

Saturday PM

Plenary Lecture

PL Hall D

Plenary Lecture

Organizer(s) - John Vederas
Chair(s) - John Vederas

19:00 0001 *Peptide-Based Natural Antibiotics: Nonribosomal and Ribosomal Strategies* Walsh C.T.

20:15 End of Session

Sunday AM

CIC Medal Lecture

CICML Hall D

CIC Medal Lecture

Organizer(s) - John Vederas
Chair(s) - Todd Lowary

Introduction of John Vederas by Fred West

11:25 0002 *The Chemistry and Biology of Getting Drugs from Bugs* Vederas J.C.

12:15 End of Session

Analytical Chemistry Division

AN2 Salon 2

Analytical Separations

Organizer(s) - Charles Lucy and James Harynuk
Chair(s) - James Harynuk and Hian Kee Lee

08:20 0003 *Microextraction Approaches for Environmental Analysis* Lee H.K.

09:00 0004 *SPME Tandem HPLC-MS Methods for Determining Antibiotics in Source Waters* Balakrishnan V.K., Crowe A.S., Toito J.M.

09:20 0005 *Mixture Separation in an NMR Tube* Simpson A.J., Woods G., Mehrzad O.

09:40 Coffee Break

10:00 0006 *Peak Integration Methods and Resulting Bias in the Measurement of Enantiomer Fraction for Environmentally Relevant Chiral Chemicals* Harynuk J.J., Asher B.J., D'Agostino L.A., Wong C.S.

10:20 0007 *Characterization and Speciation of Petroleum by GCxGC* Hager D.B.

10:40 0008 *GCxGC-TOFMS Analysis of Cigarette Smoke: The Importance of Acquisition Rate in GCxGC and its Effect on Peak Identification* Stevens P.T.

11:00 0009 *Introduction of Targeted Signal Enhancement: A Vortex Cooler-Driven Signal-to-Noise Enhancer for Process GC and Laboratory GC Applications* Eidt R.A., McCarthy B.D.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

AN3 Salon 5

Biological Mass Spectrometry (Joint with PT) (joint with PT2)

Organizer(s) - John Klassen and Liang Li
Chair(s) - Liang Li

08:00 0010 *Novel Chemical Crosslinker for MS-Based Structural Proteomics* Borchers C.H., Petrotchenko E.V.

08:20 0011 *Mass Spectrometric Identification and Characterization of Drug-Induced Protein Nitroxyl in the Human Platelet Proteome* Walsh G.M., Hoffman M.D., Devine D.V., Beavis R.C., Kast J.

08:40 0012 *Mass Spectrometric Study of Non-Tryptic Palmitoylated Peptides* Keller B.O., Kostiuik M.A., Berthiaume L.G.

09:00 0013 *Analysis of Plant Lipids by MALDI MS and MS/MS* Ross A.R.S., Olson D.J.H., Taylor D.C., Smith M.A., Abrams S.R.

09:20 Agilent Technologies Presentation

09:40 Coffee Break

10:00 0014 *Effects of the Electrospray Mechanism on the ES Mass Spectrum: Ion-Pairing and Ion-Molecule Reactions at the Surface of Proteins. Why is Ammonium Acetate such a Popular Additive in Protein ESMS?* Kebarle P., Verkerk U.

10:40 0015 *SIFT Measurements of the Chemical Stability and Reactivity of Deprotonated Oligonucleotides (DNA) in the Gas Phase* Feil S.W., Koyanagi G.K., Anichina J., Bohme D.K.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

AN7 Salons 15/16

Single-Molecule Measurements in Biological Chemistry (Joint with BM and PT) (joint with BM7)

Organizer(s) - Nancy Forde and Hongbin Li
Chair(s) - Nancy Forde

08:00 0016 *Single Molecule Studies on Liposome Encapsulated Conjugated Polymers: Toward a Liposome Beacon* Cosa G.

08:40 0017 *Exploring the Membrane Binding Properties of the Pro-Apoptotic Protein Bid* Shamas-Din A., Campbell C., Leber B., Andrews D.W., Fradin C.

09:00 0018 *Interactions of Quantum Dots with Embryonic Tissues* Cramb D.T., Clancy A., Gregoriou Y., Kelly N.M.

09:40 Coffee Break

10:00 0019 *Single Particle Tracking of T Cell Integrins Provides Insight into Receptor Subpopulations* Cairo C.W.

10:40 0020 *AFM-Based Force Sensing of Molecular Interactions and Processes in Living Cells* Grandbois M.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

Biological and Medicinal Chemistry Division

BM1 Salon 7

Altered Proteins

Organizer(s) - Ronald Kluger
Chair(s) - Stephen Withers

08:40 0021 *Engineered Fluorescent Proteins and the Development of Genetically Encoded Biosensors* Ai H.-w., Campbell R.E.

09:20 0022 *Novel β -Peptides from L-Aspartic Acid and β -Amino-L-Alanine: Synthesis, Solution Conformation, Stability, and Cytotoxicity Studies* Ahmed S., Kaur K., Sprules T., Beleid R.

09:40 Coffee Break

10:00 0023 *Analysis of phnP from the Carbon-Phosphorus Lyase Pathway* He S.-M., Podzelinska K., Yakunin A., Edwards A., Hove-Jensen B., Jia Z., Zechel D.L.

10:40 0024 *Engineering of P450 Enzymes for Biocatalysis and Nanobiochemistry* Auclair K.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

BM2 Salon 11

Carbohydrate Chemistry and Glycobiology (Joint with OR) (joint with OR2)

Organizer(s) - Christopher Cairo and Chang-Chun Ling
Chair(s) - Chang-Chun Ling

08:00 0025 *Synthesis of Potential Neuraminidase Inhibitors* Mohan S., Pinto B.M.

08:20 0026 *Glycosylation at O-4 of N-Acetylglucosamine* Hendel J.L., Wang J.-W., Auzanneau F.-I.

08:40 0027 *Building Carbohydrates on the Dioxanone Scaffold: Stereocontrolled Approach to Rare Monosaccharides* Palyam N., Majewski M.

09:00 0028 *An STD-NMR Spectroscopy Investigation of Glycosidase Mutants Leads to the Discovery of a New Family of β -Glucosidase Inhibitors* Jakeman D.L., Sadeghi-Khomami A.

09:40 Coffee Break

10:00 0029 *Glycosylsulfonhydrazides in Protecting Group Free Glycosidation Reactions* Nitz M., Gudmundsdottir A.V.

10:20 0030 *PET Imaging Agents for in vitro Labeling of Recombinant Glucocerebrosidase, the Enzyme Used for Treatment of Gaucher Disease* Phenix C.P., Rempel B.P., Adam M.J., Withers S.G.

10:40 0031 *Mapping of the Protective Epitope of the β 1,2-Mannan from Candida albicans and Prospects for a Synthetic Conjugate Vaccine* Bundle D.R., Nycholat C.M., Lipinski T., Wu X., Yasui Y., Cheriaparambil S., Rennie R.P.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

BM3 Salon 10

Chemical Biology: Molecular Probes and Organic Biomaterials (Joint with OR) (joint with OR5)

Organizer(s) - David Vocadlo and Fraser Hof
Chair(s) - Jeremy Wulff

08:00 0032 *Synthesis and Characterization of a Long, Rigid Photo-Switchable Cross-Linker for Peptide Structural Change* Zhang F., Sadovski O., Woolley G.A.

08:20 0033 *The Chemical Biology of Amanitins* Perrin D.M., May J.P., Dietrich D., Blanc A., Pellicelli J., Fournier P.

08:40 0034 *Engineering Peptides and Proteins as Molecular Probes of Endogenous Protein Localization and Dynamics in Live Cells* Ibraheem A., Cheng Z., Campbell R.E.

09:00 0035 *Probing Neuroreceptors and Ion Channels Using Unnatural Amino Acids* Dougherty D.A.

09:40 Coffee Break

10:00 0036 *Mimicking the Function of Eggshell Matrix Proteins: Role of Multiplets of Charged Amino Acid Residues and Self-Assembly of Peptides in Biomineralization* Parayil Kumaran A., Valiyaveetil S.

10:20 0037 *Novel Biodegradable Polymers for Tissue Engineering* Gillies E.R., Mequanint K., Wang Z., Atkins K.M., De Wit M.A., Knight D.K.

10:40 0038 *Strategies to Improve Biocompatibility at Silicone Interfaces* Brook M.A., Sheardown H.D., D'souza R., Chen Y., Zhao S., Shao Y., Awad N., Fawcett A.

11:00 0039 *Peptide Self-Assembly: Collagen Triple Helices and Beta-Sheet Nanofibers* Hartgerink J.D.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

BM5 Salons 13/14

Computational Approaches to Drug Design (Joint with PT) (joint with PT4)

Organizer(s) - Jack Tuszynski
Chair(s) - Jack Tuszynski

08:00 0040 *The Dance of Life and Death: Microtubule Polymerization Dynamics and the Mechanism of Action of Microtubule-Targeted Drugs* Jordan M.A.

08:40 0041 *Rational Design and Cytotoxicity of Novel Colchicine Derivatives* Huzil J.T.

09:00 0042 *Thermodynamics of Amyloid Fibril Formation: Molecular Theory of Solvation Perspective* Blinov N., Dorosh L., Wishart D., Kovalenko A.

09:20 0043 *Design of a Diverse Set of Commercially Available Screening Compounds: A First Step in Hit Identification* Nilar S.H.

09:40 Coffee Break

10:00 0044 *Conformational Relationships within the Tubulin Molecule: Implications for Rational Drug Design* Luduena R., Joe P., Banerjee A.

10:40 0045 *Predictions of Protein-Protein Interactions at the Atomic Scale* Wodak S.J.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

BM6 Salon 6

Protein NMR Spectroscopy (Joint with PT) (joint with PT8)

Organizer(s) - Leo Spyropoulos
Chair(s) - Leo Spyropoulos

08:00 0046 *Folding and Interactions of E2 and E3 Enzymes in Ubiquitylation* Safadi S.S., Serniwa S.A., Beasley S.A., Hristova V.A., Barber K.R., Shaw G.S.

08:40 0047 *Molecular Recognition and Regulation of the Eukaryotic Translation Initiation Factor eIF4E* Borden K.L.B., Volpon L., Osborne M.

09:20 0048 *Solution NMR Investigations into the Ff Bacteriophage Major Coat Protein Transmembrane Helix Dimer* [†]Goto N.K., Wu Y., Shih S.C.C.

09:40 Coffee Break

10:00 0049 *Structural Studies of Protein Disulfide Isomerases* Gehring K., Denisov A.Yu., Kozlov G.

10:40 0050 *Flexible Modular Proteins in DNA Replication and Repair Machines* Brosey C.A., Pretto D.I., Ehrhardt M.E., Chagot M.-E., [†]Chazin W.J.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

BM7 Salons 15/16

Single-Molecule Measurements in Biological Chemistry (Joint with AN and PT) (joint with AN7)

Organizer(s) - Nancy Forde and Hongbin Li
Chair(s) - Nancy Forde

08:00 Joint with AN7 and PT9 - See AN7

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

Chemical Education Division

CE2 Salon 3

Get on your Soapbox! Best Practices in Teaching I

Organizer(s) - Glen Loppnow
Chair(s) - Glen Loppnow

08:00 Introductory Remarks

08:10 0051 *Teaching Problem Solving in Spectroscopy: The Fragment Approach* [†]Hunt I.R.

08:20 0052 *Simplifying the Complicated: A Web-Based Learning Application to Improve Problem Solving Skills in Chemistry* Yu L., [†]Lam J., [†]Loppnow G.R.

08:30 Discussion - Problem Solving

08:40 0053 *The Labyrinth or the Maze: Strategies for Effective Teaching and Learning* Poe J.C.

09:00 0054 *Incorporating Peer Reviewed Journal Summary Projects into a First Year Chemistry Curriculum* Forest K.

09:10 0055 *Off-the Wall Group Activities in the General Chemistry Class* Hoffman M.Z.

09:30 Discussion - General Chemistry

09:40 Coffee Break

Chair(s) - Judith Poe

10:00 0056 *Group Exercises in a Physical Chemistry Course* Sparling S.B.S., [†]Loppnow G.R.

10:10 0057 *Science in Action at Simon Fraser University (SIA@SFU)* Lavieri S., Goyan R.L.

10:20 0058 *User Response Driven Evolution of a Laboratory Activity from Wild Idea to Effective Teaching Unit* Kutas C., Chisu C.

10:30 0059 *A Discovery-Based Undergraduate Experiment on the Measurement of Lead in Toys* [†]Kiema G.K., Lucy C.A., Harynuk J.J., Goulko A.

10:40 0060 *Personal Response Systems (Clickers) to Increase Student Engagement* [†]Loppnow G.R.

10:50 0061 *Highlights from Teaching Tools Developed by Undergraduates* Kutas C., Tran L., Al-Khalidi B., Si B., Farmer J., Kim T., Christian F., Baldendran P.

11:00 Discussion - Teaching Methodologies

11:10 Open Discussion

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

Inorganic Chemistry

IN8 Salon 4

Symposium in Honour of Bill Graham: From C-H Activation to Future Challenges in Organometallic Chemistry

Organizer(s) - Joe Takats and Michael Heinekey
Chair(s) - Liviu Vencea

08:00 Introductory Remarks

08:20 0062 *Selective Transformations of Organic Compounds Mediated by Transition Metal Complexes* [†]Bergman R.G.

09:00 0063 *Organoplatinum Chemistry and C-H Bond Activation* Puddephatt R.J.

09:40 Coffee Break

10:00 0064 *The Thermal Chemistry of 18e Cp*W(NO)(alkyl)(η^3 -allyl) Complexes* Legzdins P.

10:40 0065 *Ruthenium-Mediated Double Geminal Si-H Bond Activation Involving Organosilanes Including the Observation of a Key Stoichiometric Step in the Glaser-Tilley Alkene Hydrosilylation Mechanism* Rankin M.A., Hesp K.D., MacLean D.F., [†]Stradiotto M.

11:00 0066 *From C-H Activation to C-C Activation* Gan L.B.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

Materials Chemistry Division

MT1 Hall D Foyer

Advanced Materials by Molecular Self-Assembly

Organizer(s) - Hanadi Sleiman
Chair(s) - Torsten Hegmann and Vance Williams

08:00 0067 *Arrays of Gold Nanoparticles* [†]Lennox R.B., Kassam A., Fuller E., Shepherd J., Meli V., Corbierre M., Beauvais J., Beerens J., Ho K-P., Goulet P.

08:40 0068 *Alignment and Electro-Optic Effects of Alkyl Thiolate-Capped Metallic Au, Ag and Semiconducting CdTe Nanoparticles in Nematic Liquid Crystals* Qi H., Kinkead B., [†]Hegmann T.

09:00 0069 *Nanopolymorphs of Self-Assembled Guanine-Cytosine Derivatives* [†]Tikhomirov G.A., [†]Fenniri H.

09:20 0070 *Catalysis and Chirality with Mesoporous Materials* [†]Crudden C.M., MacQuarrie S., Thompson M.P., Blackburn T., Lemieux R.L., McEleney K., Sneickus V.

09:40 Coffee Break

10:00 0071 *Protein Sensing Using Nanoparticle-Fluorescent Polymer Complexes* [†]Rotello V.M., Bunz U.H. F.

10:40 0072 *Nanoparticle Organization and Advances in Structural DNA Nanotechnology* Aldaye F.A., [†]Sleiman H.F.

11:00 0073 *Ion-Induced Assembly of 1-D Supramolecular Polymers from Macrocyclic Building Blocks* Hui J.K.-H., MacLachlan M.J.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

Organic Chemistry Division

OR1 Salon 9

Applied Physical Organic Chemistry

Organizer(s) - Cornelia Bohne and Todd Sutherland
Chair(s) - Cornelia Bohne

08:20 0074 *High Yielding Uncatalyzed Click-Type Chemical Modification of Monolayer Protected Gold Nanoparticles (MPGNs) Using Hyperbaric Conditions* Ismaili H., [†]Workentin M.S.

08:40 0075 *Towards Mechanistic Studies of the Pyrrolinitrin Biosynthetic Enzymes* [†]Pratt D.A., [†]Morrison M.D.

09:00 0076 *Diimidazolium Cations as Versatile Guests for Various Macrocycles* [†]Noujeim N., Leclercq L., [†]Schmitzer A.R.

09:20 0077 *Acid-Catalyzed Hydrolysis of S-Nitrosothiols: Experimental and Computational Study* Moran E.E., [†]Timerghazin Q.K., Kwong E., [†]English A.M.

09:40 Coffee Break

10:00 0078 *Relationship between the Geometry and Electronic Structure of Biphenyl Systems and their Radical Cations* Zhang L., Peslherbe G.H., [†]Muchall H.M.

10:20 0079 *N-Sulfinyl Amines: A Computational Study of the Mechanisms of syn-anti Interconversion* Ivanova E.V., [†]Muchall H.M.

R.U. Lemieux Award Lecture presented by Peter Guthrie

Introduction of Peter Guthrie by Robert Lipson

10:40 0080 *No Barrier Theory as an Approach to Calculating Rate Constants for Chemical Reactions, Illustrated by a Survey of Decarboxylation* [†]Guthrie J.P., Peiris S., Simkin M.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

OR2 Salon 11

Carbohydrate Chemistry and Glycobiology (Joint with BM) (joint with BM2)

Organizer(s) - Christopher Cairo and Chang-Chun Ling
Chair(s) - Chang-Chun Ling

08:00 Joint with BM2 - See BM2

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

OR5 Salon 10

Chemical Biology: Molecular Probes and Organic Biomaterials (Joint with BM) (joint with BM3)

Organizer(s) - David Vocadlo and Fraser Hof
Chair(s) - Jeremy Wulff

08:00 Joint with BM3 - See BM3

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

OR8 Salon 1

Microwave-Promoted Organic Synthesis

Organizer(s) - Rolando Perez
Chair(s) - Michael Organ

08:00 0081 *Microwaves in Organic Synthesis: From Laboratory Curiosity to Standard Practice in 20 Years* [†]Kappe C.O.

08:40 0082 *Exploring New Avenues in Microwave Chemistry and Biology* Vanier G.S.

09:20 0083 *Microwave Heating: A Versatile Tool for Organic and Organometallic Chemistry* [†]Leadbeater N.E.

09:40 Coffee Break

10:00 0084 *Microwave Chemistry: Going With The Flow* Shore G., Comer E., Bremner S., Morin S., [†]Organ M.G.

10:40 End of Session

REMINDER

10:40 R.U. Lemieux Award Lecture presented by Peter Guthrie in Salon 9

OR9 Hall D

Organic Synthesis: The Latest Trends

Organizer(s) - Fred West and Derrick Clive
Chair(s) - Fred West

08:00 0085 *The Aza-Morita-Baylis-Hillman Reaction of Activated 1,3-Dienes with Aldimines* Clary K.N., Back T.G.

08:20 0086 *Studies Towards the Synthesis of the Marine Natural Product Palmerolide A* Kaspar L.T., Penner M., [†]Hall D.G.

08:40 0087 *N-Tosylloxycarbamates as Copper Nitrene Precursors: Enantioselective and Catalytic Aziridination Reactions* [†]Parmentier M., [†]Lebel H.

09:00 0088 *Synthetic Studies on Polypropionates* Ward D.E.

09:40 Coffee Break

10:00 0089 *Total Synthesis of Natural Products of Biological Intrigue* [†]Williams R.M.

10:40 End of Session

REMINDER

10:40 R.U. Lemieux Award Lecture presented by Peter Guthrie in Salon 9

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

Physical, Theoretical and Computational Division

PT1 Salon 12

Advances in Solid State NMR

Organizer(s) - Rod Wasylshen
Chair(s) - David Bryce

08:40 0090 *NMR Approaches to Probing Phase Separation in Model Nuclear Waste Glasses* **Kroeker S.**, Aguiar P.M., Michaelis V.K., McKinley C.M.

09:20 0091 *Solid State NMR Studies of Nanoconfined Materials* **Ratcliffe C.I.**, Desjardins P., Lang S., Ripmeester J.A., Zhou B.

09:40 Coffee Break

10:00 0092 *¹⁴N Solid State NMR with Indirect Detection* **Gan Z.**

10:40 0093 *Deuterium NMR and Quantum Chemical Studies of Hydrogen Bonding in Solids* **Penner G.H.**, Webber R.

11:00 0094 *Aurocyanides: Structural Insights from ¹³C and ¹⁵N Solid-State NMR* **Harris K.J.**, Wasylshen R.E.

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

PT2 Salon 5

Biological Mass Spectrometry (Joint with AN) (joint with AN3)

Organizer(s) - John Klassen and Liang Li
Chair(s) - Liang Li

08:00 Joint with AN3 - See AN3

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

PT4 Salons 13/14

Computational Approaches to Drug Design (Joint with BM) (joint with BM5)

Organizer(s) - Jack Tuszynski
Chair(s) - Jack Tuszynski

08:00 Joint with BM5 - See BM5

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

PT8 Salon 6

Protein NMR Spectroscopy (Joint with BM) (joint with BM6)

Organizer(s) - Leo Spyropoulos
Chair(s) - Leo Spyropoulos

08:00 Joint with BM6 - See BM6

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

PT9 Salons 15/16

Single-Molecule Measurements in Biological Chemistry (Joint with AN and BM)

Organizer(s) - Nancy Forde and Hongbin Li
Chair(s) - Nancy Forde

08:00 Joint with AN7 and BM7 - See AN7

11:20 End of Session

REMINDER

11:25 CIC Medal Lecture presented by John Vederas in Hall D

NSERC

NS Salons 17/18

NSERC Workshops

Organizer(s) - NSERC

10:00 0095 *How to Prepare a Discovery Grant Application* **NSERC Staff**

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by John Vederas in Hall D

Sunday PM

Analytical Chemistry Division

AN2 Salon 2

Analytical Separations

Organizer(s) - Charles Lucy and James Harynuk
Chair(s) - Nick Toltl and Kevin Thurbide

13:20 0096 *Understanding Electrophilic Burden in Pharmaceutical Excipients: Quantitation of Acetol in Propylene Glycol and Glycerol* **Toltl N.P.**, Beilin E., Baker L.J., Culbert P.

13:40 0097 *Preparation and Use of Amine Containing Permanently Modified Graphitic Carbon Phases for Ion Chromatography* **Chambers S.D.**, Lucy C.A.

14:00 0098 *A Review of Bitumen Separation Techniques* **Fuhr B.**

14:20 0099 *Aptamer-Modified Monolithic Capillary Chromatography for Protein Separation and Detection* **Zhao Q.**, Li X.-F., Le X.C.

14:40 0100 *Hydrophilic Interaction Chromatography (HILIC) of Nucleotides and their Pathway Intermediates on Titania* **Zhou T.**, Lucy C.A.

15:00 Coffee Break

15:20 0101 *Advanced Methods of Subcritical Water Chromatography* **Thurbide K.B.**, Fogwill M.O.

15:40 0102 *Effects of Nanostructure and Porosity on Ultra-Thin Layer Chromatography* **Bezuidenhout L.W.**, Brett M.J.

16:00 0103 *Analysis of Eight Nitrosamines in Drinking Water by Using Micellar Electrokinetic Chromatography and In-Line Preconcentration* **Modir-Rousta A.**, Bottaro C.

16:20 0104 *Confinement Effects on the Morphology of Photopatterned Porous Polymer Monoliths for Capillary and Microchip Electrophoresis of Proteins* **He M.**, Harrison D.J.

16:40 End of Session

AN3 Salon 5

Biological Mass Spectrometry (Joint with PT) (joint with PT2)

Organizer(s) - John Klassen and Liang Li
Chair(s) - Liang Li

13:20 0105 *Metabolomic Studies for Global Assessment of Antioxidant Capacity Using Capillary Electrophoresis-Mass Spectrometry* **Lee R.**, Chalcraft K., Britz-McKibbin P.

13:40 0106 *Mass Spectral Analysis of Influenza Vaccine Formulations* **Cyr T.D.**, Cameron M., Brazeau J.

14:00 0107 *Lipidomics and Mass Spectrometry* **Figeys D.**, Hou D., Smith J.C., Whitehead S.N., Ethier M., Bennett S.L.

14:20 0108 *Exploring the Gas Phase Binding of A β -40 Peptide Ions with Small Substrates by CID MS* **Mayer P.M.**, Martineau E.

14:40 MDS Analytical Technologies Presentation

15:00 Coffee Break

15:20 0109 *Mass Spectrometry-Based Biomarker Discovery Yields Promising Prognostic Markers for Head-and-Neck Cancer* **Matta A.**, DeSouza L.V., Shukla N.K., Gupta S.D., Ralhan R., Siu K.W.M.

15:40 0110 *Biological Implications of Gas-Phase Chemistry of Protonated N-Nitrosamines and their Dissociation Products* **Gabryelski W.**, Kulikova N.

16:00 0111 *Protein Dynamics Studied by Hydrogen Exchange and Radical Probe Mass Spectrometry* **Konermann L.**, Liu Y.-H., Stocks B.B., Tong X.

16:20 0112 *Iterative Exclusion (IE)-MS Analysis: Uncovering the Hidden Proteome* **Lajoie G.**, Bendall S., Hughes C., Bhatia M.

16:40 Bruker Daltonics Presentation

17:00 End of Session

AN7 Salons 15/16

Single-Molecule Measurements in Biological Chemistry (Joint with BM and PT) (joint with BM7)

Organizer(s) - Nancy Forde and Hongbin Li
Chair(s) - Hongbin Li

REMINDER

13:20 Boehringer Ingelheim Award Lecture presented by Jamie Rich in Salon 11

14:00 0113 *Fluorescence Micro-Spectroscopy: Small Molecules Target Carcinogenic Proteins* **Gradinaru C.**

14:40 0114 *Sequential Unfolding of Beta-Sheet under Mechanical Applied Force in Maltose Binding Proteins* **Zou S.**, Di Bernardo S., Wiczorek M., Lukacs G.L., Walker G.C.

15:00 Coffee Break

15:20 0115 *Using Fluorescent Proteins as Molecular Thermometers* **Wong F.H.C.**, Abu-Arish A., Banks D.S., Mazhar F., Woods K., Fradin C.

16:00 0116 *Stretching of Single Polymer Molecules from PEG to DNA: Theory and Analysis* **Kreuzer H.J.**

16:40 0117 *Dual-Polarization Imaging of a Dual-Chromophore Ion Sensor: A Single-Molecule Study* **Lu Y.**, Paige M.F.

17:00 End of Session

Biological and Medicinal Chemistry Division

BM1 Salon 7

Altered Proteins

Organizer(s) - Ronald Kluger
Chair(s) - David Zechel

REMINDER

13:20 Boehringer Ingelheim Award Lecture presented by Jamie Rich in Salon 11

14:00 0118 *CE-LIF Characterization of Quantum Dots and their Conjugates with Proteins and Antibodies* **Pereira M.**, Lai E.P.C.

14:20 0119 *Exploring the Potential of Lanthanide-Protein Conjugates for Multiplexed Assays* **Nitz M.**

15:00 Coffee Break

15:20 0120 *De novo Helical Peptides as Target Sequences for a Fluorogenic Protein Labelling Strategy* **Keillor J.W.**, Castonguay R., Guy J., Campos-Reales N.B., Caron K., Jacquier V.

16:00 0121 *Methotrexate-Resistant Human Dihydrofolate Reductase: Directed Evolution of a Selectable Marker for Mammalian Cells* **Pelletier J.N.**, Volpato J.P., Mayotte N., Sauvageau G., Yachnin B., Berghuis A., Blanchet J.

16:20 End of Session

REMINDER

16:20 CCUCC Award Lecture presented by Vivian Yip in Salon 11

BM2 Salon 11

Carbohydrate Chemistry and Glycobiology (Joint with OR) (joint with OR2)

Organizer(s) - Christopher Cairo and Chang-Chun Ling
Chair(s) - Todd Lowary

Boehringer Ingelheim Award Lecture presented by Jamie Rich

Introduction of Jamie Rich by David Bundle

13:20 0122 *Thiosialosides: Synthesis and Immunochemistry* **Rich J.R.**, Bundle D.R.

14:00 0123 *Synthesis and Testing of Mechanistic Probes of Polysialyltransferase Enzymes* **Morley T.J.**, Withers S.G., Wakarchuk W.W., Willis L.M.

14:20 0124 *Mechanistic Studies on the MurNac 6-Phosphate Lyase (MurQ) of Peptidoglycan Recycling* **Hadi T.**, Mayer C., Tanner M.E.

15:00 Coffee Break

15:20 0125 *Isolation and Structural Characterization of Cyclic β -(1 \rightarrow 2)-glucans from the Green Microalgae *Chlorella Pyrenoidosa** **Reyes Suárez E.**, Budgen S.M., Kai F.B., Kralovec J.A., Nosedá M.D., Barrow C.J., Grindley T.B.

15:40 0126 *Glycosidase Inhibitors by Design and by Selection: Towards New Therapeutics and Proteomics Probes* **Withers S.G.**, Tarling C.A., Zhang R., Brayer G.D., Buchini S., MacDonald J., Hekmat O., Reid S., Rempel B.P., Mahuran D., Tropak M., Buschiazio A.

CCUCC Chemistry Doctoral Award Lecture presented by Vivian Yip

Introduction of Vivian Yip by Stephen Withers

16:20 0127 *Family 4 Glycosidases Utilize a Redox-Elimination Mechanism in the Hydrolysis of α - and β -Glycosides* **Yip V.L.Y.**

17:00 End of Session

BM3 Salon 10

Chemical Biology: Molecular Probes and Organic Biomaterials (Joint with OR) (joint with OR5)

Organizer(s) - David Voadlo and Fraser Hof
Chair(s) - Andreea Schmitzer and Christopher Cairo

REMINDER

13:20 Boehringer Ingelheim Award Lecture presented by Jamie Rich in Salon 11

14:00 0128 *Probing Uncharted Physiology in Bacteria with (Old and New) Small Molecules* **Brown E.D.**

14:20 0129 *Probes for Interrogating the Influence of Cellular Metabolism on the Hepatitis C Virus* [§]**Pezacki J.P.**

14:40 0130 *Ghrelin Analogues as New Probes for Cancer Imaging* **Rosita D.**, [§]Luyt L.G.

15:00 Coffee Break

15:20 0131 *Bioorganometallic Approach for the Electrochemical Detection of Kinase-Catalyzed Protein Phosphorylation* Song H., Kerman K., [†]**Kraatz H.B.**

15:40 0132 *Conventional Optical Drives for Detecting CD-Based ELISA* **Ou M.L.**, [§]Yu H.Z.

16:00 0133 *Synthetic Receptors for Methylated Lysine: Pyrrole- and Indole-Derived Hosts* **Whiting A.L.**, Fowler N.M., Hof F.

16:20 End of Session

REMINDER

16:20 CCUCC Award Lecture presented by Vivian Yip in Salon 11

BM5

Salons 13/14

Computational Approaches to Drug Design (Joint with PT) (joint with PT4)

Organizer(s) - Jack Tuszynski
Chair(s) - Jack Tuszynski

REMINDER

13:20 Boehringer Ingelheim Award Lecture presented by Jamie Rich in Salon 11

14:00 0134 *Generation and Analysis of Biological Networks and their Potential Therapeutic Applications* [§]**Parkinson J.**

14:40 0135 *Designing Paclitaxel Derivatives Based on Isotype Differences within an Intermediate Binding Site for Paclitaxel Located in the Microtubule's Nanopore* **Freedman H.**, [§]Tuszynski J.A.

15:00 Coffee Break

15:20 0136 *Molecular Theory of Solvation for Complex Formation and Effective Interactions of Proteins and Synthetic Organic Nanoarchitectures in Solution* [§]**Kovalenko A.**

15:40 0137 *A Spatial Model of Tumor-Host Interaction: Application of Chemotherapy* [†]**Hinow P.**

16:20 End of Session

REMINDER

16:20 CCUCC Award Lecture presented by Vivian Yip in Salon 11

BM6

Salon 6

Protein NMR Spectroscopy (Joint with PT) (joint with PT8)

Organizer(s) - Leo Spyrapoulos
Chair(s) - Leo Spyrapoulos

REMINDER

13:20 Boehringer Ingelheim Award Lecture presented by Jamie Rich in Salon 11

14:00 0138 *NMR Spectroscopic Studies of Functional Enzyme Motions* [§]**Loria J.P.**, Watt E.D., Doucet N., Wang Y., Berlow R.B., Mesecar A.D., Pegan S.

