trends* *$**Rudolph J.**

16:00 1075 *Quantifying the Impact of Nitrogen Oxide Emission Reductions on Secondary Pollutants* *$**Murphy J.G.**

16:20 1076 *Observation of a Major Biogenic Aerosol Growth Event: Aerosol Hygroscopicity, Photochemical Activity, Comparison to Model Predictions* $**Abbatt J.P.D.**, Chang R.Y.-W., Leaitch W.R., Shantz N., Sjostedt S.J., Slowik J.G., Stroud C., Vlasenko A., Xia A.

16:40 1077 *The Kinetics of the Reactions of Br with some Cyclic Ethers* *$**Roscoe J.M.**, Giri B.R.

17:00 End of Session

EN4 SBallrm-Sher

Metal Speciation in the Environment (joint with AN4)

Organizer(s) - Ian Brindle
Chair(s) - Ian Brindle

13:20 **See AN4**

16:40 End of Session

ENP WentABC-HCC

Posters

Organizer(s) - Chris Marvin
Chair(s) - Chris Marvin

From **17:00** until **19:00**

1078 *Adsorption of Chlorophenol from Aqueous Solution by Multi-Walled Carbon Nanotubes: Kinetic and Thermodynamic Studies* *$**Abdel Salam M.**, Mokhtar M., Basahel S.

1079 *Computational Studies of Structural, Electronic and Spectroscopic Properties and Stability of Methylmercury-Amino Acid Complexes and their Se Analogues* $**Asaduzzaman A.**, Khan M., Wang F., *Schreckenbach G.

1080 *Determining Sulfonamide Antibiotics in Water and Sediments* **Toito J.M.**, *$Balakrishnan V.K., Exall K.

1081 *The Effect of Ammonium-Nitrate-Sulphate Gas/Particle Partitioning on the Agreement between Observations and Predictions of Aerosol Composition in Southwestern Ontario* ***Markovic M.**, Murphy J.G., Abbatt J.P.D., Makar P.A., Hayden K.L., Brook J.

1082 *Chemical and Meteorological Controls on the Gas/Particle Partitioning of Ammonia* ***Ellis R.**, Murphy J.G., Abbatt J.P.D., Evans G., Mihele C., Brook J.

1083 *Concurrent Quantification of 17 Trace Carbonyl Compounds in Seawater by Derivatization and Solid-Phase Microextraction (SPME)* **Hudson E.D.**, Ariya P.A.

1084 *Ozonolysis Reactions in Organic Monolayers* *$**DeWolf C.E.**, González-Labrada E.

1085 *Experimental Studies of the Oxidation of Gaseous Elemental Mercury by Bromine Radicals* **Guerette E.-A.**, *$Ariya P.A.

1086 *VOCs and SVOCs Reduction by Nanomaterials and Photolysis* **Eltouny N.**, Ariya P.A.

1087 *Determination of Formaldehyde in Ambient Air Using Solid Phase Micro Extraction (SPME)* **Kanthasamy V.**, $Ariya P.A.

1088 *Investigation of the Role of Ox Partitioning and Particle Load on Nocturnal Ox Loss* ***Geddes J.A.**, Murphy J.G.

1089 *Determination of Reduced Sulphur Compounds in Water by High-Performance Liquid Chromatography of N,N-Diethyl-p-phenylenediamine Derivatives* $**Kariuki S.**, Vadnais D., Babady R.

1090 *Atmospheric Deposition of Metals in Toronto, Canada* Zhang L., Liao P., **Zhang X.**, *Lu J.

1091 *Evaluation of RGM Source Using KCl-Coated Denuder-Based Methods* **Huang Y.**, Zhao W., *Lu J.

1092 *Identification of Mercury Sources in Toronto, Canada Using Receptor Modeling* **Cheng I.**, *$Lu J., Song X.

1093 *DRIFTS Studies on the Role of Nitrite in the Photochemical transformation of Tannic Acid as a Model for HULIS in Atmospheric Aerosols* **Cowen S.**, *$Al-Abadleh H.A.

1094 *Photo-Reduction of Oxidized Mercury Species by Selected Thiols and its Environmental Implications* **Si L.**, *Ariya P.A.

1095 *A Calibrated Source of Peroxyacyl Nitrates* **Furgeson A.**, Paul D., *Osthoff H.D.

1096 *Measurements of Total Alkyl and Peroxy Nitrate Abundance by Thermal Dissociation Cavity Ring-Down Spectroscopy (TD-CRDS)* Paul D., **Furgeson A.**, *Osthoff H.D.

1097 *Stable Carbon Isotope Composition Measurements of Volatile Organic Compounds and their Non-Volatile Products* ***Kornilova A.**, Moukhtar S., Huang L., Rudolph J.

1098 *Compound Specific Concentration and Stable Isotope Ratio Measurements of Atmospheric Particulate Organic Matter and Gas Phase Nitrophenols* $**Saccon M.**, *Busca R., Moukhtar S., Rudolph J.

1099 *Some Effects of the Great Lakes on Ground-Level Atmospheric Ozone Chemistry in Southern Ontario* **Dempsey F.**

1100 *Pesticides in Surface Waters of Ontario* **Struger J.**, Sverko E., Cagampan S., Grabuski J., Marvin C.H.

1101 *The Pathway of Dechlorination of PCB Congeners by a Photochemical Chain Process in 2-Propanol: The Role of Medium and Quenching* **Izadifard M.**, *Langford C.H., Achari G.

Industrial Chemistry

IC4 203-HCC

Nanotechnology

Organizer(s) - Guerino Sacripante and Rina Carlini
Chair(s) - Guerino Sacripante and Rina Carlini

13:20 1102 *Materials Design for Printed Electronics* ***Wu Y.**

Xerox Research Centre of Canada

14:00 1103 *Novel Hyperbranched Polysaccharide Nanoparticles (NanoPS) as the Basis for a Platform Technology with Applications in a Variety of Industrial and Biomedical Sectors* [*]**Stukalov O.**, Korenevski A., Papp-Szabo E., Dutcher J.R.

Mirexus Biotechnologies Inc.

14:40 1104 *Some of the Science Behind a Black Art: Impregnation of Activated Carbon for Respiratory Protection Applications* Westreich P., Fortier H., Smith J.W.H., Dahn J.R., **Croll L.M.**

3M Canada

15:00 Coffee Break

15:20 1105 *A New Metal Finishing Pretreatment: Waterborne Silane-Based Conversion Coating* **McLeod I.B.**, Ferguson W.D.

Vanchem Performance Chemicals

16:00 1106 *Collapsed Polyelectrolyte Nanoreactors to Produce Ultrasmall, High-Function Nanoparticles* **Anderson D.J.**, Dinglasan J., Goh J.B., Veletanlic E., Goh M.C.

Vive Nano

16:40 1107 *Applications and Challenges for Nanotechnology in the Food Industry* **Magnuson B.**

Cantox Health Sciences International

17:00 End of Session

Inorganic Chemistry

IN1 ChedokeC-HCC

Main Group Chemistry

Organizer(s) - Charles Macdonald and Kathryn Preuss
Chair(s) - Paul Ragogna

13:20 1108 *Carbenes Activation of P_4* [*]**Bertrand G.**

14:00 1109 *Strained Cationic Phosphorus Heterocycles from Phosphaalkenes* **Bates J.I.**, [$]Gates D.P.

14:20 1110 *catena-Phosphinophosphonium Cations* **Burford N.**, Burford R.J., Carpenter Y.Y., Conrad E., Dyker C.A., Knackstedt D., Riegel S.D., Robinson T., Weigand J.J., Whoriskey M.

14:40 1111 *The Reactivity of White Phosphorus with Main Group and Transition Metal Complexes* [*$]**Masuda J.D.**, Hendsbee A.D., Giffin N.A., Rogers T.D.

15:00 Coffee Break

Chair(s) - Jens Müller

15:20 1112 *Controlled Gold Nanoassemblies from Phosphorus-Containing Block Copolymers* [*$]**Gates D.P.**, Noonan K.J.T., Gillon B.H., Christiansen L., Cappello V.

15:40 1113 *New Routes to Main-Group Based Macromolecules: Ambient Temperature Synthesis of Polyphosphazenes and Polyaminoboranes* **Presa-Soto A.**, Taylor T., Staubitz A., [*]Manners I.

16:00 1114 *New Routes to Nitrogen- and Phosphorus-Containing Polymers* [*]**Greenberg S.**, [$]Stephan D.W.

16:20 1115 *Starburst Dithienophospholes with a Main Group Element Core* Kuhlmann M., Durben S., Boone M.P., [*$]**Baumgartner T.**

16:40 1116 *General Synthetic Approaches to Compounds Featuring Pn-Pn' Bonds (Pn = P, As, Sb, Bi)* [$]**Conrad E.**, [*]Burford N., Ferguson M.J., McDonald R.

17:00 End of Session

IN4 WebsterA-HCC

Organometallic Chemistry of the d- and f-Block Metals

Organizer(s) - Georgii Nikonov
Chair(s) - Davit Zargarian

13:20 1117 *An Efficient and Chemoselective Iron Catalyst for the Hydrogenation of Ketones* [*$]**Casey C.P.**, Guan H., Atesin A.C.

14:00 1118 *Facile Bifunctional Addition of Lactones, Esters, and Ketones at Low Temperatures: Catalytic Hydrogenation of Esters Under Mild Conditions* [*]**Bergens S.H.**, Hamilton R.J., [$]Takebayashi S.

14:20 1119 *Enantioselective Reduction of Ketones Catalyzed by Iron Complexes* [*$]**Morris R.H.**, Zimmer-De Iuliis M., Meyer N., Mikhailine A.A., Lough A.J.

15:00 Coffee Break

Chair(s) - Sandro Gambarotta

15:20 1120 *Synthesis of Imino-Amido Ligands for Applications in Aluminum Chemistry and Beyond* [*$]**Foley S.R.**, Chitanda J.M., Olson J.A., Ball C., Quail J.W.

15:40 1121 *Strategies to P-H and P-P Bond Activation* Geier S.J., [*$]**Stephan D.W.**

16:00 1122 *Heteroleptic Copper (I) Compounds as Volatile Precursors for Metal Deposition* Coyle J.P., [*$]**Barry S.T.**

16:20 1123 *Synthesis of Novel Titanium Precursors for Deposition of TiO_2 Thin Films* **Wasslen Y.A.**, [$]Barry S.T

16:40 1124 *Structures and Properties of Non-Chelated, d^0 Alkyl-Alkene Complexes of the Type $[Cp_2ZrMe(alkene)]^+$: Elusive Intermediates During Metallocene Initiated Ziegler-Natta and Carbocationic Polymerizations of Alkenes* [*$]**Baird M.C.**, Sauriol F., Wong E., Leung A.M.H., Elliott Donaghue I., Wondimagegn T., Ziegler T.

17:00 End of Session

IN6 ChedokeA-HCC

Transition Metals in Synthesis and Catalysis (joint with OR9)

Organizer(s) - Costa Metallinos and James Green
Chair(s) - James Green

13:20 1125 *Benzimidazole Additives in the Ru(diphosphane)Cl_2 Catalyzed Reduction of Carbonyls* **Praetorius J.M.**, *$Crudden C.M.

13:40 1126 *Aminophosphine Ligands $R_2P(CH_2)nNH_2$ and Ruthenium Hydrogenation Catalysts $RuCl_2(R_2P(CH_2)_nNH_2)_2$* **Jia W.**, Chen X., Guo R., Sui-Seng C., Amoroso D., Lough A.J., *Abdur-Rashid K.

14:00 1127 *Secondary Alkyl Complexes of Chromium(III): Steric Effects in Cr(III)-Alkyl Bond Homolysis and Reactivity* ***Smith K.M.**, Zhou W.

14:20 1128 *High-Throughput Screening in Olefin Metathesis Catalysis* Blacquiere J.M., Monfette S., *$**Fogg D.E.**

15:00 Coffee Break

15:20 1129 *Mechanistic Insights from Gas-Phase Reactivity: An ESI-MS Investigation of the Pauson-Khand Reaction* **Henderson M.A.**, *McIndoe J.S.

15:40 1130 *Non-Innocent Dithiolene Ligands Coordinated to Metals: Useful Ligand-Based Bond-Making and Bond-Breaking* ***Fekl U.W.**, Harrison D.J., Nguyen N.

16:00 1131 *Synthesis of Chromium Guanidinate Complexes and their Activity in Ethylene Oligomerization/Polymerization* **Horvath S.**, *Gambarotta S.

16:20 1132 *Large-Ring Bicyclic Titanacyclobutene Complexes from Intramolecular Free Radical Cyclization. Boracyclobutene Synthesis by Transmetallation* Bauer R.C., Quesnel J.S., *$**Stryker J.M.**

17:00 End of Session

Macromolecular Science & Engineering

MS3 Beckett-Sher

Polymer Characterization and Physics

Organizer(s) - Christian Pellerin
Chair(s) - Anna Ritcey

The Macromolecular Science and Engineering Award Lecture presented by Robert Pelton

Introduction of Robert Pelton by Michael Brook

13:20 1133 *The Deviant Behavior of Labile Polyelectrolytes* ***Pelton R.H.**

14:00 1134 *Polyelectrolyte Behavior of Arborescent Polystyrene-graft-poly(2-vinylpyridine) Copolymers* **Munam A.**, *Gauthier M.

14:20 1135 *Controlling Triplet Energy Levels in π-Conjugated Polymers: Electro-Phosphorescence and Triplet Photovoltaics* *$**Holdcroft S.**, Schulz G.L.

15:00 Coffee Break

15:20 1136 *Advances in the Study of the Internal Dynamics of Macromolecules by Time-Resolved Fluorescence* *$**Duhamel J.**

16:00 1137 *Characterization of the Poly(ethylene oxide) - Urea Complexes Prepared by Electrospinning* ***Pellerin C.**, Liu Y., Antaya H.

16:20 1138 *Synthesis and Fluorescence Characterization of a Series of Pyrene End-Labeled Poly(Ethylene Oxide)s* **Chen S.**, *Duhamel J.

16:40 End of Session

MS4 AlbionC-HCC

Polymers in Biology and Medicine

Organizer(s) - Elizabeth Gillies
Chair(s) - Elizabeth Gillies

13:20 1139 *New Materials for Treating and Imaging Inflammatory Diseases* *$**Murthy N.**

14:00 1140 *Nanoassembly of an Amphiphilic Polymer-Drug Conjugate* ***Mikhail A.S.**, $Allen C.

14:20 1141 *Arborescent Poly(ε-caprolactone) Copolymers* **Moingeon F.**, Courtney W.J., *Gauthier M.

14:40 1142 *A Novel Cascade Biodegradable Polymer Based on 4-Hydroxybenzyl Alcohol and N,N'-Dimethylethylenediamine* **DeWit M.A.**, *Gillies E.R.

15:00 Coffee Break

Clara Benson Award Lecture presented by Molly Shoichet

Introduction of Molly Shoichet by Kim Baines

15:20 1143 *Polymers Designed for Applications in Medicine* *$**Shoichet M.S.**, Shi M., Ho K., Lu J.

16:00 1144 *Novel Self-Crosslinkable Polyelectrolytes for Cell Immuno-Isolation* **Mills C.M.**, Burke N.A., *$Stöver H.D.H.

16:20 1145 *Statistics of Amino-Acid Multiplets in Protein Primary Sequences: Dependence of Mean Distributions and Correlations on Natural Frequency, Main-Chain Length, Residue Polarity and Content of Secondary Structure* Gong C., *$**Arteca G.A.**

16:40 1146 *Controlled Morphology of Silicone Elastomers* $**Rajendra V.**, Chen Y., D'Souza R., *Brook M.A.

17:00 End of Session

Organic Chemistry

OR1 WebsterB-HCC

Applied Physical Organic Chemistry

Organizer(s) - Michelle Chrétien
Chair(s) - Tito Scaiano, Jessie Blake

13:20 1147 *Metal-Chelating Polymers and Metal-Containing Polymer Microparticles Designed for Use in Bioassays* **Winnik M.A.**

14:00 1148 *Novel Off-On Fluorescent Probes for Visualizing Reactive Oxygen Species in Lipid Membranes* **Krumova K.**, Oleynik P., Khatchadourian A., Maysinger D., *$Cosa G.

14:20 1149 *Photoresponsive Liposomes: Towards the Photoregulation of Membrane Permeability* Selzler L., Cai J., ***Murphy R.S.**

14:40 1150 *Photorelease in the Blink of an Eye: The Development of Photolabile Protecting Groups Based on Xanthone Acetic Acid Photodecarboxylation for Corneal Drug Delivery* **Blake J.A.**, $Scaiano J.C.