14:40 0139 *Structural Studies of Intrinsically Disordered Proteins Using NMR Spectroscopy* Yi S., Gall C., Brickenden A., Mokhtarzada S., [§]**Choy W.-Y.**

15:00 Coffee Break

15:20 0140 *Protein Structure and Dynamics in situ* Julien O., Hoffman R., Baryshnikova O., Zhao X., **Sykes B.D.**

16:00 0141 *NMR Solution Structure of Pisl, a Group B Immunity Protein that Provides Protection Against the Type IIa Bacteriocin Piscicolin 126, PislA* **Martin-Visscher L.A.**, Sprules T., Gursky L.J., [§]Vederas J.C.

16:20 End of Session

REMINDER

16:20 CCUCC Award Lecture presented by Vivian Yip in Salon 11

BM7

Salons 15/16

Single-Molecule Measurements in Biological Chemistry (Joint with AN and PT) (joint with AN7)

Organizer(s) - Nancy Forde and Hongbin Li
Chair(s) - Hongbin Li

13:20 Joint with AN7 and PT9 - See AN7

REMINDER

13:20 Boehringer Ingelheim Award Lecture presented by Jamie Rich in Salon 11

17:00 End of Session

Chemical Education Division

CE6

Walter Harris Workshop-New Roles and New Balance: Teaching and Research at Technical Institutes, Colleges and Universities

Organizer(s) - Glen Loppnow

13:20 This workshop will take place on the University of Alberta campus in Room E3-25 in the Chemistry Centre.

17:00 End of Session

Environment Division

EN5

Salon 1

From Laboratory to Landscape: The Chemistry of Emerging Contaminants and its Real-World Applications

Organizer(s) - Thorsten Hebben
Chair(s) - Thorsten Hebben

15:20 0142 *Characterization of an LED Based Photoreactor in a Contaminant Treatment Application* **Ghosh J.**, Achari G., [§]Langford C.H.

15:40 0143 *Chloromethane Production from the Photosubstitution of a Model DOC Compound in Marine Waters* Dallin E., Wan P., Cielanga N., Stechishin O.D.M., Gill C.G., [§]**Krogh E.T.**

16:00 0144 *The Quantitative Prediction of Atrazine Sorption Kinetics in a Soil* [§]**Gamble D.S.**

16:20 0145 *A Passive Sampler Based Approach to the Fate of Pharmaceuticals as Pollutants in the North Saskatchewan River at Edmonton* **MacLeod S.L.**, [§]Wong C.S.

16:40 0146 *Methyl and Elemental Mercury Levels in the Urban Atmosphere in Toronto, Ontario* **Cairns E.**, Lu J.Y.

17:00 End of Session

EN6

Salon 1

Old and New Persistent Organic Pollutants

Organizer(s) - Gregg Tomy
Chair(s) - Gregg Tomy

13:20 0147 *Fate and Occurrence of Dechlorane Plus, a Chlorinated Flame Retardant, in the Environment* **McCarry B.E.**, Sverko E., Harner T., Li Y., Lee S., Pozo K., Zhang Z.

14:00 0148 *Chiral Analysis Can Differentiate between New and Old Contaminant Sources around the Swan Hills Treatment Centre* **Asher B.J.**, [§]Wong C.S., Schindler D.W.

14:20 0149 *Ecological and Biological Processes Influencing the Fate of Chiral Organochlorine Contaminants in the Eggs of Glaucous Gulls From the Norwegian Arctic* **Ross M.S.**, Verreault J., Letcher R.J., Gabrielsen G.W., [§]Wong C.S.

14:40 0150 *Quantification of Polychlorinated Biphenyl Methylsulfone Metabolites by Chiral High Performance Liquid Chromatography Atmospheric Pressure Photoionization Tandem Mass Spectrometry* **Cooper V.I.**, [§]Wong C.S.

15:00 End of Session

Industrial Chemistry

ICP

Hall A

Posters

Organizer(s) - Gerry Tertzakian and Wendy Lam
Chair(s) - Gerry Tertzakian and Wendy Lam

From 17:00 until 19:00

0151 *Patenting: Beyond the Horizon* [§]**Heineking N.**

Inorganic Chemistry

IN8

Salon 4

Symposium in Honour of Bill Graham: From C-H Activation to Future Challenges in Organometallic Chemistry

Organizer(s) - Joe Takats and Michael Heinekey
Chair(s) - Richard Krentz

13:20 0152 *Moving from Ruthenium Catalysts to Iron Catalysts for Asymmetric Hydrogenation* **Morris R.H.**

14:00 0153 *Ruthenated Acetonitrile: Unusual Reactivity at a Planar Phosphido Complex* Derrah E.J., McDonald R., **Rosenberg L.**

14:20 0154 *Direct Observations of the Bifunctional Addition Step in a Noyori-Type Asymmetric Ketone Hydrogenation* [†]**Bergens S.H.**, Hamilton R.J.

15:00 Coffee Break

15:20 0155 *Detrimental C-H Activation - At Least for Catalytic Hydrogenation of Imines and Aldehydes Using Rh and Ir Species!* Lorenzini F., Marcazzan P., Moiseev D., [§]**James B.R.**

16:00 0156 *Organometallic Group 8 Metal Complexes as Homogeneous Ionic Hydrogenation and Hydrogenolysis Catalysts for the Deoxygenation of Biomass to Petrochemicals: Opportunities, Challenges, Strategies and the Story so far* [§]**Schlaf M.**, Thibault M.E., Dykeman R.R., Luska K.L., Jones M.D.

16:20 0157 *Spirocyclic PCP Carbene Complexes of Neodymium(III), Thorium(IV) and Uranium(IV)* [§]**Cavell R.G.**, Ma G., Ferguson M.J., McDonald R.

16:40 0158 *Marry Me Bill! Tunable Alumina-Tethered Organoiridium Complexes for Alkane Dehydrogenation Catalysis* [§]**Baker R.T.**

17:00 End of Session

INP

Hall A

Posters

Organizer(s) - Steve Bergens
Chair(s) - Steve Bergens

From 17:00 until 19:00

0159 *Development of a Cobalt Reporter Probe for Use in Electrochemical Aptamer-Based Biosensing* **Blair D.A.D.**, Francis T.J., [§]DeRosa M.C.

0160 *Luminescence-Based Probes as a Means to Understand the Recognition Event in Aptamer-Target Binding* **Bernard E.D.**, [§]DeRosa M.C.

0161 *Parameterization and Dynamic Structure of the Mo(IV), Mo(VI) and Intermediate Mo(V) Active Sites of Sulfite Oxidase* **Pushie M.J.**, [§]George G.N.

0162 *Copper(I)-Bound and Metal-Free Forms of the CsoR Dimer Probed by Molecular Dynamics: Structural Response to Copper(I)-Binding* Zhang L., **Pushie M.J.**, [§]George G.N.

0163 *Synthesis and Electrochemical Properties of Ferrocene-Nucleic Acid Conjugates* **Song H.**, [†]Kraatz H.B.

0164 *Density Functional Theory Study of the Active Site of Sulfite Oxidase* **Hernandez-Marin E.**, Ziegler T.

0165 *Alkylaluminum Complexes Containing Nitrogen Heterocyclic Carbene and Amino Ligands. Syntheses, Structures, and Catalysis Studies* **Shih W.-C.**, Wang C.H., Li C.Y., Yap G.P.A., [§]Ong T.-G.

0166 *N-Methylbenzothiadiazolyl and its Heavy Chalcogen Variants* **Risto M.**, Robertson C.M., Reed R.W., Oakley R.T., Oilunkaniemi R., Laitinen R.S.

0167 *Ferrocenyl Boraamidates: Precursors to Radicals and Biradicals* **Corrente A.M.**, [†]Chivers T.

0168 *Group 15 (III) Halides and their Abilities as Lewis Acids and/or Lewis Bases* **Mackie I.D.**, [§]DiLabio G.A.

0169 *In Pursuit of Novel Weakly Coordinating Anions Containing Phosphorus Centres* **Siu P.W.**, [§]Gates D.P.

0170 *Main Group Complexes of Ketoimines* **Gietz T.**, [†]Boeré R.T.

0171 *On the Nature of the Bonding in Germanium(II) Donor-Acceptor Complexes* **Rupar P.A.**, Staroverov V.N., [§]Baines K.M.

0172 *Development of Four-Membered N-Heterocyclic Carbenes with Silicon and Aluminum Backbones* **Forster T.**, Krahulic K.E., Parvez M., [†]Roesler R.

0173 *A New Chapter in the Frustrated Lewis Pair Story: Tackling the Task of Ketone Hydrogenation and Alcohol Dehydrogenation* **Neu R.C.**, [†]Chase P.A., [§]Stephan D.W.

0174 *Activation of Small Molecules by Singlet Carbenes* **Masuda J.D.**, Frey G.D., Donnadiu B., Schoeller W.W., Bertrand G.

0175 *Redox and Coordination Chemistry of Two Disubstituted 1,4-Quinones* **Trefz T.K.**, [§]Hicks R.G., Patrick B.O.

0176 *Crystal Structure and NLO Properties of 3,4-Dicyano-1,2,5-telluradiazole* Cozzolino A.F., Yang Q., **Vargas-Baca I.**

0177 *Coordination of Low-Valent Main Group Elements with N-Heterocyclic Carbenes* [§]**RoyChowdhury R.**, Ellis B.D., Corrente A.M., [†]Macdonald C.L.B.

- 0178 *Neutral Low-Oxidation State Phosphorus Oligomers* Farrar G.J., Norton E.L., Macdonald C.L.B.
- 0179 *Investigations into the Synthesis, Structure and Reactivity of Low Oxidation State Group 13 Salts* Cooper B.F.T., Macdonald C.L.B.
- 0180 *The Reactivity of Trimethylene Sulfide on Porous Silicon* Wright V.A., Buriak J.M.
- 0181 *Cyclotrimerization of Disubstituted Alkynes with Nickel Complexes Bearing Zwitterionic Amido Donor Ligands* Doster M.E., Johnson S.A.
- 0182 *A New Synthetic Route to Poly(oxothiazenes) [N=S(O)R]_n* McWilliams A.R., Gezahegn S.
- 0183 *Coordination Chemistry of 3-Nitroformazans: The First Examples of 'Bulky' Formazan Ligands* Gilroy J.B., Hicks R.G., McDonald B., Ferguson M.J., Patrick B.O.
- 0184 *Paramagnetic NMR for Solving the Solution Structure of Axial Lanthanide Podates* Ryan P.E., Canard G., Piguet C.
- 0185 *Synthesis of Group 6 Transition Metal Nitrides: Precursors for Magnetic Materials* Hatnean J.A., Johnson S.A.
- 0186 *E-H Bond Addition Across an Alkyne: New Routes to Main Group Polymers* Greenberg S., Gibson G.L., Stephan D. W.
- 0187 *Rapid Probing of Reactions at Metal Centers Using MALDI-TOF Mass Spectrometry* Ikpo N., Kerton F.M.
- 0188 *Synthesis of Novel Organoplatinum(IV) Complexes: The Use of Unsymmetrical 5,5'-Disubstituted 2,2'-Bipyridine Ligands in the Formation of Supramolecular Networks through Hydrogen Bonds* Au R.H.W., Jennings M.C., Puddephatt R.J.
- 0189 *Synthesis of Cr(III) Alkyls from an Air-stable CpCr(III) β -Diketiminato Tosylate Complex* MacLeod K.C., Smith K.M.
- 0190 *Magnetic and Electronic Characterisation of a Series of Metal Complexes Based on a Robust Tridentate Diradical Ligand* Anderson K.J., Gilroy J.B., Ferguson M.J., McDonald R., Patrick B.O., Hicks R.G.
- 0191 *Novel Derivatives of Indigo as a Bridging Ligand* Oakley S.R., Hicks R.G., Patrick B.O.
- 0192 *Investigation of Mixed-Valence Behaviour in Ruthenium Complexes of the Verdazyl Radical* McKinnon S.D.J., Hicks R.G., Patrick B.O.
- 0193 *Photoacoustic FT-IR Spectra of Selected Inorganic and Organic Artists' Pigments: A Potential New Method in Forensic Art Analysis* von Aderkas E, Shavit M, Barsan M.M., Gilson D.F.R., Butler I.S.
- 0194 *Phosphaalkenes as Precursors to Highly Reactive Organophosphorus Cations* Bates J.I., Gates D.P.
- 0195 *X-Ray Microprobe Analysis of Inhomogeneous Materials: Examples From the Mineral World* Cavell R.G.
- 0196 *The Coordination Chemistry of Low-Valent Group 5 Metal Complexes Containing π -Conjugated Macrocyclic Ligands* Wong E.W.Y., Leznoff D.B.
- 0197 *Vapochromism and Magnetism of Dehydrated Transition Metal Dicyanoaurate Coordination Polymers* Korcok J.L., Leznoff D.B.
- 0198 *Synthesis, Characterization and Structures of ortho-Phosphinoaniline Complexes of Rhodium and Ruthenium* Hounjet L.J., Bierenstiel M., Cowie M.
- 0199 *Hybrid Network Solids. Combining Metal-Ligand Self-Assembly and Hydrogen-Bonding in Co-Crystals of 4,4'-Bipyridine-N-monoxide* Vukotic V.N., Habermehl N.C., Hoffart D.J., Loeb S.J.
- 0200 *Coordination Chemistry of 1st Row Transition Metal-Diamido Complexes and their Oxidation Chemistry* Moatzedi Z., Leznoff D.B.
- 0201 *Assessing Quinoidal Structure in the Derivatives of Heavier Analogs of TCNQ* Mawhinney R.C.
- 0202 *Reactivities of Novel Pd-nacnac Species* Lund L.M., Hadzovic A., Song D.
- 0203 *Photochromic Spirooxazine Cobalt Dioxolene Valence Tautomers* Paquette M.M., Frank N.L., Kopelman R.A.
- 0204 *C-C Bond Formation and C-H Bond Activation Promoted by Adjacent Metals* Ulmer T.J., Samant R., Cowie M.
- 0205 *Self-Assembly of Metal Organic Rotaxane Polygons and Polyhedra, MORPs* Viljoen E., Loeb S.J.
- 0206 *Syntheses, Structures and Reactivities of 4, 5-Diazafluorene Complexes of Late Transition Metals* Tan R., Jiang H., Song D.
- 0207 *Chelating Task Specific Ionic Liquids* Singer R.D., Naik P.
- 0208 *C-H Activation of Olefins Facilitated by Bimetallic Iridium/Rhodium Cooperativity* Slaney M.E., Anderson D.J., Cowie M.
- 0209 *Novel Tantalum(V) Boronate Clusters Exhibiting a Lewis Acid Cavity* Garon C.N., Fontaine F.-G.
- 0210 *Low Pt Loading, Ni/Pt Anode Electro-Catalyst for Direct 2-Propanol Alkaline Fuel Cells* Menard L.N., Markiewicz M.E.P., Bergens S.H.
- 0211 *Further Explorations into the Coordination Chemistry of Oxazolines and Oxazoles* Gossage R.A., Quail J.W., Vaughn D., Jones R.C., Deshpande A.A.
- 0212 *A Prototype Direct 2-Propanol Alkaline Fuel Cell* Markiewicz M.E.P., Bergens S.H.
- 0213 *Investigation on the Metalloenzyme Glyoxalase I from Clostridium acetobutylicum* Suttisansanee U., Lau K., Honek J.F., Burley S.K.
- 0214 *N-Hydroxy-N,N'-diphenylarylamidate Complexes as Synthons for Supramolecular Assemblies* Cibian M., Chartrand D., Hanan G.S.
- 0215 *Templating New Metal-Organic Rotaxane-Frameworks (MORFs) with Substituted Crown Ethers* Mercer D.J., Loeb S.K., Loeb S.J.
- 0216 *Progress Towards the Synthesis of Chiral Chelating Ligands for Olefin Polymerization* Etkin N., Doiron R.C., Smith W.W.
- 0217 *Silver(I) Coordination Compounds with Nitrile-Substituted Off-Axis Ligands: Structural Sensitivity to Solvents and Counterions* MacKinnon C.D., Parent S.L.M., Sears W.A., Winter A.J., Jenkins H., Assoud A., Robertson C.M.
- 0218 *Reactivity of Group 3 Complexes Supported by a Novel Tridentate Bis(Phosphinimino) Ligand* Johnson K.R.D., Hayes P.G.
- 0219 *The Reactivity of Amido-Actinide and Siloxo-Amino-Amido-Actinide Coordination Complexes* Hayes C.E., Leznoff D.B.
- 0220 *New Lead(II) and Bismuth Thiolate Cluster Complexes: Unexpected Products of Conventional Syntheses* Eichhöfer A., Sommer H., Fenske D., Ahlrichs R., May K.
- 0221 *C-H Bond Activation by a Derivatized Bipyridine Platinum(II) Complex* Safa M.A., Jennings M.C., Puddephatt R.J.
- 0222 *Ternary Thallium Chalcogenides for Thermoelectric Applications* Xu J., Kleinke H.
- 0223 *Multidentate N,S,S,N-Based Binuclear Complexes of Group 10 Metals* Bierenstiel M., Cross E., English M., MacDonald K., Shehzad U.
- 0224 *New Arsenides and Antimonides for High Temperature Thermoelectric Applications* Xu H., Kleinke H.
- 0225 *Proton Conduction in Complex Perovskites* Bhella S.S., Thangadurai V.
- 0226 *Ternary Rare-Earth Transition-Metal Germanides* Bie H., Tkachuk A.V., Zelinska O.Ya., Mar A.
- 0227 *New Alkali and Alkaline-Earth Metal Mercury Intermetallics* Tkachuk A.V., Mar A.
- 0228 *Mixed Electronic and Ionic Conducting Niobates for Application in H₂ Sensors* Atamanik E., Thangadurai V.
- 0229 *Energy Dependence of the Stress-Induced Birefringence of Optical Glass* Thomas S.L., Martin V., Zwanziger J.W.
- 0230 *Gd₃Ni_{0.96}Sb_{2.04} and Gd₃Ni_{0.71}Bi_{2.29}-New Representatives of the Yb₃Sb₃ Structure Type: Crystal Structure, Physical Properties and Magnetocaloric Effect. Structural Transformation and Magnetic Properties of Hexagonal Gd₃Bi₃* Svitlyk V., Fei F., Mozharivskiy Y.
- 0231 *Proton Conducting Metal Organic Frameworks (PCMOFs)* Vaidhyanathan R., Hurd J.A., Thangadurai V., Shimizu G.K.H.
- 0232 *Synthesis and Characterization of Novel Rare Earth Vanadium Oxychlorides of Composition LnVO₃Cl* Hancock M., Bieringer M.
- 0233 *New Lead-Free Ferroelectric Ceramics Derived from the AgNbO₃-KNbO₃ Solid Solution* Wei C.-Y., Lei C., Ye Z.-G.
- 0234 *In situ Studies of LnMnO₃ Formation* Lu J., Bieringer M.
- 0235 *Probing the Decomposition Pathways of Ruthenium Phosphonium Alkylidene Catalysts* Leitao E.M., Wu Q., Piers W.E.
- 0236 *Aluminum Anilido-Aldimine and Phosphido-Aldimine Catalysts in the Stereocontrolled Polymerization of rac-Lactide* Shaver M.P., Moore A.E.J., Callaghan L.M.
- 0237 *C-H Bond Activation by μ -Oxo-bis(μ -carboxylato)diruthenium Complexes: Mimic for Methanemonooxygenase* Hussain A., Moiz M.A., Thorat R.B., Padhiyar H.J., Shukla R.S., Bhatt K.N.
- 0238 *Synthesis, Characterization, and Applications of Novel Di-2-pyridylimine Ligands* Xia A., Dent C., Yorke J.
- 0239 *Rhodium-Catalyzed Double [2+2+2] Cycloaddition of 1,4-Bis(diphenylphosphino)buta-1,3-diyne with Tethered Dienes: A Modular, Highly Versatile Single-Pot Synthesis of NU-BIPHEP Biaryl Diphosphines* Doherty S., Smyth C.H., Knight J.G., Harrington R.W., Clegg W.
- 0240 *Magnesium Complexes Featuring Phosphinimine-Containing Chelating Ligands* Ireland B.J., Hayes P.G.
- 0241 *Homogenous Hydrogenation of Esters at Low Temperatures and Pressures* Bergens S.H., Takebayashi S.
- 0242 *Phosphine/Phosphonium Ligands for Immobilization and Analysis* Chisholm D.M., McIndoe J.S.
- 0243 *Synthesis and Catalytic Application of Ruthenium Complexes Featuring the New Pincer-Like bis(Phosphino)silyl ligand [κ^3 -(2-Ph₂PC₆H₄)₂SiMe] (IPSiP)* MacInnis M.C., Turculet L.
- 0244 *Selective, Catalytic C-F Bond Activation as a Route to Fluorinated Aryl Ethers* Buckley H.L., Wang T., Love J.A.
- 0245 *A New Strategy for Separating the Interactions between Metals and Ligands* Zhu D., Budzelaar P.H.M.
- 0246 *Zinc Complexes of Neutral Phosphinimine Ligands: Toward Lactide Polymerization Catalysts* Wheaton C.A., Ireland B.J., Hayes P.G.
- 0247 *Proton Sponge Phosphines for the in situ ESI-MS Analysis of Catalytic Reactions* Vikse K., McIndoe J.S.
- 0248 *Patterning Titanium Dioxide Nanostructures on Silicon for Catalysis Applications* Zhang X., Buriak J.M.
- 0249 *Bulky Polyaromatic Fluorocarbons: Main Group Complexes and their Application as Weakly Coordinating Anions* Smith J.C., Ma K., Piers W.E., Parvez M., McDonald R.
- 0250 *Trifluoromethylated Group 4 Amidate Complexes: New Directions for Enhancing Reactivity in the Catalytic Hydroamination of Alkenes* Turner C.S., Thomson R.K., Schafer L.L.
- 0251 *Phosphido Bridged Nb/Rh Heterobimetallics: Syntheses, Structures and Catalytic Hydrosilylation* Leelasubcharoen S., Zhizhko P., Kuzmina L., Nikonov G.
- 0252 *Development of N-Heterocyclic Carbenes Featuring a Transition Metal Backbone* Hobbs M.G., Roesler R.
- 0253 *Binuclear Metal Catalysts for Water Oxidation* Wasylenko D.J., Berlinguette C.P.
- 0254 *Molecular Recognition Ability of N-Methylimidazole in Kinetic Resolution of Secondary Alcohols: Application for Asymmetric Acyl Transfer* Leclercq L., Suisse I., Agbossou-Niedercorn F.
- 0255 *Synthesis of 1,1-Disubstituted Alkyl Vinyl Sulfides via Rhodium-Catalyzed Alkyne Hydrothiolation: Scope and Limitations* Yang J., Sabarre A., Shoaib S., Fraser L.R., Love J.A.
- 0256 *Efficient Carbonylation Reactions in Phosphonium Salt Ionic Liquids: Anionic Effects* Nair J.J., McNulty J.
- 0257 *Pd-Catalyzed Intramolecular Reaction of (E)-2,2-Disubstituted-1-alkenyldimethylalanes with Aryl Triflates* Heikkinen J.J., Fillion E., Trépanier V.É., Remorova A.A., Carson R.J., Seed A., Goll J.M., Taylor N.J.

Macromolecular Science and Engineering Division

MSP Hall A

Posters

Organizer(s) - Phillip Choi
Chair(s) - Xu Wang

From 17:00 until 19:00

0258 *Characterization of [Ni(III)cyclam]-Cucurbit[8]uril as an Outer Sphere Oxidant* Hart S.L., Wagner B.D., Haines R.I.

0259 *Preparation of Polymeric Material by γ -Radiation Crosslinking of Poly(vinyl alcohol) and Poly(ethylene glycol) and its Drug Release Behavior* Abu Ghalia M., Taghazi A.

0260 *Multivalent Surface Functionalization Strategies for Polymer Vesicles* Li B., Gillies E.R.

0261 *New Metallopolymer Architectures Containing Heterocyclic Conjugated Structures* MacNeil J.R.G., Moulins J.R., Walker D.T., MacLean B.J.

0262 *Scaling Properties of Field Induced Carrier Generation in Conducting Polymers* Pilapil M.A., Pillai R.G., Zhao J. H., Freund M.S., Thomson D.J.

0263 *Towards Stable Polystannanes* Foucher D., Bucur R., VanderGiesen H.

0264 *Micropatterned Functionalization of Poly(dimethylsiloxane)* Séguin C., Patrito N., McLachlan J., Norton P.R., Laguné-Labarthe F.

0265 *Synthesis and Characterization of Novel Aromatic-Ether Containing Polyfluorenes* **Sirtanski M.**, McFarlane S.L., Coumont L.S., Piercey D.G., Glover L.A.M., [§]Veinot J.G.C., Fleischauer M.D.

0266 *A Structure-Property Investigation on Highly Birefringent Coordination Polymers and the Pb(II) Lone Pair* **Katz M.J.**, [§]Leznoff D.B., Kroeker S., Ye Z.-G.

0267 *Study of Non-Isothermal Cure Kinetics of DGEBA/Amine System Reinforced with Nanosilica Particles* **Ghaemy M.**, [§]Amini Nasab S.M.

0268 *Towards Control of Nano-Phase Segregation in Donor-Acceptor Blends: π -Conjugated Polymer-C₆₀* **Zhou Z.**, Chen X., [§]Holdcroft S.

0269 *Self-Assembly and Ordering of Metallic Nanoarrays by Block Copolymer Templating* **Chai J.N.**, [§]Buriak J.M.

0270 *Chemical and Structural Factors Affecting Rosette Nanotubes Self-Assembly* **Hemraz U.D.**, Fenniri H.

0271 *Synthesis of Aryl Thioacetyl Styrene Derivatives for the Preparation of Spectroscopically Encoded Nanocomposites* **Jawabrah-Al-Hourani B.**, Sheng D., Alvarez-Puebla R., Bravo-Vasquez J.P., [§]Fenniri H.

0272 *Directed Placement and Orientation of Self-Assembled Block Copolymer/Quantum Dot Wires and Cables on Patterned Glass Substrates* **Harirchian Saei S.**, [§]Moffitt M.G.

0273 *Excited-State Behavior of OPV Chromophores Embedded in C₆₀-Terminated OPE π -Bridges* **Wang L.**, Zhou N., Zhao Y., Thompson D.W.

0274 *Amphiphilic Poly(p-phenylene)s for Preparing Highly Structured Thin Films* **Bte Muhammad Hanafiah N.**, [§]Valiyaveetil S.

0275 *Hybrid Materials from Amphiphilic Poly(p-phenylene) and Nanomaterials* **Muhammad Hanafiah N.**, [§]Valiyaveetil S.

0276 *Cellulose/Rubber-Nanocomposites with Outstanding Reinforcing Properties* **Schuster R.H.**

Materials Chemistry Division

MT1 Hall D Foyer

Advanced Materials by Molecular Self-Assembly

Organizer(s) - Hanadi Sleiman
Chair(s) - Adi Eisenberg and Harald Stöver

13:20 0277 *Tooling Up Nanoworld: The Magic of Molecular Machines* **Leigh D.A.**

14:00 0278 *Hydrogen Bonding in Organoplatinum Polymers and Networks* **Au R.H.W.**, Jennings M.C., [§]Puddephatt R.J.

14:20 0279 *Dendrimer Influenced Supramolecular Structure Formation of Block Copolymers* **Kroeger A.**, Li X., [§]Eisenberg A.

15:00 Coffee Break

15:20 0280 *Self-Crosslinkable Polyelectrolytes for Cell Immuno-Isolation* **Stöver H.D.H.**, Mazumdar M.A.J., Burke N.A., Mills C., Potter M., Shen F.

16:00 0281 *Design and Synthesis of New Porous Materials: Three-Dimensional Macromolecular Networks Based on Covalent Self-Assembly* **Maly K.E.**

16:20 0282 *Self-Assembly of Amphiphilic, Oligomeric, Alkyl Siloxane Precursors into Ordered, Nanoporous Silicate Films* **Du J.**, Shimojima A., Suzuki T., Sakurai M., Crudden C.M., [§]Kuroda K.

16:40 0283 *Oligothiophenes Substituted with Thionitriles: Single-Crystal and Thin-Film Structures* **MacKinnon C.D.**, Morgan I.S., D'Aleo D.N., Kraft T.M., Hudolin M.L., Chen A., Wen J., Tian M., Jenkins H., Assoud A.

17:00 End of Session

MT4 Salon 8

Materials for Energy Conversion

Organizer(s) - Curtis Berlinguette and Michael Eikerling
Chair(s) - Curtis Berlinguette

13:20 0284 *Powering the Planet: The Chemistry of Renewable Energy* **Nocera D.G.**

14:00 0285 *Photo-Generation of Long-Lived Electron-Hole Pairs by Charge Transfer in Nanocrystal Heterostructures* **Scholes G.D.**, Jones M., Lo S.S., Kumar S.

14:40 0286 *Electrochemical Growth of Thiophene Based Films on Nanocolumnar Tin-Doped Indium Oxide Electrodes: Towards Photovoltaic Solar Cells with an Ordered Heterojunction* **Rider D.A.**, Harris K.D., Brett M.J., [§]Buriak J.M.

15:00 Coffee Break

Macromolecular Science and Engineering Award Lecture presented by Mario Leclerc

Introduction of Mario Leclerc by Normand Voyer

15:20 0287 *Conjugated Polymers: From Genomics to Micro-Electronics* **Leclerc M.**

16:00 0288 *Synthesis and Performance of Oligo- and Polymeric Pentacene Materials* **Lehherr D.**, Tykwinski R.R., Gao J., Hegmann F.A., Briseno A.L., Xia Y., Jenekhe S.A.

16:20 0289 *Improved Turn-On Times of Light-Emitting Electrochemical Cells* **Zysman-Colman E.**, Slinker J.D., Parker J.B., Malliaras G.G., [§]Bernhard S.

16:40 0290 *Dithieno[3,2-b:2',3'-d]phosphole-Based Conjugated Polymers and their Potential Application in Organic Photovoltaic Cells* **Durben S.**, Nickel D., [§]Baumgartner T.

17:00 End of Session

MTP Hall A

Posters

Organizer(s) - Masato Aizawa
Chair(s) - Masato Aizawa

From 17:00 until 19:00

0291 *Supramolecular Co-Assemblies of Functionalized Triptycenes with C₆₀* **Raymond F.**, [§]Wuest J.D., Maris T.

0292 *Thiol-Ene Interfacial Photopolymerization for Microcapsule Synthesis* **Li J.**, Burke N.A., [§]Stöver H.D.H.

0293 *Templated Self-Assembly of Micron-Scale Components under Dry Conditions* **Miller M.S.**, Davidson G.J.E., [§]Breen Carmichael T.

0294 *The Effects of Molecular Symmetry on Liquid Crystalline Transition Temperatures* **Voisin E.**, Foster J.E., [§]Williams V.E.

0295 *A Rapidly Accessible G-C Base that Self-Assembles into Rosette Nanotubes in Water* **Beingessner R.L.**, [§]Oderinde M.S., Tikhomirov G.A., Cho J.-Y., [§]Fenniri H.

0296 *Self-Assembled Monolayers (SAMs) of Dialkyl- and Diaryldithiophosphonic Acids on Gold* **San Juan R.R.**, Müller J., Muhammad I., Eichhorn S.H., [§]Breen Carmichael T.

0297 *Electronic and Steric Factors that Control Self-Assembly in Rosette Nanotubes* **Ei Bakkari M.**, [§]Fenniri H.

0298 *Mesomorphism and Electronic Properties of Functionalized Triphenylene Derivatives* **Ahmida M.M.**, [§]Mahoney S., Eichhorn S.H.