15:00 Coffee Break

15:20 1151 *Catalysis in Decarboxylation: How Enzymes Deal with Reactive Carbanions and Carbon Dioxide* **Mundle S.**, Rathgeber S., Lacrampe-Couloume G., Sherwood Lollar B., *$Kluger R.

15:40 1152 *The Supramolecular Chemistry of Tetrazoles, Common Drug Heterocycles* *$**Hof F.**, Jana S., McKie A.H., Friedland S.

16:00 1153 *Complexation of 4, 4'bis (2-Sulfostyryl)-Biphenyl Disodium Salt ("NFW") Fluorescent Whitening Agent and β-Cyclodextrin* Armstrong E.J., Galas H., Wylie R.S., Zohrehvand S., van Stam J., *$**Evans C.H.**

16:20 1154 *Silole Chemistry Lights our Life: Synthesis and Electrogenerated Chemiluminescence of new Silole Based Luminophores* **Moustafa M.M.**, Na C., *Pagenkopf B.L., $Ding Z.

16:40 End of Session

OR8 ChedokeB-HCC

Organic Synthesis in Canada, Coast to Coast: Past, Present and Future

Organizer(s) - Tomas Hudlicky
Chair(s) - Michel Gravel

13:20 1155 *Forays in Natural Product Synthesis* **MaGee D.I.**

14:00 1156 *Efforts towards a Diastereoselective Intramolecular C-H Amination Reaction Using N-Tosyloxycarbamates as Nitrene Precursors* **Trudel C.**, *Lebel H.

14:20 1157 *Trichloroethylene, a Neglected Two-Carbon Building Block* *$**Hultin P.G.**

15:00 Coffee Break

Alfred Bader Award in Organic Chemistry Lecture presented by André Charette

Introduction of André Charette by Hélène Lebel

15:20 1158 *New Developments in the Asymmetric Cyclopropanation of Alkenes* ***Charette A.B.**

16:00 1159 *Construction of Nitrogen-Containing Heterocycles via the Stevens [1,2]-Shift* **Bott T.M.**, *$West F.G.

16:20 1160 *Microwave-Assisted Domino [3,3]-Sigmatropic Rearrangement of Allylic Azides and Related Claisen Reactions* **Tjeng A.A.**, $Batey R.A.

16:40 1161 *Indium and Montmorillonite Catalyzed Allylation and Crotylation of Ketones Using Potassium Organotrifluoroborate Salts* **Nowrouzi F.**, *Batey R.A.

17:00 End of Session

OR9 ChedokeA-HCC

Transition Metals in Synthesis and Catalysis (joint with IN6)

Organizer(s) - Costa Metallinos and James Green
Chair(s) - James Green

13:20 **See IN6**

17:00 End of Session

ORP WentABC-HCC

Posters

Organizer(s) - James McNulty
Chair(s) - James McNulty

From **17:00** until **19:00**

1162 *Phytochemical Studies on Macaranga capensis* **James A.**, Cheuk-Wing L., *$Ata A., Gengan R.

1163 *Towards Understanding Plant Male Fertility: The Role of Anther-Specific Chalcone Synthase-Like Enzymes* **Colpitts C.**, Kim S., Douglas C.J., *Suh D.-Y.

1164 *AChE and GST Inhibiting Natural Products from Medicinally Important Plants* *$**Ata A.**

1165 *Chemical and Biological Studies on Matricaria chamomilla* **Iverson C.**, *$Ata A.

1166 *Phytochemical and Biological Studies on Combretum bracteosum* **Sultana N.**, James A., *$Ata A., Gengan R.

1167 *Synthesis of Acyldepsipeptide Antibiotics Enopeptin B and A 54556 B* **Cossette M.S.**, *$Batey R.A., Houry W.A.

1168 *Application of Novel Indene Functionalization Methodologies: Towards the Synthesis of Latifine, Cherylline and the Cryptostylins* **Rosocha G.Y.**, *Batey R.A.

1169 *Are Detoxification Pathways of Plant Defenses in Closely Related Fungal Species Predictable?* **Hossain S.**, *Pedras M.S.C.

1170 *Pramanicin, an Antifungal Mycotoxin: Preparation of Defunctionalized and Fluorescent Analogues* **McIntee J.W.**, Hasan S.A., *$Harrison P.H.M.

1171 *Deveopment of Siloles as Useful Intermediates in Natural Product Synthesis* **Stevens A.**, *Pagenkopf B.L.

1172 *Biosynthetic Pathways of Cruciferous Phytoalexins and Phytoanticipins: Rapalexin, Indolyl-3-acetonitriles and Glucobrassicins* **Yaya E.**, Hossain S., *Pedras M.S.C.

1173 *Synthesis and Cytochrome P450 3A4 Inhibitory Activity of seco-Pancratistatin Analogues* **Nair J.J.**, *McNulty J., Singh M., Crankshaw D., $Holloway A.

1174 *Construction of Substituted Pyrrolidines Through Nitrogen-Centered Radical Cylizations onto Electron-Rich Olefins* **$Zhai H.**, Zlotorzynska M., *Sammis G.M.

1175 *Xanthone Acetic Acid Photodecarboxylation from the Protonated State* **Blake J.A.**, $Scaiano J.C.

1176 *Selective Acid Catalysis of Decarboxylation in Thiamin-Derived Intermediates* **Rathgeber S.**, Mundle S., *$Kluger R.

1177 *Exploratory Computational Studies towards the Photo-Induced Degradation of Lignin* Zhang L., Peslherbe G.H., **Muchall H.M.**

1178 *Synthetic Approaches to Open-Shell Electroactive Oligomers and Polymers* **Oakley N.A.**, *$Frank N.L.

1179 *Asymmetric Organocatalysis via Enamine and Iminium Intermediates* *$McNulty J., **Thorat A.**

1180 *New Efficient Phosphine Ligands for Suzuki Cross-Coupling Reactions of Aryl Chlorides* **Ullah E.**, McNulty J.

1181 *NHC-Catalyzed Tandem Reactions: An Application of Umpolung to the Diels-Alder Reactions* **Wang L.**, *$Gravel M.

1182 *Microwave Assisted Alkylations of Catechol and Pyrogallol* Mahoney S., Shuai C., ***Eichhorn S.H.**

1183 *A Novel Phosphonyl Chloride Reagent for Esterification and Amide Formation Reactions* **Krishnamoorthy V.**, *McNulty J.

1184 *Supported Pd Nanoislands on Cellulose Nanocrystallites as an Active Hybrid Material for Catalytic and Electrocatalytic Hydrogenation Reaction* **Cirtiu C.M.**, Dunlop-Brière A., *Moores A.

1185 *Use of Electron-Poor Guanidines as Hydrogen-Bonding Catalysts* **Thai K.**, $Gravel M.

1186 *Harnessing the Power of P450 Catalyzed Hydroxylations at Inactivated C-H Bonds* **Larsen A.T.**, $Auclair K.

1187 *Synthesis and Materials Properties of Star-Shaped Heptamers Based on Hexathiophene and Hexaimidazole Substituted Benzenes* **$Kayal H.**, *Eichhorn S.H.

1188 *Synthesis and Characterization of Cross-Linked Nanotubes* **$Cantin K.**, Dufour P., Morin J.-F.

1189 *Multicomponent Kinugasa Reactions in Aqueous Media* **McKay C.S.**, *Kennedy D.C., $Pezacki J.P.

1190 *Synthesis and Characterization of Gold Nanoparticles-Mounted Nanomachines* **Thibeault D.**, *$Morin J.-F.

1191 *Synthesis of Tri- and Tetraynes Using a Butadiynyl Synthon* **Jahnke E.**, Azyat K., Rankin T., *$Tykwinski R.R.

1192 *Synthetic Route and Final Progression to the Natural Product (+)-Dactylol* **Johnston J.R.**, Murphy G.K., *$West F.G.

1193 *Recent Advances in MACOS Technology and Applications: Synthesis of Propargyl Amines in a Copper-Coated Glass Reactor* **Shore G.**, Yoo W.-J., Li C.-J., *$Organ M.G.

1194 *Electrophilic Ortho-Dicyanation of Electron Rich Aromatic 1,2-Dihalides* **Chen S.**, Gorski P., *Eichhorn S.H.

1195 *Verdazyl Radicals as Substrates for Organic Synthesis: 1,5-Substituent Effects on the Formation of Azomethine Imines* **Dang J.**, *Chen E.K.Y., $Georges M.K.

1196 *Palladium-Catalyzed Intramolecular Arylation of sp^3 C-H Bonds* **Rousseaux S.**, *Fagnou K.

1197 *Cycloadditions of Alkynes with Verdazyls and the Subsequent Rearrangements of the Cycloadducts* **Bancerz M.**, $Georges M.K.

1198 *Site-Selective Azaindole Arylation at the Azole and Azine Rings via N-Oxide Activation* **Huestis M.P.**, *$Fagnou K.

1199 *Synthesis of the Western Fragment of Narasin via a Free Radical Chemistry Approach* **Brazeau J.-F.**, Guilbault A.-A., $Guindon Y.

1200 *Palladium-Catalyzed sp^3-sp^2 C-C Bond Formation by Direct Arylation* **Lapointe D.**, René O., *Fagnou K.

1201 *Towards Increased Reactivity in Intermolecular Cope-Type Hydroamination of Alkenes: Development of Tandem Sequences as a Solution to the Thermodynamic Problem* **Loiseau F.**, Bourgeois J., Moran J., Manthorp E.A., Wan Fook Chuen J.-P., *Beauchemin A.M.

1202 *Synthesis of Molecular Probes for Pancreatic Cancer* $Coster M.J., Fischer J., Leung A., **Magolan J.**, O'Connor S., Pigott A.J., Reynolds A.

1203 *A Convenient Total Synthesis of Sphingosine-1-phosphate and Sphingosyl Triazoles* ***Ahmed Z.**, $McNulty J.

1204 *Construction of Carbocycles Using Radical Relay Cyclizations Initiated by Alkoxy Radicals* **Zhu H.**, *$Sammis G.M.

1205 *Synthesis and Characterization of Some Novel Types of Mono- and Bis-Imidazolidineiminothiones and Imidazolidineiminodithiones with Antitumor, Antiviral, Antibacterial and Antifungal Activities* [*$]**Moussa Z.**, El-Sharief A.M.

1206 *Copper Coupling and Claisen Rearrangement: Synthesis of Amino Acid Precursors* **Rahem N.**, [$]Daoust B.

1207 *Synthesis of Brassinosteroids and a Study of their Neuroprotective Effect* [*]**Boisvert M.**, [$]Daoust B., Longpré F., Martinoli M.-G.

1208 *A Novel Base-Induced Cyclization of Benzyl 1-Alkynyl Sulfones* [*]**Hossain M.S.**, [$]Schwan A.L.

1209 *Incorporation of Benzonitronyl Nitroxide Radicals into Organic Open-Shell Donor-Acceptor Systems* **Dooley B.M.**, [*$]Frank N.L., Bowles S.E., Storr T., Kaminsky W., Benedict J.

1210 *Calix[4]arenes containing Norbornene; Synthesis, Polymerization and Characterization* **Pilfold J.L.**, Shipman P.O., [*$]Abd-El-Aziz A.S.

1211 *New Strategies for the peri Lithiation of Naphthyl Derivatives* **Zuliani C.J.**, [*$]Schwan A.L., Duspara P.J.

1212 *Synthesis of Boronic Acid Functionalized π-Conjugated Oligomers by Click Chemistry* [$]**Mulla K.**, [*]Zhao Y.

1213 *Studies on the Synthesis and Reactivity of Metal-Coordinating Arenediynes* **Al-Karmi S.**, [*$]Viirre R.D.

1214 *The Diastereoselective Synthesis of Sulfoxides by the Reaction of Sulfenates with Amino Acid Derived Enantiopure Electrophiles* [*]**Soderman S.C.**, [$]Schwan A.L.

1215 *Palladium-Catalyzed Direct Heck Coupling at C-5 of Imidazo[1,5-a]pyrazines* Wang J.-X., McCubbin J.A., Jin M., Crew A.P., Laufer R.S., Mao Y., Mulvihill M.J., **Board J.**, [*]Snieckus V.

1216 *Differentiation of THAM-Based Scaffolds as Entries to Novel Antimicrobial Pharmacophores* **Calzavara J.**, [*$]McNulty J.

1217 *Xenon Difluoride Mediated Ipso-Amidation of Arylboronic Acids Using Nitriles* **Moran M.D.**, Mathew T., [$]Prakash G.K.S., Olah G.A.

1218 *Synthesis of Porous Covalent Organic Frameworks Using Iptycenes as Rigid Molecular Building Blocks* **Kerneghan P.A.**, [$]Maly K.E

1219 *Mechanistic Insight into Phosphine Catalyzed [3+2] Annulations of Allenoates and Imines* [*$]Dudding T., **Fonovic B.**, Kwon O., Timperio J.

1220 *Single Amino Acid Chelates as Targeted Metal-Based Radiopharmaceuticals* **Weaver D.M.**, [*]Stephenson K.A., [$]Valliant J.F.

1221 *Synthetic Adventures on 2-Tetralones and 2-Naphthols* [*$]**Jha A.**

1222 *Highly Efficient One-Pot C-, N- and O-Acylation of Indolin-2-one Analogs* [*$]**Jha M.**, Blunt B.

1223 *Microwave Assisted Hetero Diel-Alder Reaction on 1-Acetyl-3-[2-[prop-2-ynyloxy]benzylidine]indolin-2-one Analogs* [*$]**Jha M.**, Oro E.

1224 *Oxidation of Piperidines Derived from (R)-Phenylglycinol: A Practical Strategy for the Synthesis of Diversely Subsituted Piperidines* [*]**Castro A.**, Juárez J.R., Gnecco D., Terán J.L.

1225 *Ni-Catalyzed Efficient Pinacolborylation of Aromatic and Heteroaromatic Halides* [$]**Rantanen T.**, [*]Snieckus V.

1226 *Cucurbit[7]uril Host-Guest Complexes of 4-Alkyl-4-methylmorpholine Cations* **Gamal-ElDin M.**, [*$]Macartney D.H.

1227 *A Rotaxane "Flip-Switch" with an Electrostatic Component* [$]Loeb S.J., **Viljoen E.**

1228 *New Synthetic Routes to Polysubstituted Benzenes and Pyridines* [*]Miller R.E., **David E.**, Ogilvie K.A., Groth U., [$]Snieckus V.

1229 *Conformational Investigation of the Impact of Tetrahydropyran's Stereochemistry on Exocyclic Radical Reduction Outcome* [*]**Viens F.**, Brazeau J.-F., Godin F., Mochirian P., [$]Guindon Y.

1230 *Synthesis of 6,6'-Disubstituted 2,2'-Bipyridine Derivatives from 2,2'-Bipyridine bis-N-Oxides* **Li X.**, [*]Petitjean A.

1231 *Synthesis and Characterization of 2,7-Bis(tert-butyl)pyreno[4,5-c:9,10-c]difuran and Related Cyclophanes* **Franz D.**, Robbins S.J., [*$]Dibble P.W.

1232 *Investigations into the Scope of Platinum (II) Catalyzed Isomerization to Form New Ring Systems by a Cyclization Cation-Trapping Sequence* **Dodd J.M.**, [$]Dake G.R.

1233 *Microwave-Assisted, Parallel Synthesis of a Toxoflavin-Derivative Library* **Todorovic N.**, [*]Capretta A.

1234 *Organocatalytic Aldol Reactions of Dioxanones: Application in Synthesis of Polyoxygenated Natural Products* Palyam N., **Delawarally K.**, [*$]Majewski M.

1235 *Synthesis of a New Liquid Crystal (LC) Material with Phenanthrene Core by a Combined Metalation-Cross Coupling Strategy* **Gan W.**

1236 *Synthesis of New Troeger's Base Derivatives* [$]Karlsson J., **David E.**, [*]Snieckus V., Warnmark K., Harmata M.

1237 *Development of Complementary AAA-DDD Triply Hydrogen-Bonded Complexes* **Wang H.-B.**, $Wisner J.A.

1238 *[2]Rotaxanes for Self Assembled Monolayers* **Bolla M.A.**, Carmichael T.B., $Loeb S.J.

1239 *Decarboxylative Allylation of α,α-Dialkyl Trifluoromethyl Sulfones* **Gill M.A.**, Hrdina A.H.I., *$Manthorpe J.M.

1240 *Effects of Encapsulation of Photoacids by Cucurbit[7]uril in Aqueous Solution* **Fraser A.J.**, *$Macartney D.H.