0299 *Langmuir and Langmuir-Blodgett Films of Tetraazaporphyrins with Face-On Orientation* **Ahmida M.M.**, Dufour S., Li H.-S., Schmidt R., DeWolf C., Eichhorn S.H.

0300 *Self-Assembling Nanotubules* **Johnson R.S.**, Moralez J., [§]Fenniri H.

0301 *Engineering Crystals Built from Esters of Gallic Acid* **Hamilton T.D.**, [§]Wuest J.D.

0302 *Modifying Mesogen Shape Through Hydrogen Bonding and the Resulting Effects on Liquid Crystalline Self-Assembly* **Lavigne C.**, Williams V.E.

0303 *Probing the Ordering and Disordering of Self-Assembled Monolayers* **Moula M.G.**, [§]Rowntree P.A.

0304 *Self-Assembled Rosette Nanotubes with Increased Inner Diameter* **Borzsonyi G.**, Myles A., Johnson R.S., Cho J.-Y., [§]Fenniri H.

0305 *Photoregulation of Lewis Acidity Using Molecular Switches* **Lemieux V.**, Branda N.R.

0306 *Nanopatterning Surfaces Directed by Molecular Self-Assembly* **Zhou H.**, [§]Wuest J.D.

0307 *Synthesis of Star-Shaped Heptamers Based of Hexathiophene Substituted Benzene* **Kayal H.**, Eichhorn S.H.

0308 *Investigation of the Mechanism of Hydrogen Formation Induced by Low-Energy Electron Irradiation of Partially Deuterated Hexadecanethiols* **Sheepwash E.E.**, Schwan A.L., [§]Rowntree P.A.

0309 *Synthesis and Evaluation of Nanopatterned Interfaces for Neuron Growth* **Cooper A.M.**, Daly B., Buriak J.M., Giuliani F.

0310 *Silica Fabrication Using Self-Assembled Molecular Gels from Silyl L-Glutamide Lipids* **Takafuji M.**, Maeda S., Rao N.M., Ihara H.

0311 *Surface-Confined Metal Deposition and its Application* **Xu L.**

0312 *Building New Molecular Materials from Derivatives of Bis(diaminotriazinyl)amine* **Che-Quang H.**, Brunet P., Maris T., [§]Wuest J.D.

0313 *Molecular Modification of Metal-Semiconductor Diode Junctions* **Popoff R.T.W.**, Yu H.Z.

0314 *Towards Spectral Stability in Polyfluorene-Based Materials* **McFarlane S.L.**, [§]Veinot J.G.C., Coumont L.S., Piercey D.G., Tucker R.T., Glover L.A.M., Sirtanski M., Ruhl J., Chisholm R.A., Fleischauer M.D., McDonald R., Brett M.J.

0315 *Catalytic Activity and Stability of Thiol-Coated Nickel Catalysts for Use in the Steam Reforming of Methane* **Abatzoglou N.**, Hossain M., Oudghiri-Hassani H., [§]Rowntree P.

0316 *Electronic Structure of TiO₂ Nanotube Arrays from XANES and XEOL Studies* **Fang H.T.**, **Zhou J.G.**, Murphy M., Ko J.-Y.P., [§]Sham T.K.

0317 *Nanocasted Cathode Catalysts Used in Polymer Electrolyte Fuel Cells* **Garsuch A.**, MacIntyre K., Michaud X., Stevens D.A., Garsuch R.R., [§]Dahn J.R.

0318 *Donor/Acceptor Materials for Excitonic Solar Cells* **McClure S.A.**, [§]Buriak J.M.

0324 *Controlling Excitonic Solar Cell Materials at the Nanoscale* **McClure S.A.**, [§]Buriak J.M.

0319 *Electrochemical Characterization of Proton Exchange Membrane Catalyst Layers containing Sulfonated Polyaromatic Ionomers* **Astill T.D.**, [§]Holdcroft S.

0320 *Time of Flight Carrier Mobility Measurements in Nanostructured TiO₂/Polythiophene Hybrid Materials* **Gerein N.J.**, Brett M.J.

0321 *Chemisorptive Modification of Planar and Nanocolumnar Tin-Doped Indium Oxide Electrodes for Photovoltaic Solar Cells* **Rider D.A.**, Harris K.D., Brett M.J., [§]Buriak J.M.

0322 *Unprecedentedly High Catalytic Activities of cis-Dichlorobis(aminopyridine)platinum(II) Derivatives in Hydrogen Evolution from Water and their Applications in Photochemical Conversion Processes* **Hirahara M.**, Masaoka S., Sakai K.

0323 *Nanoparticle Catalyst Arrays for Aromatic Hydrogenation* **Dehm N.A.**, [§]Buriak J.M.

0325 *Facile Formation of Au Nanoparticle/CNT Hybrid Catalyst and its Electrochemical Application* **Shi Y.**, [§]Yuet P.K.

0326 *Sulfonated Polysiloxane-Based Proton Exchange Membranes* **Easton E.B.**, Northcott A.D.

0327 *Cyclometalated Ru Complexes as Light Harvesters in Dye Sensitized Solar Cells* **Bomben P.G.**, [§]Berlinguette C.P.

0329 *Polymer-Coated Superparamagnetic Iron Oxide Nanoparticles with Immobilized Proteins-Water-Stable Colloids as Drug Carriers* **Yathindranath V.**, van Lierop J., Moore D.F., [§]Hegmann T.

0330 *1-D Inorganic Nanomaterials Templated by Rosette Nanotubes* **Danumah C.**, Hemraz U.D., Morales J.G., Fenniri H.

0331 *Aerobic Alcohol Oxidations in Aqueous Solutions Using Bimetallic AuPd Nanoparticle Catalysts* **Hou W.**, Dehm N.A., [§]Scott R.W.J.

0332 *Rational Design of Supported-PdAu Bimetallic Catalysts* **Dash P.**, [§]Scott R.W.J.

0333 *Analysis of Self-Assembled Rosette Nanotubes Using AFM: Sample Preparation, Tip Property and Scan Condition* **Cho J.-Y.**, Tikhomirov G., Borzsonyi G., [§]Fenniri H.

0334 *Surface Chemistry on Erbium-Doped Lanthanum Fluoride Nanoparticles for Polymer-Based Optical Waveguide Amplifier* **Johnson N.**, Sangeetha N.M., [§]van Veggel F.C.J.

0335 *PbSe/CdSe and PbS/CdS Core Shell Quantum Dots for Photonic Applications* **Abel K.A.**, Tan M., Boyer J.C., [§]van Veggel F.C.J.

0336 *Synthesis and Characterization of Encoded Methyl-Substituted Thioacetylstyrenes-Gold NP Polymeric Nanocomposite Scaffolds* **Farah A.A.**, Jawabrah-Al-Hourani B., Bravo-Vasquez J.P., Cho J.-Y., [§]Fenniri H.

0357 *Silver Nanostructures Bound to Polymeric Microspheres: A Robust and Versatile Platform for Ultradetection SERS Labels* **Farah A.A.**, Cho J.-Y., Bravo-Vasquez J.P., [§]Fenniri H.

0337 *Size- and Shape-Dependent Electrocatalysis of Platinum Nanoparticles on Semiconductor Surfaces* **Aizawa M.**, [§]Buriak J.M.

0338 *Synthesis and Optical Properties of Group IV Semiconductor Nanocrystals* **Henderson E.J.**, Veinot J.G.C.

0339 *Scanning Tunneling Microscopy and Computational Study of the Self-Directed Growth of Butadiene, 2,3-Dimethylbutadiene and 1,3-Cyclohexadiene on Hydrogen-Terminated Silicon(100)-2x1* **Dogel S.A.**, Zikovsky J., Sinha S., DiLabio G.A., Wolkow R.A.

0340 *Theoretical Study of Work Function Modification by Organic Molecule-Derived Linear Nanostructure on H-Silicon(100)-2x1* **Anagaw A.Y.**, Wolkow R.A., [§]DiLabio G.A.

0341 *Stability of Metallic Nanoparticles Incubated in Human Blood Serum* **Elias A.L.**, Copper A.M., Gao Y., Ritchie B., [§]Buriak J.M.

0342 *A Bioinspired Approach for the Attachment of Gold Nanoparticles onto Phospholipids Using an Enzyme* **Tang N.Y.-W.**, Badia A.

0343 *Synthesis of Erbium Hydroxide Microflowers and Nanostructures in Subcritical Water* **Assaaoudi H.**, Fang Z., [§]Butler I.S., **Barsan M.M.**, Kozinski J.A.

0344 *Recycling Nanoparticle Metal Sequestration Products: Applications of Fe/Fe-Oxide/Metal Core-Shell Nanoparticles* Johnson M., Macdonald J.E., Veinot J.G.C.

0345 *Lead Sulfide Nanocrystal Growth Investigation via Stopped-Flow Spectrophotometry* Brazeau A.L., Jones N.D.

0346 *Synthesis and Interfacial Characterization of Gold and Silver Nanostructures on InP and GaAs* Sayed S.Y., Buriak J.M.

0347 *Atomic Layer Deposition of Copper on Self Assembled Monolayers of Various Surface Terminations* Coyle J.P., Barry S.T.

0348 *Pulsed Plasma Synthesis of an Organic Hole Transport Nanofilm of Triphenylamine* Sanchez F.S., Vega J., Juelt J., Kranjac D., McNabb B.

0349 *Microscale Bioactive Patterning of Silicone Rubber for Incorporation in Microfluidic Channels* McLachlan J.M., Patrio N., Varma S., Chan J., McCague C., Norton P.R., Petersen N.O.

0350 *pH Sensitive Fluorescence Resonance Energy Transfer with CdSe/ZnS Quantum Dots* Revesz E., Lai E.P.C., DeRosa M.C.

0351 *Characterization of Lipid Monolayers at the Aqueous-Liquid Crystal Interface* Meli V., Gupta J.K., Lin I.-H., Teren S., Abbott N.L.

0352 *Clay-Supported Gold Nanoparticles* Zhu L., Letaief S., Detellier C.

0353 *New Biolabels for Luminescence Deep-Tissue Imaging through Upconversion in the Near-Infrared* Manseau M.-P., van Veggel F.C.J.

0354 *Label-Free Immunoassay Using Localised Surface Plasmon Resonance of Noble Metal Nanoparticles Produced by Glancing Angle Deposition* Gish D.A., Nsiah F., McDermott M.T., Brett M.J.

0355 *Amino-Functionalized Porous Nanostructured Thin Films* Kwan J.K., Sit J.C.

0356 *Complete Benchtop Fabrication of NSOM Probes* Galway G., Ianoul A.

0358 *FRET Property of Single-Walled Carbon Nanotubes and its Implication for Protein-Protein Interaction Assays* Su Z., Zhu S., Tzogankis C., Honek J.F.

Organic Chemistry Division

OR1 Salon 9

Applied Physical Organic Chemistry

Organizer(s) - Cornelia Bohne and Todd Sutherland
Chair(s) - Cornelia Bohne

13:40 0359 *Substituent Effects on the Photochemistry of 1,1-Diaryl-1-germacyclobutanes and the Reactivity of 1,1-Diarylgemines* Leigh W.J., Potter G.D., Huck L.A., Bhattacharya A.

14:00 0360 *Diselenide Derivative, Potential Successor of Ebselen with High Antioxidant Activity: Assessment on in vitro Models* Mareque-Faez J., Heyne B., Deby C., Lamy M., Deby-Dupont G., Serteyn D., Mouithys-Mickalad A.

14:20 0361 *Novel Fluorescence Based Strategies for Visualizing Reactive Oxygen Species in Lipid Membranes* Cosa G.

15:00 Coffee Break

15:20 0362 *Unnatural Amino Acids for Probing Radical Transfer in Peptides and Proteins* Nara S.J., Pratt D.A.

15:40 0363 *The Complexation Mechanism of a Cucurbit[7]uril Host-Guest System* Tang H., Bohne C., Kim K.

16:00 0364 *Proton and Electron Transfer Processes in p-(Hydro)quinones Containing Intramolecular Hydrogen Bonds* Trefz T., Kabir M.K., Jain R., Hicks R.G.

16:20 0365 *Recent Progress in the Development of New Photoremoveable Protecting Groups* Lukeman M., Blake J., Burns M.D., Kiemele E.R., Yorke M., Roxin A.

17:00 End of Session

OR2 Salon 11

Carbohydrate Chemistry and Glycobiology (Joint with BM) (joint with BM2)

Organizer(s) - Christopher Cairo and Chang-Chun Ling
Chair(s) - Todd Lowary

13:20 Joint with BM2 - See BM2

13:20 *Boehringer Ingelheim Award Lecture presented by Jamie Rich*

16:20 *CCUCC Chemistry Doctoral Award Lecture presented by Vivian Yip*

17:00 End of Session

OR5 Salon 10

Chemical Biology: Molecular Probes and Organic Biomaterials (Joint with BM) (joint with BM3)

Organizer(s) - David Vocadlo and Fraser Hof
Chair(s) - Andreea Schmitzer and Christopher Cairo

REMINDER

13:20 *Boehringer-Ingelheim Award Lecture presented by Jamie Rich in Salon 11*

14:00 Joint with BM3 - See BM3

16:20 End of Session

REMINDER

16:20 *CCUCC Award Lecture presented by Vivian Yip in Salon 11*

OR9 Hall D

Organic Synthesis: The Latest Trends

Organizer(s) - Fred West and Derrick Clive
Chair(s) - Dale Ward

13:20 0366 *Synthesis of Natural Products: Free Radical-Based Methodologies* Guindon Y.

14:00 0367 *Chiral Carbenoids for Asymmetric Synthesis* Aggarwal V.K.

14:40 0368 *Total Synthesis of Mersicarpine, an Indole Alkaloid from a Malayan Kopsia Species* Kerr M.A., Magolan J., Carson C.A.

15:00 Coffee Break

15:20 0369 *Progress in the Synthesis of Daphnilongeranin B and Geminal Acylation Processes Leading to Heterocycles* Burnell D.J., Hughes J.A., Thornton P.D.

16:00 0370 *Tandem Vilsmeier-Haack Cyclization/Azomethine Ylide Intramolecular Cycloaddition as a New Synthetic Strategy Towards Tricyclic Cores of Alkaloids* Bélanger G., Lévesque F., Doré M., Darsigny V.

16:20 0371 *Development and Application of Ruthenium-Catalyzed Tandem Olefin Metathesis-Oxidations* Scholte A.A., Snapper M.L.

16:40 0372 *PtCl₂-Catalyzed Cycloisomerizations and Radical Cyclizations of 1,5-Enynes. Construction of Various Bicyclo [3.1.0] Skeletons.* Dhimane A.L., Blasczykowski C., Brancour C., Cariou K., Cloarec J.M., Harrak Y., Madness M.L., Mainetti E., Fensterbank L., Malacria M.

17:00 End of Session

OR12 Salons 17/18

General

Organizer(s) - Dennis Hall and Rik Tykwinski
Chair(s) - Yuming Zhao

13:40 0373 *General Preparation of Boracyclobutenes by Transmetalation of Titanacyclobutene Complexes. New Boron Synthons for Applications in Organic Synthesis* Bauer R.C., Stryker J.M.

14:00 0374 *Molecular Switches for Selective and Sequential Photorelease* Lemieux V., Gauthier S., Branda N.R.

14:20 0375 *Diphenylacetylenes: Methoxy and Amino Substituent Effects on Photoadditions and Photophysical Properties* Pincock J.A., Gonzalez C.M., Young I., Pincock A.L.

14:40 0376 *Self-Assembly of Carboxylic Acid Substituted Discotic Molecules in Solution and in Liquid Crystalline Phases* Lavigueur C., Williams V.E.

15:00 End of Session

Physical, Theoretical and Computational Division

PT1 Salon 12

Advances in Solid State NMR

Organizer(s) - Rod Wasylishen
Chair(s) - Rob Schurko

13:20 0377 *Advancements in Natural Abundance ³³S MAS NMR of Solids Including Sensitivity Enhancements* Jakobsen H.J.

14:00 0378 *A Solid-State Multinuclear Magnetic Resonance Investigation of Ga- and In-Trihalide Triarylphosphine Adducts* Chen F., Ma G., Wasylishen R.E., Tersikh V.V., Cavell R.G.

14:20 0379 *²⁷Al ^{3Q} MAS NMR of Aluminous Clinopyroxenes at 21.1 Tesla* Flemming R.L., Pawsey S.

14:40 0380 *First-Principles Calculations and Ultra-High Field Multinuclear Solid State NMR in Magnesium Sulfate Polymorphs* Moudrakovski I.L., Ripmeester J.A.

15:00 Coffee Break

15:20 0381 *New Hetero-Nuclear Recoupling and Homo-Nuclear Decoupling Sequences for Dipolar Interactions, Available for Ultra-Fast MAS in Solids* Amoureux J.-P.

15:40 0382 *Recent Developments in and Application of Domain Filtering Methods for Fluorine Containing Materials* Hazendonk P., Montana T., Borisov A.S.

16:00 0383 *Solid-State NMR Investigations of Diselenimidodiphosphinate Systems* Demko B.A., Wasylishen R.E.

16:20 0384 *Refinement of Zeolite Crystal Structures Using Ultrahigh-Field Measurements and Ab Initio Calculations of ²⁹Si Chemical Shift Tensors* Brouwer D.H.

16:40 End of Session

PT2 Salon 5

Biological Mass Spectrometry (Joint with AN) (joint with AN3)

Organizer(s) - John Klassen and Liang Li
Chair(s) - Liang Li

13:20 Joint with AN3 - See AN3

17:00 End of Session

PT4 Salons 13/14

Computational Approaches to Drug Design (Joint with BM) (joint with BM5)

Organizer(s) - Jack Tuszynski
Chair(s) - Jack Tuszynski

REMINDER

13:20 *Boehringer Ingelheim Award Lecture presented by Jamie Rich in Salon 11*

14:00 Joint with BM5 - See BM5

16:20 End of Session

REMINDER

16:20 *CCUCC Award Lecture presented by Vivian Yip in Salon 11*

PT8 Salon 6

Protein NMR Spectroscopy (Joint with BM) (joint with BM6)

Organizer(s) - Leo Spyropoulos
Chair(s) - Leo Spyropoulos

REMINDER

13:20 *Boehringer Ingelheim Award Lecture presented by Jamie Rich in Salon 11*

14:00 Joint with BM6 - See BM6

16:20 End of Session

REMINDER

16:20 *CCUCC Award Lecture presented by Vivian Yip in Salon 11*

PT9 Salons 15/16

Single-Molecule Measurements in Biological Chemistry (Joint with AN and BM)

Organizer(s) - Nancy Forde and Hongbin Li
Chair(s) - Hongbin Li

13:20 Joint with AN7 and BM7 - See BM7

REMINDER

13:20 *Boehringer Ingelheim Award Lecture presented by Jamie Rich in Salon 11*

17:00 End of Session

PTP Hall A

Posters

Organizer(s) - Wolfgang Jäger
Chair(s) - Wolfgang Jäger

From 17:00 until 19:00

0385 *Angular Momentum Recoupling in NMR: Simplifying Rotation Matrix Products via Racah Algebra* Siminovitch D.J. PAPER WITHDRAWN

0386 *A Solid-State Phosphorus-31 NMR Investigation of Fe(η^5 -C₅H₅)(η^5 -P₃[C⁻Bu]₂)₂* Bernard G.M., Eichele K., Nixon J.F., Wasylishen R.E.

0387 *A Morphological Study of Poly[bis(trifluoroethoxy)phosphazene] (PBFP) Using High-Resolution ¹H, ¹⁹F, ³¹P and ¹³C Solid-State Nuclear Magnetic Resonance* Borisov A.S., Hazendonk P., Hayes P.G.

0388 *Solid-State NMR Characterization of a Paramagnetic Metal Hexafluoroacetylacetonate* Sidhu P.S., Aguiar P.M., Kroeker S.

0389 *Characterization of the ⁵¹V NMR Parameters of [V(O)(ONMe₂)₂O Using Hyperbolic Secant Pulses* Nakashima T.T., Teymooori R., [§]Wasylishen R.E.

0390 *Solid-State NMR and Computational Study of the Chlorine-35/37 Chemical Shift and Electric Field Gradient Tensors of a Series of Group 13 Chlorides* Chapman R.P., Bryce D.L.

0391 *Quantification of Water in the Nafion Membrane of an Operating Polymer-Electrolyte Membrane Fuel Cell Using Micro-MRI* Wang M., Bergens S.H., [§]Wasylishen R.E.

0392 *Multiple Pulse Variable Excitation Angle Domain Selection Methods for Semi-Crystalline Fluoropolymers* [†]Montina A.D., [§]Hazendonk P.

NSERC

NS Salon 3

NSERC Workshops

Organizer(s) - NSERC

12:30 0393 *NSERC's Role in Supporting Research and Innovation at the Leading Edge* Fortier S.

14:00 End of Session

Monday AM

Analytical Chemistry Division

AN2 Salon 2

Analytical Separations

Organizer(s) - Charles Lucy and James Harynuk
Chair(s) - Edgar Arriaga and Karen Waldron

08:20 0394 *Capillary Electrophoretic Separation of Markers of Oxidative Stress found in Subcellular Environments* Arriaga E.A., Xu X., Kostal V., Sa R., Feng J.

09:00 0395 *Lab in a Capillary: Capillary Electrophoresis as an Integrated Sample Preparation Tool* [§]Yeung K.K.C., Nesbitt C.A., Booker C.J., Abel R.J.

09:20 0396 *Tunable Aptamer Capillary Electrophoresis and its Application to Protein Analysis* Zhang H., Li X.-F., [†]Le X.C.

09:40 Coffee Break

10:00 0397 *Single-Step Analysis of Glutathione Ratio via On-Line Sample Preconcentration with Chemical Derivatization by Capillary Electrophoresis: An Elusive Clinical Biomarker* Ptolemy A.S., Britz-McKibbin P.

10:20 0398 *Multi-Class Pharmaceutical Analysis in Environmental Matrices by Capillary Electrophoresis* Drover V.J., [†]Bottaro C.

10:40 0399 *Prediction of Ionization Response for Unknown Metabolites by Capillary Electrophoresis-Electrospray Ionization-Mass Spectrometry* Chalcraft K., [†]Britz-McKibbin P.

11:00 0400 *Evaluation of Glutaraldehyde Cross-Linked Proteolytic Enzymes Using Capillary Electrophoresis-Based Peptide Mapping* [†]Waldron K.C., Nguyen Q.V., Gan S.-M.

11:20 0401 *Effect of Experimental Factors on Phospholipid Bilayer Coatings in Capillary Electrophoresis* Gulcev M.D., [§]Lucy C.A.

11:40 0402 *Coupling of Large Volume Single Drop Microextraction and Sweeping in Capillary Electrophoresis* Liang G., Choi K., [†]Chung D.S.

12:00 End of Session

AN3 Salon 5

Biological Mass Spectrometry (Joint with PT) (joint with PT2)

Organizer(s) - John Klassen and Liang Li
Chair(s) - John Klassen

08:00 0403 *Formation of Zwitterions of Amino Acids in Gas Phase Ion-Molecule Complexes* [§]McMahon T., Wu R.

08:20 0404 *Development of 'GELFrEE' Technologies for Proteome Prefractionation* [§]Doucette A.A.

08:40 0405 *Proteomics of Metastasis: A Label-Free Approach* [†]Pinto D.M., Bonner R., Ivosev G., Lock C., Tate S., Leslie A., Burton L.

09:00 0406 *Nanoelectrospray and FAIMS. A Match Made in Heaven?* Hatsis P., Sawdey L., Valaskovic G., Wu J.-T.

09:20 BD Diagnostics-Preanalytical Systems Presentation

09:40 Coffee Break

10:00 0407 *Revised HDX-MS Strategies for Improving the Analysis of Protein Interactions* Percy A.J., Slys G.W., Baker C.J., Bosza B., Dang A., [§]Schriemer D.C.

10:20 0408 *Structures of (Thy)_mLi⁺(H₂O)_m and (Ura)_nLi⁺(H₂O)_n and (Gly)₂H⁺ by IRMPD Spectroscopy* Rajabi K., Gillis E., Atkins C., [§]Fridgen T.D.

10:40 0409 *Dissociation of Gas Phase Protein Complexes* [§]Thachuk M., Wanasundara S.N.

11:00 0410 *A Pepsin Digest Emitter Coupled to a Separation Column for Mass Spectrometry Analysis* Douma M.D., Waterman K., Goode I., Marecak D., [§]Oleschuk R.D.

11:20 0411 *Quantifying Protein-Hydrophobic Ligand Interactions by ES-MS* Lan L., [§]Klassen J.S.

11:40 0412 *Enabling Sample Preparation and Mass Spectrometric Techniques for Comprehensive Proteome Profiling* Li L.

12:00 End of Session

AN7 Salons 15/16

Single-Molecule Measurements in Biological Chemistry (Joint with BM and PT) (joint with BM7)

Organizer(s) - Nancy Forde and Hongbin Li
Chair(s) - Michel Grandbois

08:00 0413 *Probing Mechanical Response from Single Molecules to Materials* van der Horst A., [§]Forde N.R.

08:20 0414 *Force Spectroscopy of Structure Formation in Single Nucleic Acid Molecules* Woodside M.T.

09:00 0415 *Stretching Protein Filaments by Friction Force Spectroscopy* [§]Kreplak L., Herrmann H., Aebi U.

09:20 0416 *Atomic Force Microscopy Reveals Parallel Mechanical Unfolding Pathways of T4 Lysozyme: Evidence for a Kinetic Partitioning Mechanism* [§]Li H., Peng Q.

09:40 Coffee Break

10:00 0417 *Single Molecule Mechanics of Protein Unfolding* [§]Walker G.C.

10:40 0418 *Catch Bonds of Glycoprotein Ib-von Willebrand Factor Interaction and their Elimination by VWD Mutants* Wu T., Yago T., Yang J., Miner J., Coburn L., López J.A., Cruz M.A., McIntire L.V., McEver R.P., [§]Zhu C.

11:00 0419 *Fluorescence Correlation Spectroscopy in Sub-Diffraction-Limited Volumes Using Near-Field Optical Probes* Johnston L.J., Vobornik D., Banks D.S., Lu Z., Fradin C., Taylor R.S.

11:20 End of Session

REMINDER

11:20 Bernard Belleau Award Lecture presented by Andrew Woolley in Salon 11

Biological and Medicinal Chemistry Division

BM1 Salon 7

Altered Proteins

Organizer(s) - Ronald Kluger
Chair(s) - Ronald Kluger

08:40 0420 *Non-Sulfamate Suicide Inhibitors of Steroid Sulfatase* [§]Taylor S.D., Ahmed V., Liu Y., Qadoumi Z., Trinh J.

09:20 0421 *Agility of Adding Artificial Amino Acids* Ebhardt H.A., [§]Fahlman R.P.

09:40 Coffee Break

10:00 0422 *Proteins Containing Fluorinated Methionines* [§]Honek J.F., Su Z.

10:40 0423 *Directed Evolution of Redesigning Enzymes for Glycoside Synthesis* [§]Withers S.G., Kim Y.-W., Shim J.H., Hancock S., Rich J.R., Warren R.A.J., Aharoni A., Strydnaka N.C.J.

Bernard Belleau Award Lecture presented by Andrew Woolley in Salon 11

Introduction of Andrew Woolley by Ronald Kluger

11:20 0424 *Photo-Switchable Proteins* [†]Woolley G.A.

12:00 End of Session

BM2 Salon 11

Carbohydrate Chemistry and Glycobiology (Joint with OR) (joint with OR2)

Organizer(s) - Christopher Cairo and Chang-Chun Ling
Chair(s) - Christopher Cairo

08:00 0425 *Synthesis of 2-Deoxyglycosides via 2,3-Anhydrosugar Thioglycosides* Hou D.J., [†]Lowary T.L.

08:20 0426 *Kinetic Isotope Effects on Sialidase-Catalyzed Hydrolysis Reactions* Chan J., Bennet A.J.

08:40 0427 *Synthesis Of Potential α -Galactosidase Inhibitors* Chakladar S., Wang Y., Cheng L., Bennet A.J.

09:00 0428 *Probing the Conformational Itinerary of Glycosidases Using Conformationally-Restricted Substrate Analogues* Bennet A.J., Wang Y., Cheng L., Chakladar S.

09:40 Coffee Break

10:00 0429 *Investigating and Interfering with Cell Wall Recycling: A Strategy for Attenuating Amp^C-Mediated Antibiotic Resistance* Stubbs K.A., Balcewich M., Asgarali A., [§]Vocadlo D.J., Scaffidi A., Stick R.V., Mark B.L.

10:20 0430 *Synthesis and Evaluation of Phenolic Glycolipid Immunomodulators as Potential Vaccine Candidates for Mycobacterial Infections* Elsaidi H., [§]Lowary T.L.

10:40 0431 *The Role of Sialic Acid in the Formation of Protective Conformational Epitopes* Jennings H.J.

11:20 End of Session

REMINDER

11:20 Bernard Belleau Award Lecture presented by Andrew Woolley in Salon 11

BM6 Salon 6

Protein NMR Spectroscopy (Joint with PT) (joint with PT8)

Organizer(s) - Leo Spyrapoulos
Chair(s) - Leo Spyrapoulos

08:00 0432 *NMR Tools and Strategies for Structural Genomics and Structural Biology* Arrowsmith C.

08:40 0433 *Understanding cAMP-Dependent Allostery by NMR Spectroscopy* [§]Melacini G.

09:20 0434 *A Novel NMR Assay for the Intrinsic and GAP-Accelerated GTPase Activity of Small G-Proteins: Characterization of Rheb and TSC2* [†]Marshall C.B., Plevin M.J., Li G.Y., Ho J., Stambolic V., [§]Ikura M.

09:40 Coffee Break

10:00 0435 *Using NMR and Calorimetry to Study Protein Dynamics* Mittermaier A.

10:40 0436 *Solution and Solid-State NMR Studies of Natural and Transgenic Spider Silk Proteins* [§]Auger M., Leclerc J., Cloutier I., Gagné S.M., Pézolet M.

11:00 0437 *Progress in Solid State NMR of Peripheral and Integral Membrane Proteins* Ladizhansky V., Shi L., Zhong L., Bamm V., Brown L., Harauz G.

11:20 End of Session

REMINDER

11:20 Bernard Belleau Award Lecture presented by Andrew Woolley in Salon 11

BM7 Salons 15/16

Single-Molecule Measurements in Biological Chemistry (Joint with AN and PT) (joint with AN7)

Organizer(s) - Nancy Forde and Hongbin Li
Chair(s) - Michel Grandbois

08:00 Joint with AN7 and PT9 - See AN7

11:20 End of Session

REMINDER

11:20 Bernard Belleau Award presented by Andrew Woolley in Salon 11

Chemical Education Division

CE5 Salon 3

Making Career Choices and Entering the Workforce-An Interactive Presentation

Organizer(s) - Stewart Roth and Candace Ford
Chair(s) - Stewart Roth and Candace Ford

CIC Award for Chemical Education Lecture presented by Geoffrey Rayner-Canham

Introduction of Geoffrey Rayner-Canham by Peter Mahaffy

09:00 0438 *General Chemistry: Fossilized or Futurized?* Rayner-Canham G.W.

09:40 Coffee Break

10:00 Introductory Remarks - This will be an interactive session - four presentations intermingled with dialogue and followed by discussion. The starting time of each presentation is approximate.

10:20 0439 *Making Good Decisions in University* Armour M.-A.

10:40 0440 *Careers Decisions that Make Sense* Makar I.C.

11:00 0441 *The Employable Chemistry Graduate* Schwass D.

11:20 0442 *The Graduate School Option* Taylor G.

Discussion

12:00 End of Session

Inorganic Chemistry

IN7 Riverview

Solid-State Chemistry: From Materials Discovery to Industrial Processing (Joint with MT) (joint with MT9)

Organizer(s) - Arthur Mar and Zuo-Guang Ye
Chair(s) - Mario Bieringer08:00 0443 *Zinc Antimonides and their Derivatives: Intermetallics with Complex Structures and Narrow Band Gaps* Häussermann U.08:40 0444 *Ternary Rare-Earth Titanium Antimonides* Bie H., Tkachuk A.V., Zelinska O.Ya., Mar A.09:00 0445 *Structure, Composition and Thermoelectric Properties of the Cu-Si-P and Cu-Ge-P Phases* Mozharivskiy Y.09:20 0446 *Electronic Structure of Transition-Metal Phosphides M₂P* Blanchard P.E., Grosvenor A.P., Cavell R.G., Mar A.