1241 *Anion Receptors Based on 1,4-Thiazine-1,1-dioxide-3,5-dicarboxamides* **Kumala M.**, $Wisner J.A.

1242 *Dynamic Covalent Assembly of Anion Receptors Based on a Pyridine-2,6-dicarboxamide Structural Template* **Dan S.**, $Wisner J.A.

1243 *Synthesis and Self-Association of AADD Hydrogen-Bonding Components to Form Double-Helical Complexes* **Mudraboyina B.P.**, $Wisner J.A.

1244 *Cyclic Peptides from Amphoteric Aziridine Aldehydes* **Rai V.**, Hili R., *$Yudin A.K.

1245 *Recent Developments in the Preparation and Synthetic Utility of N-Alkenyl Aziridines* **Afagh N.A.**, *$Yudin A.K.

1246 *The Transition Metal Catalyzed Hydroboration of Enamines* **Geier M.J.**, Vogels C.M., Decken A., $Westcott S.A.

1247 *A Novel Procedure for the Generation of Key Species for Suzuki-Miyaura Cross-Coupling Reactions, Compounds of the Type PdL_2 (L = tertiary phosphines)* **Norton D.M.**, Mitchell E.A., Botros N., *Baird M.C.

1248 *Development of Inhibitors for Aminoglycoside Resistance Bacteria* **Akinnusi O.**, Auclair K.

1249 *Preparation of 6,7,n-Ring Systems by Electrophilic Cyclizations of Vinylogous Propargyl Acetate-$Co_2(CO)_6$ Complexes* **Kolodziej I.**, *$Green J.R.

1250 *Metal-Catalyzed Enantioselective Alkoxycarbonylation of Secondary Alkyl Halides* **Hsieh T.H.H.**, Yeung C.S., *$Dong V.M.

1251 *The Development of Hemilabile Catalysts for Low Temperature Hydroformylation* **Little V.R.**, Uh Y., Hesp K.D., Boyd A.R., $Stradiotto M., *Jessop P.G.

1252 *Rhodium-Catalyzed Intramolecular Ketone Hydroacylation: Natural Products via C-H Bond Activation* **Kim B.**, *Phan T., $Dong V.M.

1253 *Studies Toward the Synthesis of Novel Chiral Chelating Ligands for Asymmetric Catalysis* **Dornan P.**, *$Dong V.M.

1254 *Palladium-Catalyzed C-H Bond Functionalization with Arylsulfonyl Chlorides* **$Zhao X.**, Dimitrijevic E., *Dong V.M.

1255 *Ru-Catalyzed O- to N-Alkyl Migration of Pyridones* **Yeung C.S.**, $Dong V.M.

1256 *Intermolecular Carbonyl Insertion Reactions Using Rhodium Catalyzed Hydroboration* **Holland A.**, *Crudden C.M.

1257 *Development of Novel Chiral Aminophosphine Ligands via Cyclic Sulfamidates for Asymmetric Hydrogenation* **Lu S.M.**, Guo R., Chen X., *Abdur-Rashid K.

1258 *sp^3 C-H Bond Functionalization Through Lewis Acid-Catalyzed Domino [1,5]-Hydride Shift/Cyclization Reaction of Benzylidene Meldrum's Acids* **Mahoney S.J.**, Moon D.T., Hollinger J.R., *$Fillion E.

1259 *Allylic Amination with Palladium: Teaching New Tricks to an Old Dog* **Dubovyk I.**, $Yudin A.K.

1260 *NMR Studies of Metal-Carbene Complexes: Understanding the Relationship between Steric Bulk of the Catalyst and Reactivity* **Dowlut M.**, Tsimerman M., Hunter H.N., Kantchev E.A.B., O'Brien C.J., Hadei N., *$Organ M.G.

1261 *Synthesis of Chiral Binaphthalenes via Cross-Coupling Reactions Catalyzed by Air-Stable Carbene-Based Asymmetric Palladium (II) Complexes* **Dowlut M.**, *$Organ M.G.

1262 *High Yielding Aryl Aminations Mediated by a Highly-Active and Sterically-Demanding Pd-NHC Precatalyst: Pd-PEPPSI-iPent* *$Organ M.G., **Hoi K.H.**, Çalimsiz S.

1263 *Pd-PEPPSI-iPent: An Active, Sterically Demanding Cross-Coupling Catalyst and its Application in the Synthesis of Tetra-Ortho-Substituted Biaryls* **Çalimsiz S.**, *$Organ M.G., Sayah M., Hoi K.H.

1264 *Preparation and Evaluation of Supported N-Heterocyclic Carbene Complexes* **Abdel Hadi M.**, *Achonduh G.T., $Organ M.G.

1265 *Toward Catalytic Amine Synthesis Using new Zirconium and Tantalum Amidate Complexes* **Lauzon J.M.**, Schafer L.L., Fryzuk M.D.

1266 *Preparation of High Density V-N Microalloy Additive* *$**Lu Z.**, Sui Z.

1267 *Molecular Catalysts for Water Oxidation* **Wasylenko D.J.**, Koivisto B.D., *$Berlinguette C.P.

1268 *Lewis Acid Assisted Hydroboration: Reaction Acceleration and Selectivity Change* **Lata C.J.**, *Crudden C.M.

1269 *Imido-Hydride Complexes of Mo(IV): Synthesis and Catalysis of Hydrosilylation Reactions* **Shirobokov O.**, Nikonov G.I.

1270 *Role of Water Molecules in Ruthenium Metathesis Catalysts* Makal A., Szadkowska A., Pazio A., Lemcoff N.G., $Grela K., ***Wozniak K.**

1271 *Modular Synthesis of Chelating Aryloxide Ligands for Olefin Metathesis Using Modern Cross-Coupling Strategies* **Normand A.T.**, *$Fogg D.E.

1272 *Synthesis of Hydrido(σ-Methoxy) Ruthenium(II) Complexes: Pushing Methanolysis of 1st- and 2nd-Generation Grubbs Catalysts Too Far* **Beach N.J.**, Weiss J.W.E., $Fogg D.E.

1273 *Copper (II), Nickel (II) and Vanadyl Tetradentate Schiff Base Complexes as Catalysts for C-H Bond Activation of Olefins with tert-Butylhydroperoxide: Synthesis, Characterization and Structure* *$**Rayati S.**, Koliaei M.

1274 *β-Partially Brominated meso-Tetraphenylporphyrin: A Coformational Study and Application to the Mn-Porphyrin Catalyzed Oxidation of Hydrocarbons with Tetrabutylammonium Oxone* *$**Rayati S.**, Zakavi S.

1275 *Selective Alkane Oxidation Using Supported Pt(II) and Pt(IV) Halides* ***Mader E.A.**, Miller J.T., $Marshall C.L.

1276 *Rational Design of Acid-, Water- and High-Temperature Stable Homogeneous Catalysts for the Selective Deoxygenation of Sugar Polyalcohols and Triglyceride Esters* **Ashok D.**, *$Schlaf M.

1277 *Ru(η^5-C_5H_3)(N∩N)(CH_3CN)](OTf) Complexes as Homogeneous Ionic Hydrogenation Catalysts for the Selective Deoxygenation of Sugar Polyalchohols* **DiMondo D.**, *$Schlaf M.

Physical, Theoretical and Computational Chemistry

PT3 WBallrm-Sher

Atoms in Molecules

Organizer(s) - Paul Ayers and Chérif Matta
Chair(s) - Paul Popelier

Advances in the Quantum Theory of Atoms in Molecules

13:20 1278 *A New Theorem for the Electron Density* *$**Bader R.F.W.**

14:00 1279 *Electron Density Analysis a la Bader: Applications in Science Education, Chemical Research and Even Social Commentary* **MacDougall P.J.**

14:40 1280 *Continua of Interactions between Pairs of Atoms in Molecular Crystals* ***Wozniak K.**, Dominiak P.M.

15:20 Coffee Break

15:40 1281 *Interacting Quantum Atoms View of Steric Repulsions, Rotation Barriers and Stereoelectronic Effects* *$**Martín Pendás A.**, Blanco M.A., Francisco E.

16:20 1282 *Electron Density Descriptors of Simple Wheland Intermediates* **Hernández-Trujillo J.**, García-Revilla M.

17:00 End of Session

PT4 EBallrm-Sher

Biomolecular NMR (joint with BM2)

Organizer(s) - Giuseppe Melacini
Chair(s) - Giuseppe Melacini

13:20 **See BM2**

16:40 End of Session

PT8 AlbionB-HCC

Nanostructured Surfaces - Surfaces of Nanostructures (joint with SS2)

Organizer(s) - Byron Gates and Matthias Geissler
Chair(s) - Byron Gates, Matthias Geissler

13:20 1284 *The Role of Surfaces in Doping Nanostructures and the Effect of Dopants on the Morphology, Structure and Properties of Nanomaterials* *$**Radovanovic P.V.**, Farvid S.S., Dave N., Ju L.

14:00 1285 *Preparation and Electrocatalytic Properties of Metallic Nanowires and Nanotubes* ***Guay D.**, $Ponrouch A., Garbarino S., Maunders C., Botton G.A., Taberna P.L., Simon P.

14:20 1286 *Energy and Site Selective Electron-Induced Bond Dissociations at Interfaces* Garand E., Moula G., *$**Rowntree P.**

14:40 1287 *Preparation of Thin Metal Films by Electroless Deposition* **Galway G.**, Bottomley A., *$Anatoli I.

15:00 Coffee Break

15:20 1288 *Physisorption and Diffusion of Pentacene on Hydrogen-Terminated Silicon Surfaces: Application of Dispersion-Corrected Density Functional Theory* *$**DiLabio G.A.**

15:40 1289 *Theoretical and Experimental Studies of the Anisotropy of Styrene Diffusion on Hydrogen Terminated Si(100):2x1* **Sinha S.**, DiLabio G.A., $Wolkow R.A.

16:00 1290 *Studies of the Thin Layer Porous Structure Formation on a Pt Electrode via a Chemical Oscillatory Reaction* **Harati M.**, Green J.R., *Wang J.

16:20 1291 *A Phase Transition in ortho-H_2 Adsorbed on Ionic Surfaces* ***Jack D.B.**, Hawrylo J.

16:40 1292 *Novel Pressure-Induced Transformations Observed in Boron Nitride Nanotubes* **Dong Z.H.**, *$Song Y.

17:00 End of Session

PT11 Heritage-Sher

Static Electron Correlation

Organizer(s) - Paul Ayers and Marcel Nooijen
Chair(s) - Marcel Nooijen

John C. Polanyi Award Lecture presented by Axel Becke

Introduction of Axel Becke by Russell Boyd

13:20 1293 *Static Correlation in Density-Functional Theory: The Good and the Bad* *$**Becke A.D.**

14:00 1294 *Density Functional Theory for Strong-Interacting Electrons* *$**Gori-Giorgi P.**, Seidl M., Vignale G.

14:40 1295 *Alternative Ornstein-Zernike Models for the Homogeneous Electron Liquid* *$**Cuevas-Saavedra R.**, Ayers P.W.

15:00 Coffee Break

15:20 1296 *Molecular Dissociation in Density Functional Theory* **Maitra N.T.**

16:00 1297 *Introducing Near Degeneracy Correlation in DFT by Easing the Constraints on the Kohn Sham Determinant* *$**Ziegler T.**

16:20 1298 *Electron Correlation in the Complex Plane* **Ernzerhof M.**

16:40 1299 *Reconstruction of Density Functionals from Kohn-Sham Potentials* **Staroverov V.N.**

17:00 End of Session

PTP WentABC-HCC

Posters

Organizer(s) - Kalai Saravanamuttu
Chair(s) - Kalai Saravanamuttu

From **17:00** until **19:00**

1283 *Charge Density Studies of the N---Ni Interactions in a Model Dimeric Complex of Nickel* Kaminski R., Herbaczynska B., Pietrzykowski A., *__Wozniak K.__

1300 *Photocatlytic Oxidation of Gaseous Mercury over Titanium Dioxide* $**Snider G.**, *Ariya P.A.

1301 *Inhibitor-Amino Acid Interactions at the Interface of tcTIM Enzyme* **Chávez-Calvillo R.**, Hernández-Trujillo J., Costas-Basin M.

1302 *Viewing the Chemical Bond Formation/Breaking in a Chemical Reaction* **Chakraborty D.**, *Cárdenas C., $Ayers P.W.

1303 *Where is Electronic Energy Released from The Gas-Phase Hydrolysis of Atp?* **Arabi A.A.**, *Matta C.F.

1304 *Volumetric and Thermochemical Properties of Some Aliphatic Amino Acids in Aqueous Aliphatic Amide Solutions at T = 298.15 K and Ambient Pressure* **Bhuiyan M.**, Liu J.L., *$Hakin A.W.

1305 *The Quest for the Elusive Carbodiimide Ion, HN=C=NH$^+$, and its Generation from Ionized Cyanamide by Proton Transport Catalysis* Dimopoulos-Italiano G., Imbault A.L., **Jobst K.J.**, *Terlouw J.K.

1306 *Computational Studies of Noncovalent Interactions between DNA and Protein Building Blocks* **Rutledge L.R.**, *$Wetmore S.D.

1307 *CRITIC: A New QTAM Code for Solid State Densities* *__Otero-de-la-Roza A.__, Blanco M.A., Martín Pendás A., Luaña Cabal V.

1308 *Asphaltene Aggregation and Spectroscopy of Ni(II) and Vanadyl Porphyrins in Heavy Oils: A Multiscale Modeling Study* **Stoyanov S.R.**, Gusarov S., $Kovalenko A.

1309 *Cholineacetyltransferase Activity and Bifurcations in a Nonlinear Model of the Acetylcholine Neurocycle* *$**Mustafa I.**, Elkamel A., Chen P., Ibrahim G., Elnashaie S.

1310 *Quantum Effects in Theoretical Investigations of Water Photolysis: $(H_2O)_2^+$ as a Case Study* **Koch D.M.**, Issack B., *$Peslherbe G.H.

1311 *Theoretical Investigation of the Hydration Structure of the Nitrate and Nitrite Ions in Clusters* **Jahangiri S.**, *Peslherbe G.H.

1312 *Effects of Classical Vibrations on the Stability of Molecular Complexes: The Case of Water Clusters* *$**Tritzant-Martinez Y.**, Roy P.-N.

1313 *A QM/MM/MD Simulation Study of Adsorption of 1,2-Dichloroethane in Zeolites* **Zhang H.**, *Constas S.

1314 *An ab initio and Raman Investigation of Rare Earth Hydration* *__Pye C.C.__, Rudolph W.W.

1315 *Quantitative Description of the Multi-Mode Pseudo-Jahn-Teller Effect in Singlet $V(C_6H_6)^+$: A Case Study* **Ryabinkin I.G.**, $Polestshuk P.M.

1316 *Functional Derivatives and Stray Potentials in Kohn-Sham Density Functional Theory* **Gaiduk A.P.**, $Staroverov V.N.

1317 *Fukui Functions for Degenerate Ground States* *$**Cárdenas C.**

1318 *The Electronic Structure of 3d-M(smif)$_2$: A Testing Ground for Computational Investigations of Organometallic Complexes and their Spectroscopic Characterization* **Hachmann J.**, Frazier B.A., Wolczanski P.T., Chan G.K.L.

1319 *Variational Determination of the Two Particle Reduced Density Matrix* **Verstichel B.**

1320 *Fluorescence Studies of the Supramolecular Host Properties of PAMAM Dendrimers* *__Wagner B.D.__, Stojanovic N.

1321 *Raman Spectroscopic and XRD Characterization of Defect Structures and Phase Transitions in Hyper-Stoichiometric UO_{2+x}* **He H.**, Shoesmith D.W.

1322 *Fluorescence Studies of the Supramolecular Host-Guest Inclusion Complexes of Guaiazulene in Native and Modified Cyclodextrins* **Snow C.**, *Wagner B.D.

1323 *In situ High-Pressure Study of Ammonia Borane by Raman and Infrared Spectroscopy* **Xie S.**, Liu Z., *$Song Y.

1324 *Chemical Speciation and Ion-Pair Formation Based on Raman Spectroscopic Measurements for $NiSO_4$-H_2SO_4 from 25-140 °C and the Apparent Molar Properties for the Neutral Species* $**Madekufamba M.**, *Tremaine P.R., Trevani L.N.

1325 *Sulfate Association Reactions in the Oxidative Leach Process of Sulfide Minerals: Development of a New High-Temperature and High-Pressure Cell for Raman Microscopy* **Trevani L.N.**, *Tremaine P.R., Brosseau F., Papangelakis V.G.