09:40 Coffee Break

10:00 0447 *Transition Metal Antimonide-Tellurides: An Emerging Family on the Edge between Semiconducting and Metallic Properties* Kleinke H.10:20 0448 *Hydro/Solvothermal Synthesis: Targeting Noncentrosymmetric Structures and other New Materials* Poeppelmeier K.R.11:00 0449 *Structure and Properties of Multiferroic Materials* Zhu W., Feng L., Bokov A., Ye Z.-G.11:20 0450 *Brownmillerite Oxides: Potential Multi-Ferroic Materials?* Ramezanipour F., Cowie B., Derakhshan S., Greedan J.E., Cranswick L.M.D.11:40 0451 *Magnetism of Geometrically Frustrated Double Perovskite with Pseudo Face Center Cubic Symmetry* Aharen T., Greedan J.E., Imai T., Luke G.M.

12:00 End of Session

IN8 Salon 4

Symposium in Honour of Bill Graham: From C-H Activation to Future Challenges in Organometallic Chemistry

Organizer(s) - Joe Takats and Michael Heinekey
Chair(s) - Charles Campana08:00 0452 *Strong CH and CC Bond Cleavage Reactions Using Homogeneous Transition Metal Complexes* Jones W.D.08:40 0453 *Oxidatively Induced Insertion of NO into a Metal-Carbon Bond* Graham P.M., Buschhaus M.S., Legzdins P.09:00 0454 *Reactivity of Rh(III) Complexes Featuring an Ambiphilic Bifunctional Ligand PMe₂CH₂AlMe₂* Fontaine F.-G., Boudreau J.09:20 0455 *X-H Bond Activation by Transition Metal Phosphinidene Complexes* Sterenberg B.T., Bolton T.M.

09:40 Coffee Break

10:00 0456 *From C-H to C-F Activation: An Unlikely Connection* Anderson D.J., Slaney M.E., McDonald R., Cowie M.10:40 0457 *A Mechanistic Study of C-F Bond Activation by Nickel Complexes* Johnson S.A., Keen A.L., Saliba M., Mustafa F.11:00 0458 *Alkene C-H Activation Involving Heretofore Unknown Complexes of the Type [Cp₂ZrMe(1-alkene)]⁺* Baird M.C.11:40 0459 *Synthesis, Reactivity and Structural Features of Group IV and V Metal Complexes Bearing N,N'-Disubstituted 1,8-Diaminonaphthalene Ligands* Lavoie N., Burchell T., Richeson D.S.

12:00 End of Session

IN9 Salons 17/18

General

Organizer(s) - Martin Cowie
Chair(s) - Sean Barry08:00 0460 *Adsorption of 3d Series on the TiO₂(110) Surface by Density-Functional Theory* Asaduzzaman A., Kruger P.08:20 0461 *Conductance Switching of Fluorene/TiO₂ Molecular Heterojunctions* Wu J., McCreery R.L.08:40 0462 *Deposition of Gold Metal Films from Photo-Reactive Gold (I) Amidinates* Whitehorne T.J.J., Albert J., Guo T., Barry S.T.09:00 0463 *Conductivity Measurements on Arrays of Indium Tin Oxide Posts Using Conductive AFM* Fernando S.P., Harris K.D., Brett M.J.09:20 0464 *Self-Directed Growth of Contiguous Perpendicular Molecular Lines on H-Si(100) Surfaces* Zikovskiy J., Dogel S.A., Haider M.B., DiLabio G.A., Wolkow R.A.

09:40 Coffee Break

Chair(s) - Daniel Leznoff

10:00 0465 *Employing Tetracyanoaurate(III) and First-Row Transition Metals in Heterobimetallic Functional Coordination Polymers* Geisheimer A.R., Leznoff D.B.10:20 0466 *Polyoxometalates Covalently Linked to Ru^{II} Complexes* Santoni M.-P., Hanan G.S., Proust A., Hasenknopf B.10:40 0467 *Real and Apparent Magnetic Ordering in M[Au(CN)₂]₂-Based Coordination Polymers* Lefebvre J., Sonier J.E., Leznoff D.B.11:00 0468 *Increased Magnetic Anisotropy: A Route to High Blocking Temperature Single Molecule Magnets* Murugesu M.11:20 0469 *Synthesis and Structures of Strained, Neutral [d⁷] and Cationic [d⁶] Hydrocarbon-Bridged [n]Cobaltocenophanes (n = 2, 3)* Mayer U.F.J., Manners I.11:40 0470 *Strain-Controlled, Photochemically or Thermally Promoted Haptotropic Shifts of Cyclopentadienyl Ligands in Group 8 [1]- and [2]Metallocenophanes* Herbert D.E., Tanabe M., Bourke S.C., Lough A.J., Manners I.

12:00 End of Session

Macromolecular Science and Engineering Division

MS3 Salon 10

Nanostructured Polymeric Assemblies (Joint with MT) (joint with MT6)

Organizer(s) - Alex Adronov
Chair(s) - Alex Adronov08:00 0471 *Diblock Copolymer Tadpole Preparation and Assembly* Liu G.J., Nijkang G.08:20 0472 *Catalyst Stamp Lithography* Mizuno H., Buriak J.M.08:40 0473 *Investigations into the Synthesis of Composite Polyurea Microcapsules* Hickey J.N., Stöver H.D.H.09:00 0474 *Integrating Top-Down Fabrication with Bottom-Up Self-Assembly* Rotello V.M.

09:40 Coffee Break

10:00 0475 *Self-Assembly of Inorganic Nanorods: A Block Copolymer Paradigm* Nie Z., Fava D., Zou S., Walker G.C., Rubinstein M., Kumacheva E.10:40 0476 *Ru(bpy)₃²⁺-Containing Block Copolymers: Self-Assembly, and Luminescence Properties* Metera K.L., Sleiman H.F.11:00 0477 *Conjugated Polymer-Nanotube Assemblies* Cheng F., Imin P., Adronov A.11:20 0478 *Folding, Switching, and Stitching Molecules* Hecht S.

12:00 End of Session

Materials Chemistry Division

MT1 Hall D Foyer

Advanced Materials by Molecular Self-Assembly

Organizer(s) - Hanadi Sleiman
Chair(s) - Robert Lemieux08:00 0479 *Synthesis and Characterization of Liquid Crystalline Materials Based on a Dibenzylidene-Acetone Core* Hope-Ross K.A., Kadla J.F.08:20 0480 *Columnar Liquid Crystals as Model Systems for Understanding Self-Assembly* Williams V.E., Voisin E., Calderon O.08:40 0481 *Building Complex Structures by the Self-Association of Molecules Containing Multiple Tetraphenylmethyl Groups* Gagnon E., Maris T., Wuest J.D.09:00 0482 *Organosiloxane Liquid Crystals with de Vries Character* Roberts J.C., Li L., Kapernaum N., Giesselmann F., Lemieux R.P.

09:40 Coffee Break

10:00 0483 *Self-Assembly of Block Copolymer Templates on Silicon and other Semiconductor Surfaces* Buriak J.M., Chai J., Qiao Y.H.10:40 0484 *Templated Synthesis of Highly Stable, Electroactive and Dynamic Metal-DNA Branched Junctions* Yang H., Sleiman H.F.11:00 0485 *Towards the Synthesis of a Molecular Trefoil Knot* Zysman-Colman E., Arias K., Loren J.C., Linden A., Siegel J.S.11:20 0486 *[3]Rotaxane-Porphyrin Conjugate as a Novel Supramolecular Host for Fullerenes* Morin J.-F., Marois J.-S.11:40 0487 *Self-Sorting Rosette Nanotubes* Johnson R.S., Yamazaki T., Kovalenko A., Fenniri H.

12:00 End of Session

MT4 Salon 8

Materials for Energy Conversion

Organizer(s) - Curtis Berlinguette and Michael Eikerling
Chair(s) - Michael Eikerling and Thomas Baumgartner08:00 0488 *Combinatorial Studies of PEM Fuel Cell Catalysts* Dahn J.R., Stevens D.A., Yang R., Garsuch A., Bonakdarpour A., Liu G.08:40 0489 *Catalysts for Direct Ethanol Fuel Cells* Pickup P.G., Li G., Ghumman A., Bennett D.V.09:00 0490 *Application of Pt/Zn Alloy as a Fuel Cell Catalyst: Fundamental Approach* Sode A., Bizzotto D.09:20 0491 *Synergistic Effects of Ni_{1-x}Co_x-YSZ Alloyed Cermet SOFC Anodes for Direct Oxidation of Hydrogen and Methane Fuels Containing H₂S* Giorgi J.B., Grgicak C.M., Pakulska M.M., O'Brien J.S.

09:40 Coffee Break

10:00 0492 *Proton Exchange Membrane under Low Hydration Level: Insights from Atomistic Simulations and Electronic Structure Computations* Dupuis M., Devanathan R., Venkatnathan A., Glezakou V.A.10:40 0493 *Physical Model of Cathode Catalyst Layers for Polymer Electrolyte Fuel Cells: Porous Structure and Water Balance* Liu J., Eikerling M.H.11:00 0494 *Carbon Nanotubes as Electrocatalyst Supports for Proton Exchange Membrane Fuel Cells* Chen Y., Saha M., Liu H., Li R., Sun X.11:20 0495 *Ceramic Carbon Electrodes for Fuel Cell Systems* Easton E.B., Eastcott J.I.11:40 0496 *Nanowire-Based Electrodes for Fuel Cell Applications* Sun X., Cai M.

12:00 End of Session

MT6 Salon 10

Nanostructured Polymeric Assemblies (Joint with MS) (joint with MS3)

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

08:00 Joint with MS3 - See MS3

12:00 End of Session

MT9 Riverview

Solid-State Chemistry: From Materials Discovery to Industrial Processing (Joint with IN) (joint with IN7)

Organizer(s) - Arthur Mar and Zuo-Guang Ye
Chair(s) - Mario Bieringer

08:00 Joint with IN7 - See IN7

12:00 End of Session

Organic Chemistry Division

OR1 Salon 9

Applied Physical Organic Chemistry

Organizer(s) - Cornelia Bohne and Todd Sutherland
Chair(s) - Todd Sutherland08:00 0497 *A Cucurbit[7]uril-Ferrocene Complex Achieves Avidin-Biotin Affinity by Overcoming Enthalpy-Entropy Compensation* Inoue Y., Rekharsky M., Mori T., Yang C., Ko Y.H., Selevapalam N., Kim H., Kim K., Chen W., Moghaddam S., Gilson M.08:40 0498 *Polymer Vesicles: Tuning Function Through Organic Chemistry* Gillies E.R., Li B., De Wit M.A.09:20 0499 *Photoresponsive Liposomes: Towards the Photoregulation of Membrane Permeability with Spirooxazines* Selzler L., Louis K.M., Murphy R.S.

09:40 Coffee Break

10:00 0500 *Helices and Macrocycles with a Polar Cavity* Petitjean A., Cuccia L.A., Schmutz M., Lehn J.-M.10:40 0501 *Host-Guest Binding of Cucurbit[7]uril with Local Anaesthetics and other Medically Relevant Guests* Wyman I.W., Macartney D.H.

11:00 0502 *Supramolecular Assemblies Based on Imidazolium and Diimidazolium Salts: A New Class of Supramolecular Networks* [§]Schmitzer A.R., Leclercq L., Noujeim N., Samsam S.

Clara Benson Award Lecture presented by Cornelia Bohne

Introduction of Cornelia Bohne by William Leigh

11:20 0503 *Supramolecular Dynamics* [§]Bohne C.

12:00 End of Session

OR2 Salon 11

Carbohydrate Chemistry and Glycobiology (Joint with BM) (joint with BM2)

Organizer(s) - Christopher Cairo and Chang-Chun Ling
Chair(s) - Christopher Cairo

08:00 Joint with BM2 - See BM2

11:20 End of Session

REMINDER

11:20 Bernard Belleau Award Lecture presented by Andrew Woolley in Salon 11

OR4 Salons 13/14

Catalytic Transformation of C-H Bonds

Organizer(s) - Keith Fagnou

08:40 0504 *Enantioselective Approach to Chiral Lactones via C-H Bond Activation* Dong V.M.

09:20 0505 *Regiocontrol and Mechanistic Insights in the Oxidative Cross-Coupling of Indoles with Simple Arenes* [§]Stuart D.R., Villemure E., Sun H.-Y., [§]Fagnou K.

09:40 Coffee Break

10:00 0506 *Regioselective Functionalization of Unreactive C-H Bonds* [§]Daugulis O.

10:40 0507 *Oxidative Formation of C-C Bonds Directly from C-H/C-H Bonds* Li C.-J.

11:20 End of Session

REMINDER

11:20 Clara Benson Award Lecture presented by Cornelia Bohne in Salon 9

OR9 Hall D

Organic Synthesis: The Latest Trends

Organizer(s) - Fred West and Derrick Clive
Chair(s) - Jean Burnell

08:00 0508 *The Total Synthesis of (+)-Fawcettidine* Kozak J., [§]Dake G.R.

08:20 0509 *Chemoenzymatic Total Synthesis of (+)-Codeine* Leisch H., Omori A.T., Finn K.J., Carroll R.J., [§]Hudlicky T.

08:40 0510 *Total Synthesis and Structural Assignment of (-)-Aplysiallene* Wang J., [§]Pagenkopf B.L.

09:00 0511 *New Discoveries in Tandem Reactions and Synthesis of Complex Polycyclic Products* [§]Barriault L.

09:40 Coffee Break

10:00 0512 *Complexity and Chemoselective Methods Towards the Total Synthesis of Biologically Active Compounds* Cossy J.

10:40 0513 *Tricyclopopylbismuth as a Cyclopropyl Transfer Agent in N-Cyclopropylation and Cross-Coupling Reactions* [§]Gagnon A.

11:20 End of Session

REMINDER

11:20 Clara Benson Award Lecture presented by Cornelia Bohne in Salon 9

Physical, Theoretical and Computational Division

PT1 Salon 12

Advances in Solid State NMR

Organizer(s) - Rod Wasylishen
Chair(s) - Scott Kroeker

08:40 0514 *Direct NMR Detection of Alkali Metal Ions in Biological Solids* Wu G.

09:20 0515 *Characterization of the Niobate Species Formed During Synthesis: From Nb₂O₅ Grains to Microporous Na₂Nb₂O₆H₂O Fibers and NaNbO₃ Cubes* Kirby C.W., Yan Z., [§]Huang Y., Zhou H., Frost R.L.

09:40 Coffee Break

10:00 0516 *Solid-state ³⁵Cl, ^{47/49}Ti and ⁹¹Zr NMR Spectroscopy of Metallocenes Relevant in Heterogeneous Catalysis* Rossini A.J., Hung I., Mills R.W., Briscoe G.A., [§]Schurko R.W.

10:20 0517 *Lithium-7 NMR in Oxides: Distinguishing between Quadrupolar and Dipolar Effects* Michaelis V.K., Aguiar P.M., [§]Kroeker S.

10:40 0518 *Probing the Solid and Liquid State Local Structure of Ionic Liquid Salts with ³⁵Cl, ⁷⁹Br and ¹²⁷I NMR* Gordon P.G., Brouwer D.H., [§]Ripmeester J.A.

11:00 0519 *Different Methods-One Solution? Structure of fd (f1,M13) Bacteriophage from X-Ray Fibre Diffraction, Solid State NMR, and CryoEM* Marvin D.A., Symmons M.F., Scott W.R.P., [§]Straus S.K.

11:20 0520 *What Solid-State NMR Can Do for MRI* [§]Jerschow A., Regatte R.R.

12:00 End of Session

PT2 Salon 5

Biological Mass Spectrometry (Joint with AN) (joint with AN3)

Organizer(s) - John Klassen and Liang Li
Chair(s) - John Klassen

08:00 Joint with AN3 - See AN3

12:00 End of Session

PT8 Salon 6

Protein NMR Spectroscopy (Joint with BM) (joint with BM6)

Organizer(s) - Leo Spyropoulos
Chair(s) - Leo Spyropoulos

08:00 Joint with BM6 - See BM6

11:20 End of Session

REMINDER

11:20 Bernard Belleau Award Lecture presented by Andrew Woolley in Salon 11

PT9 Salons 15/16

Single-Molecule Measurements in Biological Chemistry (Joint with AN and BM)

Organizer(s) - Nancy Forde and Hongbin Li
Chair(s) - Michel Grandbois

08:00 Joint with AN7 and BM7 - See AN7

11:20 End of Session

REMINDER

11:20 Bernard Belleau Award Lecture presented by Andrew Woolley in Salon 11

PT11 Salon 1

General

Organizer(s) - Wolfgang Jäger
Chair(s) - Wolfgang Jäger

08:00 0521 *Temperature Dependence of the Rate Coefficients for the Reactions of Br atoms with Iso-octane and Some Ethers* [§]Roscoe J.M., Wheeler M., Mills R.

08:20 0522 *Isomerization of Cyclohexylum and the Subsequent Ring-Opening of Methylcyclopentylum* Mackie I.D., Govindhakannan J., [§]DiLabio G.A.

08:40 0523 *Equilibrium Quotients for Contact Ion-Pair Formation Based on Raman Spectroscopic Measurements and Apparent Molar Volumes for the Neutral Species MgSO₄(aq) under Hydrothermal Conditions* Madekufamba M., Trevani L.N., Tremaine P.R.

09:00 0524 *Free Radical and Radiation Chemistry in "Green Solvents", Ionic Liquids and Supercritical Fluids* [§]Ghandi K.

09:20 0525 *Effects of pH and Dissolved Oxygen on Steady-State Water Radiolysis: Experiments and Model Analysis* Joseph J.M., Choi B.S., Yakabuskie P., Wren J.C.

09:40 Coffee Break

10:00 0526 *Phase Transitions of Organics Confined in Mesoporous Silica* Lee J.A., [§]Huang Y.

10:20 0527 *1D and 2D Nmr Investigations of the Interaction between Oppositely Charged Polymers and Surfactants* [§]Marangoni D.G., McLachlan A.A.

10:40 0528 *Gas-Phase Chemistry in the Hot-Wire Chemical Vapor Deposition Process with Dimethylsilacyclobutane as a Precursor Gas* Tong L., Shi Y.J.

11:00 0529 *Optical Waveguide Supported Cavity Ring-Down Spectroscopy* Bescherer K., [§]Looock H.-P., Barnes J., Kamino B., Dias S., Trefiak N., Tong Z.

11:20 0530 *Investigation of the Effects of Water on Aggregation of Model Asphaltene in Organic Solution* Tan X.L., Fenniri H., Gray M.R.

11:40 0531 *The Synthesis and Characterization of Pyrene and Bipyridine Derivatives as Models for Asphaltene and Resins* Tan X.L., Fenniri H., Gray M.R.

12:00 End of Session

Monday PM

Analytical Chemistry Division

AN2 Salon 2

Analytical Separations

Organizer(s) - Charles Lucy and James Harynyuk
Chair(s) - Norman Dovichi and Robert McLaren

AWARD SYMPOSIUM

13:20 0532 *Chemical Cytometry: The Chemical Analysis of Single Cells* [§]Dovichi N.J., Dickerson J., Reid B., Paulson T., Sanchez R., Ramsay L.

Ryan/Harris Graduate Prize Lecture presented by Andrei Drabovich

14:00 0533 *Selection of Smart Aptamers Using Kinetic Capillary Electrophoresis* [§]Drabovich A.P., [§]Krylov S.N.

Fred Beamish Award Lecture presented by Aaron Wheeler

Introduction of Aaron Wheeler by Ulrich Krull

14:20 0534 *Digital Microfluidics for Screening Assays* Wheeler A.R.

15:00 Coffee Break

W.A.E. McBryde Award Lecture presented by David Chen

Introduction of David Chen by Norman Dovichi

15:20 0535 *Capillary Electrophoresis for Chemical Separation, Characterization, and Identification* [§]Chen D.D.Y.

Maxxam Award Lecture presented by Charles Lucy

Introduction of Charles Lucy by Ron Kratochvil

16:00 0536 *A Physical Analytical Perspective of Self-Assembled Coatings in Capillary Electrophoresis* [§]Lucy C.A.

16:40 End of Session

Biological and Medicinal Chemistry Division

BM1 Salon 7

Altered Proteins

Organizer(s) - Ronald Kluger
Chair(s) - John Honek

13:20 0537 *Activation and Inhibition of the Cancer Chemotherapy Target Cytidine 5'-Triphosphate Synthase* [§]Bearne S.L., Lunn F.A.

14:00 0538 *Further Travels around AroA's Active Site* [§]Berti P.J., Chindemi P.

14:40 0539 *Biomimetic Acylation: Selectivity and Applications* [§]Kluger R., Tzvetkova S., Andrusiak T., Bunn S., Rathgeber S

15:00 Coffee Break

15:20 0540 *The Mechanism of Prephenate Dehydrogenase Revealed Through Structural, Kinetic and Mutational Analyses* Turnbull J.L., Christendat D.

15:40 0541 *Investigating and Manipulating the Enzymes of Sialic Acid and Pseudaminic Acid Biosynthesis* Liu F., [§]Tanner M.E., Schoenhofen I.C., Logan S.M.

16:20 End of Session

BM3 Salons 15/16

Chemical Biology: Molecular Probes and Organic Biomaterials (Joint with OR) (joint with OR5)

Organizer(s) - David Voadlo and Fraser Hof
Chair(s) - Mark Nitz and David Zechel

13:20 0542 *Alkaloid Biosynthesis in Periwinkle* [§]O'Connor S.E.

14:00 0543 *Type III Polyketide Synthase Loci from Rhizobium leguminosarum and Synechococcus sp.* Colpitts C., Lohans C., Askew C., Yost C., [§]Suh D.-Y.

14:20 0544 *Synthesis and Activity of Olfaction and Gustation Inhibitors against Pest Insects* [§]Plettner E., Mudalige A.P., Gong Y., Castillo C., Nagabandi S.

14:40 0545 *Probing Brassinin Oxidase and Brassinin Glucosyl Transferase, Fungal Detoxifying Enzymes from Plant Pathogens* [§]Pedras M.S.C., Minic Z., Sarma-Mamillapalle V.K., Jha M., Hossain M., Suchy M.

15:00 Coffee Break

15:20 0546 Lipase Resistant Phosphonolipids for Exogenous Lung Surfactant Therapy [§]Schwan A.L., Davy J.A., Wang Z., Notter R.H., Wang Z.

15:40 0547 Molecular Beacon Detection of DNA and RNA Damage [§]Loppnow G.R.

16:00 0548 Polyvalent Display of Cationic Motifs on Bacteriophage Q β with anti-Heparin Activity [†]Udit A.K., Everett C., Gale A.J., Kyle J.R., Ozkan M., [§]Finn M.G.

16:20 0549 Unprecedented in vitro Activity and in vivo Efficacy of Pre-Ordered Polymeric Heterobifunctional Ligands [§]Bundle D.R., Kitov P.I., Paszkiewicz E., Lipinski T.

17:00 End of Session

BMP Hall A**Posters**

Organizer(s) - Robert Campbell and Todd Lowary
Chair(s) - Robert Campbell and Todd Lowary

From 17:00 until 19:00

0550 Modifying the Spectral Properties of a Red Fluorescent Protein **Chica R.A.**, Allen B.D., [§]Mayo S.L.

0551 Potential Role of Tubedown in the Treatment of Ocular Diseases **Islam T.**, Paradis H., Gendron R.L.

0552 Investigation of the Key Residues Involved in Binding of Anti-Cancer Ru(III)-Complexes via Functional Analysis of Site-Directed Mutants of Human Serum Transferrin **Cetinbas N.**, [§]Walsby C.J.

0553 Structural and Mutagenic Analysis of Inositol Dehydrogenase from *Bacillus subtilis* **Zheng H.**, Van Straaten K.E., Sanders D.A.R., [§]Palmer D.R.J.

0554 Structural and Kinetic Studies of Chimeric beta-Lactamases **Clouthier C.M.**, Morin S., Gobeil S., Gagné S., [§]Pelletier J.N.

0555 NMR Evidence for Half-of-the-Sites Ni²⁺ Binding in Two Identical Active Sites of *Escherichia coli* Glyoxalase I [†]Su Z., Sukdeo N., Daub E., [§]Honek J.F.

0556 RNA Binding by the Spliceosomal Protein p14 **Schellenberg M.J.**, [§]MacMillan A.M.

0557 The Effects of Protein Osmolytes and Detergent Chain Length on the Stability of the Integral Membrane Protein Glycerol Facilitator **Baturin S.J.**, Galka J., [§]O'Neil J.D.

0558 A Novel Strategy for the Synthesis of Sulfotyrosine-Bearing Peptides **Ali A.M.**, [†]Taylor S.D.

0559 Phenylalanine Ammonia Lyase Activity in Organic Solvents [†]D'Cunha G.B., Quinn A.J., Pickup M.J.

0560 A Convenient Route to N-[2-(Fmoc-aminoethyl)glycine Esters and bis-N-Boc Protected Nucleobases **Wojciechowski F.**, [§]Hudson R.H.E.

0561 Suitably Protected Pseudoisocytosine and 2,6-Diaminopurine for Mild Acid Deprotection in PNA Oligomer Synthesis **Wojciechowski F.**, [§]Hudson R.H.E.

0562 Mechanistic Investigation of a Synthetically Modified DNase: An RNaseA Mimic? **Thomas J.M.**, [§]Perrin D.M.

0563 Probing General Acid/Base Catalysis in the Hammerhead and Hairpin Ribozymes **Thomas J.M.**, [§]Perrin D.M.

0564 Characterization of the DNA Homolog of the RNA Dopamine Aptamer **Walsh R.**, Blair D.A.D., Dedhar S., [§]DeRosa M.C.

0565 Molecular Beacon Detection of DNA Damage due to Gamma Radiation **Sparling S.B.**, [§]Loppnow G.R.

0566 Directed Evolution of *Thermus aquaticus* DNA Polymerase I for Improved Incorporation of Modified Nucleotides **Hipolito C.**, [§]Perrin D.M.

0567 Cyclic DNA Nanostructures: From Synthetic Methodology to Utility for Three-Dimensional DNA Assemblies **McLaughlin C.K.**, Aldaye F.A., [§]Sleiman H.F.

0568 RNA-Protein Interactions in a Gene Silencing Complex **Gesner E.M.**, Makil N., Duchaine T., [§]MacMillan A.M.

0569 Towards an Aptamer for Fumonisin B₁ **McKeague M.**, [†]DeRosa M.C.

0570 Dynamics for the RING Domain from Human TRAF6 by ¹⁵N NMR: Implications for Biological Function **Markin C.J.**, [§]Spyracopoulos L.

0571 Dissecting the Enzymatic Mechanism of the Sialyltransferase CstII from *Campylobacter jejuni* by NMR Spectroscopy **Chan P.H.W.**, Lee H.J., Wakarchuk W.W., Strynadka N.C.J., Withers S.G., [§]McIntosh L.P.

0572 Structural Characterization of Zn(II) Binding to HIV-1 Transactivator-of-Transcription Protein by Circular Dichroism and Nuclear Magnetic Resonance Spectroscopy **Vo T.N.**, O'Neil J.D.

0573 Structural Elucidation of Thuricin, a Two-Component Antimicrobial Peptide **Sit C.**, [§]Vederas J.C., Rea M.C., O'Connor P.M., Hill C., Ross R.P.

0574 Binding Study of Pi-Stacked Guanidinium Motif [†]Wang X., [§]Hof F.

0575 Synthesis of Enantiopure Pyrrolo[β ,2-e][1,4]diazepin-2-ones by Pictet-Spengler Cyclization **Deaudelin P.**, [†]Lubell W.D.

0576 A Concise Total Synthesis of (\pm)-Acutifolone A [†]Liu H.J., Hsieh M.C.

0577 Efficient Synthesis of Hydroxyethylene Dipeptide Isostere of Phe-Aib **Genest N.**, Lama T., Del Valle S., [†]Lubell W.D.

0578 An Iterative Approach to the Synthesis of Pseudo-Steroidal Beta-Sheet Mimetics **Coopersmith K.A.**, Wulff J.E.

0579 Experimental and Theoretical Investigations of Acetohydroxamic Acid Tautomers **Sears D.N.**, Ying L., Sujino K.

0580 Design, Synthesis and Bioevaluation of 3,5-Bisarylmethylene-4-piperidone Derivatives as Antitumor Agents for Site Specific Delivery **Potter E.**, [†]Jha A., Youssef D., DeClercq E.

0581 Development of Butyrylcholinesterase Neuroimaging Ligands for the Early Diagnosis of Alzheimer's Disease **Atkinson A.**, [§]Darvesh S., Joy E.E., Macdonald I.R., Martin E., [†]Pottie I.R.

0582 Antineoplastic 3,5-Bis(4-pyridylmethylene)-4-piperidone Derivatives: Novel Human Topoisomerase-IIa Inhibitors **Jha M.**, Paul N.K., Jha A., DeClercq E.

0583 3,5-Bis(benzylidene)-4-piperidones: A Novel Class of Potent Antimycobacterial Agents which Stimulate Mitochondrial Respiration **Das S.**, Das U., Bandy B., Stables J.P., [†]Dimmock J.R.

0584 Functionalised 3-Hydroxy-4-pyridinones for Alzheimer's Disease Therapy **Scott L.E.**, Page B.D.G., Bowen M.L., Green D.E., Merkel M., Schugar H.J., [§]Orvig C.

0585 Substrate Analogues as Inhibitors and Mechanistic Probes of MenD from *E. coli* **Fang M.**, Langman B., Ho K., [§]Palmer D.R.J.

0586 Biochemical Investigations of Methionine γ -Lyase I **Moya I.A.**, [§]Honek J.F.

0587 Peptide and Peptidomimetic Approaches for Developing Cancer Targeting Agents **Ahmed S.**, [§]Kaur K.

0588 Chemical Synthesis and Chemopreventive Evaluation of Natural Products Analogs, Application I: Chalcone Analogs [†]Touaibia M.

0589 Synthesis and Evaluation of Small Molecule Inhibitors of Severe Acute Respiratory Syndrome 3C-Like Proteinase [§]Miyapuram V., Zhang J., [†]Vederas J.C.

0590 Insulinomimetic Activity of Kaempferitrin from Leaves of *Cinnamomum osmophloeum* [†]Tzeng Y.M., Chen K., Lee M.J.

0591 Ab initio Conformational Studies of Galactofuranose **Richards M.R.**, [†]Lowary T.L.

0592 In vivo Synthesis of Complex Ganglioside Analogues by Metabolically Engineered *Escherichia coli* Strains **Jacques S.**, Ling C.C., Samain E., [§]Bundle D.R.

0593 Synthesis of Aza-C-glycosides as Potential Inhibitors of Glycosidases and Glycosyltransferases **Sandbhor M.**, Williams D., Bhasin M., [§]Zou W.

0594 Synthesis of ABO Blood Group Oligosaccharides for Glycosyl Transferase and Antigen Affinity Studies **Meloncelli P.**, Lowary T.L.

0595 Studies Directed Towards the Synthesis of a CS-D Tetrasaccharide **Ingram L.J.**, [†]Taylor S.D.

0596 Biological Evaluation of α -Galactosidase Inhibitors [†]Wang Y., **Cheng L.**, Ko S., [§]Bennet A.J.

0597 Solution Structures of Tumor Antigen Le^aLe^x and Two Trisaccharide Fragments **Jackson T.A.**, Wang A., [†]Auzanneau F.-I.

0598 The Role of Sialic Acid Residues in T Cell Integrin Adhesion **Sadek C.M.**, Strelkov I., [§]Cairo C.W.

0599 Synthesis of Fluorinated Fructose Analogues for Use with PET [§]Cheeseman C.I., **Grant T.N.**, Trayner B., West F.G.