1326 *Comparing the Release of Reactive Oxygen Species by Single Human Urinary Bladder Cells and Kidney Epithelial Cells* **Zhao X.**, Lam S., Jass J., *Ding Z.

1327 *in situ Electrochemical-NMR Spectroscopy* **Zhang X.C.**, *Zwanziger J.W.

1328 *Low Density Polyethylene Window for the Determination of Mercury by Cold Vapor Atomic Spectroscopy* ***Ramezani Z.**, $Behfar A.A., Jafari S.

Rubber Chemistry

RB1 WebsterL-HCC

Recent Advances in Rubber Technology

Organizer(s) - Richard Pazur and Marvin Myhre
Chair(s) - Richard Pazur, Marvin Myhre

13:20 1329 *Morphology Development and Properties of Polymer/Clay Nanocomposites* *$**Sundararaj U.**, Lakshminaryanan S.

14:00 1330 *Butyl Elastomers: Extending the Scope to Peroxide Crosslinking* *$**Knight L.K.**, Ferrari L.P., Schenkel R.-l.

14:40 1331 *Sulfuration and Reversion Reactions of Brominated Poly(isobutylene-co-isoprene)* **Faba M.**, *$Parent J.S., Whitney R.A.

15:00 Coffee Break

15:20 1332 *Novel EPDM Products for Peroxide Cure Applications* **Choonoo G.**, Dikland H., Dees M., van Duin M.

16:00 1333 *Cross Metathesis for new HNBR Materials* **Müller J.**, Soddemann M., Ong C., *Kulbaba K.

16:40 1334 *New HNBR Materials with Improved Processing* $Soddemann M., Müller J., ***Kulbaba K.**

17:00 End of Session

Surface Science

SS2 AlbionB-HCC

Nanostructured Surfaces - Surfaces of Nanostructures (joint with PT8)

Organizer(s) - Byron Gates and Matthias Geissler
Chair(s) - Byron Gates, Matthias Geissler

13:20 **See PT8**

17:00 End of Session

Undergraduate Student Poster Competition

UPC1 WentABC-HCC

Analytical Chemistry

Organizer(s) - Randall Dumont
Chair(s) - Randall Dumont

1335 *Analysis of Nitrate and Organic Aerosol Using Two Aerosol Mass Spectrometers: AMS and ATOFMS* **Corbin J.C.A.**, Abbatt J.P.D., $Evans G.J.

1702 *Surfaced Enhanced Raman Spectroscopy of Microbiological Systems* **Douglas C.**, Smith-Palmer T., Pink D.

1336 *Detection of Antigen-Antibody Binding by Extraordinary Optical Transmission (EOT)* **Hui C.Y.**

1337 *Does Carrier Gas Influence the Dynamics of Gas Chromatographic Separations?* **McGinitie T.**, Karolat B., *$Harynuk J.J.

1338 *MAX-DOAS Measurements of Atmospheric Trace Gases* **Mendolia D.**, *D'Souza R., $Evans G.

1339 *Measurement of Kinetic Isotope Effect Using Time Resolved Electrospray Mass Spectrometry* **Olkhov E.**, Rob T., Wilson D.J.

1340 *Separation and Determination of Closely-Related Lantibiotics by Micellar Electrokinetic Chromatography* **Stanley B.**, *$Donkor K.K., Mehr K.A., Kellock T., Van Hamme J.D.

1341 *Optimisation of a Method to Quantify Amino Acids in Soil Using HPLC-UV/Vis* **Stogran M.**, Forbes S., Carter D.

1342 *Measurement of Hydroxyl Radical Formation by n-Hexane Soot in Surrogate Lung Fluid* **Wong J.P.S.**, McWhinney R.D., $Abbatt J.P.D.

UPC2 WentABC-HCC

Biological Chemistry

Organizer(s) - Randall Dumont
Chair(s) - Randall Dumont

1343 *Using Green Methods in Silicon Chemistry as a Means of Preventing Cork Taint in Wine* **Bartakovic I.**, *$Zelisko P.M.

1344 *The Effect of Alizarin Dye for Inhibition of Microbiology Influenced Corrosion on Aluminum* *$**Barzin M.**, Pooladi Baghbadarani M., Ahmadi A.

1345 *Synthesis of Aryl Azide Derivatives of a Modulator of Mutant Cystic Fibrosis Transmembrane Conductance Regulator Function for Use as Photoaffinity Labels* **Bogojeski J.**, *$Viirre R.D.

1346 *Fluorine-18 Labelled 1-Deoxy-1-fluoro-scyllo-inositol: A New Approach for Imaging Alzheimer's Disease* **Chio J.**, Wilson A.A., van Oosten E.M., Nitz M., McLaurin J., Houle S., $Vasdev N.

1347 *An Investigation into β-Sheet Mimics* **Colquhoun C.**, Davidson C., *Kraatz H.-B.

1348 *Triterpenoidal Alkaloids from Buxus natalensis and their Acetylcholinesterase Inhibitory Activity* **Kozera D.J.**, *$Ata A.**PAPER WITHDRAWN**

1349 *Crystallization of the High-Affinity Metal-Binding Peptide of E. coli HypB* **Ladrillo J.R.**

1350 *Development of a DNA-Based pH Sensor* **Lee J.A.**, DeRosa M.C.

1351 *In vitro Selection, via the SELEX Procedure, of a DNA Aptamer for the Neurotransmitter Dopamine* **McConnell E.M.**, Walsh R.P., *$DeRosa M.C.

1352 *Examining the Effects of the Ibs Toxins on the Growth of E. coli Cells* **Patel N.H.**, $Li Y.

1353 *Extended Ferrocene-Peptide Foldamers as Protein Secondary Structure Mimics* **Priegert A.M.**, *Kraatz H.-B.

1354 *PAH-Appended Phenanthroline Ligands for Use in Photodynamic Therapy* **Scott J.R.**, *$McFarland S.A.

1355 *Isolation, Structure Elucidation and Cytochrome P450 Inhibitory Activity of Alkaloids and Triterpenoid Glycosides of Plant Origin* **Singh M.**, *McNulty J., Nair J.J., $Crankshaw D., Holloway A

1356 *Synthesis of 5-Fluorouracil-Estradiol Conjugates as Potential Targeted Drugs for Estrogen Receptor-Positive Cancers* **Tikka V.J.**, Tassotto M.L., Pyko R., Th'ng J., $Jiang Z.H.

1357 *Non-Terpenoidal Constituents of Buxus natalensis* **Vickell C.**, Ata A.

UPC3 WentABC-HCC

Inorganic Chemistry

Organizer(s) - Randall Dumont
Chair(s) - Randall Dumont

1358 *Probing the Mechanism of Aldehyde Addition to Germenes* **Allan C.**, *$Baines K.M.

1359 *Silver/Palladium Bimetallic Nanoparticles as Hydrogenation Catalysts in Aqueous and Ionic Liquid Media* **Calver C.F.**, *Scott R.W.J.

1360 *Sulphonated Crown Ethers and their Metal Complexes* **Caputo C.B.**, $Loeb S.J.

1361 *Thiocyanato- and Alkylthiocyanato-Substituted Oligothiophenes: Solid-State and Thin Film Structures* **D'Aleo D.N.**, *$MacKinnon C.D., Morgan I.S., Hudolin M.L., Assoud A., Jenkins H.A.

1362 *Verres de chalcogénures: TeI, 5% MI, $GeTe_4$, 5% MI (M = Ag, Cu, Cs, Pb) et $Te_{80-x}Ge_{20}Se_x$ ($0 \le x \le 20$)* **Dereeper E.**, Bastien J.C., *$Boussard-Plédel C.

1363 *Synthesis of Oxime and Hydrazone Based Polytopic Ligands and their Complexation Reactions with Transition Metals: Structural and Magnetic Studies* **Elliott A.S.**, Thompson L.K.

1364 *Iron(III) Complexes of Diamine-bis(Phenolate) Ligands as Catalysts for C-N and C-C Cross-Coupling Reactions* **Granville S.L.**, Kozak C.M.

1365 *Synthesizing Trinuclear Copper Polymeric Systems Using Oxime-Based Ligands and Azide as Linkers* **Habib F.**, Pathmalingam T., Gorelsky S.I., Burchell T.J., Loiseau F., Beauchemin A.M., $Murugesu M.

1366 *Phosphenium Carbene Analogues in Frustrated Lewis Pair Chemistry* **Hickie D.H.**, *Blackmore I.J., $Stephan D.W.

1367 *Design and Synthesis of Pentadentate Amino-Thiolate Ligands for Indium(III) Radiopharmaceuticals* **Hunter N.M.**, *$Briand G.G., Yorke S.R., Decken A.

1368 *High-Yield Synthesis of ReO_3F and a Study of its Fluoride Ion Donor and Lewis Acid Properties* **Ivanova M.V.**, Hughes M.J., Mercier H.P.A., $Schrobilgen G.J.

1369 *An Experimental and Computational Study of the Structures of 1-Hydro-benzo-2,1,3-selenadiazolyl and 1,3-Dihydro-benzo-2,1,3-telluradiazolyl Cations* **Lee M.**, Elder P.J.W., Cozzolino A.F., Yang Q., Jerred B.J., *Vargas-Baca I.

1370 *Transformation of Silver Platelets into Twinned Cubes and Right Bi-Pyramids that are Governed by Structural Defects* **McEachran M.**, *Kitaev V.

1371 *Observation of Cu Nanoparticle Oxidation by Spectrophotometry and with Inhibited Oxygen Uptake Method* **Presseau N.**, Pacioni N., Filippenko V., Scaiano J.C.

1372 *Synthesis and Reactivity of γ-Diamido Ligands with Phosphorus and Aluminum* **Prokopchuk D.E.**, $Foley S.R.

1373 *C-C Cross-Coupling Reactions Catalyzed by Amine-bis(Phenolate) Iron Complexes* **Reckling A.R.**, *$Kozak C.M.

1374 *New Synthetic Approaches to Arsenic(I) Cations* **Stinchcombe M.R.**, Rowchowdhury R., *$Macdonald C.L.B.

1375 *The Preparation and Characterization of a New Family of Spin-Bearing Tetrathiafulvalene Donors* **Venneri S.**, Pilkington M.

1376 *Incorporating Dynamic Components into Metal Organic Frameworks* $Loeb S.J., **Vukotic V.N.**

1377 *Preparation of Dimethylsilyl Ferrocene Oligomers and Polymers with a Silicon or Tin Atom in the Backbone from the Dehydrogenative Coupling of Tertiary Ferrocenyl Silanes and Stannanes* **Ward J.**, $Foucher D.

UPC4 WentABC-HCC

Organic Chemistry

Organizer(s) - Randall Dumont
Chair(s) - Randall Dumont

1378 *Second Mitochondria-Derived Activator of Caspases* **Cheema T.**, *Ben R.N., Cheung H., LaCasse E.

1379 *A Novel, Metal-Free, Aminocarbonylation of Alkenes* $**Clavette C.**, Roveda J.-G., Whipp C.J., *Beauchemin A.M.

1380 *Verdazyl Radicals as Substrates for Oligomer Synthesis: Future Substrates for Block Copolymer Synthsis for Self-Assembly Studies* **Cumaraswamy A.**, Lukkarila J.L., *$Georges M.K.

1381 *Nicholas Reaction Based Synthetic Approach to (-)-O-Methylandrobiphenyline and (-)-Allocolchicine* **Djurdjevic S.**, Yang F., *$Green J.R.

1382 *Towards the Synthesis of Biocompatible, Non-Adhesive, Absorbent Wound Dressings* **Durbin D.J.D.**, *Brook M.A.

1383 *Practical Pd-Catalyzed Synthesis of Fused 1,2,3-Triazoles* **Erne P.M.**, Aguilar-Aguilar A., *Lautens M.

1384 *Studies toward the Synthesis of Helical Molecules via a Tandem Sonogashira Cross-Coupling-Cyclization Strategy* **Grover H.**, *$MacNeil S.

1385 *Towards the Synthesis of a Configurationally Stable Substituted Hexabenzotriphenylene* **Halperin S.D.**, *Maly K.E.

1386 *Lactone Analogs of Pramanicin for Bioactivity Analysis* **Hasan S.A.**, *Harrison P.H.M.

1387 *Development of an Indium-Mediated Chemo and Diastereoselective Allylation of α,β-Epoxyketones with Potassium Allyltrifluoroborate and its Applications* **Janetzko J.**, Nowrouzi F., *Batey R.A.

1388 *Desymmetrization of a meso-Imidazolinone Through Enantioselective Buchwald-Hartwig Reaction* **Kwok J.**, *$Viirre R.D.

1389 *Studies on Diastereoselectivity in the Buchwald-Hartwig Reaction and Hindered Rotation about a Chiral Axis* **Matarazzo A.**, Wylie R.S., *$Viirre R.D.

1390 *Does the DNA Binding Mode of a Molecule Affect its Ability to Interact with Singlet Oxygen?* **Lau V.**, *$Heyne B.

1391 *Synthesis, Characterization and Reactivity of a Series of Novel Hexaalkoxytrinaphthylenes* **Lynett P.T.**, *$Maly K.E.

1392 *Efforts towards the Synthesis of Molecular Cages Through Reversible Imine Formation* **MacKinnon M.R.**, *Maly K.E.

1393 *Synthesis and Biological Evaluation of Functionalized Chalcones* **McLeod D.A.**, *$McNulty J.

1394 *Synthesis of 5-Chloro-2, 3-difluoropyridine with Blended Catalysts as an Intermediate for Agrochemicals and Pharmaceuticals* *$**Pooladi Baghbadarani M.**, Barzin M., Ahmadi A.

1395 *In situ FTIR Study of the Huisgen 1,3-Dipolar Cycloaddition Reaction on Monolayer Protected Gold Nanoparticles (MPGNs) under Extreme Pressures* **Snell K. E.**, Song Y., *$Workentin M.S.

UPC5 WentABC-HCC

Physical Chemistry

Organizer(s) - Randall Dumont
Chair(s) - Randall Dumont

1396 *^2H Double and Zero Quantum Filtered NMR Spectroscopy for Probing the Environments of Water in the Perfluorosulfonic Acid Membrane, Nafion* $**Blackburn M.A.**, Ooms K.J.

1397 *Self-Assembly of Nanoparticle Monolayers: Effects of Solvent and Concentration* **Bolivar J.P.**, $Meli M.-V.

1398 *Colossal Expansion: A Solid-State NMR Investigation of $Ag_3Co(CN)_6$* **Feland B.C.**, Bernard G.M., *$Wasylishen R.E.

1399 *Trends in the Infrared Frequencies of v(AsOx) [x=2,3] in Selected As(V)-Containing Compounds Investigated Using Quantum Mechanical Calculations* **Gray H.**, Adamescu A., Hamilton I., *$Al-Abadleh H.A.

1400 *SO(4) Invariant Scalar and Spinor Hamiltonians and the Two-Body Bound State* **Huntington L.M.J.**, *Nooijen M.

1401 *Computational Study of Proper and Improper Hydrogen Bonding in Methanol Complexes* **Istvankova Z.**, $Keefe C.D.

1402 *Synthesis and Rheological Properties of Amine Based Surfactants* **Petropolis H.**, *Marangoni D.G., Singh K.

1403 *Experimental and Computational Study of the Intermolecular Interactions between Acetic Acid and Pyridine* **Pickup J.E.**, Keefe C.D.

1404 *Spontaneous Formation of 3-D Optical and Structural Lattices from Two Orthogonal and Mutually Incoherent Beams of White Light Propagating in a Photopolymerisable Medium* **Ponte M.R.**, Burgess I.B., Welch R., *Saravanamuttu K.

1405 *A Qualitative Descriptor for the Reactivity of Ambiphilic Reagents* **Rabi N.**, Cárdenas C., Ayers P.W.

1406 *Catalytic Mechanism for Epoxide Hydrolase B Enzyme from Mycobacterium tuberculosis Using QM/MM Calculations* **Rabi S.**, Burger S.K., Ayers P.W.

1407 *Excess Properties of Binary Mixture of Mesitylene and Vinyl Acetate at T = (298.15, 303.15 and 308.15) K* **Rajabi N.A.**, Manoochehri M., Fazaeli R., $Karimi M., *Faridi M.

1408 *Evanescent-Wave Linear-Fibre-Cavity Ring-Down Spectroscopy: A Technique for Field Analysis of Environmental Pollutants* **Saunders J.E.**, *$Tong A., Robertson M.

1409 *The Nature of the Ultra-High CO_2 Storage Capacity and Adsorption Selectivities in Zeolitic Imidazolate Framework Materials: A Molecular Simulation Study* **Sirjoosingh A.**, Alavi S., *$Woo T.K.