0600 Investigating Multiple Free-Energy Relationships for the O-GlcNAcase-Catalyzed Hydrolysis of Glycosides [†]Maccauley M.S., Greig I.R., [§]Vocadlo D.J.

0601 Identification of Biocatalysts for Glycosyl Transfer of C-3 Modified Galactopyranoses **Rich J.R.**, Shim J.H., Chen H.-M., Wakarchuk W.W., Warren R.A.J., [§]Withers S.G.

0602 Investigating Unusual Forms of Glycosylation of Epidermal Growth Factor Repeats **Whitworth G.E.**, Stubbs K.A., Vocadlo D.J.

0603 Synthesis of Sulfonium-Ion Analogs of Galactofuranose Rings **Li J.**, [†]Lowary T.L.

0604 Studies of a Polyprenol Monophosphomannose-Dependent α -(1 \rightarrow 6)-Mannosyltransferase Involved in Mycobacterial Lipoarabinomannan Biosynthesis **Tam P.H.**, [†]Lowary T.L.

0605 Synthesis of Lipoic Acid Tagged Glycolipids for Probing the Mycobacterial Cell Wall Assembly **Peng W.J.**, [†]Lowary T.L.

0606 Synthesis of Glycoconjugate Related to Mycobacteria Cell Wall **Liu C.**, [†]Richards M.R., [†]Lowary T.L.

0607 A Novel Method for in situ Generation of Glycosyl Iodides [†]Lowary T.L., **Martin A.D.**

0608 Synthesis of Zwitterionic Oligosaccharides with the Potential to Stimulate T-Cell Responses **lynkkaran I.**, Ling C.C., [§]Bundle D.R.

0609 Development of Fluorinated Carbohydrates as Mechanism-Based Inactivators of Glycosidases **Rempel B.P.**, Withers S.G.

0610 Mechanistic Investigations of the Lipo-Oligosaccharide Sialyltransferase from *Nisseria meningitidis* **Rakic B.**, Wakarchuk W.W., [§]Withers S.G.

0611 Deoxygenated Galactofuranosides and UDP-Galactofuranose Analogues as Probes for Mycobacterial Galactofuranosyltransferases **Zhou R.**, [†]Lowary T.L.

0612 Synthesis of Polyacetylene Glycosides and Thioglycosides **Pan Y.**, [†]Lowary T.L., Tykwinski R.R.

0613 Altering Cell Surface Glycosylation State of T Cells Using the Staudinger Ligation **Loka R.S.**, [†]Cairo C.W.

0614 An Efficient Chemoenzymatic Synthesis of α (2,8)-Oligosialic Acids **Zuccolo A.J.**, [†]Ling C.C., [†]Zheng R.B.

0615 Elicitors: Stress-Driven Discovery of Secondary Metabolites from the Fungal Phytopathogen *Leptosphaeria maculans* **Yu Y.**, [†]Pedras M.S.C.

0616 Synthesis of an Oxidatively Stable Analogue of the Antimicrobial Peptide, Lactacin 3147 A2 [†]Liu H., Pattabiraman V.R., [†]Vederas J.C.

0617 Syntheses and Antimicrobial Activity Testing of Lantibiotic-Siderophore Conjugates [†]Yoganathan S., Martin-Visscher L.A., Pattabiraman V.R., Cobb S.L., Sit C.S., [†]Vederas J.C.

0618 Analysis of Metabolic Responses of *Brassica juncea* to the Biotrophic Pathogen *Albugo candida* and Abiotic Stress **Zheng Q.A.**, Jha A., [†]Pedras M.S.C., [†]Rimmer S.R.

0623 Metabolic Profiling of *Brassica napus* Revealed Distinct Defense Responses against the Biotrophic Pathogen *Plasmodiophora brassicae* **Zheng Q.A.**, Jha A., [†]Pedras M.S.C.

0619 Stereoselective Synthesis and Biological Activity of Gypsy Moth Pheromone Analogues [†]Plettner E., Mudalige A.P., Nagabandi S.

0620 A Profluorophore Labeling Strategy for Cell Surface Glycoconjugates **Key J.A.**, Romaniuk N.A., [†]Cairo C.W.

0621 Aqueous Solvolysis of Heteroaryltrifluoroborates at Physiological Conditions by ¹⁹F-NMR **Li Y.**, [†]Perrin D.M.

0622 Unexpected Reduction Reactions of Cytochrome P450_{cam} **Prasad B.**, Rojubally A., [†]Plettner E.

0624 Design and Synthesis of Fluorescent Probes of Protein Tyrosine Phosphatase Activity **Tulsi N.S.**, [†]Cairo C.W.

0625 Mechanistic Study of the Antibiotic Resistance-Causing Enzyme Aminoglycoside N-6'-acetyltransferase **Freiburger L.A.**, Mittermaier A., [†]Auclair K.

0626 Binding Properties Comparison between Native and C-Terminus Truncated Pheromone Binding Proteins (PBPs) in Gypsy Moth **Castillo C.**, Gong Y., [†]Plettner E.

0627 Elucidating the Interaction between Inducer Peptide Pheromones and Membrane Receptors in Quorum Sensing **van Belkum M.J.**, Derksen D.J., [†]Vederas J.C.

0628 Library Screening Using a Novel "Beads on a Bead" Approach Coupled with a Fast Single-Bead MS/MS Deconvolution Enables High Throughput Discovery of Peptides for Molecular Imaging **Amadei G.A.**, [†]Luyt L.G., Cho C.F., Lewis J.D.

0629 The Association Pathway of an Insect Pheromone-Binding Protein with Ligands by Kinetic Studies **Gong Y.**, [†]Plettner E.

0630 Biosynthesis of Ethyl Oleate in Honeybees, a Primer Pheromone that Regulates Behavioral Maturation **Chen H.**, Castillo C., [†]Plettner E.

0631 Electrochemical Probing of HIV Proteins Using Ferrocene-Conjugated Peptides **Kerman K.**, [†]Kraatz H.B.

0632 Amatoxins as Probes for Transcriptional Inhibition **Dietrich D.**, May J.P., [†]Perrin D.M.

0633 The Optimization of DNA Photodamage Detection on Microarray Slides **Pinnock C.L.**, [§]Loppnow G.R.

0634 *Interaction of the Fungal Phytotoxins Destruxin B and Sirodesmin PL with Crucifer Plants* **Khallaf I.S.**, Pedras M.S.C.

0635 *Probing the Metabolism of Crucifer Fungal Pathogens with Indole Glucosinolates* **Hossain S.**, Pedras M.S.C.

0636 *DRED: A Proof of Concept* **Perez-Pineiro R.**, Alvarez-Puebla R., Bravo-Vasquez J.P., Materi W., Fenniri H.

0637 *Evaluating Potential Inhibitors of Phytoalexin Detoxification by the Plant Pathogenic Fungus *Leptosphaeria maculans** **Sarma-Mamillapalle V.K.**, Jha M., Pedras M.S.C.

0638 *Fluorescent Labeled Rosette Nanotube* **St. Jules M.**, Fenniri H.

0639 *Hock Cleavage of Cholesterol 5-Hydroperoxide: An Ozone-Free Pathway to the Cholesterol Ozonolysis Products Identified in Arterial Plaque and Brain Tissue* **Brinkhorst J.**, Nara S.J., Pratt D.A.

Chemical Education Division

CE3 Salon 3

Getting to the Core of Introductory Level Chemistry

Organizer(s) - Laura Deakin and Joel Kelly
Chair(s) - Laura Deakin and Joel Kelly

13:20 0640 *As if the Concerns of our Students Mattered; As if the Planet Were at Stake* **Middlecamp C.**

14:00 0641 *My Prof is Different than your Prof. What Does this Mean?* **Mahadev K.**, Mozol V.

14:20 Undergraduate Student Panel - Perspectives from students of their introductory chemistry experience. Audience questions and discussion about student interests, participation and learning.

15:00 Coffee Break

15:20 0642 *LabEx: A Community Outreach Designed for Homeschooled Students* **Schriver M.J.**

15:40 0643 *Gen Chem for Gen Y* **Mahaffy P.G.**

16:20 Textbook Publisher Panel - Vision behind different Canadian textbooks. Audience questions and discussion about content approaches, context and examples for a heterogeneous classroom.

17:00 End of Session

Environment Division

EN4 Salon 11

Bioinorganic Chemistry-Toxic Metals (Joint with IN) (joint with IN2)

Organizer(s) - Juergen Gailer and Farideh Jalilvand
Chair(s) - Juergen Gailer

13:20 0644 *X-Ray Absorption Spectroscopy as an in-situ Probe of Toxic Heavy Elements* **George G.N.**, Pickering I.J., Singh S.P., Korbas M., Hoffmeyer R.

14:00 0645 *Mercury(II) Complex Formation with Cysteine, Penicillamine and Glutathione* **Jalilvand F.**, Leung B.O., Mah V.

14:20 0646 *Towards Understanding Mercury Toxicity: Organomercury Uptake in Zebrafish* **Korbas M.**, Krone P.H., Pickering I.J., George G.N.

14:40 0647 *Preferential Binding of Hg²⁺ and Cd²⁺ to Specific Lipid Classes as Detected by Fluorescence Spectroscopy* **Le M.T.**, Gailer J., **Prenner E.J.**

15:00 Coffee Break

Chair(s) - Farideh Jalilvand

15:20 0648 *The Mechanism of Arsenic Binding to Metallothioneins from Time- and Temperature-Resolved Electro Spray Mass Spectrometry* **Ngu T.T.**, **Stillman M.J.**

15:40 0649 *Arsenic and Arthropods: An Unusual Detoxification Molecule Uncovered in Terrestrial Insects Using X-Ray Absorption Spectroscopy* **Andrahennadi R.**, **Pickering I.J.**

16:00 0650 *Cadmium(II) Complex Formation with Glutathione in Aqueous Solution* **Mah V.**, **Jalilvand F.**

16:20 0651 *Disruption of Copper Homeostasis Contributes to Cadmium Toxicity in Yeast* **Zahler N.H.**, Stoddard A.K., Kidd M.J., Ward J., Vogt S., Penner-Hahn J., Fierke C.A.

16:40 0652 *Competitive Interactions between Toxic Metals and Endogenous Thiol Ligands Studied by HPLC-ICP-AES* **Pei K.L.**, **Gailer J.**

17:00 End of Session

Inorganic Chemistry

IN2 Salon 11

Bioinorganic Chemistry-Toxic Metals (Joint with EN) (joint with EN4)

Organizer(s) - Juergen Gailer and Farideh Jalilvand
Chair(s) - Juergen Gailer

13:20 Joint with EN4 - See EN4

15:00 Coffee Break

15:20 Chair(s) - Farideh Jalilvand

17:00 End of Session

IN3 Salon 8

Catalysis (Joint with OR) (joint with OR3)

Organizer(s) - Cathleen Crudden and Steve Westcott
Chair(s) - Cathleen Crudden and Parisa Mehrkhodavandi

13:20 0653 *Metal-Catalyzed Dehydrogenation of Ammonia-Borane for Transportation Applications: The Importance of Aminoborane (BH₂NH₂) Coordination Chemistry* **Baker R.T.**

14:00 0654 *"Frustrated Lewis Pairs": Activation of Small Molecules and Catalysis* **Stephan D.W.**

14:40 0655 *Catalytic Dehydrocoupling of Group 13-Group 15 Lewis Acid-Base Adducts: New Catalysts and Mechanistic Studies* **Lee K.**, Clark T.J., Staubitz A., Lough A.J., **Manners I.**

15:00 Coffee Break

15:20 0656 *Amidate Supported Early Transition Metal Complexes: Tunable Species for Hydroamination Catalysis* **Schafer L.L.**

16:00 0657 *Pt-Catalyzed Cross-Coupling Reactions of Polyfluoroarenes* **Wang T.**, Buckley H.L., **Love J.A.**

16:20 0658 *Dinuclear Ruthenium Complexes Capable of Oxidizing Water into Molecular Dioxygen* **Masaoka S.**, Yoshida M., Sakai K.

16:40 0659 *Stability of Mesoporous Silica Materials Used in Pd Catalysis* **Glasspoole B.W.**, Webb J.D., **Crudden C.M.**

17:00 End of Session

IN5 Salon 12

Main Group Chemistry: A Symposium in Honour of Neil Burford, Tristram Chivers and Richard Oakley

Organizer(s) - Roland Roesler and Robin Hicks
Chair(s) - Robin Hicks

13:20 0660 *New Ambient Temperature and Controlled Routes to Polyphosphazenes* **Manners I.**

14:00 0661 *Living Anionic Polymerization of Phosphaalkenes* **Noonan K.J.T.**, Gillon B.H., Cappello V., **Gates D.P.**

14:20 0662 *Redox Chemistry of the Monoanionic [HC(PR₂E)₂]⁻ and Dianionic [C(PR₂E)₂]²⁻ Ligands (R = Alkyl, Aryl; E = Chalcogen)* **Konu J.**, Chivers T.

14:40 0663 *Phosphinoarsonium and Diarsonium Cations from Chloride Abstraction Induced Pnictogen Coupling* **Conrad E.D.**, Burford N., McDonald B., Ferguson M.R.

15:00 Coffee Break

15:20 0664 *Nonconventional Sb-Sb Bonding in Thermoelectric Materials* **Kleinke H.**

15:40 0665 *Phosphole-Containing Dendrimers* **Romero-Nieto C.**, Merino S., Rodriguez-López J., **Baumgartner T.**

16:00 0666 *Donor-Stabilization and Reductive Coupling of Halostibonium Cations* **Carpenter Y.**, Decken A., McDonald R., Ferguson M.J., **Burford N.**

16:20 0667 *New Directions in Low Valent Main Group Chemistry* **Macdonald C.L.B.**, Ellis B.D., Norton E.L., Dube J.W.

16:40 End of Session

IN7 Riverview

Solid-State Chemistry: From Materials Discovery to Industrial Processing (Joint with MT) (joint with MT9)

Organizer(s) - Arthur Mar and Zuo-Guang Ye
Chair(s) - John Greedan

13:20 0668 *Mechanistic Insights into ABO₃ Bixbyite Oxidation Pathway and Investigation of Novel Oxygen Defect Materials* **Shafi S.P.**, Kotyk M.W., **Bieringer M.**

13:40 0669 *Cycling Highly Strained and Relaxed Oxide Structures for Material Synthesis* **Bieringer M.**, Shafi S.P., Castillo-Martinez E., Alario Franco M.A.

14:00 0670 *Artificial Charge Modulation in Perovskite Vanadate Superlattices* **Sheets W.C.**, Boullay P., **Prellier W.**

14:20 0671 *Three Electrons to Revenue: Electroplating of Indium* **Brese N.**, Szocs E., Schwager F., Toben M., Bayes M.

15:00 Coffee Break

15:20 0672 *Nanostructured Tin-Transition-Metal Carbon Alloys as Negative Electrodes in Li-ion Batteries* **Dahn J.R.**, Ferguson P.P., Todd A.D.W., Dunlap R.A., Thorne J.S.

16:00 0673 *Recent Trends in Solid Electrolytes* **Thangadurai V.**

16:20 0674 *Polymer Electrolytes/Graphite Oxide Nanocomposites* **Bissessur R.**, Scully S.F.

16:40 0675 *Selective Electroless Metallization of Flexible Polymeric Substrates Using Aluminum (III) Porphyrins as 'Ink'* **Davidson G.J.E.**, Miller M.S., **Breen Carmichael T.**

17:00 End of Session

IN8 Salon 4

Symposium in Honour of Bill Graham: From C-H Activation to Future Challenges in Organometallic Chemistry

Organizer(s) - Joe Takats and Michael Heinekey
Chair(s) - Eddy Isaacs

13:20 0676 *The Organometallic Active Sites of Hydrogenase Enzymes* **Darensbourg M.Y.**

14:00 0677 *Characteristic Reactivity of Tungsten Alkyl Allyl Complexes* **Semproni S.P.**, Graham P.M., Buschhaus M.S., **Legzdins P.**

14:20 0678 *Activation of Molecular Nitrogen: Way Harder than C-H Bond Activation* **Fryzuk M.D.**

15:00 Coffee Break

15:20 0679 *Phosphinimide Catalysts for Olefin Polymerization* **Stephan D.W.**

16:00 0680 *Exploring the Chemistry of Early Transition Metal "Frustrated Lewis Pairs"* **Labeodan O.A.**, **Stephan D.W.**

16:20 0681 *Methylene-to-Acetyl Conversion in Heterobimetallic Ir/Ru Complexes: Roles of the Metals and Comparison with the Analogous Rh/Os and Rh/Ru Systems* **Samant R.G.**, Wigginton J.R., Trepanier S.J., Xu L., McDonald R., Ferguson M.J., **Cowie M.**

16:40 0682 *Preparation and Characterization of Transition Metal Dihydrogen Complexes* **Heinekey M.**, Egbert J., Matthews S.

17:00 End of Session

IN9 Salons 17/18

General

Organizer(s) - Martin Cowie
Chair(s) - Brian Sterenberg

13:20 0683 *New Asymmetric Scorpionate Ligands and their Group 10 Complexes* **Vachon J.**, **Schougaard S.B.**

13:40 0684 *Iminoindolines as Ligands for the Formation of Palladacyclic Complexes: Synthesis, Characterization and Application in C-C Coupling Reactions* **Chitanda J.M.**, Prokopchuk D.E., Quail J.W., Foley S.R.

14:00 0685 *Structural Characterization and Applications in Catalysis of Pd(II) Oxazolidines* **Strong E.T.J.**, Cardile S.A., **Jones N.D.**

14:20 0686 *Non-Symmetrically Substituted Bis-NHC Palladium(II) Complexes: Synthesis, Structure and Catalytic Activity* **Foley S.R.**, **Paulose T.A.P.**, Quail J.W.

14:40 0687 *Synthesis and Reactions of Substituted Cobalt η⁵-Pentadienyl Complexes: Substituent Effects in [5 + 2] Pentadienyl/Alkyne Cycloaddition Chemistry* **Ylijoki K.E.O.**, Böcklein S., Lofstrand V.A., **Stryker J.M.**

15:00 Coffee Break

Chair(s) - Brian Sterenberg

15:20 0688 *Synthesis and Preparation of Tungsten and Molybdenum Sulfide Fluorides* **Nieboer J.**, **Gerken M.**

15:40 0689 *Sulfur Nitrogen Fluoride Cations of Xenon(II) Derived from N=SF₃ and Prospects for the Syntheses of their Krypton Analogues* **Smith G.L.**, **Mercier H.P.A.**, **Schrobilgen G.J.**

16:00 0690 *Synthesis and Coordination Chemistry of a New P,Te-Centred Ligand* **Ritch J.S.**, **Chivers T.**

16:20 0691 *Copper(I) Complexes of Aliphatic n-acnac Ligands* **Oguadinma P.O.**, **Schaper F.**

16:40 0692 *Ruthenium Complexes Derived from Biquinoline Ligands and their DNA Interactions* **McFarland S.A.**, Thummel R.P., Levangie J.E., Scott J.R., **Monro S.M.A.**, Parrish A.W.

17:00 End of Session

Macromolecular Science and Engineering Division

MS3 Salon 10**Nanostructured Polymeric Assemblies (Joint with MT) (joint with MT6)**Organizer(s) - Alex Adronov
Chair(s) - Matthew Moffitt**13:20 0693** *Chirality Information Transfer in Poly lactides: From Main-Chain Chirality to Lamella Curvature* Maillard D., Prud'homme R.E.**13:40 0694** *Polyurea Microcapsule Surface Modification Using Functional Polyelectrolyte* Li J., Jafar Mazumdar M.A., Stöver H.D.H., Hithcock A.P., Shirley I.**14:00 0695** *Poly(Ureido-Pyrimidinone-Norbornene) Based Nanoparticles* Foster E.J., Meijer E.W.**14:20 0696** *Virus Capsid Templates* Cornelissen J.J.L.M., Comellas-Aragones M., Sikkema F.G., Minten I.C., de la Escosura A., Nolte R.J.M.**15:00 Coffee Break****15:20 0697** *Photo-Mechanical Polymer Assemblies: From Reflectometry to Robotics* Barrett C.J.**16:00 0698** *Au Carbon Nanotube Composites from Self-Reduction of Au³⁺ upon Poly(ethylene imine) Functionalized SWNT Thin Films* Adronov A., Brook M.A., de Silveira G., Gonzaga F., Huang J., Lawson G.**16:20 0699** *Nanopatterning on Silicon Surfaces via Templated Block Copolymer Self-Assembly* Buriak J.M., Chai J., Qiao Y.H.**17:00** End of Session**Materials Chemistry Division****MT6 Salon 10****Nanostructured Polymeric Assemblies (Joint with MS) (joint with MS3)**Organizer(s) - Alex Adronov
Chair(s) - Matthew Moffitt**13:20** Joint with MS3 - See MS3**17:00** End of Session**MT9 Riverview****Solid-State Chemistry: From Materials Discovery to Industrial Processing (Joint with IN) (joint with IN7)**Organizer(s) - Arthur Mar and Zuo-Guang Ye
Chair(s) - John Greedan**13:20** Joint with IN7 - See IN7**17:00** End of Session**Organic Chemistry Division****OR1 Salon 9****Applied Physical Organic Chemistry**Organizer(s) - Cornelia Bohne and Todd Sutherland
Chair(s) - Todd Sutherland**13:20 0700** *Solar Energy Conversion Schemes Inspired in Photosynthesis* Moore A.L., Moore G.F., Hambourger M., Kodis G., Gervaldo M., Keirstead A., Liddell P.A., Gust D., Moore T.A.**14:00 0701** *Kinetic Solvent Effects on Peroxyl Radical Reactions* Jha M., Pratt D.A.**14:20 0702** *Functional Materials Using Azomethines Connections: Investigation of their Physical Properties* Skene W.G., Bourgeois M., Dufresne S.**15:00 Coffee Break****15:20 0703** *Self-Discharge in Symmetric Aqueous Carbon Electrochemical Capacitors: Determining the Primary Causes and Mechanisms* Andreas H.A., Black J.M., Oickle A.**16:00 0704** *Charge Transfer in Hydrogen-Bonded Anthraquinone* Phillips S.E., Sutherland T.C.**16:20 0705** *Synthesis and Characterization of Gold and Silver Nanoparticles from an Organic Chemist's Perspective* Scaiano J.C., McGilvray K.L., Billone P., Gonzalez C., Marin M.L., Maretti L.**17:00** End of Session**OR3 Salon 8****Catalysis (Joint with IN) (joint with IN3)**Organizer(s) - Cathleen Crudden and Steve Westcott
Chair(s) - Cathleen Crudden and Parisa Mehrkhodavandi**13:20** Joint with IN3 - See IN3**17:00** End of Session**OR4 Salons 13/14****Catalytic Transformation of C-H Bonds**

Organizer(s) - Keith Fagnou

13:20 0706 *Catalytic C-H Bond Functionalization for Medicinal Chemistry and Natural Products Synthesis* Ellman J.A.**14:00 0707** *Accessing Chiral Heterocyclic Intermediates via Rh(II)-Carbenoid C-H Insertion Reaction: Applications in Alkaloid Synthesis* Wee A.G.H.**14:40** End of Session**OR5 Salons 15/16****Chemical Biology: Molecular Probes and Organic Biomaterials (Joint with BM) (joint with BM3)**Organizer(s) - David Vocadlo and Fraser Hof
Chair(s) - Mark Nitz and David Zechel**13:20** Joint with BM3 - See BM3**17:00** End of Session**OR9 Hall D****Organic Synthesis: The Latest Trends**Organizer(s) - Fred West and Derrick Clive
Chair(s) - Louis Barriault**13:20 0708** *Development of New Methods for the Preparation of Hindered Cyclic Systems* Jung M.E.**14:00 0709** *Total Synthesis of Ouabain* Deslongchamps P., Zhang H., Sridhar Reddy M.**14:40 0710** *Cope-Type Hydroaminations: Improved Scope and Selected Applications* Beauchemin A.M.**15:00 Coffee Break****15:20 0711** *Synthesis of Novel Types of Polyester Dendrimers* Karamerwa J.d'A., Al-Mughaid H., Huestis M., McIssac E., Grindley T.B.**15:40 0712** *Synthesis of the Rearranged Abietane Framework of Microstegiol via Nicholas Reactions* Taj R.A., Green J.R.**16:00 0713** *Enantioselective Cross-Coupling of Nitrogen Nucleophiles* Viirre R.D., Porosa L., Galas H., Khan A.**16:20 0714** *Stereoselective Synthesis of Non-Racemic Polysubstituted Hydroquinolines Using a RC-ROM Process: Mechanistic Insight and Application to the Total Synthesis of Lepadin B* Barbe G., Charette A.B.**16:40** End of Session**OR12 Salon 1****General**Organizer(s) - Dennis Hall and Rik Tykwinski
Chair(s) - Michel Gravel**13:40 0715** *Innovation in Using Industrial Byproducts as Useful Feedstock in a Chemical Process* Chaudhary S., Schoonover B., Mohebalian J., Gluck S., Kreschollek T., Bradley T., Campbell S., Graishe J., Listak P., Welch J., Heinlein W., Prescott R., Cole K., Pons R., Lord G., Jones S., Bond G., Smith S., Rixon M., Burkholder B.**14:00 0716** *Towards the Total Synthesis Depsilairdin* Pardeshi S.G., Ward D.E.**14:20 0717** *Rearrangement of an Oxonium Ylide Towards the Total Synthesis of (+)-Dactylol* Johnston J.R., Murphy G.K., West F.G.**14:40 0718** *Approaches to Planar Chiral Aminoferrocenes: Solving the Problems of Generality, Selectivity and Manipulability* Zaiman J., Metallinos C.**15:00 Coffee Break****15:20 0719** *Synthetic Studies on Siphonarid Polypropionates: Synthesis of the Trioxadamantane Ring System of Caloundrin B* Beye G.E., Ward D.E.**15:40 0720** *The Total Synthesis of (-)-Allosecurinine* Leduc A.B., Kerr M.A.**16:00** End of Session**ORP Hall A****Posters**Organizer(s) - Dennis Hall and Rik Tykwinski
Chair(s) - Dennis Hall and Rik Tykwinski

From 17:00 until 19:00

0721 *Controlled Switchable Self-Assembly of Dibenzylimidazolium Bromide Salt by Cyclodextrin Complexation* Leclercq L., Schmitzer A.R.**0722** *Excited State Intramolecular Proton Transfer (ESIPT) from Phenol OH to Adjacent "Aromatic" Carbons of Simple Biphenyl Systems* Behin Aein N., Wan P.**0723** *Photophysics of AC in the Presence of HSA: Photochirogenesis of the AC Cyclodimerization Reaction* Pace T.C.S., Bohne C., Nishijima M., Wada T., Mori T., Inoue Y.**0724** *Anion Recognition Using a Tristetrazole Derived Host* McKie A.H., Friedland S., Hof F.**0725** *Nonlinear Spatiotemporal Dynamics in the Bromate-Pyrocatechol Reaction* Harati M., Wang J.**0726** *Photoinduced Electron Transfer on Monolayer Protected Gold Nanoparticle Surfaces* Hartlen K., Workentin M.S.**0727** *Chemical Modification of Monolayer Protected Gold Nanoparticles (MPNs) via the Diels-Alder Cycloaddition Assisted under High Pressure Conditions* Lines B., Zhu J., Workentin M.S.**0728** *Synthesis of Novel Diarylamine Antioxidants* Hanthorn J.J., Jha M., Pratt D.A.**0729** *Computational Evaluation of the Role of Pirkle-Type Complexes of Chiral Sulfoxides in the Determination of their Absolute Configuration* Ivanova E.V., Muchall H.M., Buist P.H.**0730** *Synthesis of Porphyrinoid Systems Based on Thiophene for Applications in Light Harvesting* Jimenez R.P., Sutherland T.C.**0731** *Base-Catalyzed Diels-Alder Reactions* Sanchez-Larios E., Gravel M.**0732** *N-Heterocyclic Carbene-Catalyzed Ring Expansion of Oxacycloalkane-2-carboxaldehydes: A Novel Approach to the Synthesis of Lactone Derivatives* Wang L., Gravel M.**0733** *Synthesis and Evaluation of Guanidinyl Pyrrolidines as Organocatalysts in Asymmetric Conjugate Addition Reactions* Lingampally R., Pansare S.V.**0734** *Investigation of N-Bis(trimethylsilyl)methyl Group as a Conformational Control Element in The Metal-Catalyzed Reaction of Diazoamides* Zhang B., Wee A.G.H.**0735** *Synthesis of Partially Deuterated Hexadecanethiols for the Study of Electron Induced Molecular Hydrogen Production* Sheepwash E.E., Rowtree P.A., Schwan A.L.**0736** *Benzo Fused Dehydrotropone Dicobalt Hexacarbonyl Complexes: Access via Knoevenagel Cyclization and Competitive Reactivity of their Derived Diols* Amiralaee S., Green J.R.**0737** *Study of Asymmetric Induction of Alkynes into Aldehydes* Graham E., Luu T., Tykwinski R.R.**0738** *Chemical and Biological Studies on Buxus natalensis* Hawranik D., Zahid S., James A., Ata A., Gengan R.**0739** *Progress Toward the Total Synthesis of the Bisbenzyltetrahydroisoquinoline (BBIQ) Alkaloid (-) Cycleanine* Dakhil O.O., Georghiou P.E.**0740** *Phytochemical Studies on Macaranga capensis* James A., Qasir M., Ata A., Gengan R.**0741** *Elucidation of the PKS Genes From Alternaria cinerariae* Li J., Marcus S.L., Vederas J.C.**0742** *A Foray into Asymmetric Alkene Isomerization: Preparation of Cyclic α -Substituted Allylic Boronates via Palladium-Catalyzed Borylation* Lessard S., Peng F., Hall D.G.**0743** *Soft Enolate Formation for Metal-Catalyzed Enolate Chemistry* Geary L.M., Hultin P.G.**0744** *Novel Tetramerization of 3-Methyl-cyclopropene-3-carbonitrile: A CN-Alder-Ene Reaction?* Shamov G.A., Ashirov R.V., Lodochnikova O.A., Litvynov I.A., Appolonova S.A., Plemenkov V.V.**0745** *Development of a Palladium-Catalyzed Enantioselective Intramolecular Aryl Amidation* Porosa L., Viirre R.D.**0746** *Triazinyl Radicals as Electrode Materials* Oakley N.A., Frank N.L.**0747** *Catalytic Asymmetric Olefin Aziridination and Rhodium (I) Mediated Synthesis of Alkyl Vinyl Sulfides* Bichler P., Love J.A.**0748** *Rational Design of Aldol Reactions that Proceed with Kinetic Resolution and Tunable Enantioselectivity* Zahedi M.M., Becerril-Jimenez F., Ward D.E.**0749** *Electrocyclic Ring Opening and Nazarov Cyclization of 2-Alkoxy-1,1-dichloro-2-vinylcyclopropanes* Bonderoff S.A., Grant T.N., West F.G.**0750** *Non-Linear Effects in the Enantiotopic Group Selectivity of Aldol Reactions of Chiral Reactants* Becerril-Jimenez F., Zahedi M.M., Ward D.E.**0751** *Exploring Modifications of the BINAP Framework: 3,3'-Disubstitution and the 3,5-Dialkyl Meta Effect* Rankic D.A., Keay B.A.**0752** *Synthesis of New Photo-Switches: Metal Complexes of Dimethyldihydropyrene (DHP)* Zhang P., Mitchell R.H., Berg D.J.

0753 Versatile Double-Allylation Reagents for the Stereo- and Enantioselective Synthesis of Polysubstituted Heterocycles **Sivasubramaniam U.**, Peng F., Hall D.G.

0754 Synthetic Approaches Towards (+)-Halenaquinone **Lucciola D.**, Keay B.A.

0755 Cucurbit[7]uril Complexes of the Histamine H₂-Receptor Antagonist Ranitidine in Aqueous Solution **Macartney D.H.**, Wang R.

0756 Substituent Effects upon the Catalytic Activity of Aromatic Gpx Mimetics **Mercier E.A.**, Press D.J., Kuzma D., Back T.G.