1410 *Electrochemical Formation of a Heterogenous Mixed Monolayer on a Planar Polycrystalline Gold Electrode* **Smith S.R.**, *Lemay D.M., $Shepherd J.L.

1411 *Solid-State $^{6,7}Li$ and ^{31}P NMR Studies of Lithium Manganese Phosphates* **Soo K.J.**, *Davis L.J.M., $Goward G.R.

1412 *Theoretical Investigation of Multifunctional Molecules for Single-Layer Organic Light Emitting Diodes (OLEDs)* **Zeng G.-C.**

Wednesday AM

Analytical Chemistry

AN2 203-HCC

Chemicals of Emerging Concern (joint with EN2)

Organizer(s) - Mehran Alaee and Eric Reiner
Chair(s) - Mehran Alaee, Eric Reiner

08:00 1413 *On Line HPLC μExtraction of Hydrophobic Chemicals In Immersed Soils* **Gamble D.S.**

08:20 1414 *Determining Dyes and Pigments in Water and Sediments* *$**Balakrishnan V.K.**, Palabrica V.

08:40 1415 *Determination of Co-Planar Bromo-Chloro Biphenyls in Fish from the Great Lakes: Preliminary Results and Analytical Challenges* *Alaee M., **Pacepavicius G.**, Reiner E., MacPherson K., Fayez L., Nakao T., Ohta S.

09:00 1416 *Identification of Potential Disinfection By-Products in Treated Drinking Water Using GC-(FT)MS* Taguchi V.Y., Trikoupis M.A., **Jobst K.J.**, Terlouw J.K.

09:20 1417 *Challenges of Produced Water in Oil Fields: Best Practices* **Uthaman K.**

09:40 Coffee Break

10:00 1418 *Profiles of Dechlorane Plus and New Related Compounds in a Lake Ontario Sediment Core* **Sverko E.**, Reiner E., Tomy G.T., Marvin C.H., Zaruk D., McCrindle B., Arsenault G., Shen L., MacPherson K., McCarry B.E.

10:20 1419 *Brominated Flame Retardants and Dechlorane Plus Related Compounds in Environmental Samples from the Laurentian Great Lakes* **Shen L.**, Reiner E., MacPherson K., Kolic T., Sverko E., Helm P., Brindle I., Marvin C.H.

10:40 1420 *Emerging Instrumentation and Techniques for Chemicals of Emerging Concern: A Highly Sensitive and Versatile Triple Quadrupole LC/MS/MS System* *__Gamble H.A.__, Scott G., Cousins L.M., Alaee M., Gamble D.S.

11:00 1421 *A Spectral Displacement Study of Cyclodextrin/Carboxylic Anion Inclusion Compounds* Mohamed M.H., *$**Wilson L.D.**, Headley J.V., Peru K.M.

11:20 1422 *Micellar Enhanced Ultrafiltration for the Removal of Sulfonamide Antibiotics from Wastewater* **Exall K.**, Balakrishnan V.K.

11:40 1423 *High Concentration Adsorption of Zinc Acetate onto Acid Treated Activated Carbon* *__Farooq A.__, Mehboob S., Chaudhry M., Irfan N.

12:00 End of Session

AN3 EBallrm-Sher

Frontiers of Separation Science

Organizer(s) - Philip Britz-McKibbin and Nicole Baryla
Chair(s) - Philip Britz-McKibbin

08:20 1424 *Applications of Micro Free Flow Electrophoresis* *$**Bowser M.T.**, Turgeon R.T., Fonslow B.R.

09:00 1425 *Metabolomic Studies of Radiation-Induced Apoptosis of Human Lymphocytes by Capillary Electrophoresis-Electrospray Ionization-Mass Spectrometry* **Lee R.**, *$Britz-McKibbin P.

09:20 1426 *Sulfur Response Characteristics of a Novel Micro Dual Flame Photometric Detector* **Hayward T.C.**, *Thurbide K.B.

09:40 Coffee Break

10:00 1427 *Novel Boronic Acids Chemistry Based Techniques for Extraction, Separation and Preconcentration of Cis-Diol Containing Biomolecules: Can We Teach an Old Dog New Tricks?* *$**Liu Z.**, Ren L., He J., Dou P., Liu J., Chen H.-Y.

10:40 1428 *Development of an Immobilized Enzyme Microreactor Based on Microencapsulated Laccase Coupled to Capillary Electrophoresis to Measure Oxidation Reactions* Gusetu-Roman G., Rochefort D., *__Waldron K.C.__

11:00 1429 *CE-LIF Based Single Enzyme Molecule Assay with Time Resolution* *$**Craig D.B.**, Nichols E.R.

11:20 End of Session

Biological & Medicinal Chemistry

BM4 CBallrm-Sher

Carbohydrates and Glycobiology (joint with OR2)

Organizer(s) - France-Isabelle Auzanneau
Chair(s) - France-Isabelle Auzanneau

08:00 1430 *Protecting Group-Free Synthesis of Thioglycosides* **Chibba A.**, $Nitz M.

08:20 1431 *Preparation and Characterization of Mannosylated Oligoribonucleotides* *$**Yan H.B.**, Zhao Y.Z.

09:00 1432 *Chemoenzymatic Synthesis of α-(2,8)-Linked Oligosialosides* *$**Ling C.-C.**, Zhang P., Li W.L., Zuccolo A.J., Zhen R.B.

09:20 1433 *Carbohydrate Hydration and Its Role in Inhibiting Ice Recrystallization* *$**Ben R.N.**

09:40 Coffee Break

Chair(s) - Robert Ben

10:00 1434 *Glycosylsulfonylhydrazides in Protecting Group Free Glycosidation Reactions* $**Nitz M.**

10:40 1435 *Synthesis of Triazole containing Carbocycles Related to Oseltamivir as Potential Neuraminidase Inhibitors* **Mohan S.**, *Pinto B.M.

11:00 1436 *The Redox Glycoside Hydrolysis Mechanism Catalyzed by GlvA: A DFT Study* **Huang W.**, Llano J., *$Gauld J.W.

11:20 1437 *Synthetic and Biological Studies of GPI Anchors and Related Derivatives* *Guo Z.

12:00 End of Session

BM6 SBallrm-Sher

Microbial Chemical Biology (joint with OR4)

Organizer(s) - Gerry Wright
Chair(s) - Gerry Wright

08:00 1438 *Chemical Genomics: Charting Chemical-Genetic Interactions in Bacteria* *$**Brown E.D.**

08:40 1439 *Harnessing Biosynthetic Pathways to Produce Complex Molecules* *$**Boddy C.N.**

09:20 1440 *Chemical Modification of Thiostrepton: Analogs with Improved Physicochemical Properties and as Probes for Structure-Activity Studies* *Myers C., Hang P., Ng G., Yuen J., Su Z., $Honek J.

09:40 Coffee Break

10:00 1441 *Chemogenomic Profiling Predicts Antifungal Synergies* *$**Thomas D.Y.**, Jansen G., Suprenant J., Epp E., Harcus D, Scott M., Tan E., Whiteway M., Hallett .M

10:40 1442 *Investigation of σ^{54} as a Conserved Regulator of Heterologous Secondary Metabolite Biosynthesis* **Stevens D.C.**, *$Boddy C.N.

11:00 1443 *Quantification of Viable Escherichia coli O157:H7 Using the rpoS Gene as the Target* **Wang C.**, Fung C., Liu Y., *Li X.-F.

11:20 1444 *The Development of β-Strand Mimetic Oligomers as Potential Antibiotics* **Watson J.L.**, *Gillies E.R.

11:40 1445 *Known Bioactive Small Molecules Probe the Function of a Widely Conserved but Enigmatic Bacterial ATPase, YjeE* **Mangat C.S.**, $Brown E.D.

12:00 End of Session

Chemical Education

CE3 AlbionA-HCC

Strategies and Best Practices for Teaching Organic Chemistry

Organizer(s) - Paul Zelisko
Chair(s) - Tracy Morkin, Paul Zelisko

08:00 1446 *On the Practical Limits of Determination of Isolated Yields and Isomeric Ratios* **Collins J.**, *Hudlicky T., $English A., Crandles M.

08:40 1447 *Problem-Based Learning in an Undergraduate Chemistry Course* *$**Flynn A.B.**, Biggs R.

09:00 1448 *Developing an Undergraduate Course and Program in Synthetic and Catalytic Chemistry* **Dicks A.P.**, Batey R.A.

09:20 1449 *On-Line Quizzes as a Means of Evaluating Comprehension and Allotting Study Time in Second-Year Organic Chemistry* *$**Zelisko P.M.**

09:40 1450 *Teaching the Tools, Tricks and Techniques of Organic Chemistry in a Scenario-Driven, Integrated Laboratory Format* *$**Leigh W.J.**, Huck L.A.

10:20 Coffee Break and Student Awards Presentation and Reception

12:00 End of Session

Environmental Chemistry

EN1 202-HCC

Atmospheric Chemistry

Organizer(s) - Robert McLaren
Chair(s) - Robert McLaren, Corrine Schiller

Air Quality in Lake-Influenced and Coastal Regions

08:00 1451 *Glancing-Angle Raman Study of Chemistry at the Atmosphere-Ice Interface* **Wren S.N.**, Kahan T.F., $Donaldson D.J.

08:20 1452 *Simultaneous Direct and Indirect Night-Time Measurements of NO_2, NO_3, N_2O_5 and H_2O Using Differential Optical Absorption Spectroscopy in Winter at York University* *Wojtal P., $McLaren R.

08:40 1453 *Photo-Redox Reactions of Chlorophyll at the Air-Salt Water Interface* **Reeser D.I.**, *Donaldson D.J.

09:00 1454 *Night Time Atmospheric Chemistry in a Polluted Marine Environment* *$**McLaren R.**, Wojtal P., McCourt J., Majonis D., Halla J.D.

09:20 1455 *Nocturnal Halogen Activation in the Marine Boundary Layer: Production of $ClNO_2$ and Cl_2 from Heterogeneous Uptake of N_2O_5* *$**Osthoff H.D.**, Roberts J.M., Brown S.S., Ravishankara A.R.

09:40 Coffee Break

10:00 1456 *Ground-Level Ozone in Southwestern Ontario and the Influence of the Great Lakes: Overview of the BAQS-Met Study* *$**Brook J.R.**, Levy I., Mihele C.

10:40 1457 *Process Tracking for Chemical Analysis: Causes of Ozone Formation in Southern Ontario During BAQS-Met* ***Makar P.A.**, Stroud C., Zhang J., Gong W., Moran M., Hayden K.L., Tarasick D., Brook J., Sills D.

11:20 1458 *Long Path Absorption Photometer (LOPAP) Measurements of HONO During BAQS-Met 2007* **Wentzell J.J.B.**, Schiller C.L., $Harris G.W.

11:40 1459 *Photochemical Age Determination Using Gaseous Carbonyls and NMHCs During the BAQS-MET Field Study* ***Nuaaman I.**, Kornilova A., Moukhtar S., $McLaren R.

12:00 End of Session

EN2 203-HCC

Chemicals of Emerging Concern (joint with AN2)

Organizer(s) - Mehran Alaee and Eric Reiner
Chair(s) - Mehran Alaee, Eric Reiner

08:00 **See AN2**

12:00 End of Session

Inorganic Chemistry

IN1 ChedokeC-HCC

Main Group Chemistry

Organizer(s) - Charles Macdonald and Kathryn Preuss
Chair(s) - Jason Masuda

08:00 1460 *Simple Complexes of Elemental Phosphorus, Sulfur and Selenium* *$**Krossing I.**

08:40 1461 *Stable Five-Membered Ring Allenes of Second Row Elements* **Dyker C.A.**, Lavallo V., Donnadieu B., *Bertrand G.

09:00 1462 *Cationic Crown Ether Complexes of Germanium(II)* **RoyChowdhury R.**, *$Macdonald C.L.B., Baines K.M., Rupar P.A., Ragogna P.J., Cooper B.F.T., Stinchcombe M.R.

09:20 1463 *The Addition of Nitriles and Amides to Group 14 (Di)metallenes* **Hardwick J.A.**, $Baines K.M.

09:40 Coffee Break

Chair(s) - Adam Dyker

10:00 1464 *Steric Influence on Oligomerization in Dimethylindium(III) Chalcogenolates $[Me_2InER']_n$ (E = O, S, Se)* *$**Briand G.G.**, Decken A., Hamilton N.S.

10:20 1465 *Classic Coordination Chemistry at Heavy Chalcogen Centres* **Dutton J.L.**, $Ragogna P.J.

10:40 1466 *Thallium, Tin and Lead Complexes of a Te-Centred Ligand: Structural Chemistry and Applications to PbTe Thin Film Deposition* **Ritch J.S.**, $Chivers T., Ahmad K., Afzaal M., O'Brien P.

11:00 1467 *Synthesis and Characterization of a New Thiadiazolo-Fused p-Semiquinone Radical* *$**Morgan I.S.**, Jennings M.C., *Preuss K.E.

11:20 1468 *Investigations of N-Substituted Chalcogenadiazoles* **Cozzolino A.F.**, Elder P.J.W., Jerred B.J., Lee L.M., *$Vargas-Baca I.

11:40 1469 *New Ferrocenyl Based Chalcogenolate Ligands* **MacDonald D.G.**, *Corrigan J.F.

12:00 End of Session

IN4 WebsterA-HCC

Organometallic Chemistry of the d- and f-Block Metals

Organizer(s) - Georgii Nikonov
Chair(s) - Charles Casey

08:00 1470 *Osmium-Carbon Multiple Bonds: Reduction and C-C Coupling Reactions* **Esteruelas M.A.**

08:40 1471 *Carbon-Carbon Bond Formation and Carbon-Hydrogen Bond Activation by Heterobimetallic Iridium/Osmium Complexes* **Ulmer T.J.**, *$Cowie M., McDonald R., Ferguson M.J.

09:00 1472 *Single-Component Selective and Switchable Catalysts for Ethylene Oligo- and Polymerization* **Gambarotta S.**

09:20 1473 *The Lewis-Acidity of Trimethylplatinum(IV) and its Interaction with a Brominated closo-Carboranate Anion* **De Crisci A.G.**, Hsieh V., Kleingardner J., Larsen A., Lough A.J., *Fekl U.W.

09:40 Coffee Break

Chair(s) - Philip Mountford

10:00 1474 *Twisted and Nonplanar Pincer Complexes: Structures and Catalysis* *$**Protasiewicz J.D.**

10:40 1475 *Pyridylidene (rNHC) Pincer Complexes* *$**Gusev D.G.**, Athanasopoulous T.

11:00 1476 *Modular Routes to Chiral, Chelating Pyridinylidenes of Pt and Pd, Allyl Complexes, and Applications in Catalysis* *$**Jones N.D.**, Strong E.T.J., Price J.T., McDonald R.

11:20 1477 *New PNHN Pincer-Type Ligands and their Complexes for Transfer Hydrogenation* **Konrad B.I.**, Gusev D.G.

11:40 1478 *Coordinatively Unsaturated Late Metal Silyl Pincer Complexes: Applications in Challenging σ-Bond Cleavage Reactions* *$**Turculet L.**

12:00 End of Session

IN6 ChedokeA-HCC

Transition Metals in Synthesis and Catalysis (joint with OR9)

Organizer(s) - Costa Metallinos and James Green
Chair(s) - Stephen MacNeil

08:00 1479 *Palladium-Catalyzed Dioxygenation of Olefins* *$**Song D.**

08:20 1480 *Reactivity and Selectivity Trends in Tethered Bis(amidate)zirconium Complexes for Hydroamination* **Yonson N.**, *$Schafer L.L.

08:40 1481 *Trifluoromethylated Bis(Amidate) Bis(Amido) Zirconium Complexes: Low Temperature Reactivity in the Catalytic Hydroamination of Alkenes* **Turner C.S.**, $Schafer L.L.

09:00 1482 *Using N-Heterocyclic Carbene Ligands in the Design of New Catalysts for Oxidative Coupling and Olefin Metathesis Reactions* **Collins S.K.**

09:40 Coffee Break

10:00 1483 *Lanthanide-Like Behaviour from a Bis(Ureate) Supported Zirconium Complex: Intramolecular Alkene Hydroamination of Primary and Secondary Amines* **Leitch D.C.**, *$Schafer L.L.

10:20 1484 *Rhodium-Catalyzed Ketone Hydroacylation: An Enantioselective Approach to Five-Membered Lactones* **Phan D.**, *Kim B., $Dong V.M.

10:40 1485 *The Synthesis of Velloziolide* *$**Green J.R.**, Tjeng A.

11:00 1486 *An Enantioselective Synthesis of Medium-Sized Ring Heterocycles via Rhodium-Catalyzed Olefin Hydroacylation* **Coulter M.M.**, Dornan P., *$Dong V.M.

11:20 1487 *Novel Transition Metal-Catalyzed Methods Toward Aromatic Heterocycles* *$**Gevorgyan V.**

12:00 End of Session

IN7 WebsterL-HCC

General and Coordination Chemistry

Organizer(s) - David Emslie
Chair(s) - Tim Storr

08:00 1488 *Synthesis and Reactivity of New Coordinatively Unsaturated Bis(phosphino)silyl Ruthenium Pincer Complexes* **MacInnis M.C.**, *$Turculet L.

08:20 1489 *Mono- and Binuclear Complexes of Rhodium and Ruthenium Bearing Hemilabile ortho-Phosphinoaniline Ligands* **Hounjet L.J.**, Bierenstiel M., Ferguson M.J., McDonald R., *$Cowie M.

08:40 1490 *Synthesis of Pincer-Type Pyridylidene Complexes of Group 8 and 9 Metals* **Athanasopoulos T.**, Gusev D.G.

09:00 1491 *Synthesis of Rigid Tetradentate Ligand Scaffolds for Coordination to Transition Metals* *$**Lavoie G.G.**, Skrela B.C., Hossain D.

09:20 1492 *Upper Rim Functionalized Metallocalix[4]arenes containing Azo Dyes* **Shipman P.O.**, Pilfold J.L., Shipley P.R., *$Abd-El-Aziz A.S.

09:40 Coffee Break

Chair(s) - Michael Shaver

10:00 1493 *A Versatile One-Pot Synthesis of Magnetite Nanoparticles: A Greener Approach* **Yathindranath V.**, *Hegmann T., van Lierop J., $Moore D.F.

10:20 1494 *Decomposition of Copper(I) Guanidinates: Experimental and Computational Studies* **Johnson P.A.**, Coyle J.P., Müller J., DiLabio G.A., *$Barry S.T.

10:40 1495 *Terthiophene and Bithiazole Dinitriles as Ligands for Silver(I)* **Andreychuk N.R.**, *$MacKinnon C.D., Parent S.L.M., Assoud A.

11:00 1496 *Helical Zn(II) and Ni(II) Complexes of bis(Imine-quinoline) Ligands with Extended Aromatic Sidearms* **Levy C.J.**, Prema D., Desper J.

11:20 1497 *Lewis Acid Properties of OsO_3F_2 and $XeOF_4$: Synthesis of $(OsO_3F_2)_2{\cdot}2XeOF_4$, $[XeF_3][\mu\text{-}F(OsO_3F_2)_2]$, $[XeF_3][OsO_3F_3]$, $[Xe_2F_{11}][OsO_3F_3]$ and $XeOF_4{\cdot}NgF_2$ (Ng = Xe, Kr)* **Hughes M.J.**, Mercier H.P.A., *Schrobilgen G.J.

11:40 1498 *Tris(o-phenylenedioxy)phosphate: Application of a Modern Hexacoordinated Phosphorus Anion as a Weakly Coordinating Anion* **Siu P.W.**, $Gates D.P.

12:00 End of Session

Macromolecular Science & Engineering

MS4 AlbionC-HCC

Polymers in Biology and Medicine

Organizer(s) - Elizabeth Gillies
Chair(s) - Elizabeth Gillies

08:20 1499 *Silicone-Hydrogel IPNs as Ophthalmic Biomaterials* *$**Sheardown H.**, Liu L.

09:00 1500 *Effect of DNA Length on Electron Transfer between Intercalated Ethidium Bromide and Externally Bound Copper Cations Analyzed with the Fluorescence Blob Model* **Keyes-Baig C.**, *$Duhamel J.

09:20 1501 *Synthesis and Radiolabelling of Ligand-Tailored Hyperbranched Polyglycerols for Imaging Applications* **Saatchi K.**, Kainthan R.K., Brooks D.E., *$Häfeli U.O.

09:40 Coffee Break

10:00 1502 *Indium-111-Labeled Block Copolymer Micelles for Imaging and Cancer Therapy* **Hoang B.**, Fonge H., Lee H., Reilly R.M., *$Allen C.

10:40 1503 *Synthesizing Artificial Vitreous Humor* **Fawcett A.S.**, *Brook M.A.

11:00 1504 *Exploring Microfluidic Routes to Microgels of Biological Polymers* **Tumarkin E.**, *Zhang H., $Kumacheva E.

11:20 1505 *Single Walled Carbon Nanotube Reinforced Collagen-Based Biomaterials* **Homenick C.M.**, Sheardown H., *$Adronov A.

11:40 1506 *Mechanism and Energy Landscape of Domain Swapping in the B1 Domain of Protein G* **Malevanets A.**, Wodak S.

12:00 End of Session

Materials Chemistry

MT3 Heritage-Sher

Energy Storage and Conversion (joint with PT5)

Organizer(s) - Gillian Goward and Linda Nazar
Chair(s) - Gillian Goward

08:00 1507 *Fuel Cells and Batteries: Fundamentals, Materials and Applications* *$**Thangadurai V.**, Atamanik E., Bhella S.S., Li Q.

08:40 1508 *Hydrogen in Metal Cluster Cages: Weak Bonding and Reactions in Confined Spaces* *$**Naumkin F.Y.**, McNelles P.

09:00 1509 *Solid State NMR Studies of Hydrogen Storage Materials* *$**Moudrakovski I.**, Pallister P.J., Flacau R., Ratcliffe C.I., Ripmeester J.A., McGrady G.S.

09:20 1510 *Ceramic Carbon Electrode Materials for the Electrochemical Step of the Cu-Cl Thermochemical Cycle for Hydrogen Production* **Santhanam R.**, *Easton E.B.

09:40 Coffee Break

10:00 1511 *Surface Chemical Approaches to Increasing Proton Conductivity in Fuel Cell Electrocatalyst Layers* *$**Easton E.B.**, Pauric A.D., Eastcott J.I., Pedersen A.W.

10:40 1512 *Prototype Direct Alcohol Alkaline Fuel Cells* **Markiewicz M.E.P.**, *$Bergens S.H.

11:00 1513 *Structure-Property Relationships for a Series of Polyimide Copolymers with Sulfonated Pendant Groups* Savard O., **Peckham T.J.**, Yang Y., *$Holdcroft S.

11:20 1514 *Hydrogen Production from Combined Endothermic and Exothermic Hydrogen Carriers* **Dean D.**, Wechsler D., *$Jessop P.G., Davis B.

11:40 1515 *The Use of Substituted N-Heterocycles as Hydrogen Storage Media for Fuel Cells* **Wechsler D.**, Dean D., Carrier A., *$Jessop P.G., Davies B.

12:00 End of Session

MT4 Beckett-Sher

Frontiers in Materials Characterization with X-Rays, Neutrons and Electrons (joint with PT6)

Organizer(s) - James Britten, Gianliugi Botton and Lachlan Cranswick
Chair(s) - Lachlan Cranswick, James Britten, Gianliugi Botton

08:00 1516 *Neutron Powder Diffraction Studies of the Magnetism and Crystallography of Rare-Earth Iintermetallics: $R_3T_4X_4$ (R=Rare-Earth; T=Cu, Ag; X=Si, Ge, Sn)* *$**Cadogan J.M.**, Ryan D.H.

08:40 1517 *In-Situ versus Quench Methods for Characterizing Oxides: A Study of Copper-Manganese Spinel* *$**Petric A.**, Wei P., Cranswick L.M.D., Bieringer M.

09:20 1518 *Probing the Mechanism of Oxide Film Growth on Ti Using Cold Neutron Depth Profiling* **Noël J.J.**, Tun Z., Downing R.G., Cao R.L.

09:40 Coffee Break

10:00 1519 *Charge Density Studies of Quasi-One-Dimensional Transition Metal Carbides* *$**Scherer W.**, $Poettgen R.

10:40 1520 *Grazing-Incidence X-Ray Diffraction of Tetracene Thin Films on Hydrogenated Si(001) Substrate* *$**Jiang D.T.**, Tersigni A., Kim C.-Y., Shi J., Chen N., Gordon R., Qin X.R.

11:20 1521 *Electron Spectroscopy Using Inelastic X-Ray Scattering* *$**Kim Y.-J.**, Ellis D.S., Kim J., Gog T., Casa D., Hill J.P.

12:00 End of Session

Organic Chemistry

OR1 AlbionB-HCC

Applied Physical Organic Chemistry

Organizer(s) - Michelle Chrétien
Chair(s) - Gonzalo Cosa, Qadir Timerghazin

08:00 1522 *Proton-Coupled Electron Transfer of Anthraquinone Monolayers* *__Sutherland T.C.__, Abhayawardhana A.D.

08:40 1523 *Mechanistic Studies on the Photochemistry of 4-Trifluoromethanesulfonic Phenol: Substituent Effects and Acid Generation for Photolithography Applications* **Billone P.S.**, Liras M., Heafy E., *Scaiano J.C., Blackwell J.M., Bristol R.

09:00 1524 *Fast Kinetic Studies of the Reactions of Silylenes with Oxiranes and Thiiranes* **Kostina S.**, *Leigh W.J.

09:20 1525 *Studying Persistent C-H···X (X = O, S, Br, Cl, F) Bonding in Solution Using Benzyl Meldrum's Acids* **Wilsily A.**, Fishlock D., *$Fillion E.

09:40 Coffee Break

10:20 1526 *Density Functional Theory Modelling of Organic Systems: The Importance of Accounting for Non-Covalent Interactions* *$__DiLabio G.A.__

10:40 1527 *A Computational Study of the Electronic Structure and Hydrolytic Reactivity of Various N-Sulfinyl Species* **Ivanova E.V.**, $Muchall H.M.

11:00 1528 *Nitrone Modified Monolayer Protected Gold Nanoparticles: Template for Introducing Structural Diversity via 1,3-Dipolar Cycloaddition Reactions* **Lines B.M.**, *$Workentin M.S.

11:20 1529 *Equilibrium Constants in Solution are Available with Useful Accuracy by Computation Alone for Reactions of Small Neutral Molecules* **Guthrie J.P.**, Povar I.

11:40 End of Session

OR2 CBallrm-Sher

Carbohydrates and Glycobiology (joint with BM4)

Organizer(s) - France-Isabelle Auzanneau
Chair(s) - France-Isabelle Auzanneau

08:00 **See BM4**

09:40 Coffee Break

Chair(s) - Robert Ben

12:00 End of Session

OR3 ChedokeB-HCC

Green Chemistry and Organocatalysis

Organizer(s) - Philip Jessop and C.J. Li
Chair(s) - Philip Jessop, C.J. Li

08:00 1530 *Functional Polymers and Nano-Matrices from Industrial Lipids* *$__Narine S.S.__

08:40 1531 *Transition Metal Nanoparticle Catalysts Stabilized by Functionalized Ionic Liquids* **Luska K.L.**, $Moores A.

09:00 1532 *Total Catalytic Deoxygenation of Glycerol by the Acid-, Water- and Thermally Stable Ruthenium Complexes [Ru(R-terpy)(H_2O)$_3$](OTf)$_2$, R = H, 4'-Ph* Thibault M., Taher Alansawi D., *$__Schlaf M.__

09:20 1533 *Enzyme Mediated Sol-Gel Processing of Alkoxysilanes: Synthesis and Kinetics* **Frampton M.B.**, Simionescu R., $Zelisko P.M.

09:40 Coffee Break

10:00 1534 *Frustrated Lewis Pairs: A New Paradigm for "Green" Metal-Free Catalysis* Chase P.A., *$__Stephan D.W.__

10:40 1535 *Binaphthol-Catalyzed Addition Reactions of Boronates for Asymmetric Synthesis* **Chong J.M.**

11:20 1536 *Investigation of Hydride Donors for the Regeneration of Ammonia Borane* **Laberge V.S.**, Webb J.B., Crudden C.M.

11:40 1537 *Boronic Acid Catalysed Rearrangement Reactions of Allylic and Propargylic Alcohols* *$__McCubbin J.A.__

12:00 End of Session

OR4 SBallrm-Sher

Microbial Chemical Biology (joint with BM6)

Organizer(s) - Gerry Wright
Chair(s) - Gerry Wright

08:00 **See BM6**

12:00 End of Session

OR5 WebsterB-HCC

Modern Acetylene Chemistry

Organizer(s) - Rik Tykwinski and Michael Haley
Chair(s) - Rik Tykwinski

08:00 1538 *Synthesis and Characterization of Asphaltene Model Compounds* **Azyat K.**, Tan X., Veroni L., McKinty A., Gray M., Stryker J.M., *$Tykwinski R.R.

08:20 1539 *Development of New Acetylene-Expanded Tetrathiafulvalene Analogues* *__Zhao Y.__, Chen G., Mahmud I., Shao M.

09:00 1540 *Catalytic Nucleophilic Additions of Terminal Alkynes in Water* *$__Li C.J.__

09:40 Coffee Break

10:00 1541 *All-Organic Oligoynes: Synthesis, Structures, Stability and Applications* *__Bryce M.R.__, Wang C., West K., Batsanov A.S.

10:40 1542 *Activation of Acetylenes by Transition Metals: Catalytic Formation of C-N Bonds* *$__Fokin V.V.__

11:20 1543 *Supramolecular Approaches toward Organic Electronic and Carbonaceous Materials* *__Frauenrath H.__, Hoheisel T., Gebers J., Tian L.

12:00 End of Session

OR8 WebsterC-HCC

Organic Synthesis in Canada, Coast to Coast: Past, Present and Future

Organizer(s) - Tomas Hudlicky
Chair(s) - Robert Batey

10:00 1544 *Enantioselective Addition of Di- and Triynes to Aldehydes: Towards the Synthesis of Montiporynes I, J and K* **[$]Graham E.R.**, [*]Tykwinski R.R.

10:20 1545 *Development and Studies of Catalyzed Mono and Domino Aryl-Claisen Rearrangements* **Ramadhar T.R.**, Kawakami J., Lough A.J., [*]Batey R.A.

10:40 1546 *Rearrangements of Verdazyl Radical-Derived Cycloadducts to Structurally Unique Pyrazolotriazinones and Triazoles* **Chen E.K.Y.**, [*$]Georges M.K.

11:00 1547 *Nucleophilic Ring-Opening of Enantioenriched Protected Aziridines and Synthetic Application* **Ross K.**, [*]Lebel H.

11:20 1548 *The Oxo-Povarov Reaction: A Novel Method for the Synthesis of Chromans* **Taylor R.R.R.**, [*$]Batey R.A.

11:40 End of Session

OR9 ChedokeA-HCC

Transition Metals in Synthesis and Catalysis (joint with IN6)

Organizer(s) - Costa Metallinos and James Green
Chair(s) - Stephen MacNeil

08:00 **See IN6**

12:00 End of Session

Physical, Theoretical and Computational Chemistry

PT3 WBallrm-Sher

Atoms in Molecules

Organizer(s) - Paul Ayers and Chérif Matta
Chair(s) - Axel Becke

Reactivity, Reaction Mechanisms, Potential Energy Surfaces and Biological Applications of QTAIM

08:00 1549 *Currents and Aromaticity: Finding the Right Place to Stand* **Fowler P.W.**

08:40 1550 *Electron Transport in Real Space: Visualizing Conductivity, Rectification and Switching in Molecules and Bulk Matter* [*$]**Levit C.**

09:20 1551 *Topology of the Electron Density Laplacian in Crystals* [*]**Otero-de-la-Roza A.**, Martín Pendás A., Luaña Cabal V.

09:40 Coffee Break

10:00 1552 *Dissociation Curves from Variational Second Order Density Matrices: An Atoms in Molecules Perspective* [*]**Bultinck P.**, Van Aggelen H., Verstichel B., Van Neck D., Ayers P.W.

10:40 1553 *Physical Understanding Through Variational Reasoning: Electron Sharing and Covalent Bonding* [*]**Ruedenberg K.**, Schmidt M.W.