0757 Attempts towards the Synthesis of Decahydroquinoline 275B **Isosub V.**, Back T.G.

0758 Synthesis of Peptide Thioesters by S-Acylation of Cysteine Based Di- and Tri-Peptides Using N-Acyl Benzotriazoles **Pandya K.**, Tala S.

0759 Synthesis of Didemnaketal Analogues as HIV-1 Protease Association Inhibitors **Bromba C.M.**, Wulff J.E.

0760 Unexpected Effect of the Fluorine Atom on the Optimal Ligand-to-Palladium Ratio in the Enantioselective Pd-Catalyzed Allylation Reaction of Fluorinated Enol Carbonates **Bélangier É.**, Houzé C., Guimond N., Cantin K., Paquin J.-F.

0761 Stereoselective Synthesis of Tetrasubstituted Fluoroalkenes Using an Addition/Elimination Sequence of Organolithium Reagents to Silylated Difluoroalkenes **Landelle G.**, Barbeau X., Paquin J.-F.

0762 Iridium Catalyzed Enantioselective Hydrogenation with Monodentate Phenanthroline-Derived NHCs **Du X.**, Metallinos C.

0763 Cycloadditions of Acetylenic Sulfones on Solid Supports **Gao D.**, Back T.G.

0764 Approaches to the Synthesis of Lactocin S **Ross A.C.**, Pattabiraman V.R., Vederas J.C.

0765 Stereoselective Enzymatic Acylation with Functionalized Acyl Donors **Morin P.**, Pelchat N., Chênevert R.

0766 Utility of the Anthraquinone Chromophore as a Photocaging Group for Alcohols, Aldehydes and Ketones via Intramolecular Photoredox Reaction in Aqueous Solution **Hou Y.**, Wan P.

0767 Palladium-Catalyzed Synthesis of Sulfur-Containing Aryl and Heteroaryl Vinyls as Spectroscopically Tagged Monomers **Perez-Pineiro R.**, Dai S., Alvarez-Puebla R., Wigginton J.R., Fenniri H.

0768 A New Methodology for the Synthesis of Spectroscopically Active Thioacetyl Styrene Monomers **Jawabrah Al-Hourani B.**, Bravo-Vasquez J.P., High L., Fenniri H.

0769 Characterization of LL-Diaminopimelate Aminotransferase **Clay M.D.**, Watanabe N., Cherney M.M., van Belkum M.J., Marcus S.L., Vederas J.C., James M.N.G.

0770 Methanesulfonamide Effect in Sharpless Asymmetric Dihydroxylation of Aliphatic Olefins **Junttila M.H.**, Hormi O.E.O.

0771 First Total Synthesis of Illudane Alcyopterins E, L, M and I via Transition Metal-Catalyzed [2+2+2] Cycloaddition **Witulski B.**, Tran H.-A., Zimmermann A.

0772 The Essential Oil Composition of *Eryngium foetidum* L. in South Vietnam Extracted by Hydrodistillation under Conventional Heating and Microwave Irradiation **Tran H.-A.**, Nguyen Duong T.-T., Le N.-T.

0773 Synthesis of "Calixarene-Like" N,N-Ditosyldiaza[3.3](1,4)naphthalenophanes **Tran H.-A.**, Collins J., Georghiou P.E.

0774 Electrochemical Studies of Verdazyl Radicals **Gilroy J.B.**, McKinnon S.D.J., Koivisto B.D., Zsombor M.S., Hicks R.G.

0775 Formal Radical Closure onto Aromatic Rings: A General Route to Benzo-Fused Carbocycles **Sunasee R.**, Clive D.L.J., Chen Z.

0776 One-Pot Synthesis of Tri- and Tetraynes Using a Butadiynyl Synthon **Azyat K.**, Tykwinski R.R.

0777 Studies Toward the Total Synthesis of Diazonamide B **Zhang J.**, Ciufolini M.A.

0778 Efficient Preparation of the Isoindoline Framework via a Six Component, Tandem Double A³ Coupling and [2+2+2]Cycloaddition Reaction **Bonfield E.R.**, Li C.-J.

0779 Application of the Reaction of Imines with Cyclopropanes Towards the Total Synthesis of FR901483 **Carson C.A.**, Kerr M.A.

0780 Progress Toward Construction of the Dimeric Core of Lomaiviticin A **Bykowski D.**, Roush W.R.

0781 Binaphthol-Catalyzed Alkenylboration of N-Acylimines as a Stereoselective Route to Allylic Amides **Chan A.S.**, Chong J.M.

0782 Exploring the Interrupted Nazarov Reaction: Novel Modes of Friedel-Crafts Chemistry **Rieder C.J.**, West F.G.

0783 Synthetic Studies toward the Total Synthesis of Tetrodotoxin **Mendelsohn B.A.**, Ciufolini M.A.

0784 Model Studies Related to the Synthesis of the Powerful Antitumor Antibiotic MPC1001 **Peng J.**, Clive D.L.J.

0785 A Convenient One-Pot Synthesis of trans-Vinyl Iodides from 1-Alkynes and Applications in Pheromone Synthesis **Darwish A.**, Chong J.M.

0786 A Novel Synthetic Approach to Substituted Piperidines **Qadoumi Z.**, Britton R.A.

0787 Novel Functionalized Phosphines and Applications Toward Stereoselective Wittig-Type Olefination Reactions **Keskar K.**, McNulty J.

0788 Synthesis of Poly-Hetero Methylenes and Methines and their Application in Organic Synthesis **McNulty J.**, Das P.

0789 Studies Towards the Total Synthesis of Haterumalides **Kang B.**, Britton R.A.

0790 Synthesis of the Diazobenzo[a]fluorene Antitumor Antibiotic Isoprekinamycin and Congeners: A Potential Route to the Fluostatins **Liu W.**, Buck M., Chen N., Dmitrienko G.I.

0791 Formation of Functionalized Pyrrolidines via the Stevens Rearrangement of Azetidinium Ylides **Bott T.M.**, West F.G.

0792 Total Synthesis of Dihydroxytetrahydrofurans from *Nothelia anomala* **Mowat J.**, Piercy G., Kang B., Pinter T., Britton R.A.

0793 Applications of an Ephedrine-Derived Morpholine-Dione in the Enantioselective Synthesis of Selected Natural Products **Adsool V.A.**, Pansare S.V.

0794 Diastereoselective Diels-Alder Reactions of a Novel 1,3-Spiro-Amino-Alcohol Chiral Auxiliary **Henderson J.R.**, Keay B.A.

0795 Progress Towards the Total Synthesis of Phorbol **Stewart C.**, West F.G.

0796 Design, Synthesis and Properties of 2D Donor-Acceptor Chromophores **Ramsaywack S.**, Azyat K., Gholami M., Tykwinski R.R.

0797 Improving the Photochromic Properties of Dihydropyrene Switches by Changing the Internal Group **Ayub K.**, Mitchell R.H.

0798 The Synthesis of Oligothiophene Functionalized Dimethyldihydropyrenes and their Electrical and Photochromic Properties **Robinson S.G.**, Mitchell R.H.

0799 Synthesis of Benzotrithiophenes as Potential Cores for Discotic Liquid Crystals **Kayal H.**, Demenev A., Eichhorn S.H.

0800 Stereoselective Synthesis of the Pentacyclic Natural Product Brevianamide E **May J.P.**, Perrin D.M., Huang S.-C.

0801 Extending Conjugation in 2-Dimensions: Synthesis and Characterization of Multidentate Monomers **Taerum T.A.**, Wylie R., Perepichka D.F.

0802 2D Structural Motif in New Thienoacene Molecular Semiconductors **Hirst O.D.**, Brusso J.L., Dadvand A., Perepichka D.F.

0803 Unusual Cycloaddition Reactions of Phosphaalkenes **Pavelka L.C.**, Baines K.M.

0804 New Anion Receptors Based on Thiazine-1,1-Dioxide Subunits **Wang H.-B.**, Wisner J.A.

0805 The Synthesis of 4-Aryl-8-hydroxyquinolines by Anhydrous Suzuki-Miyaura Coupling Reaction **Heiskanen J.P.**, Hormi O.E.O.

0806 A New Organic Radical with Strong Donor Ability: Building Blocks for Magneto-Conducting Materials **Zsombor M.S.**, Frank N.L.

0807 Highly Extended TTFs with a Conjugated Macrocyclic Enyne Core **Chen G.**, Zhao Y.

0808 Synthesis and Characterization of New Highly π -Extended Conjugated TTF Derivatives **Shao M.**, Zhao Y.

0809 Structure and Reaction of Kinetically Stabilized Naphtho[1,2-c:5,6-c']difurans **Robbins S.J.**, Dibble P. W.

0810 NMR Studies of Self-Assembling Guanine-Cytosine Derivatives **Tikhomirov G.A.**, Fenniri H.

0811 Self-Assembly of Rosette Nanotubes with Increased Inner Diameter in Water **Borzsonyi G.**, Myles A., Fenniri H.

0812 Regioselective Synthesis of Trisubstituted 2 (or 6)-Arylamino-pyrimidine-5-carbaldehydes and their Application in the Synthesis of G-C Base Precursors **Beingessner R.L.**, Deng B.-L., Fenniri H.

0813 Novel H-Shaped Conjugated Oligomers: Synthesis, Properties, and Donor/Acceptor Functionalization **Zhou N.**, Zhao Y.

0814 The Synthesis and Electronic Structure of Annulated Delocalized Benzonitronyl Nitroxide Radicals **Dooley B.M.**, Frank N.L., Bowles S.E., Andrews T., Storr T., Benedict J., Kaminsky W.

0815 Towards the Synthesis of Discotic Liquid Crystalline Schiff Base Macrocycles **Shopsowitz K.E.**, Edwards D.R., Gallant A.J., MacLachlan M.J.

0816 Phosphorescent Light-Harvesting Bi- and Terpyridine-Functionalized Dithienol[3,2-b:2',3'-d]phosphole Derivatives **Bai D.R.**, Nickel D., Baumgartner T.

0817 Nonlinear Optical Properties of Schiff Base-Containing Conductive Polymer Films Electrodeposited in Microgravity **Pietrangolo A.**, Sih B.C., Boden B.N., Wang Z., Li Q., Chou K.C., MacLachlan M.J., Wolf M.O.

0818 Syntheses and Optical Properties of Double Salts Incorporating Tetrakis(thiocyanato)platinate(II) Units **Kobayashi M.**, Masaoka S., Sakai K., Leznoff D.B.

0819 Highly Fluorinated n-Type Dithienol[3,2-b:2',3'-d]phosphole Materials **Ren Y.**, Dienes Y., Baumgartner T.

0820 Conjugation in Dinuclear Ru^{II} Complexes of Bis-Tridentate Ligands: Synthesis and Photophysical Properties **Santoni M.-P.**, Hanan G.S., Proust A., Hasenknopf B.

0821 Dibenzoborepin: A Boron Containing Polycyclic Aromatic Hydrocarbon (PAH) **Mercier L.G.**, Piers W.E.

Physical, Theoretical and Computational Division

PT1 Hall D Foyer

Advances in Solid State NMR

Organizer(s) - Rod Wasylshen
Chair(s) - Gang Wu

13:20 0822 Can a Protein Bound Zn(II)-OH₂ be Considered a Weak Acid? The Answer Will be Illustrated From our Work on Zinc Metalloproteins **Ellis P.D.**, Lipton A.S., Heck R.

14:00 0823 Recent Progress in Solid State NMR at Warwick: Low Gamma Nuclei, Double Angle Rotation and Dynamic Nuclear Polarisation **Smith M.E.**

14:20 0824 From Calcium to Cobalt: Solid-State NMR Characterization of Polymorphs and Catalysts **Bryce D.L.**, Bultz E.B., Aebi D.

14:40 End of Session

NSERC

NS Salon 5

NSERC Workshops

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

13:20 0825 Future Changes to the Discovery Grants Program **NSERC Staff**PAPER WITHDRAWN

17:00 End of Session

Tuesday AM

Montreal Medal Lecture

MML Hall D

Montreal Medal Lecture

Organizer(s) - John Vederas
Chair(s) - John Vederas

Introduction of Stan Brown by Gregory Jerkiewicz

11:25 0826 Getting Involved in Chemistry: A Personal Perspective for the Profession and Society **Brown R.S.**

12:15 End of Session

Analytical Chemistry Division

AN5 Hall D Foyer

Nanoscale Phenomena in Electrochemistry

Organizer(s) - Richard McCreery
Chair(s) - Richard McCreery

08:20 0827 Electrochemical in situ Investigation of Thiolate DNA Monolayers on Gold with Fluorescence Imaging **Murphy J.N.**, Bizzotto D., Cheng A.K.H., Yu H.Z.

08:40 0828 An Electrochemical Method for Creating Domain-Segregated Binary SAMs on Polycrystalline Au Electrodes **Shepherd J.L.**, Lemay D.

09:00 0829 Lithographically Patterned Nanowire Electrodeposition **Penner R.M.**

09:40 Coffee Break

10:00 0830 Analytical Chemistry and Electrochemistry of Golden Quantum Dots **Murray R.W.**

John C. Polanyi Award Lecture presented by Jacek Lipkowski

Introduction of Jacek Lipkowski by Sharon Roscoe

10:40 0831 *Building a Biomimetic Membrane at an Electrode Surface* ***Lipkowski J.**

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

AN8

Salon 6

Spectroscopy at Surfaces and Interfaces (Joint with PT) (joint with PT10)

Organizer(s) - Alex Brolo and Dennis Hore
Chair(s) - Dennis Hore

08:00 0832 *Enhanced Infrared Absorption Spectroscopy of Interfaces Using Metal Films with Arrays of Tiny Holes* ***Coe J. V.**

08:40 0833 *Raman Imaging and the Use of Meso- and Nanostructured Metallic Platforms* ***Lagugné-Labarthet F., Galarreta B., Varma S., Marquestaut N., Talaga D.**

09:20 0834 *Plasmonic Nanostructures for Biosensing* ***Brolo A.G.**

09:40 Coffee Break

10:00 0835 *Infrared Studies of Surfaces of Interest to Catalysis and Microelectronics* Tiznado H., Ma Z., Bouman M., Lee I., Bocian D.F., ***Zaera F.**

10:40 0836 *XPS and Electrochemical Analysis of the Growth of β -Ni(OH)₂ on Metallic Nickel in Aqueous KOH* ***Jerkiewicz G., Alsabet M., Grden M.**

11:00 0837 *Photoelectron Spectroscopy of a Key Pd Intermediate in the Suzuki-Miyaura Reaction* ***Horton J.H., MacQuarrie S., McEleney K., Barnes J., Looock H.-P., Crudden C.M.**

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

AN9

Salon 1

General

Organizer(s) - Mark McDermott
Chair(s) - Chris Grant and Peng Wu

08:20 0838 *Characterization and Cytotoxicity Study of Emerging Drinking Water Disinfection By-Products* ***Li X.F., Boyd J.M., Zhao Y.Y., Qin F.**

08:40 0839 *Pluronic Additives: A Solution to Sticky Problems in Digital Microfluidics* **Luk V.N., Mo G.C. H., Wheeler A.R.**

09:00 0840 *Microfluidic Single-Cell-Based Measurement of Multidrug Resistant Cancer Cells* **Li X.J., Li P.C.H. PAPER WITHDRAWN**

09:20 0841 *Paramagnetic Assisted Micromixer* ***Mugo S.M., Roszell S., Oleschuk R.D.**

09:40 Coffee Break

10:00 0842 *A Comprehensive Proteome Profile of Zebrafish Gill and Its Implications* **De Souza A.G., MacCormack T.J., Goss G.G., Li L.**

10:20 0843 *2-MEGA: An Optimized Protocol for Determining Differential Protein Expression by Mass Spectrometry Using Guanidination and Isotopic Dimethylation Labelling* **Lo A., Ji C., Li L.**

10:40 0844 *A Novel Approach to Characterizing Prion Protein Structures Using Chemical Labelling, Microwave-Assisted Acid Hydrolysis and MALDI-MS* **Tsang J.S.W., Bujold A.R., Wishart D., Li L.**

11:00 0845 *Enhanced Protein Identification Efficiency for Comprehensive Membrane Proteome Analysis Using 2D-LC ESI QTOF MS/MS* **Wang N., Li L.**

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

Biological and Medicinal Chemistry Division

BM8

Salon 2

Small Molecule Drug Design and Development (Joint with OR) (joint with OR11)

Organizer(s) - Amitabh Jha
Chair(s) - Donald Weaver

08:00 0846 *Toward the Discovery and Development of Novel Therapies for the Treatment of Hepatitis C Virus Infection* **Beaulieu P.L.**

08:40 0847 *Synthesis and Biological Evaluation of Glycosylated Anti-Tumor Compounds Structurally Mimicking Anthracycline Antibiotics* **Shi W., Lowary T.L.**

09:00 0848 *Design of Inhibitors of the Enzyme Aminoglycoside 6'-N-Acetyltransferase Involved in Antibiotic Resistance* ***Auclair K.**

09:20 0849 *Design, Synthesis, and Evaluation of Peptide-Based HCV Entry Inhibitors* **Algryani R., Kaur K., Douglas D., Kneteman N.**

09:40 Coffee Break

10:00 0850 *Comparing the Metabolomic Profiles of Different Streptomyces Bacteria* **Le C.H., Hayward R.J., Shipley P.R.**

10:20 0851 *Design of Vitamin D Receptor/Histone Deacetylase Inhibitor Hybrids as Potential Anticancer Compounds* **Gleason J.L., White J.H., Quach T.D., Tavera-Mendoza L.E., Dabbas B., Lamblin M., Hudon J., Liao X.**

10:40 0852 *Targeting an Ubiquitous Enzyme, ODCase: Discoveries and Lessons* ***Kotra L.P., Pai E.F.**

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

Chemical Education Division

CE1

Salon 3

Creating and Supporting a Positive Teaching Culture

Organizer(s) - Margaret-Ann Armour
Chair(s) - Margaret-Ann Armour

08:00 0853 *The Role of the Individual, the Department, and the University in Creating a Positive Teaching Culture* ***Darvesh K.V.**

08:20 0854 *They're Not Weeds, They're Talented Flowers!* **Rayner-Canham G.W.**

08:40 0855 *Best Practices for a Positive Teaching and Learning Culture in Year 1 Chemistry* ***Lock P.E.**

09:00 0856 *Avoiding Student Behaviour Problems in the Classroom* **Meintzer C.P.**

09:20 0857 *Bridging the Faculty-Teacher Chasm* **Hoffman M.Z.**

09:40 Coffee Break

10:00 0858 *Organic Chemistry Laboratories: A Culture of Discovery and Creativity* **Kawulka K.E.**

10:20 0859 *The Chemistry Faculty "Teaching-Stream" Model at the University of Toronto* **Dicks A.P.**

10:40 0860 *Indigenous Chemistry: A Play in Two and Two-Thirds Acts* ***Hayes J.M., Perez P.L.**

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

Industrial Chemistry

IC4

Salons 17/18

The Business of Chemistry

Organizer(s) - Gerry Tertzakian and Wendy Lam
Chair(s) - Gerry Tertzakian and Wendy Lam

08:00 Introductory Remarks

08:15 Intellectual Property - Value of a Chemical Patent, Ngatcha B.

09:00 SR and ED - How to Access R&D Tax Credits, Patel C.

09:45 Coffee Break

10:15 Financing - How to Prepare your Enterprise to Raise Angel and Venture Capital, Brown K.

11:00 Corporate Development - Talent Management for Business Success, Eggen L.

11:45 End of Session

Inorganic Chemistry

IN3

Salon 8

Catalysis (Joint with OR) (joint with OR3)

Organizer(s) - Cathleen Crudden and Steve Westcott
Chair(s) - Fran Kerton and Cathleen Crudden

08:00 0861 *CO₂ as a Reagent for the Catalytic Synthesis of β -Hydroxycarboxylic Acids* **Flowers B.J., Gautreau-Service R., Jessop P.G.**

08:20 0862 *Bis(β -ketoamino)cobalt and Related Complexes as Catalytic Models* **Kent C.L., Robson K.C.D., McNeil W.S.**

08:40 0863 *Site Selective Direct Arylation of Azine N-Oxides* ***Schipper D.J., Campeau L.-C., Fagnou K.**

09:00 0864 *Highly Modular and Efficient Synthesis of Biaryl and Biaryl-Like Based Diphosphines: Applications in Platinum Group Catalysis* ***Doherty S., Smyth C.H., Knight J.G., Harrington R.W., Clegg W.**

09:40 Coffee Break

REMINDER

10:00 Strem Chemicals Award in Pure or Applied Inorganic Chemistry Lecture presented by George Shimizu in the Riverview Room

10:40 0865 *Novel Catalytic Amination Reactions* **Lebel H.**

11:00 0866 *Platinum Group Metal Carbenoid Complexes* ***Jones N.D., Caputo C.A., Strong E.T.J., Jennings M.C., McDonald R., Tuononen H.M.**

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

IN4

Salon 11

Conjugated Materials and Heterocycles (Joint with OR) (joint with OR6)

Organizer(s) - Alison Thompson
Chair(s) - Alison Thompson

08:20 0867 *Hydrogen-Bonded Double Helices* ***Wisner J.A., Li J., Mudraboyina B.**

08:40 0868 *Synthesis and Asymmetric Oxidation of Sulfenyl Pyrroles* ***Thompson A., Garabatos-Perera J.R., Gillis H.M.**

09:00 0869 *Synthesis, Coordination Chemistry, and Properties of New Bridging Ligands Derived from Indigo* **Oakley S.R., Hicks R.G.**

09:20 0870 *Oligo-nuclear Re(I) Complexes Based on Heterocyclic Ligands* **Hanan G.S., Chartrand D., Lisowskaya N.**

09:40 End of Session

REMINDER

10:00 Strem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture presented by George Shimizu in the Riverview Room

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

IN5

Salon 12

Main Group Chemistry: A Symposium in Honour of Neil Burford, Tristram Chivers and Richard Oakley

Organizer(s) - Roland Roesler and Robin Hicks
Chair(s) - Ignacio Vargas-Baca

08:00 0871 *Simple Routes to Functionalized Phosphorus Compounds* **Ott T., Puschmann F., Bräuer J., Schönberg H., Grützmacher H.**

08:40 0872 *Synthesis of Organoarsenic Compounds via the Niobium-Mediated Activation Chemistry of Molecular Arsenic (As₄)* **Spinney H.A., Piro N.A., Cummins C.C.**

09:00 0873 *Divalent Main Group Bis(diphenylphosphino)amido Complexes: Unexpected Coordination Motifs and Reactivity with Carbon Dioxide* **Dickie D.A., Kemp R.A.**

09:20 0874 *N-Heterocyclic and P,N-Heterocyclic Phosphonium, Cations: Synthesis, Group 10 Metal Complexes and Reactivity Studies* **Caputo C.A., Jennings M.C., McDonald R., Tuononen H.M., Jones N.D.**

09:40 Coffee Break

REMINDER

10:00 Strem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture presented by George Shimizu in the Riverview Room

10:40 0875 *Computational Study of Lithium Hexamethyl Disilazide (LiHMDS) Complexes: Effects of Solvation and Aggregation* **Popenova S., Mawhinney R.C., Schreckenbach G.**

11:00 0876 *New Adventures in the Reactions of Sulfur Compounds with Molybdenum Trioxide* **Apblett A.W.**, Barber K.N.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

IN6 Salon 4

Nanotechnology: Nanoparticles, Nanowires and Quantum Dots (Joint with MT) (joint with MT7)

Organizer(s) - Jonathan Veinot, Eric Henderson and Arnold Kell
Chair(s) - Robert Scott

08:00 0877 *Synthesis of Manganese Oxide One-Dimensional Nanostructures using Chemical Vapor Deposition Method* **Norouzi Banis M.**, Ruying L., Zhang Y., Sun X.

08:20 0878 *Growth of Ultralong V₂O₅ Nanoribbons* **Lu C.**, Ding Z., Lipson R.H.

08:40 0879 *A Soft-Chemical Approach to Anisotropic Lithium Niobate Nanostructures* **Wood B.D.**, Mocanu V., Gates B.D.

09:00 0880 *Formation of Copper Oxide and Copper Metal Nanostructures from Copper Oxide Thin Films* **Barry S.T.**, Coyle J.P.

09:20 0881 *Hydrogen Silsesquioxane: A Versatile and Technologically Enabling Silicon Nanoparticle Precursor* **Veinot J.G.C.**, Hessel C.M., Henderson E.J.

09:40 Coffee Break

10:00 0882 *Photoluminescent Silicon Nanocrystals: Aerosol Synthesis, Surface Functionalization and Applications* **Swihart M.T.**, Erogbogbo F.

10:40 0883 *Tailoring the Surface of Photoluminescent Silicon Nanocrystals* **Kelly J.A.**, Veinot J.G.C.

11:00 0884 *Controlled Self-Assembly of Quantum Dots and Block Copolymers in Microfluidic Devices* **Moffitt M.G.**, Schabas G., Yusuf H., Sinton D.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

IN7 Riverview

Solid-State Chemistry: From Materials Discovery to Industrial Processing (Joint with MT) (joint with MT9)

Organizer(s) - Arthur Mar and Zuo-Guang Ye
Chair(s) - Yuriy Mozharivskiy

08:00 0885 *Economical Production of Controlled Silver Nanoparticles by Molecular Sieve Surface Templating* **Kuznicki S.M.**, Lin C.C.H., Danaie M., Liu Y., Kuznicki T.M.

08:40 0886 *Synthesis of MOF-5 Using DMF as Solvent: Reinvestigation of the Inconsistency in Adsorption Properties and Powder XRD Data of MOF-5* Xi X., Cai J., Wang J., Shi S., Huang Q., Yuan D., Fang M.

09:00 0887 *[3x3] and [4x4] Square Grids by Designed Self-Assembly: Co^{II}, Co^{III} and Cu^{II}Cu^I Magneto-Structural Investigations* **Dawe L.N.**, Thompson L.K.

09:20 0888 *Photolithographically Patternable Room Temperature Ferromagnetic Amorphous Iron Oxide* **Trudel S.**, Hill R.H.

09:40 Coffee Break

Strem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture presented by George Shimizu

Introduction of George Shimizu by Robert Thompson

10:00 0889 *Nanoporous Metal Organic Frameworks: Possibilities from Porous Materials to Fuel Cell Membranes* **Chandler B.D.**, Hurd J.A., Dalrymple S.A., Vaidyanathan R., Shimizu G.K.H.

10:40 0890 *Novel Metal Organic Frameworks from Three Dimensional Organophosphonates* **Vaidyanathan R.**, Taylor J., Shimizu G.K.H.

11:00 0891 *An Open-Framework Copper-Germanium Phosphate [Cu(H₂O)₂(OH)]₂Ge(PO₄)₂* Liu Y., Du H.B.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

IN9 Salon 7

General

Organizer(s) - Martin Cowie
Chair(s) - Mark Stradiotto

08:00 0892 *Synthesis and Reactivity of Rhodium Complexes Featuring the New Pincer-Like bis(Phosphino)silyl Ligand [κ³-(2-Ph₂PC₆H₄)₂SiMe] (PSPiP)* **MacLean D.F.**, Turculet L.

08:20 0893 *Molecular Manipulation of Main and Transition Group Metals Using an Amino Pendant Linked Nitrogen Heterocyclic Carbene and their Possible Application* **Ong T.-G.**, Shih W.-C., Yang R.B.G., Huang Y.P., Wang C.H., Li C.Y., Yap G.P.A.

08:40 0894 *Di-N-Heterocyclic Carbenes as Bridging Ligands in Dirhodium Complexes* Wells K.D., Cowie M., Zamora M.T.

09:00 0895 *Transformations of Cyclic Olefins Mediated by Tungsten Nitrosyl Complexes* **Buschhaus M.S.**, Blackmore I.J., Graham P.M., Legzdins P.

09:20 0896 *Insertion of Terminal Acetylenes into Agostic η³-Cyclopentenyl and η³-Cyclohexenyl Cobalt and Ruthenium Complexes: Construction of Bridge Bicyclic Structures via Double Insertion of Acetylene* **Chan B.C.**, Dzwiniel T.L., Older C.M., Stryker J.M.

09:40 Coffee Break

Chair(s) - Mark Stradiotto

REMINDER

10:00 Strem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture presented by George Shimizu in the Riverview Room

10:40 0897 *Sterically Isolated "Oxo-Surface" Analogues: New Preorganized Polydentate Aryloxy Ligands for Coordination Chemistry and Polymerization Catalysis* **Lightbody O.C.**, Stryker J.M.

11:00 0898 *Schiff Base Macrocycles: Reliable Templates for Metallocavitand Formation* **Frischmann P.D.**, MacLachlan M.J.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

Materials Chemistry Division

MT7 Salon 4

Nanotechnology: Nanoparticles, Nanowires and Quantum Dots (Joint with IN) (joint with IN6)

Organizer(s) - Jonathan Veinot, Eric Henderson and Arnold Kell
Chair(s) - Robert Scott

08:00 Joint with IN6 - See IN6

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

MT9 Riverview

Solid-State Chemistry: From Materials Discovery to Industrial Processing (Joint with IN) (joint with IN7)

Organizer(s) - Arthur Mar and Zuo-Guang Ye
Chair(s) - Yuriy Mozharivskiy

08:00 Joint with IN7 - See IN7

10:00 Strem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture presented by George Shimizu

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

Organic Chemistry Division

OR3 Salon 8

Catalysis (Joint with IN) (joint with IN3)

Organizer(s) - Cathleen Crudden and Steve Westcott
Chair(s) - Fran Kerton and Cathleen Crudden

08:00 Joint with IN3 - See IN3

REMINDER

10:40 Strem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture presented by George Shimizu in the Riverview Room

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

OR6 Salon 11

Conjugated Materials and Heterocycles (Joint with IN) (joint with IN4)

Organizer(s) - Alison Thompson
Chair(s) - Alison Thompson

08:20 Joint with IN4 - See IN4

09:40 End of Session

09:40 Coffee Break

REMINDER

10:00 Strem Chemicals Award for Pure or Applied Inorganic Chemistry Lecture presented by George Shimizu in the Riverview Room

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

OR9 Salon 9

Organic Synthesis: The Latest Trends

Organizer(s) - Fred West and Derrick Clive
Chair(s) - Derrick Clive

08:00 0899 *Concise Total Synthesis of (+)-WIN-64821 and (-)-Ditryptophenaline* **Movassaghi M.**, Schmidt M.A., Ashenurst J.A.

08:20 0900 *New Approach to the Asymmetric Synthesis of Indolizidine Alkaloids* **Breau L.**, Chiasson J.-F., Juneau S.

08:40 0901 *The Preparation of Single Isomer Trisubstituted Olefins* **Ogilvie W.**, Jiang J.L., Simard-Mercier J., Ho M.L., Flynn A.B.

09:00 0902 *Development of a Concise, Stereocontrolled Synthesis of 2,5-Disubstituted-3-hydroxytetrahydrofurans: Application to Natural Product Synthesis* **Britton R.A.**, Kang B., Mowat J., Pinter T., Piercy G., Michaleski M.

09:20 0903 *Transition Metal Catalyzed Asymmetric Cyclopropanation of Alkenes with Diazo Reagents Bearing Two Electron-Withdrawing Groups* **Charette A.B.**, Marcoux D.

09:40 Coffee Break

10:00 0904 *Synthetic Approaches to Halenaquinone, Viridin, Coumarins and Labdanes* Henderson J.R., Lucciola D., Kiemele E.R., Gorobets E., Keay B.A.

Alfred Bader Award Lecture presented by Tom Back

Introduction of Tom Back by Brian Keay

10:40 0905 *Design and Synthesis of Some Biologically Interesting Natural and Unnatural Products* **Back T.G.**

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

OR11 Salon 2

Small Molecule Drug Design and Development (Joint with OR) (joint with BM8)

Organizer(s) - Amitabh Jha
Chair(s) - Don Weaver

08:00 Joint with BM8 - See BM8

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

OR12 Salon 5

General

Organizer(s) - Dennis Hall and Rik Tykwinski
Chair(s) - Don Coltart

09:00 0906 *Synthesis of Privileged Scaffolds for the Inhibition of Protein-Protein Interactions* **Wulff J.E.**, Coopersmith K.A.