11:20 1554 *Insight into Biological Systems from the Topology of the Electron Density* [*$]**Boyd R.J.**

12:00 End of Session

PT5 Heritage-Sher

Energy Storage and Conversion (joint with MT3)

Organizer(s) - Gillian Goward and Linda Nazar
Chair(s) - Gillian Goward

08:00 **See MT3**

12:00 End of Session

PT6 Beckett-Sher

Frontiers in Materials Characterization with X-Rays, Neutrons and Electrons (joint with MT4)

Organizer(s) - James Britten, Gianliugi Botton and Lachlan Cranswick
Chair(s) - Lachlan Cranswick, James Britten, Gianluigi Botton

08:00 **See MT4**

12:00 End of Session

Wednesday PM

Biological & Medicinal Chemistry

BM4 CBallrm-Sher

Carbohydrates and Glycobiology (joint with OR2)

Organizer(s) - France-Isabelle Auzanneau
Chair(s) - Chang-Chun Ling

13:20 1555 *The Effect of Hydrophobic Groups on Hydration and Antifreeze Activity of C-Linked Carbohydrates* **Chaytor J.L.**, [$]Ben R.N.

13:40 1556 *Structure and Function Relationship of Lytic Transglycosylases* [*$]**Clarke A.J.**

14:20 1557 *Flagellar Glycosylation Systems of Bacteria: Novel Therapeutic Targets, Novel Therapeutic Products* [*$]**Logan S.M.**

15:00 Coffee Break

Chair(s) - France-Isabelle Auzanneau

15:20 1558 *Polysaccharide-Based Vaccines against Human Pathogens* **Monteiro M.A.**

16:00 1559 *Investigation of the Binding of a Carbohydrate-Mimetic Peptide to its Complementary Anti-Carbohydrate Antibody by STD-NMR Intensity-Restrained CORCEMA Optimization (SICO) and Molecular Dynamics Simulation* **Szczepina M.G.**, Bleile D. W., Müllegger J., Dixit S.B., *$Pinto B.M.

16:20 1560 *Insight into the Mechanism of Peptide-Heparin Interactions* **Rullo A.**, $Nitz M.

16:40 1561 *Biomimetic Monoacylation of Carbohydrates in Water* **Dhiman R.**, $Kluger R.

17:00 End of Session

BM10 AlbionC-HCC

General

Organizer(s) - Yingfu Li
Chair(s) - Yingfu Li

13:20 1562 *Synthesis of N^{ind}-Benzyltryptophan Dipeptides: Biomimetic Cation-π Binding Motifs* **Beshara C.S.**, $Hof F.

13:40 1563 *Pattern-Based Recognition of Heparin Contaminants by an Array of Self-Assembling Fluorescent Receptors* $Nitz M., **Gomez-Biagi R.F.**, *Jagt R.B.C.

14:00 1564 *Ester Surfaces from Hydrogen Bombardment Induced Crosslinking* **Thompson D.B.**, Stojcevic G., *Gillies E.R., $Lau W.M.

14:20 1565 *Mirror Symmetry Breaking and Chiral Amplification of Ethylenediammonium Sulfate Crystals* **Cheung P.S.M.**, Cuccia L.A.

14:40 1566 *The In-Plane Structure of Magnetically Alignable Lamellae made of Biomimetic Membranes: "Bicelles"* ***$Nieh M.-P.**, Katsaras J., Soong R., MacDonald P.M., Nicholson E.

15:00 Coffee Break

15:20 1567 *Tuning Diamond Like Carbon for Enhanced Biocompatibility* **Maley J.M.**, *$Sammynaiken R., Hirose A., Foursa M., Zhang C.

15:40 1568 *Structuring Silicone Interfaces* **Shao Y.**, $Brook M.A.

16:00 1569 *Chemical Functionalization of Stainless Steel for Human and Animal Implants* **Cooper A.M.**, Wright V.A., Daly B., Meloncelli P.J., Mylvaganam J., Buriak J.M., Lowary T.L., West L.J.

16:20 1570 *A Kinetic and Rheological Investigation of the Effects of Ozone on Lung Surfactant* **Conway J.W.**, *$DeWolf C.E.

16:40 End of Session

Chemical Education

CE6 AlbionA-HCC

The Power of Narrative in Teaching Chemistry: A Symposium in Memory of Robert Haines, UPEI

Organizer(s) - Nola Etkin
Chair(s) - Nola Etkin

13:20 1571 *Stories about the Storyteller: What Makes an Extraordinary Teacher?* ***Etkin N.**, Hart S.L.A.

13:40 1572 *Chemistry Stories to Regale One and All* **Schwarcz J.A.**

14:20 1577 *Improving Student Communications: The Narrative Goes Both Ways* ***$Linkletter B.A.**

14:40 1574 *Student-Centered Narratives: Empowering Student Stories* ***$Loppnow G.R.**

15:00 Coffee Break

15:20 1575 *Learning the Principles of Organic Chemistry Backwards* ***Green M.M.**

16:00 1576 *A Variation on the Use of Interactive Anonymous Quizzes (IAQs) in the University Chemistry Classroom* **Wagner B.D.**

16:20 1573 *The Roles of Narrative in Chemistry Teaching* ***Rayner-Canham G.W.PAPER WITHDRAWN**

16:40 End of Session

Environmental Chemistry

EN1 202-HCC

Atmospheric Chemistry

Organizer(s) - Robert McLaren
Chair(s) - Robert McLaren, Corrine Schiller

Air Quality in Lake-Influenced and Coastal Regions

13:20 1578 *The impact of Lake Breezes on Trace Gases and Particles During the Border Air Quality and Meteorology Study (BAQS-Met)* ***$Hayden K.L.**, Sills D., Li S.-M., Brook J.R., Liu P., Stroud C., Makar P.A., Anlauf K.G., O'Brien J.M., Sharma S., Lu G., Strapp J.W.

14:00 1579 *Aerosol Particle Characterization During the 2007 Border Air Quality Meteorology Study* ***$Evans G.J.**, Jeong C.-H., McGuire M., Rehbein P., Lee C., Corbin J.C.A.

14:40 1580 *The Effect of Photochemical Activity on Volatile Organic Compounds and Aerosol Composition at Harrow, Ontario* **Sjostedt S.J.**, Slowik J.G., Chang R.Y.-W., Vlasenko A., Mihele C., $Abbatt J.P.D.

15:00 Coffee Break

15:20 1581 *Comparing Measured and Modelled Indicator Ratios of Air Mass Photochemical Age During the BAQS-Met Study in Southern Ontario* ***$Stroud C.**, Makar P.A., Moran M., Zhang J., Brook J., McLaren R., Rudolph J., Abbatt J.P.D., Sjostedt S.J., Wang D., Dann T.

15:40 1582 *HCHO and CO Measurements Using Tunable Diode Laser Absorption Spectroscopy (TDLAS) in Ridgetown, ON During BAQs-MET 2007* *__Schiller C.L.__, Hall R., Harris G.W.

16:00 1583 *Determination of Local and Long Range Sources of NO_2 and Aerosols During BAQS-Met Using MAX-DOAS* *__Halla J.D.__, Wojtal P., Ng A., Wagner T., Beirle S., $McLaren R.

16:20 1584 *DRIFTS Studies on the Photodegradation of Tannic Acid as a Model for HULIS in Atmospheric Aerosols* *$__Al-Abadleh H.A.__, Cowen S.

16:40 End of Session

Inorganic Chemistry

IN1 ChedokeC-HCC

Main Group Chemistry

Organizer(s) - Charles Macdonald and Kathryn Preuss
Chair(s) - Glen Briand

13:20 1585 *Frustrated Lewis Pairs: Reactivity of Olefins, Dienes and Alkynes* Dureen M.A., Zhao X., Ulrich M., Seto K., *$__Stephan D.W.__

14:00 1586 *Facile Cycling of Ti-Doped $LiAlH_4$ for High Performance Hydrogen Storage* Liu X., *$McGrady G.S., __Langmi H.W.__, Jensen C.M.

14:20 1587 *Relevance of Metal Aminoborane Complexes ([M]-$NHRBH_2$) to Catalyzed Dehydrogenation of Primary Amine-Boranes (R = H, alkyl)* *$__Baker R.T.__, Rachiero G.P., Pons V., Camaioni D.M., Liu J.

14:40 1588 *Characterization of β-B-Agostic Isomers in Zirconocene Amidoborane Complexes* Forster T.D., Tuononen H.M., Parvez M., *$__Roesler R.__

15:00 Coffee Break

Chair(s) - Charles Macdonald

15:20 1589 *To Be Strained or Not to Be Strained. Insights into the Formation of Metallacyclophanes* Bagh B., Lund C.L., Schachner J.A., Quail J.W., Schatte G., *$__Müller J.__

15:40 1590 *Group 13 Metal Complexes Utilizing the Bis(imino)pyridine Ligand Framework: Attempted Synthesis and Characterization of Low-Valent Compounds* __Jurca T.__, Burchell T.J., Lummiss J., Yap G.P.A., *Gorelsky S.I., $Richeson D.S.

16:00 1591 *New Bis(iminophosphorano)methanide Complexes of Tl(I): An Unsupported C-Tl Bond and a Geminal Di-Thallide with Tl-Tl Bonds* *$__Cavell R.G.__, Ma G.

16:20 1592 *Synthesis, Characterization and Thermolysis of Novel Heteroleptic Aluminum Complexes* __Kurek A.__, *Wasslen Y.A., Pigeon T.C., Johnson P.A., Monillas W.H., Yap G.P.A., $Barry S.T.

16:40 1593 *Three Cases for Thermochemistry: Wanzlick Carbenes, P_8 and the Sulfur-Sulfur Bond* *$__Denk M.K.__, Hastie J., Krause M., Hezarkhani A., Zheng F.L.

17:00 End of Session

IN4 WebsterA-HCC

Organometallic Chemistry of the d- and f-Block Metals

Organizer(s) - Georgii Nikonov
Chair(s) - Michael Fryzuk

13:20 1594 *Borylene Complexes as Reagents in Organic and Organometallic Synthesis* __Braunschweig H.__, Kraft K., $Seeler F., Radacki K., Gruß K.

14:00 1595 *An η1-Borobenzene Platinum Adduct: The First Example of an Unchelated Metal Borane Complex?* *$__Fontaine F.-G.__, Languérand A., Bélanger Chabot G., Barnes S.S.

14:20 1596 *Oligomeric (Dimethylsilyl) Bridged Ferrocenes from the Dehydrogenative Coupling of Tertiary Bis(dimethylsilyl)Ferrocene* *$__Foucher D.__, Ward J., *Miles D.

14:40 1597 *Synthesis, Reactivity and Polymerization of Strained Hydrocarbon-Bridged [2]Metallocenophanes* __Gilroy J.B.__, Herbert D.E., Mayer U.F.J., *Manners I.

15:00 Coffee Break

Chair(s) - Miguel Esteruelas

15:20 1598 *Pincer Complexes of Divalent and Trivalent Nickel and Cobalt* *$__Zargarian D.__, Spasyuk D., Castonguay A., Lefèvre X., Pandarus V.

16:00 1599 *Organozinc Cations as Homogeneous Catalysts for Lactide Polymerization* $__Hayes P.G.__, Wheaton C.A.

16:20 1600 *Computational Studies of $ZnR_2/ZnCl_2$ Reactions with Zincocenes and the Anomalous Formation of Decamethyldizincocene* __Hepperle S.S.__, *$Wang Y.A.

16:40 End of Session

IN6 ChedokeA-HCC

Transition Metals in Synthesis and Catalysis (joint with OR9)

Organizer(s) - Costa Metallinos and James Green
Chair(s) - Stephen Foley

Boehringer Ingelheim Award Lecture presented by Alexandre Côté

Introduction of Alexandre Côté by Robert Prud'homme

13:20 1601 *Use of a Diphosphine Monoxide Ligand in Copper Catalyzed Nucleophilic Addition Reactions* __Côté A.__, *$Charette A.B.

14:00 1602 *Trans-Directing Ability of the Amide Group: Enabling Enantio- and Diastereocontrol in Rh-Catalyzed Cyclopropanation of Alkenes Using Diazo Reagents Bearing Two Acceptor Groups* **Marcoux D.**, Azzi S., *Charette A.B.

14:20 1603 *A Synthesis of Piperidines from Propargyl Amines and Cyclopropanes* **Lebold T.P.**, Leduc A.B, *$Kerr M.A.

14:40 1604 *Preparation of a Low Valent Cr (I) Complex of a Ligand with Electron-Storage Capability* **Shuster V.**, Budzelaar P.H.M., Nikiforov G.B., *$Gambarotta S.

15:00 Coffee Break

15:20 1605 *Electrochemical Reduction of CO_2 with Novel Ruthenium(II) Complexes* Chu J., **Abedin T.**, Potvin P.G., Lever A.B.P.

15:40 1606 *Ruthenium(II) Complexes containing Substituted Diimine Ligands and the Azoimine Ligand* **Al-Noaimi M.Z.**

16:00 1607 *A New Family of Single-Component Ethylene Trimerization and Polymerization Catalysts* **$Nikiforov G.B.**, *Gambarotta S.

16:20 1608 *Design and Synthesis of Dyads Utilizing Charge-Separation for Use in Molecular Devices* **Dares C.**, Lever A.B.P., Fournier R.

16:40 End of Session

IN7 203-HCC

General and Coordination Chemistry

Organizer(s) - David Emslie
Chair(s) - Fran Kerton

13:20 1609 *A Structural Study of [CpM(CO)$_3$H] (M = Cr, Mo, W) by X-Ray Diffraction and DFT Calculations: Sterically Crowded Yet Surprisingly Flexible Molecules* ***Sirsch P.**, Burchell R.P.L., Decken A., $McGrady G.S.

13:40 1610 *New Insights into the Nature of Cr-Cr Quintuple Bonds: Computational and Magnetic Studies of Low-Valent Chromium Complexes* **Gorelsky S.I.**, Savard D., Murugesu M., Woo T.K.

14:00 1611 *Luminescence Properties of Molybdenum(IV)-Oxo Complexes* ***$Reber C.**, Lanthier E.

14:20 1612 *d-d Luminescence of Palladium(II) and Platinum(II) 1,4,7-Trithiacyclononane Complexes* **Genre C.**, Reber C.

14:40 1613 *Pressure and Temperature Dependent Luminescence Study of Cyclometalated Pt(II) Complexes* ***Rodrigue-Witchel A.**, $Reber C.

15:00 End of Session

Macromolecular Science & Engineering

MS3 SBallrm-Sher

Polymer Characterization and Physics

Organizer(s) - Christian Pellerin
Chair(s) - Christopher Barrett

13:20 1614 *Orientation, Structure and Deformation of PVDF and HDPE Films* **Ajji A.**, Sadeghi F.

14:00 1615 *Simultaneous Probing of Hydrophobic Interactions of an Associative Thickener under Sheared Conditions Using Fluorescence* **Siu H.**, *Duhamel J.

14:20 1616 *Heavy Oil Viscosity Prediction with Phase Transition Temperature* ***$Cheng Y.**, Kharrat A.

14:40 1617 *Measurement of Tie-Chain Relative Concentrations in Single-Site Linear Low-Density Polyethylene Blown Films by FTIR Spectroscopy* Li N., Wang M., ***$Choi P.**

15:00 Coffee Break

Chair(s) - Christian Pellerin

15:20 1618 *Azo Polymers as Photo-Mechanical Materials for Robotics and Artificial Muscles* ***$Barrett C.J.**, Ikeda T., Tanchak O.M., Yager K.G, Mahimwalla Z.

16:00 1619 *Proton Sensing Polynorbornene Materials containing Aryl and Hetaryl Azo Dyes* ***$Abd-El-Aziz A.S.**, Shipman P.O., Shipley P.R., Boden B.N., Joraid A.A., Alamri S.N., Abu-Sehly A.A., Al-Raqa S.Y., Aly S., Harvey P.D.

16:20 1620 *Addition Polymerization of Group 14 Metallenes* **Pavelka L.C.**, *$Baines K.M.

16:40 End of Session

MS4 WebsterB-HCC

Polymers in Biology and Medicine

Organizer(s) - Elizabeth Gillies
Chair(s) - Elizabeth Gillies

13:20 1621 *Size-Scaling Behaviour in Single- and Multidomain Proteins Belonging to Folding Classes with Variable Secondary-Structural Content* **Rogerson P.**, *$Arteca G.A.

13:40 1622 *Development of Alternate Polycations for Alginate Based Microcapsule* **Jafar Mazumder M.A.**, Burke N.A., Shen F., Potter M.A., *Stöver H.D.H.

14:00 1623 *Enzymatic Ring-Opening Polymerization of Lactic-O-carboxylic anhydride, an Activated Equivalent of Lactide* **Bonduelle C.**, *Martin-Vaca B., $Bourissou D.

14:20 1624 *Synthesis of Arborescent Polypeptides* **Whitton G.**, *Gauthier M.