09:20 0907 *Synthesis and Oxidation Chemistry of α-Cyclodextrin Capped Porphyrins* **Moorthie V.A.**, Pollard M., Vederas J.C.

09:40 Coffee Break

10:00 0908 *Conformational Studies of Biologically Important Furanose-Containing Oligosaccharides* **Taha H.A.**, Castillo N., Roy P.-N., Lowary T.L.

10:20 0909 *Iridoid Glycosides from *Barleria prionitis* and *Vitex pinnata** **Zahid S.**, Kalhari K., Mbong N., Zubair M., Ata A., Samarasekera R.

10:40 0910 Preliminary Work on the Biosynthesis of Usnic Acid Anderson K.S., Simmonds R., [§]Sorensen J.L.

11:00 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

Physical, Theoretical and Computational Division

PT3 Salon 10

Computational and Theoretical Chemistry

Organizer(s) - Pierre-Nicholas Roy, Alexander Brown and Mariusz Klóbukowski
Chair(s) - Pierre-Nicholas Roy

08:00 0911 Molecular Dynamics Simulation of the Interaction of Peptides with Nanoscale Chemical Heterogeneities on a Planar Substrate Soliman W., Kaur K., [§]Bhattacharjee S.

08:20 0912 Computational Studies of CHXYZ:C₆H₆ Complexes [§]Keefe C.D., Isenor M.

08:40 0913 Computational Studies of Unbridged Dizin Compounds Hepperle S.S., [§]Wang Y.A.

09:00 0914 Hydrogen Abstraction by OH on Fluorinated Ethyl Methyl Ethers White C.W., [§]Martell J.M.

09:20 0915 Characterization of Weak Interactions between Protein and DNA Building Blocks Wetmore S.D., Rutledge L.R.

09:40 Coffee Break

10:00 0916 Predicting New Inorganic Compounds [§]Pykko P.

10:40 0917 A Relativistic Generalisation of AIM, ZORA Treatment [§]Anderson J.S.M., Ayers P.W.

11:00 0918 Density Functional Theory Simulations of the Infrared Spectra of Peptides Tzadu L., [§]Gough K.M.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

PT5 Hall D

Frontiers of Molecular Spectroscopy: A Symposium in Honour of Michael Gerry

Organizer(s) - Yunjie Xu and Wolfgang Jäger
Chair(s) - Jennifer van Wijngaarden

08:00 0919 Thirty Years of Fourier Transform Microwave Spectroscopy: A Personal View Maeder H.

08:20 0920 Characterization of the Bonding in Some Metal Compounds Using Microwave Spectroscopy Gerry M.C.L.

08:40 0921 The Weakly Bound H₂ - HCCCN Complex Studied Using Microwave Spectroscopy and ab initio Calculations Michaud J.M., Topic W.C., Jäger W.

09:00 0922 The Search for a Stable Helium Complex [§]Evans C.J., Richardson J.

09:20 0923 Rotational Spectra of Nitrous Oxide Solvated with Hydrogen Molecules: The Search for Microscopic Superfluidity in para-(H₂)_N van der Waals Clusters Landry J.N., [§]Jäger W.

09:40 Coffee Break

10:00 0924 Cavity Based Fourier Transform Microwave Spectroscopy from 0.5 to 110 GHz Cooke S.A.

10:20 0925 Microwave Spectrum and Structure of a Polar Dimer of N₂O Walker N., Minei A.J., Novick S.E., Legon A.C.

10:40 0926 Microscopic Lock-and-Key model Systems: Hydrogen Bonding in the Propylene Oxide-Ethanol and Propylene Oxide-2-Fluoroethanol Dimers Borho N., [§]Xu Y.

11:00 0927 The Interplay between Rotational Spectroscopy and Radioastronomy [§]Müller H.S.P.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

PT7 Salons 15/16

Photochemistry and Photobiology: Probing Excited States Using Experiment and Theory

Organizer(s) - Glen Loppnow and Alexander Brown
Chair(s) - Alex Brown

08:00 0928 Theoretical Aspects of the Photophysical Behavior of Natural Nucleobases and their Analogs Matsika S., Kistler K.A., Laikov D., Mburu E.

08:40 0929 Excited-State Structural Dynamics of Pyrimidine Nucleobases [§]Loppnow G.R.

09:00 0930 Ultrafast Singlet Excited-State Dynamics in Single- and Double-Stranded DNA [§]Kohler B.

09:40 Coffee Break

Chair(s) - Ronald Steer

10:00 0931 Electron Transfer in DNA: A Fluorescence Blob Model Approach Keyes-Baig C., [§]Duhamel J.

10:20 0932 Ab initio Multiconfigurational Quantum Chemistry in Photobiology [§]Olivucci M.

11:00 0933 Photoemission of Fluorescent Protein Chromophores Timerghazin Q.K., Carlson H.J., Cotton D.W., Campbell R.E., Brown A.

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

PT10 Salon 6

Spectroscopy at Surfaces and Interfaces (Joint with AN) (joint with AN8)

Organizer(s) - Alex Brolo and Dennis Hore
Chair(s) - Dennis Hore

08:40 Joint with AN8 - See AN8

11:20 End of Session

REMINDER

11:25 Montreal Medal Lecture presented by Stan Brown in Hall D

Tuesday PM

Chair's Event

CH Riverview

Chair's Event

Organizer(s) - Murray Gray and Bruce Peachey
Chair(s) - Bruce Peachey

14:00 The Chemistry of the Oil Sands - the development of the oil sands presents enormous challenges and opportunities for the chemical sciences.

In order for this resource to supply our future energy needs, we need to improve the energy efficiency of the production and conversion processes, while at the same time reducing the environmental impact.

This panel discussion is co-sponsored by the Energy Subject Division of the CIC and will feature presentations on the scientific and research challenges of the oil sands.

The panel will encourage discussion on the need for new chemical research and the prospects for employment of chemical professionals in this rapidly growing sector.

Panelists include Ross Chow, Randy Mikula, Ron Myers, Mike Sprague and Harald Thimm

15:30 End of Session

Analytical Chemistry Division

AN5 Hall D Foyer

Nanoscale Phenomena in Electrochemistry

Organizer(s) - Richard McCreery
Chair(s) - Mark McDermott

13:20 0934 Reversible Switching of Coloration of Nanometric Passive Layers on Titanium [§]Jerkiewicz G., Zhao B., Hrapovic S., Luan B.L.

14:00 0935 Conducting Polymer Nanoionic Composites for Electronic Applications [§]Freund M.S., Thomson D.J., Gopalakrishna Pillai R., Zhao J.H.

14:40 0936 Molecular Electronics Using Diazonium-Derived Adlayers on Carbon with Cu Top Contacts Bergren A.J., Harris K.D., Deng F., [§]McCreery R.L.

15:00 Coffee Break

15:20 0937 Nanostructural Issues and Heterogeneous Electron Transfer at Self-Assembled Alkanethiolate Monolayers on Gold [§]Porter M.D., Bergren A.J., Edwards G.A., Cox E.J.

16:00 0938 Ab-initio Calculations of Surface-Mediated Proton Transfer in Polymer Electrolyte Membranes [§]Eikerling M.H., Roudgar A., Narasimachary S.P.

16:40 0939 Methanol Electro-Oxidation Enhancement [§]Wilkinson D.P., [§]Fan S. PAPER WITHDRAWN

17:00 End of Session

AN8 Salon 6

Spectroscopy at Surfaces and Interfaces (Joint with PT) (joint with PT10)

Organizer(s) - Alex Brolo and Dennis Hore
Chair(s) - Alex Brolo

REMINDER

13:20 Keith Laidler Award Lecture presented by Albert Stolow in Salon 10

14:00 0940 New SERS Substrate Development and its Application in Biofuel Cell Research Fan M.K., Finn A., Maréchal M., Harrington D., Brolo A.G.

14:20 0941 Surface Properties of M-YSZ(100) Model Anodes for Solid Oxide Fuel Cells [§]Giorgi J.B., Green R.G.

14:40 0942 Chemical Methods for the Termination of Silicon Dangling Bonds Pitters J.L., Dogel I.A., Dogel S.A., DiLabio G.A., Wolkow R.A.

15:00 Coffee Break

15:20 0943 Surface Phase Transition of Polymers Studied by IR-Visible Sum-Frequency Generation [§]Chou K.C., Li Q., Hua R., Cheah I.J.

15:40 0944 Fourier Transform Infrared Photoacoustic Spectra of Resin Beads Wen Q., Michaelian K.H.

16:00 0945 Surface Electronic and Conformational Properties of the Conjugated Polymer MEH-PPV Investigated by 2D IR-Visible Sum Frequency Generation Li Q., Hua R., [§]Chou K.C.

16:20 0946 Controlled Laser Dye Emission Through the Oxidation Level of Polypyrrole Santos M.J.L., Giroto E.M., Brolo A.G.

16:40 0947 Chemical Characterization of Antiwear Film on 52100 Steel Using X-Ray Absorption Near Edge Structure (XANES) Spectroscopy Zhou J.G., Thompson J., Cutler J., Kasrai M., Bancroft G.M., Yamaguchi E.S.

17:00 End of Session

ANP Hall A

Posters

Organizer(s) - Mark McDermott
Chair(s) - Mark McDermott

From 17:00 until 19:00

0948 Pellicular Membranes of Zirconium Phosphate and Hafnium Phosphate via Intercalation-Deintercalation of Arginine and the Protonation of Na Forms of their θ -Type Materials Abu Ghalia M., Edresi M.

0949 A New Way to Understand the Interacting Process between Species in Vacancy Affinity Capillary Electrophoresis Sun Y., Fang N., Chen D.D.Y.

0950 Development of an Enzymatic Microreactor Based on Microencapsulated Enzyme, Coupled "On-Line" with a Capillary Electrophoresis System Roman G., Waldron K.C., Rochefort D.

0951 A Method for the Selective Preconcentration of DNA Targets by Capillary Affinity Gel Electrophoresis Chan A., [§]Krull U.J.

0952 Sub-Microliter Volume Desalting for Intact Proteins by Capillary Electrophoresis (CE) Booker C.J., Yeung K.K.C.

0953 Strategies for Increased Capacity Flow-Counterbalanced Continuous Electrophoretic Purification Maxwell E.J., Chen D.D.Y.

0954 Subcritical Water Chromatography in a Capillary Column Fogwill M.O., Thurbide K.B.

0955 Acoustic Flame Detection of Surfactants in Liquid Chromatography Mah C., Thurbide K.B.

0956 Selectivity Enhancement in RP-HPLC by Tuning the Molecular Packing Structure of Polymeric Organic Phase on Silica Mallik A.K., Rahman M. M., Czaun M., Takafuji M., Ihara H.

0957 Multiplex Proteomic Analysis on a Valve-Based Microfluidic Device Lu Q., Bao J.B., [§]Harrison D.J.

0958 Structures of Hydrated Metalated Adenine by IRMPD Spectroscopy Rajabi K., Gillis E., [§]Fridgen T.D.

0959 Polymer Entrapped Trypsin Laden Microspheres: Online Digestion and Separation by a Monolithic Column Mugo S.M., [§]Oleschuk R.D.

0960 Targeted Quantitative Mass Spectrometric Identification of Differentially Expressed Proteins between Bax Positive and Bax Deficient Colorectal Cancer Wang P.W., Lo A., Young J.B.Y., Hao C.H., [§]Li L.L.

0961 Microwave-Assisted Acid and Base Hydrolysis Combined with MALDI-MS for Studying Prion Structures Reiz B., Bujold A.R., Wishart D.S., Li L.

0962 *Nano-LC-QTOF MS/MS Analysis of Micro- and Nano-Scale Proteomic Samples* **Xu M.**, Wang N., Wang P.W., Marcus S.L., [§]Li L.L.

0963 *Tandem Affinity Purification and Proteome-Wide Identification of Oncoprotein NPM/ALK Interacting Proteins by Mass Spectrometry* **Wu F.**, Wang P.W., Young L.B.Y., Lai R., [†]Li L.L.

0964 *The Effect of Methylation on the Dehydration of Guanidinium-Centered Nanodroplets* **McQuinn K.J.**, [†]McIndoe J.S., Hof F.

0965 *Identification of Novel Endogenous Metabolites of Acylglycines in Human Urine* **Lewis A.E.**, [§]Li L.

0966 *High-Resolution Separation and Identification of Structural Isomers of Endogenous Acylcarnitine Metabolites in Human Urine* **Zuniga A.**, [§]Li L.

0967 *¹³C-¹²C-Stable Isotope Labeling for ESI Signal Enhancement and Absolute Quantitation of Metabolites* **Guo K.**, [§]Li L.

0968 *Insight into Halide Induced Aggregation of DMAP-Monolayer Protected Gold Nanoparticles Using the Thermodynamics of Ideally Polarized Electrodes* **Vivek J.P.**, [§]Burgess I.J.

0969 *Stability of Thin Films of Nickel Aluminium Layered Double Hydroxides (LDH) Containing Borate Anions to Potential Cycling in Basic Electrolytes* **Yu L.**, [§]Villemure G.

0970 *Applications of Nanofabricated Graphitic Carbon Electrodes* **Du R.**, Yang N., [†]McDermott M.T.

0971 *Modeling Charge Redistribution with a Thin Layer Cell* **Black J.M.**, [†]Andreas H.A.

0972 *Composite Nanoscale Electrodes for the Study of Electrocatalytic Hydrogenation at Palladium* **Read S.T.**, [§]Rowntree P.A.

0973 *A Switchable Surface: Using Electric Fields to Toggle the Protonation of an Acid Self-Assembled Monolayer* **Rosendahl S.M.**, [§]Burgess I.J.

0974 *A Surface Enhanced Raman Spectroscopic Study of the Attachment Mechanism of Diazonium Salt Derived Aryl Films to Gold Electrodes* **Chisholm R.**, Gish D.A., Brett M.J., [†]McDermott M.T.

0975 *Quantitative Analysis of Mixtures Using XANES Spectroscopy* **Warner J.**, **Cutler J.**

0976 *The Usefulness of *p*-Dialkylphenylenediamine Compounds in the Analysis of Inorganic Sulfides, Polysulfides, Thiosulfate, Polythionates, and other Sulfur Compounds likely to be Found in Water* [§]Kariuki S., [†]Babady-Bila P., **Drouin J.**

0977 *Microcalorimetric Study of the Antioxidant (Quercetin, Flavonoid) Interactions with Aggregates of Sodium Polystyrenesulfonate and Sodium Dodecylsulfate.* **Singh K.**, [§]Marangoni D.G.

0978 *Properties of a Novel Micro Dual Flame Photometric Detector* **Hayward T.C.**, [†]Thurbide K.B.

0979 *CE Characterization of Molecularly Imprinted Polymer Nanoparticles Specifically Tailored for Pre-Concentration of Estrogenic Compounds in Waste Water Analysis and Treatment* **DeMaleki Z.**, **Pereira M.**, Lai E.P.C

0980 *A Novel Nitrogen Phosphorus Detector Using a Micro Counter-Current Flame* **Giganto B.**, [†]Hayward T.C., [†]Thurbide K.B.

0981 *Modeling of Electric Field Distribution in an Electrospray Ion Source* **Zhong X.**, Yi R., [§]Chen D.D.Y.

0982 *Comprehensive Proteome Mapping of Escherichia coli by LC-ESI MS/MS Combined with Sequential Protein Precipitation and Solubilization* **Ye X.**, Wang N., Weiner J., Li L.

0983 *Analytical Instrument Qualification in the Pharmaceutical Industry* **McClure E.L.**, [†]Ying L.

0984 *Modelling the Stretching of Titin In and Out of Equilibrium* [§]Staple D.B., [†]Kreuzer H.J.

0985 *Dynamics of Single Molecule Force Ramp Experiments: The Role of Fluctuations* [§]Staple D.B., Hanke F., [†]Kreuzer H.J.

0986 *Measurement of the Differences in Electrophoretic Mobilities of Individual Molecules of E. coli β -Galactosidase Provides Insight into Structural Differences which Underlie Enzyme Microheterogeneity* **Nichols E.R.**, [§]Craig D.B.

0987 *Simultaneous Measurement of the Electrophoretic Mobility, Catalytic Activity and its Response to Change in Temperature for a Single Molecule of β -Galactosidase* **Craig D.B.**, [§]Nichols E.R.

0988 *Ppy/BPB Characterization by in situ Raman Spectroelectrochemistry* **Ferreira J.**, Giroto E.M., [†]Brolo A.G.

0989 *Developing Circular Dichroism for the Study of Potential Driven Conformation Changes of Adsorbed Proteins on a Gold Surface* [§]Fiche J.B., Laredo T., Lipkowski J., Dutcher J.R.

0990 *Current Rectification from Chemically Modified Silicon(100) Surfaces* **Sinha S.**, Dickie A.J., [§]Wolkow R.A.

0991 *Plasmonic Nano-Biosensors based on Surface Enhanced Raman Spectroscopy* **Galarreta B.**, Varma S., Chan E., Norton P.R., [§]Laguné-Labarthe F.

0992 *Acid Dissociation at Ice Surfaces* [§]Marchand P., Plessis S., [†]Ayotte P.

0993 *In Situ Optically-Active Second Harmonic Generation (OA-SHG) Studies of Functionalized Polycrystalline Silver Electrodes* **Birnie-Lefcovitch S.**, [§]Brolo A.G., Sanderson A.C.

0994 *Influence of Hydrolysis on the Deposition of 3-Mercaptopropyltrimethoxysilane on Mg Alloy AZ91* **Scott A.F.**, [†]Gray-Munro J.E., [§]Shepherd J.L.

0995 *Raman Microscopy and Infrared Spectromicroscopy of Focally Elevated Creatine in Brain Tissue from Amyloid Precursor Protein (APP) in Transgenic Mice* **Khamenehfar A.**, [§]Gough K.M., Del Bigio M.R.

0996 *Design and Calibration of a Visible-IR Mueller-Matrix Ellipsometer to Study Molecules Adsorbed at the Solid-Liquid Interface* **Hall S.A.**, [§]Hore D.K.

Biological and Medicinal Chemistry Division

BM4 Salon 5

Chemistry and Biology of Nucleic Acids

Organizer(s) - Andrew MacMillan and Peter Unrau
Chair(s) - Andrew MacMillan and Peter Unrau

13:20 0997 *Genetic Control by Metalloregulatory RNAs* [§]Winkler W., Dann C., Wakeman C., Ramesh A.

14:00 0998 *Gene Regulation Mechanisms of Purine Riboswitches* [§]Lafontaine D.A., Tremblay R., Mulhbachter J., Lemay J.F.

14:20 0999 *Bridging the Gap: Molecular Dynamics and the Nucleotide Exchange Reaction in Elongation Factor Tu* [§]Wieden H.-J., Mercier E., Yawney D., Gray J.

14:40 1000 *In Vitro Selection of a Sugar-Sensing DNzyme* **Lam C.**, Hollenstein M., Hipolito C., [§]Perrin D.M.

15:00 Coffee Break

15:20 1001 *Chemically-Modified siRNA and AONs: Synthesis and Applications* **Watts J.K.**, Donga R., Lackey J., Bayó-Puxan N., Hassler M., Deleavey G., El-Sabahy M., Wazen N., Leroux J.C., Chan T.H., [§]Damha M.J.

16:00 1002 *Chelating versus Nonchelating N²-Modified Guanines and their Fluorescent Response toward Metal Ions* **Martic S.**, [†]Wu G., [§]Wang S.

16:20 1003 *Molecular Recognition Using Self Assembling Cyclodextrin-DNA Conjugates* [§]Linkletter B.A., Curran E.

16:40 1004 *Structural Insights on Key Proteins at the Heart of the Spliceosome* **MacMillan A.M.**

17:00 End of Session

Chemical Education Division

CE4 Salon 3

Innovative Teaching Technologies. Best Practices in Teaching II

Organizer(s) - Michael Mombourquette
Chair(s) - Michael Mombourquette

13:20 1005 *Communicating with Students Outside the Classroom* [§]Burk R.C.

13:40 1006 *Animating Chemistry: Claymation as a Creative Tool for Evaluation of Student Learning* **Etkin N.**

14:00 1007 *Digital Ink: Annotation of PowerPoint Presentations* **Johnson A.E.**

14:20 1008 *Making the Best of Both Worlds* **Hunt I.R.**

14:40 1009 *Guided Inquiry-Based Approach to the Teaching of Absolute Configuration, Conformational Energy, and Fischer Projections* **Kutas C.**, **Tran L.**, Al-Khalidi B., Si B.

15:00 Coffee Break

15:20 1010 *Laboratory Computerization as a Tool to Link Chemistry's Abstractions to Undergraduate Students' Realities* [§]Young J.C.O.C.

16:00 1011 *Too Much To Do!* **Mozol V.**, [†]Mahadev K.

16:20 1012 *Remote Instrumentation for Undergraduate Education: The BC-ILN Project* **Brewer S.E.**, **Cinel B.**

16:40 1013 *Calculations of IR and NMR Spectra for Organic Compounds* **Dicks A.P.**, [§]Skonieczny S., Staikova M.G.

17:00 End of Session

CEP Hall A

Posters

Organizer(s) - Glen Loppnow
Chair(s) - Glen Loppnow, Peter Mahaffy and Frances Sutherland

From 17:00 until 19:00

1014 *Voltammetric Determination of Vitamin C in Orange Juice Using a Pencil Lead Electrode* [§]Kariuki J., King D.

1015 *Using "Clickers" to Help your Students Learn Organic Chemistry* **Hunt I.R.**

1016 *Who Does Clicker Technology Help?* **McWilliams A.R.**, George N.A.

1017 *Sharing Conceptual Resources with Reform Mathematics* **Kutas C.**, Chisu C.

1018 *Thinking Outside the Classroom: Incorporating Field Trips into a First Year Curriculum* **Forest K.**

Environment Division

EN2 Hall D

Atmospheric and Astrophysical Applications: Part III of Symposium in Honour of Michael Gerry (Joint with PT) (joint with PT6)

Organizer(s) - Yunjie Xu and Wolfgang Jäger
Chair(s) - Holger Müller

REMINDER

13:20 **Keith Laidler Award Lecture presented by Albert Stolow in Salon 10**

14:00 1019 *The Atmospheric Chemistry Experiment: Remote Sensing of the Earth's Atmosphere from Orbit* **Walker K.A.**

14:20 1020 *High Precision Spectroscopic Line Parameters of Carbon Dioxide in the Near Infrared* [§]Predoi-Cross A., McKellar A.R.W., Devi V.M., Benner D.C., Hurtmans D.R.

14:40 1021 *Nocturnal Processing of Nitrogen Oxides in Marine and Coastal Environments: Implications of the First Ambient Measurements of Nitryl Chloride* [§]Osthoff H.D., Roberts J., Brown S., Lerner B., Williams E., Sommariva R., Bates T., Coffman D., Quinn P., Ravishankara A.

15:00 Coffee Break

15:20 1022 *Pulsed Quantum Cascade Laser for Gas Sensing Applications* **Manne J.**, Jäger W., Tulip J.

15:40 1023 *Release of Hydrogen Molecules from Vacuum Ultraviolet Photodissociation of Amorphous Solid Water at 100K* **Loock H.-P.**, Yabushita A., Hama T., Iida D., Kawanaka N., [§]Kawasaki M., Watanabe N., Ashfold M.N.R

16:00 1024 *Toward an Accurate Database for the 12 μ m Region of the Ethane Spectrum* **Moazzen-Ahmadi N.**

16:20 1025 *Submillimeter-Wave Spectroscopy of Molecular Ions* [§]Amano T.

16:40 1026 *On the Formation of Glycine in the Interstellar Medium* **Koch D.M.**, [†]Peslherbe G.H., [§]Hynes J.T.

17:00 End of Session

EN4 Salon 9

Bioinorganic Chemistry-Toxic Metals (Joint with IN) (joint with IN2)

Organizer(s) - Juergen Gailer and Farideh Jalilvand
Chair(s) - Farideh Jalilvand

REMINDER

13:20 **Alcan Award Lecture presented by Jack Passmore in Salon 12**

14:00 1027 *Electrospray Mass Spectrometric Assessment of the Interactions between Heavy Metals and Bio-Ligands* **Burford N.**, Phillips H.A., Saunders C.D.L.

14:20 1028 *Bacteria's View of the Periodic Table: Exploring Metal Resistance/Tolerance/Toxicity* [§]Turner R.J., Workentine M.L., Harrison J.J., Ceri H.

14:40 1029 *The Microbial Weathering of Lead Jarosite (PbFe₆(SO₄)₄(OH)₁₂)* **Smeaton C.M.**, [†]Fryer B.J., [§]Weisener C.G.

15:00 Coffee Break

Chair(s) - Arvi Rauk

15:20 1030 *Probing the Excited States of Metalloporphyrins and Phthalocyanines by Magnetic Circular Dichroism. A Density Functional Theory Study* **Ziegler T.**, Seth M., Peralta A., Zhekova H.

15:40 1031 *Synthesis and Characterization of Lead-Amino Acid Complexes* [§]Saunders C.D.L., [†]Burford N., Werner-Zwanziger U., Chen B., McDonald R.

16:00 1032 *Copper Peptides vs Copper Proteins: What's the Difference? An In Vitro Study with Relevance to Prion Diseases and Alzheimer's Disease* [§]Rauk A.

16:20 1033 *Copper and the Prion Protein, Normal Functioning and Disease Pathogenesis: Insights from Theory and Experiment* **Pushie M.J.**, [§]Vogel H.J.

16:40 End of Session

ENP Hall A

Posters

Organizer(s) - Charles Wong and Jonathan Martin
Chair(s) - Charles Wong and Jonathan Martin

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

1034 *Environmental Management Win Polygraphic World Oilfirenko I.*

1035 *Predicting the Congener-Specific Environmental Behaviour of Perfluorinated Acid Contaminants Using Semi-Empirical Computational Methods* [§]**Rayne S.**, Forest K., Friesen K.J.

1036 *Comparison of Three Atmospheric Pressure Ionization Sources for the Determination of Hexabromocyclododecane Enantiomers in Environmental Samples* **Ross M.S.**, [§]Wong C.S.

1037 *Are We as Contaminated as Previously Thought? HPLC-MS/MS Interferences and the Case of Perfluorohexane Sulfonate (PFHxS) in Human Serum* **Chan E.**, Sandhu M.S., Benskin J.P., Martin J.M.

1038 *Tracking Sources of Slippery Substances: PFA Isomer Profiling of Ocean Water and Sediment Cores* **Benskin J.P.**, [§]Martin J.W., Scott B., Philips V., St. Louis V., Yamashita N., Lam P., Tomy G., Muir D., Spencer C., Rosenburg B.

1039 *Ozonation Studies of Naphthenic Acids by Capillary HPLC/QTOF-MS* **Han X.**, [§]Martin J.W., Fu H., Demeter M., Gamal El-Din M.

1040 *The Utilization of Biochemistry to Create a Natural, Organic Fungal Pesticide to Replace Chemical Insecticides* **Skinner J.PAPER WITHDRAWN**

1041 *Surface Enhanced Raman Spectroscopy as a Field Sensor for the Detection of Cyanide Exposure* **Vinnakota C.**, [§]Logue B.

1042 *Atmospheric Mercury Speciation and Deposition in Urban Area* **Zhang X.**, He T., Song X., Siddiqi Z., [§]Lu J.Y.

1043 *Detection of DNA Repair Proteins Binding to Trivalent Arsenic* **Yan H.M.**, Le X.C.

1044 *Development of a Novel Technique for the Selection of Aptamers against Whole, Live Bacterial Cell Surface Molecules* **Hamula C.L.**, Zhang H., Li X.F., Le X.C.

1045 *Unconventional Liquid-Liquid Extraction of Pigments Present in Waste Waters of the Printing Industry* [§]**Alex S.**, Biasotto F., Becker S., Aroca G.

1046 *Capillary Electrophoresis-Based Immunoassay for DNA Damage Detection and its Application to the Mechanistic Study of DNA Repair Inhibition by Arsenic* **Shen S.**, Lee J., Weinfeld M., [§]Le X.

1047 *Determination of Herbicide Residues in Wetland Sediments using LC/MS/MS* [§]**Xu D.**, Cessna A.J., Raina R., Farenhorst A., Pennock D.J.

1048 *Development, Evaluation, and Validation of a Device for Generating Gaseous HgBr₂* **Zhao W.**, [§]Lu J.Y.

1049 *Chemical and Particulate Cell Toxicity Measured by Real Time Cell Electronic Sensing (RT-CES)* **Boyd J.M.**, Huang L., Xie L., [§]Li X.-F.

1050 *Alteration of Glutathione Synthesis by Arsenicals in Acute Promyelocytic Leukemia Cells (HL-60 Cells)* **Charoensuk V.**, Gati W.P., Weinfeld M., [§]Le X.C.

1051 *Determination of Trivalent Arsenicals Using Post Column Derivatization HPLC-ESI-MS/MS* **McKnight-Whitford A.N.**, [§]Le X.C.

Industrial Chemistry

IC1 Salons 17/18

Enterprising Chemistry

Organizer(s) - Gerry Tertzakian and Wendy Lam
Chair(s) - Wendy Lam and Gerry Tertzakian

13:45 **Introductory Remarks**

14:00 Analytical Method Development - Meeting Industry Needs, Heaton P.

14:30 Microchip Business, Lumb C.

15:00 **Coffee Break**

15:30 Chemical Contract Research Business: Chem Kits for Drug Discovery, Mendonca A.

16:00 Building a Chemical Business: Sourcing Contract Manufacturers, Ying L.

16:30 Globalization and Fine Chemical Industry: How to Compete and Win against Low Cost Producers, Comanita B.

17:00 End of Session

Inorganic Chemistry

IN2 Salon 9

Bioinorganic Chemistry-Toxic Metals (Joint with EN) (joint with EN4)

Organizer(s) - Juergen Gailer and Farideh Jalilvand
Chair(s) - Farideh Jalilvand

REMINDER

13:20 Alcan Award Lecture presented by Jack Passmore in Salon 12

14:00 Joint with EN4 - See EN4

15:00 **Coffee Break**

15:20 Chair(s) - Arvi Rauk

16:40 End of Session

IN3 Salon 8

Catalysis (Joint with OR) (joint with OR3)

Organizer(s) - Cathleen Crudden and Steve Westcott
Chair(s) - Mark Stradiotto and Rui Resendes

REMINDER

13:20 Alcan Award Lecture presented by Jack Passmore in Salon 12

14:00 **1052** *Electrophilic Catalysts for the Enantioselective Cation-Olefin Cyclization of Poly-Enes: Mechanistic and Synthetic Developments* [§]**Gagné M.R.**, Campbell A., Koropala S., Mullen C.

14:40 **1053** *Tandem Catalysis with Metathesis Catalysts: Mechanism, Design, and Applications in Tissue Engineering* Beach N.J., Weiss J., Camm K.D., [§]Fogg D.E.

15:00 **Coffee Break**

15:20 **1054** *Lanthanide Amine bis-Phenolate Complexes and their Reactivity in the Ring-Opening Polymerization of ϵ -Caprolactone* [§]**Kerton F.M.**

15:40 **1055** *Catalytic Direct Functionalization of Arenes and Nanocarbons* **Itami K.**

Merck Frosst Centre for Therapeutic Research Award Lecture presented by Dennis Hall

Introduction of Dennis Hall by Fred West

16:20 **1056** *Catalytic Enantioselective Carbonyl Allylboration: Discovery and Application of a New Mode of Activation for Boronic Esters* [§]**Hall D.G.**

17:00 End of Session

IN4 Salon 11

Conjugated Materials and Heterocycles (Joint with OR) (joint with OR6)

Organizer(s) - Alison Thompson
Chair(s) - Martin Gillis

REMINDER

13:20 Alcan Award Lecture presented by Jack Passmore in Salon 12

14:00 **1057** *Diboradiferrocene Cations: Electronic Structure and Lewis Acidity Enhancement* Venkatasubbaiah K., Pakkirisamy T., Herber R., [§]Jaekle F.