14:40 End of Session

MS5 EBallrm-Sher

Polymers in Nanoscale Composites and Assemblies

Organizer(s) - Alex Adronov
Chair(s) - Sundar Sundararajan

13:40 1625 *Carbon Nanotube Reinforced Porous Gels of Poly(methyl methacrylate) with Non-Solvents as Porogens*
*$**Sundararajan P.**, Vaysse M., Khan M.K.

14:00 1626 *Self-Assembled Layer-Structured PEO-Urea and PEO-Thiourea Composites* **Liu Y.**, Antaya H., *Pellerin C.

14:20 1627 *Development of Chromate Free Corrosion Suppression Coatings via Crosslinked Sol-Gel Chemistry*
Stabler J.L., Vreugdenhil A.J.

14:40 1628 *Studies of Solid-State Inclusion Complexes of β-Cyclodextrin and some Perfluorinated Guest Molecules*
Borisov A.S., Karoyo A., Hazendonk P., *$**Wilson L.D.**

15:00 Coffee Break

15:20 1629 *Methacrylates by Nitroxide Mediated Polymerization (NMP)* **Lessard B.**, *$Maric M.

15:40 1630 *Pickering Emulsion Templated Layer-by-Layer Assembly for Making Microcapsules* **Li J.**, Stöver H.D.H.

16:00 1631 *Noncovalent Functionalization of SWNTs with Conjugated Polymers* **Imin P.**, Cheng F., *$Adronov A.

16:20 End of Session

Materials Chemistry

MT3 Heritage-Sher

Energy Storage and Conversion (joint with PT5)

Organizer(s) - Gillian Goward and Linda Nazar
Chair(s) - V. Thangadurai

13:20 1632 *Pore Effects, such as Charge Redistribution, on the Self-Discharge of Supercapacitor Electrodes* *$**Andreas H.A.**, Black J.

14:00 1633 *Nanoporous Polythiophene Films for Applications in Supercapacitors* **Bremner G.R.**, Wolf M.O.

14:20 1634 *Preparation and Characterization of Solar Cells Based on Cu(In,Ga)Se_2 Thin Films* **Harati M.**, Lau L., *Ding Z.

14:40 1635 *Ruthenium(II) Complexes of Carboxylated Tridentate Ligands* *$**Stublla A.**, $Potvin P.G., Sepehrifard A., Morin S.

15:00 Coffee Break

15:20 1636 *Functionalized Carbons for Application in Electrochemical Capacitors*
$**Bélanger D.**, Pognon G., Brousse T.

16:00 1637 *Insights into the Optimization of Charge Storage in Electric Double Layer Supercapacitors* *$**Vatamanu J.**, Borodin O., $Smith G.D.

16:20 1638 *Investigating the Stability of Pt/Zn Alloy Used for ORR* Sode A., Musgrove A., *$**Bizzotto D.**

16:40 End of Session

MT4 Beckett-Sher

Frontiers in Materials Characterization with X-Rays, Neutrons and Electrons (joint with PT6)

Organizer(s) - James Britten, Gianliugi Botton and Lachlan Cranswick
Chair(s) - Lachlan Cranswick, James Britten, Gianliugi Botton

13:20 1639 *Beyond PID Temperature Control for Time-Resolved Scattering Measurements*
Sutton M.

14:00 1640 *Analyzing the Bonding in Oxypnictides LaOMAs (M = Fe-Ni, Zn) via X-Ray Spectroscopy*
Blanchard P.E.R., Slater B.R., $Cavell R.G., *Mar A.

14:20 1641 *Atomic-Scale Study of Structure and Lattice Defects of Oxides* **Jia C.L.**

15:00 Coffee Break

15:20 1642 *Characterisation of Nanostructured Materials Using Aberration-Corrected Transmission Electron Microscopy* *$**Etheridge J.**

16:00 1643 *Aberration Corrected STEM: An Atomic-Scale Window into the World of Catalysis*
Borisevich A.Y., Rashkeev S.N., Wang S., Allard L.F., Overbury S.H., Pennycook S.J., Sohlberg K., Pantelides S.T., Flytzani-Stephanopoulos M.

16:40 1644 *Advanced Analytical Electron Microscopy of Complex Materials* *$**Botton G.A.**

17:00 End of Session

Organic Chemistry

OR1 AlbionB-HCC

Applied Physical Organic Chemistry

Organizer(s) - Michelle Chrétien
Chair(s) - Paul Billone, Michelle Chrétien

13:20 1645 *Preparation and Properties of Complexes between Single-Walled Carbon Nanotubes and Conjugated Polymers*
*$**Adronov A.**, Cheng F., Imin P., Rice N., Bahun G.J.

14:00 1646 *Reaction of Isoprene with a Heavy Carbene Analogue: Evidence for a π-Complex* **Huck L.A.**, *Leigh W.J.

14:20 1647 *Contact Electrification and Electrical Discharges* $**Vella S.J.**, Thomas III S.W., Kaufman G.K., Chen X., *Whitesides G.M.

14:40 1648 *A New Paradigm for Structure-Performance Relationships for Gemini Surfactants* *$**Grindley T.B.**, Jahan N., Paul N., Karpechev Y., Petropolis C., Tran T., Marangoni D.G.

15:00 Coffee Break

15:20 1649 *Synthesis of Metal Nanoparticles Using Organic Photochemistry* **Gonzalez C.M.**, *Scaiano J.C.

15:40 1650 *Chemical Modification of Maleimide Functionalized Monolyer Protected Gold Nanoparticles (MPGNs) via High Pressure Accelerated Michael Addition Reactions* **Hartlen K.D.**, *Workentin M.S.

16:00 1651 *A Reinvestigation of the Photochemistry some Dimethylgermylene Precursors by Laser Flash Photolysis* **Lollmahomed F.B.**, *$Leigh W.J.

16:20 1652 *Molecules that Sense and Compute* **Magri D.C.**

16:40 End of Session

OR2 CBallrm-Sher

Carbohydrates and Glycobiology (joint with BM4)

Organizer(s) - France-Isabelle Auzanneau
Chair(s) - Chang-Chun Ling

13:20 See BM4

15:00 Coffee Break

Chair(s) - France-Isabelle Auzanneau

17:00 End of Session

OR3 ChedokeB-HCC

Green Chemistry and Organocatalysis

Organizer(s) - Philip Jessop and C.J. Li
Chair(s) - Philip Jessop, C.J. Li

13:20 1653 *Using Green Chemistry and Supercritical Carbon Dioxide to Produce Nanomaterials* ***$Charpentier P.A.**

14:00 1654 *Biodegradable Ionic Liquids as Alternative Solvents in Synthesis* Harjani J., Scammells P.J., Garcia M.T., Farrell J., ***$Singer R.D.**

14:40 1655 *Controlling Colour with CO_2* **Boyd A.R.**, Buncel E., Jessop P.G.

15:00 Coffee Break

15:20 1656 *Computational Studies of Asymmetric Organocatalysis* ***$Deslongchamps G.**, Lambropoulos A., Holt J.

16:00 1657 *Cycloadditions by Organocatalytic Activation of Unsaturated Carboxylic Acid: A Mild and Greener Approach Using Boronic Acids as Catalysts* **Zheng H.**, Marion O., *Hall D.G.

16:20 1658 *Tandem Stetter-Cyclization Reactions Catalyzed by NHCs* **Sanchez-Larios E.**, $Gravel M.

16:40 1659 *Peroxidatic Coupling of Phenolic Compounds by Micellar Nanoreactors of HRP/Ionic Surfactants* ***$Salmani S.**, *Nazari K., Adhami F., Safari A.N.

17:00 End of Session

OR9 ChedokeA-HCC

Transition Metals in Synthesis and Catalysis (joint with IN6)

Organizer(s) - Costa Metallinos and James Green
Chair(s) - Stephen Foley

See IN6

13:20 Boehringer Ingelheim Award Lecture presented by Alexandre Côté

16:40 End of Session

OR10 WebsterL-HCC

General

Organizer(s) - James McNulty
Chair(s) - James McNulty

13:20 1660 *Chemoselective Functionalization of α-Carbolines at C-2, C-3, C-4 and C-6 Positions by the Suzuki-Miyaura Reaction* **Schneider C.**, Gueyrard D., Joseph B., *$Goekjian P.G.

13:40 1661 *Diastereoselective Synthesis of Cysteine Sulfoxides via Sulfenate Anion* ***$Singh S.P.**, Verdu M.J., $Schwan A.L.

14:00 1662 *Utility of α-Trimethylsilylmethyl Allylboronates: Stereoselective Preparations of Larger Oxa-Bicyclic Rings, Polysubstituted Furans and Pyrrolidines* **Sivasubramaniam U.**, Peng F., *Hall D.G.

14:20 1663 *Synthesis and Characterization of Dibenzo[a,c]phenazine Liquid Crystals* **Voisin E.**, *Williams V.E.

14:40 1664 *Vinyl/Allyl Transfer Reaction and Nucleophilic Addition to Aldehydes Bearing an α Quaternary Carbon Center* **Waltz M.-E.**, Duplessis M., Cardinal-David B., *$Guindon Y.

15:00 Coffee Break

15:20 1665 *Synthesis of Heterocycles via Alkoxy Radical Initiated Relay Cyclizations* **Wickenden J.G.**, *$Sammis G.M.

15:40 1666 *Host-Guest and [2]Pseudorotaxane Complexes of Cucurbit[7]uril with Acetylcholine and Succinylcholine Guests* **Wyman I.W.**, *$Macartney D.H.

16:00 1667 *Hydrolysis of Cyclic Ureas with Schwartz's Reagent: Applications to the Stereoselective Synthesis of Chiral Octahydrophenanthrolines and 5-Substituted-pyrrolo[1,2-c]imidazol-3-ones* **Xu S.**, *$Metallinos C.

16:20 1668 *Reduction of Tertiary Amides to Aldehydes by in situ Generated Schwartz Reagent [$Cp_2Zr(H)Cl$]: Link to the Directed ortho Metalation (DoM) Reaction* **Zhao Y.**, Morin J., $Snieckus V.

16:40 1669 *Chemoselective Oxygen-Centered Radical Cyclizations onto Electron Rich Olefins* **Zlotorzynska M.**, Zhai H., *$Sammis G.M.

17:00 End of Session

Physical, Theoretical and Computational Chemistry

PT3 WBallrm-Sher

Atoms in Molecules

Organizer(s) - Paul Ayers and Chérif Matta
Chair(s) - Russell Boyd

Reactivity, Reaction Mechanisms, Potential Energy Surfaces and Biological Applications of QTAIM

13:20 1670 *Quantum Chemical Modelling of Vibrational Spectra, from Alkanes to Brains* *$**Gough K.M.**

14:00 1671 *The Mechanism of Peptide Bond Formation in the Ribosome* **Massa L.**, *Matta C.F.

14:40 1672 *On the Chemical Interpretation of Molecular Electron Density Distributions* *$**Mawhinney R.C.**

15:00 Coffee Break

15:20 1673 *Using the AIM Theory for Modeling Halogen-Halogen Interactions by Ultra High Resolution X-Ray Diffraction* *$**Lecomte C.E.P.**, Dahaoui S., Garcia P., Espinosa E.

16:00 1674 *Attosecond Science-Manipulating Electrons with Lasers* *__Bandrauk A.D.__

16:40 1675 *Electronic Structure and Reactivity of Double Rydberg Anions* *__Melin J.__

17:00 End of Session

PT5 Heritage-Sher

Energy Storage and Conversion (joint with MT3)

Organizer(s) - Gillian Goward and Linda Nazar
Chair(s) - V. Thangadurai

13:20 See MT3

16:40 End of Session

PT6 Beckett-Sher

Frontiers in Materials Characterization with X-Rays, Neutrons and Electrons (joint with MT4)

Organizer(s) - James Britten, Gianliugi Botton and Lachlan Cranswick
Chair(s) - Lachlan Cranswick, James Britten, Gianluigi Botton

13:20 See MT4

17:00 End of Session

Thursday AM

Physical, Theoretical and Computational Chemistry

PT3 McMaster-ABB163

Atoms in Molecules

Organizer(s) - Paul Ayers and Chérif Matta
Chair(s) - Patrick Bultinck

Conceptual DFT and Interpretive AIM

08:00 1676 *An Analysis of the Chemical Reactivity Concepts of Density Functional Theory* **Gázquez J.L.**

08:40 1677 *Conceptual DFT : The Woodward-Hoffmann Rules Revisited* **Geerlings P.**, Jaque P., Ayers P.W., De Proft F.

09:20 1678 *Charge Transfer in Hydrogen Bonded Complexes* González-Rivas N., **Cedillo A.**

09:40 Coffee Break

10:00 1679 *Potential Wall Approach in Density Functional Theory: Application to the Computation of Metastable Anions and the Study of Confinement* **De Proft F.**, Borgoo A., Tozer D.J., Fievez T., Geerlings P.

10:40 1680 *Molecules in Molecules* *$**Ziegler T.**, Mitoraj M.P., Michalak A.

11:20 1681 *Insights into Chemical Bonding from Electron Propagator Theory* *$**Ortiz J.V.**

12:00 End of Session

Thursday PM

Physical, Theoretical and Computational Chemistry

PT3 McMaster-ABB163

Atoms in Molecules

Organizer(s) - Paul Ayers and Chérif Matta
Chair(s) - Paul Geerrlings

Conceptual DFT and Interpretive AIM

13:20 1682 *Chemical Bonds from Quantum Mechanical Probabilities* Scemama A., Mafra-Lopes Jr.,O., Caffarel M., Cancès E., **Savin A.**

14:00 1683 *Chemical Bonds in Stress Tensor Energy Density* *$**Tachibana A.**

14:40 1684 *Towards a Dynamical Theory of Atoms in Molecules* **Jenkins S.**, Kirk S.R, Ayers P.W., Pendás A.M., Mori-Sánchez P.

15:00 Coffee Break

15:20 1685 *AIM Catastrophes in Transition Metal Bonding* *$**Farrugia L.J.**

16:00 1686 *Structural and Bond Evolution in Reaction Mechanisms* *$**Cortes-Guzman F.**, Gomez R.M.

16:20 1687 *Detailing the Intricacies of the Bonding of Reaction Intermediates and Transition States with QTAIM: A Physical Organic Chemist's Account* **Werstiuk N.H.**

16:40 1688 *Visualizing Non-Covalent Interactions from the Electron Density* **Johnson E.R.**, Mori-Sanchez P., Cohen A.J., Yang W.

17:00 End of Session

Friday AM

Physical, Theoretical and Computational Chemistry

PT3 McMaster-ABB163

Atoms in Molecules

Organizer(s) - Paul Ayers and Chérif Matta
Chair(s) - Lou Massa

08:00 1689 *Advances in QTAIM Calculations Using AIMAll* **Keith T.A.**

08:40 1690 *AIM2000: A Programme to Analyse and Visualise Atoms in Molecules* *$**Biegler-König F.**, Schönbohm J.

09:20 1691 *A High Performance Grid-Based Algorithm for Computing QTAIM Properties* *$**Rodriguez J.I.**, Bader R.F.W., Ayers P.W.

09:40 Coffee Break

10:00 1692 *The Origin of Saytzeff Rule* *$**Braida B.**, Prana V., Hiberty P.

10:40 1693 *Application of Polarized-Ion Models and Quantum Chemical Methods in Rationalizing Structural Preferences in Small Molecules: Metal Halide Monomers and Dimers* *$**Donald K.J.**

11:20 1694 *Accurate Electrostatics: Polarisation of Finite Atoms by Machine Learning* *$**Popelier P.L.A.**, Mills M, Hawe G., Handley C

12:00 End of Session

Friday PM

Physical, Theoretical and Computational Chemistry

PT3 McMaster-ABB163

Atoms in Molecules

Organizer(s) - Paul Ayers and Chérif Matta
Chair(s) - Paul Ayers, Chérif Matta

13:20 1695 *The ZORA Treatment of the Quantum Theory of Atoms in Molecules* *$**Anderson J.S.M.**, Ayers P.W.

13:40 1696 *Electronic Structure of Green Fluorescent Protein Chromophore in the Ground and Excited States: A Topological Approach* **Timerghazin Q.K.**, $Brown A.

14:00 1697 *Evaluation of Accurate Absolute Hardness: A New Approach* **Noorizadeh S.**, Parsa H.

14:20 1698 *Disintegration of Charged Droplets containing Macromolecular Ions* *Constas S.

14:40 1699 *Dual Grid Methods for Fast Marching on Potential Energy Surfaces* *Burger S.K.**, $Ayers P.W.

15:00 1700 *Reaction Electronic Flux: A New Concept to get Insights into Reaction Mechanisms. Study of Model Symmetric Nucleophilic Substitutions* **Echegaray E.**, *Toro-Labbe A.

15:20 End of Session