14:20 **1058** *Charge Decomposition and Natural Population Analyses of Ruthenium Quinonoid Species* [§]**Lever A.B.P.**, Kalinina D., Dares C., Krainova J.

14:40 **1059** *Novel Strategy for the Construction of Medium-Sized Ethers via [1,2]-Shift of Monothioacetal-Derived Sulfur Ylides* **Cao L.**, [§]West F.G.

15:00 **Coffee Break**

Chair(s) - Adeeb Al-Sheikh Ali

15:20 **1060** *The G-C Quartet, a Unique DNA Base Hybrid: Synthesis, Self-Association and Structural Analysis* **Asadi A.**, [§]Perrin D.M.

15:40 **1061** *Metallated Conjugated Materials: Ruthenium(II)-Oligothiophene Complexes* **Kuchison A.M.**, Patrick B.O., [§]Wolf M.O.

16:00 **1062** *Steric and Electronic Effects on Stability, Reactivity, and Luminescence of 4-Coordinate Organoboron Compounds* **Amarne H.**, Rao Y., [§]Wang S.

16:20 End of Session

REMINDER

16:20 Merck Frosst Centre for Therapeutic Research Award Lecture presented by Dennis Hall in Salon 8

IN5 Salon 12

Main Group Chemistry: A Symposium in Honour of Neil Burford, Tristram Chivers and Richard Oakley

Organizer(s) - Roland Roesler and Robin Hicks
Chair(s) - Paul Ragogna

13:20 Alcan Award Lecture presented by Jack Passmore

Introduction of Jack Passmore by Neil Burford

13:20 **1063** *Homopolyatomic Cations of Groups 16 and 17: Structure, Energetics and Chemistry: New Classes of Compounds, Unexpected Structures, Novel Bonding and Physical Properties* **Passmore J.**

14:00 **1064** *Cationic Carbene Complexes of Germanium(II)* **Rupar P.A.**, Staroverov V.N., Ragogna P.J., [§]Baines K.M.

14:20 **1065** *Stable Bent Allenes: A New Avenue in the Main Group Chemistry of Carbon* **Dyker C.A.**, Lavallo V., Donnadiu B., [§]Bertand G.

14:40 **1066** *Non-Classical NHC Complexes from the Reaction of (IMes)AgCl with Main Group Reagents and Osmium Carbonyl Clusters* **Cooke C.**, Pomeroy R., [§]Clyburne J.A.C.

15:00 **Coffee Break**

15:20 **1067** *N-Heterocyclic Carbenes with Inorganic Backbones* [§]Tuononen H.M., **Kausamo A.**, Roesler R., Krahulik K.E.

15:40 **1068** *Heterometallasiloxanes-Novel Si-O-Based Inorganic Ring Systems and Cages* **Edelmann F.T.**, Blaurock S., Edelmann A., Gießmann S., Lorenz V.

16:20 End of Session

REMINDER

16:20 Merck Frosst Centre for Therapeutic Research Award Lecture presented by Dennis Hall in Salon 8

IN6 Salon 4

Nanotechnology: Nanoparticles, Nanowires and Quantum Dots (Joint with MT) (joint with MT7)

Organizer(s) - Jonathan Veinot, Eric Henderson and Arnold Kell
Chair(s) - Arnold Kell

13:20 **1069** *High Pressure Study of Nanostructured Tin Dioxide by Raman Spectroscopy and X-Ray Diffraction* **Dong Z.**, Song Y.

13:40 **1070** *Absolute Quantum Yield Measurements on Upconverting Nanomaterials* **Boyer J.C.**, Bovero E., Sivakumar S., [§]van Veggel F.C.J.

14:00 **1071** *Synchrotron Spectroscopy Analysis of Nanomaterials* **Sham T.K.**

14:40 **1072** *The Origin of Luminescence from Silicon Nanocrystals: A Near Edge X-Ray Absorption Fine Structure (NEXAFS) and X-Ray Excited Optical Luminescence (XEOL) Study of Oxide-Embedded and Freestanding Systems* [§]**Hessel C.M.**, Veinot J.G.C.

15:00 **Coffee Break**

15:20 **1073** *Developing a Viable Interface between Silicon and Neurons: Nanopatterned Surfaces for Neuroregeneration* **Daly B.**, [§]Buriak J.M., [§]Giuliani F.

15:40 **1074** *Fabrication of Ordered Nanoparticle Arrays on Silicon and their Applications* **Qiao Y.H.**, [§]Buriak J.M.

16:00 **1075** *Directed Assembly of Semiconductor Nanowires* [§]**Gates B.D.**, Wang M., Sieb N.R.

16:20 **1076** *Nanoscale Patterning of Size- and Shape-Controlled Metallic Nanoparticles on Semiconductor Surfaces* **Aizawa M.**, [§]Buriak J.M.PAPER WITHDRAWN

16:40 **1077** *Nanoparticle Films: A Novel Platform for Fundamental Studies of Charge Transport* [§]**Dhirani A.-A.**, Dunford J.L., Lam B.

17:00 End of Session

IN9 Salon 7

General

Organizer(s) - Martin Cowie
Chair(s) - John Corrigan

REMINDER

13:20 Alcan Award Lecture presented by Jack Passmore in Salon 12

14:00 **1078** *Novel Palladium β -Diminate Chemistry* **Hadzovic A.**, [§]Song D.

14:20 **1079** *The Use of Tetra(4-pyridyl)amidinate Dirhodium(II) Dimer as a Structural Backbone for Multinuclear Complexes* **Chartrand D.**, Hanan G.S.

14:40 1080 *Photochromic Platinum Terpyridyl Complexes Containing Dithienylethene Ligands* **Roberts M.N.**, Finden J.G., Branda N.R., Wolf M.O.

15:00 Coffee Break

Chair(s) - John Corrigan

15:20 1081 *Synthesis and Reactivity of Diarylamido-Based PNP Pincer Complexes of Scandium* **Scott J.L.**, Basuli F., Mindiola D., Fout A.R.

15:40 1082 *A Lanthanide Phosphinidene Complex* **Masuda J.D.**, Jantunen K.C., Ozerov O.V., Noonan K.J.T., Gates D.P., Scott B.L., Kiplinger J.L.

16:00 1083 *Non-Cyclopentadienyl Actinide Organometallic and Redox Chemistry* **Emslie D.J.H.**, Cruz C.A., Ilango S., Vidjayacoumar B., Ray M.

16:20 1084 *Synthesis and Reactivity of Base-Free Yttrium Complexes Supported by a Novel Carbazole-Based Ancillary Ligand* **Hayes P.G.**, Johnson K.R.D.

16:40 1085 *Synthesis of Pyrazolylborate Supported Lanthanide Dialkyl Complexes and their Reaction with Terminal Alkynes* **Saliu K.**, Cheng J., Takats J.

17:00 End of Session

Macromolecular Science and Engineering Division

MS1 Salon 1

Design and Synthesis of Water-Soluble Polymers and their Applications/General

Organizer(s) - Sundar Sundararajan
Chair(s) - Sundar Sundararajan and Xu Wang

13:20 1086 *Preparation of Micelles Loaded with Biocide* Vyhalkova R., Van de Ven T.G.M., **Eisenberg A.**

14:00 1087 *Dendronized Block Copolymers as Potential Vectors for Gene Transfection* **Wigglesworth T.J.**, Teixeira Jr. F., Axthelm F., Eisler S., Csaba N.S., Merkle H.P., Meier W., Diederich F.

14:20 1088 *Studying Water-Soluble Associative Thickeners by a Combination of Fluorescence and Rheology* Siu H., **Duhamel J.**

14:40 1089 *Electrospray Mass Spectrometry Studies of Carboxylic Acids in Aqueous Solution* **Wilson L.D.**, **Mohamed M.H.**, Peru K., Headley J.

15:00 Coffee Break

15:20 1090 *Water Soluble Multifunctional Cross Conjugated Poly(para-phenylenes): Design, Synthesis and Characterization* Li H., **Valiyaveetil S.**

16:00 1091 *Comparing the Dynamics of Encounters between Chain Ends or Random Intrachain Segments with Pyrene-Labeled Polymers in Solution* Ingratta M., **Duhamel J.**

16:20 1092 *Molecular Dynamics Study of Solid State Structures of LLDPEs with Different Intra-Chain Branch Distributions* Li C., **Choi P.**

16:40 1093 *Advances in Ziegler-Natta Catalysts for Ethylene Polymerization in the Solution Process* **Jaber I.**

17:00 End of Session

MS2 Salon 2

Functional Polymer Architectures and their Applications (Joint with MT) (joint with MT2)

Organizer(s) - Derek Gates
Chair(s) - Daniel Foucher and Colin Cameron

13:20 1094 *New Science and New Bioassays Based upon Functional Polymer Architecture* **Winnik M.A.**

14:00 1095 *Microstructured Polypyrrole Composites* **Cameron C.G.**

14:20 1096 *Living Polymerization: AB Block Copolymers* **Cappello V.**, Noonan K.J.T., Gillon B.H., **Gates D.P.**

14:40 1097 *Nonlinear Light Propagation in Photopolymers: Pathways to Complex and Functional Microstructures* Qiu L., Villafranca A., Kasala K., Shimmell W., Ponte M., Burgess I., **Saravanamuttu K.**

15:00 Coffee Break

15:20 1098 *Complex, Explicit 3D Silicone Structures from Dehydrocarbonative Coupling* **Brook M.A.**, Thompson D.B.

15:40 1099 *Dithienophospholes as Building Blocks for pi-Conjugated Macromolecules* **Durben S.**, Nickel D., Baumgartner T.

16:00 1100 *Fabrication of Porous Conducting Polymer Hybrid Materials for Electrochemical Supercapacitors Applications* **Suppes G.M.**, Deore B.A., **Freund M.S.**

16:20 1101 *Functionalization of Iron Oxide Nanoparticles with Dendritic Molecules* **Martin A.L.**, **Gillies E.R.**

16:40 1102 *Organoboron Polymers as New Functional Materials* Cui C.Z., Parab K., Qin Y., **Jaekle F.**

17:00 End of Session

Materials Chemistry Division

MT2 Salon 2

Functional Polymer Architectures and their Applications (Joint with MS) (joint with MS2)

Organizer(s) - Derek Gates
Chair(s) - Daniel Foucher and Colin Cameron

13:20 Joint with MS2 - See MS2

17:00 End of Session

MT7 Salon 4

Nanotechnology: Nanoparticles, Nanowires and Quantum Dots (Joint with IN) (joint with IN6)

Organizer(s) - Jonathan Veinot, Eric Henderson and Arnold Kell
Chair(s) - Arnold Kell

13:20 Joint with IN6 - See IN6

17:00 End of Session

Organic Chemistry Division

OR3 Salon 8

Catalysis (Joint with IN) (joint with IN3)

Organizer(s) - Cathleen Crudden and Steve Westcott
Chair(s) - Mark Stradiotto and Rui Resendes

13:20 Joint with IN3 - See IN3

16:20 Merck Frosst Centre for Therapeutic Research Award Lecture presented by Dennis Hall

17:00 End of Session

OR6 Salon 11

Conjugated Materials and Heterocycles (Joint with IN) (joint with IN4)

Organizer(s) - Alison Thompson
Chair(s) - Martin Gillis

13:20 Joint with IN4 - See IN4

REMINDER

13:20 Alcan Award Lecture presented by Jack Passmore in Salon 12

15:00 Coffee Break

15:20 Chair(s) - Adeeb Al-Sheikh Ali

16:20 End of Session

REMINDER

16:20 Merck Frosst Centre for Therapeutic Research Award Lecture presented by Dennis Hall in Salon 8

OR12 Salons 13/14

General

Organizer(s) - Dennis Hall and Rik Tykwinski
Chair(s) - John Sorenson

13:20 1103 *Diversity-Oriented Synthesis of Highly Substituted Five-Membered Lactones and Lactams Originating from an Allylboration Reaction of Aldehydes or Imines* **Elford T.G.**, Pelletier E., Ulaczyk-Lesanko A., Hall D.G.

13:40 1104 *Direct CarbonCarbon Bond Formation via Chemoselective Thioester Enolate Formation* **Coltart D.M.**

14:00 1105 *The Conversion of 6-Hydroxycoumarins to 5-Hydroxyindoles* **Stoffman E.J.L.**, **Clive D.L.J.**

14:20 1106 *Boronic Acids: Convertible Tags in Phase-Switch Synthesis* **Mothana S.**, Chahal N., Vanneste S., **Hall D.G.**

14:40 1107 *A Versatile Synthesis of Azaindoles* **Leblanc Y.**, Dufresne C., Lachance N., Leclerc J.-P., Boisvert M., Roy P., Cerat P.

15:00 Coffee Break

15:20 1108 *Direct, Facile Synthesis of N-Acyl Amino Acid Amides* **Thadani A.N.**, Ntaganda R., Milovic T., Scott J., Tiburcio J.

15:40 1109 *Asymmetric α -Functionalization of Acyclic Ketones* **Coltart D.M.**

16:00 1110 *An Inverse-Electron-Demand Diels-Alder Approach to Hetero[5]acenes and Xanthone-Carbazole Hybrid Systems* **Dang A.-T.**, Bodwell G.J., Wituski B., Moritz J.

16:20 End of Session

REMINDER

16:20 Merck Frosst Centre for Therapeutic Research Award Lecture presented by Dennis Hall in Salon 8

Physical, Theoretical and Computational Division

PT3 Salon 10

Computational and Theoretical Chemistry

Organizer(s) - Pierre-Nicholas Roy, Alexander Brown and Mariusz Klobukowski
Chair(s) - Mariusz Klobukowski

REMINDER

13:20 Keith Laidler Award Lecture presented by Albert Stolor in Salon 10

14:00 1111 *New Insights into the Bromination Reaction for a Series of Alkenes in Gas Phase and in Solution* **Islam S.M.**, Poirier R.A.

14:20 1112 *A Density Functional Theory Study on the Catalytic Mechanism of a DNA/RNA Repair Enzyme AlkB* **Liu H.**, **Gauld J.W.**

14:40 1113 *Adsorption of Liquid Benzene on Silica Surfaces: Molecular Dynamics Study* **Wang X.**, **Choi P.**

15:00 Coffee Break

15:20 1114 *Attosecond Science: The Next Frontier* **Bandrauk A.D.**

16:00 1115 *What Drives Weak Acid Ionization in Water? A Computational Study* **Iftimie R.**, Thomas V.

16:20 1116 *Minimal Elements for a Tunable Biochemical Band-Pass Filter* **Roussel M.R.**

16:40 1117 *Density Functional Theory Scaling Properties of Non-Interacting and Exchange Functionals through Legendre Transforms* **Cuevas-Saavedra R.**, Ayers P.W.

17:00 End of Session

PT6 Hall D

Frontiers of Molecular Spectroscopy: Atmospheric and Astrophysical Applications: Part III of Symposium in Honour of Michael Gerry (Joint with EN) (joint with EN2)

Organizer(s) - Yunjie Xu and Wolfgang Jäger
Chair(s) - Holger Müller

13:20 Joint with EN2 - See EN2

REMINDER

13:20 Keith Laidler Award Lecture presented by Albert Stolor in Salon 10

17:00 End of Session

PT7 Salons 15/16

Photochemistry and Photobiology: Probing Excited States Using Experiment and Theory

Organizer(s) - Glen Loppnow and Alexander Brown
Chair(s) - Glen Loppnow

Keith Laidler Award Lecture presented by Albert Stolor in Salon 10

Introduction of Albert Stolor by Dan Wayner

13:20 1118 *Non-Adiabatic Molecular Dynamics and its Quantum Control* **Stolor A.**

14:00 1119 *Long-Range Proton Transfer in Aqueous Acid-Base Reactions* **Siwick B.J.**, Bakker H.J.

14:20 1120 *Theoretical Studies of the Photochemistry of Seeded Clusters* **Peslherbe G.H.**, Mak C.C., Timerghazin Q.K.

15:00 Coffee Break

Chair(s) - Glen Loppnow and Alex Brown

15:20 1121 *Upper Singlet State Dynamics of Metalloporphyrins* **Steer R.P.**, Liu X., Tripathy U., Kowalska D.

16:00 1122 *The Effects of Supramolecular Host Inclusion on the Excited States of Guest Molecules* **Wagner B.D.**, Snow C.A.

16:20 1123 *Luminescent Excited States Probed by Resonance Raman Spectroscopy at Variable Pressure* **Reber C.**, Baril-Robert F.

16:40 1124 *Probing Excited States by Magnetic Circular Dichroism* **Ziegler T.**, Seth M., Krykunov M.

17:00 End of Session

PT10 Salon 6

**Spectroscopy at Surfaces and Interfaces
(Joint with AN) (joint with AN8)**

Organizer(s) - Alex Brolo and Dennis Hore
Chair(s) - Alex Brolo

REMINDER

13:20 Keith Laidler Award Lecture presented by Albert Stolow in Salon 10

14:00 Joint with AN8 - See AN8

17:00 End of Session

PTP Hall A

Posters

Organizer(s) - Wolfgang Jäger
Chair(s) - Wolfgang Jäger

From 17:00 until 19:00

1125 *Peptide/Peptide Interactions: Models for Protein Secondary Structure and Intelligent Drug Design (in the Context of Alzheimer's Disease)* Roy S., Mothana B., [§]Rauk A.

1126 *On the Origin of Circular Dichroism in Trigonal Dihedral Cobalt (III) Complexes of Electronically Unsaturated Bidentate Ligands* Fan J., Ziegler T.

1127 *Studies of Potential Sources Contributing to Mercury in the Urban Atmosphere* Cheng I., [§]Lu J.Y.

1128 *A Novel Approach to Gas Sensing in the Atmosphere with Path-Integrated Optical Systems: Locating Emission Sources and Measuring Emission Fluxes* Lytkine A., Jäger W., Tulip J.

1129 *Atmospheric Heavy Metal Concentrations and Deposits in Toronto, Ontario and Yellowknife, Northwest Territories, Canada* Zhang L., [§]Lu J.Y., Zhang C.X.Z.

1130 *Modeling and Simulations of the Low-Cu²⁺-Occupancy Form of the Mammalian Prion Protein Octarepeat Region: Gaining Insight into Cu²⁺-Mediated β -Cleavage* Pushie M.J., [§]Vogel H.J.

1131 *Experimental and Computational Examination of Tryptophan and Solvent Interactions with the High-Cu²⁺-Occupancy Form of the Mammalian Prion Protein Octarepeat Region* Pushie M.J., [§]Vogel H.J.

1132 *Oxidative Stability and Storage Behavior of Fatty Acid Esters Mixtures* [§]Marangoni D.G., Gillis S.

1133 *Agonist-Induced Redistribution of the Human μ -Opioid Receptor (hMOR) in HEK 293 Cell Membranes* Sun T., Burns D., [§]Dahms T.E.S.

1134 *Vibrational Spectra of Ca₂IrH₅ and Ca₂IrD₅* Barsan M.M., Moyer Jr. R.O., Butler I.S., Gilson D.F.R.

1135 *Evidence for Impurity Based Initiation of the Reaction of Alkenes with the Hydrogen Terminated Silicon Surface* Mischki T.K., Lopinski G.P., [§]Wayner D.D.M.

1136 *Solid-to-Liquid Phase Transitions in Supported Phospholipid Bilayers* Badia A., Ramkaran M.

1137 *Photophysics of Soret-Excited Corroles in Solution* Tripathy U., Liu X., [§]Steer R.P.

1138 *Theoretical Investigation of the Photo-Ionization of Ion Pairs in Solvent Clusters* Koch D.M., Nguyen T.-N., [§]Peslherbe G.H.

1139 *Low Power Fluorescence Upconversion in a Zinc Metalloporphyrin via Triplet-Triplet Annihilation* Sugunan S.K., Tripathy U., Paige M.F., [§]Steer R.P.

1140 *Nonlinear Dynamics in the Catalyzed Bromate-Aminophenol Reaction* Harati M., Wang J.

1143 *Multi Stage Wave Formation in the Catalyzed Bromate-Aminophenol Reaction* Harati M., Wang J.

1141 *Effect of Substitutions on the Photophysics of Soret-Excited States of Metalloporphyrins* Liu X., Tripathy U., [§]Steer R.P.

1142 *The Excited State Chemistry of Coumarin Based Chromophore-Quencher Dyads: Charge Transfer Dynamics Leading to Long Lived Charge Separation.* El-Dali A., Kudale A., [§]Bodwell G.J., Thompson D.W., Szakacs C., Mezey P.G.

1144 *Two-Color Resonance Enhanced Multiphoton Ionization Spectroscopic Study of the Rydberg States of Acetone* [§]Al-Basheer W., Heden M., Shi Y.J.

1145 *Exploration of the Protective Effects of Tryptophan on DNA Photodamage* Oladepo S.A., Loppnow G.R.

1146 *The Effect of Solvent and Molecular Oxygen Concentration on the Spectral and Photophysical Properties on MgTPP in the S1 State* Kowalska D., [§]Steer R.P.

1147 *CO Hydrogenation on Fe-Co Alloy Surfaces* [§]Lo J.M.H., Ziegler T.

1148 *Characterization of Weak Interactions between Aromatic Amino Acids and the Natural Nucleobases* [§]Rutledge L.R., Durst H.F., Wetmore S.D.

1149 *A Computational Study of C8-Purine DNA Adducts* Millen A.L., Wetmore S.D.

1150 *Minimizing Energy of Lennard-Jones Clusters with Coordinate Transformations* Vinogradov I., Ayers P.W.

1151 *Development and Implementation of a New Computational Analysis Tool for NMR Chemical Shifts* Walker S.M., [§]Schreckenbach G.

1152 *Kinetic Model of Electrocatalytic Activity in Supported Catalyst Nanoparticle Arrays* Wang L., Eikerling M.H.

1153 *A Computational Study of Substituent Effects on Stacking Interactions* [§]Chhikara A., Wetmore S.D.

1154 *Interaction Between Class Iia Bacteriocins and s Bacterial Cell Membrane Model: A Molecular Dynamics Simulation Study* Soliman W., Bhattacharjee S., [§]Kaur K.

1155 *Finding the Minimum Energy Reaction Path Using the Fast Marching Method* Liu Y., Burger S.K., Sarkar U., [§]Ayers P.W.

1156 *A Computational Study of the CO₂ Reduction by Ruthenium Benzothiazole* Islam S.M., Pickup P.G., Poirier R.A.

1157 *Design of a Computational Model for the Hydrolysis of Deoxyuridine* Przybylski J.L., Wetmore S.D.

1158 *A Bethe-Goldstone Formulation of the Valence Bond Model* [§]Cullen J.

1159 *Rapid and Efficient Picosecond Laser Pulse Molecular Control* Zaari R., Brown A.

1160 *Ab initio Molecular Dynamics with the Semiclassical Initial Value Representation* Wong S.Y., Carreón-Macedo J.-L., Roy P.-N., Brown A.

1161 *A Theoretical Study on the Mechanism of the Reaction Catalyzed by UDP-Glucose Dehydrogenase* Huang W., [§]Gauld J.W.

1162 *Simulation Studies of Floppy Carbohydrates in Solution: The Importance of Solvation Effects* [§]Castillo Rijo N., Lowary T.L., Roy P.-N.

1163 *Ring Polymer Molecular Dynamics Approach* Huh Y., Roy P.-N.

1164 *Using MCTDH with Optimal Control Theory and Filter Techniques* Schröder M., Carreón-Macedo J.-L., [§]Brown A.

1165 *Photoswitching of Fluorescent Proteins: A Computational Approach* Timerghazin Q.K., Ai H., Campbell R.E., Brown A.

1166 *Effects of Flexibility on the Classical Stability of Water Clusters* Tritzant Y., Roy P.-N.

1167 *Solvation Structure and Thermodynamics of Guanidinium Ions in Aqueous Clusters* Mak C.C., Koch D.M., Peslherbe G.H.

1168 *Theoretical and Experimental Investigation of Radical Molecular Arrays on Hydrogen-Terminated Silicon(100)-2x1 II* Shimoi Y., [§]DiLabio G.A., Dogel S.A., Lin S., Ingold K.U.

1169 *Dimerization of Acyclic and Cyclic Stannylene Acetals: Regioselectivity and Energetics* Whittleton S.R., Grindley T.B., Boyd R.J.

1170 *Simulation Studies of Hydrogen Bond Dynamics in Charged and Hydrated Protein-Ligand Complexes in the Gas Phase* Seo M., Kitova E.N., Klassen J.S., Roy P.-N.

1171 *Tracer Diffusion in Rough Sphere Fluids* [§]Thachuk M., Kravchenko O., Sokolovskii R., Patey G.

1172 *Quadruplex Formation of the Human Telomere: An Atoms in Molecules Investigation* Taylor A., Taylor J., Watson G.W., [§]Boyd R.J.

1173 *Energetics, Structure and Dynamics of Quantum Clusters in their Ground State* Cuervo J.E., Boninsegni M., Roy P.-N.

1174 *Structure and Properties of Peloruside A: Towards an Understanding of Anti-Cancer Activity* Gajewski M., Klobukowski M., Tuszyński J.

1175 *New Families of Model Core Potentials for Au* [§]Zeng T., Sadlej A.J., Klobukowski M.

1176 *Calibration of New Model Core Potentials for Main Group Elements* [§]Zeng T., Mori H., Miyoshi E., Klobukowski M.

1177 *Multiple Scale Modeling of Supramolecular Architectures in Solution* Yamazaki T., Fenniri H., Kovalenko A.

1178 *Molecular Theory of Hydrodynamic Boundary Conditions in Nanofluidics* Kobryn A.E., Kovalenko A.

Undergraduate Student Poster Competition

UPCA Hall A

Analytical

Organizer(s) - Glen Loppnow
Chair(s) - Glen Loppnow

From 17:00 until 19:00

1179 *Capillary Electrophoresis of Proteins: Self-Assembled Diblock Polymer Coating vs. Commercial Coating* Da Cunha R., MacDonald A.M., [§]Lucy C.A.

1180 *Comparing Deconvolution and Valley-Drop Integration Methods for Determining Enantiomer Fraction* D'Agostino L.A., Asher B.J., Wong C.S., Harynuk J.J.

1181 *Solid-Phase Extraction of Pentachlorophenol Using Magnetically Functionalized Multi-Walled Carbon Nanotubes* Davies J.E., [§]Burk R.C.

1182 *Preparation of a Carbon Based Aniline Stationary Phase for High Performance Liquid Chromatography* Baergen A.M., Chambers S.D., [§]Lucy C.A.

1183 *Investigation of the Two State Adsorption of Benzotriazole on Gold(111)* Jennings M., Zamylny V.

1184 *High Spatial Resolution Analysis of Fungal Cell Biochemistry with Synchrotron FTIR* Jilkine K., Gough K.M., Kaminsky S.G.W.

1185 *Electroosmotic Pumping in Glancing Angle Deposited Nanostructured SiO₂ Thin Films* Jim S., Bezuidenhout L.W., Taschuk M.T., [§]Brett M.J.

1186 *Handling Analytical Calibration Data: A Dry Laboratory for Undergraduate Chemistry Students* Lam J., [§]Harynuk J.J.

1187 *The Surface Modification of a Polyurethane Biomaterial for Bacterial Biofilm Prevention* Leclair A., [§]Gray-Munro J.E.

1188 *Minimizing FRET in DNA Microarrays* Towle K., Pinnock C.L., Elyazbi A., Pillai S., [§]Loppnow G.R.

1189 *Method Development and Analysis of Arsenic Species in Blood Serum Using Anion Exchange Chromatography Coupled with Inductively Coupled Plasma Mass Spectrometry* Yu L., Lu X., [§]Le X.C.

UPCB Hall A

Biological/Medicinal

Organizer(s) - Glen Loppnow
Chair(s) - Glen Loppnow

From 17:00 until 19:00

1190 *Creating Red Fluorescent Protein Based Ca²⁺ Sensors* Cotton D.W., Huiwang A.I., [§]Campbell R.E.

1191 *Investigating Phosphopeptides by Mass Spectroscopy* Fung A., Payoe R., [§]Fahlman R.P.

1192 *The Roles of 3 AA Side Chains in the Function of Escherichia coli Citrate Synthase* Gao Y., Duckworth H.W.

1193 *Probing Conformational Changes of Proteins Using Fluorescently-Labeled Aptamers* Nguyen N.N., Zhang H., Le X.C.

1194 *Multifunctional Compounds for Alzheimer's Disease Therapeutic Agents* Page B.D.G., Scott L.E., [§]Orvig C.

1195 *UV Resonance Raman Spectroscopy: Toward an Understanding of Antimicrobial Peptide Structure-Function Relationships* Quan B.D., [§]Ianoul A.

1196 *Detection of Photochemical Damage in Polymerized Adenine by Molecular Beacons* Turk C.J., Loppnow G.R.

1197 *Determination of the Subcellular Location of a Key Enzyme Involved in Sex Pheromone Biosynthesis by the Female Yellow Mealworm Beetle, Tenebrio molitor* Van Den Bosch S., Vanderwel D.

1198 *Molecular Mechanism of pEM-2 Activity* Won A., [§]Ianoul A.

UPCI Hall A

Inorganic

Organizer(s) - Glen Loppnow
Chair(s) - Glen Loppnow

From 17:00 until 19:00

1199 *Development of Aptamer-Gadolinium Conjugates as MRI Contrast Agents* Beking M.A., [§]DeRosa M.C.

1200 *The Quest for a Zirconium-Boron Bond* Burford R.J., Garon C.N., Fontaine F.-G., Westcott S.A.

1201 *Synthesis of Novel Fluorene-Based Blue-Emitting Polymers for Polymer Light-Emitting Diode (PLED) Applications* Coumont L.S., McFarlane S.L., Piercey D.G., Sirtoksi M., Veinot J.G.C.

1202 *Three New Ternary Compounds in the Zr-Si-As System* Gaultois M.W., Grosvenor A.P., Mar A.

1203 *Synthesis and Investigation of Blue Light-Emitting Polyfluorene-Based Materials Containing Sulfur, Bromine and Fluorine* [§]Glover L.A.M., McFarlane S.L., Veinot J.G.C.

1204 *Developing Luminescent Aptamer-Based Biosensors Using Excimer and Monomer Emission* Hosseini B., [§]DeRosa M.C.

1205 *Starburst Dithieno[3,2-b;2',3'-d]phospholes with Main Group Element Cores* Kuhlmann M., Durben S., [§]Baumgartner T.

1206 *Improved Synthesis and Characterization of Water Soluble Amine Terminated Au Nanoparticles*
Leontowich A.F.G., Lu Y., Paige M.F., Kraatz H.B., [†]Scott R.W.J.

1207 *Platinum-Aniliny-Oxazoline Complexes as Cisplatin Analogues* **MacInnis T.D.**

1208 *Effect of Surfactants and Cross-Linkers on Gold Nanoparticle Agglomeration in Sol-Gel Matrices*
Malcolm A.C., Vreugdenhil A.J., Parnis J.M.

1209 *Selective Self-Assembly of Micron Scale Components under Dry Conditions* **Miller M.S.**, Davidson G.J.E., [†]Breen Carmichael T.

1210 *Asymmetric Phosphaalkene Polymers* **Puetz K.**, Dugal-Tessier J., Dake G.R., [†]Gates D.P.

1211 *Cyanometallate Coordination Polymers with Amino-Thiol Ligands* **Sue K.C.**, [†]Leznoff D.B., Kobayashi M., Geisheimer A.R.

1212 *Evidence for the Formation of Trithiatetrazocinyl Radical Anions* **Yu X.**, [†]Boeré R.T., Roemmele T.L.

1213 *Preparation of Cyclopentadienyl Salicylaldiminato Complexes of Chromium(III)* **Zhou W.**, [†]Smith K.M.

1214 *Synthesis and Reactivity of N-Heterocyclic Carbene Complexes from Bis(alkylimidazolium) Salts* **Zilke L.**, [†]Prokopchuk E.

UPCO Hall A

Organic

Organizer(s) - Glen Loppnow
Chair(s) - Glen Loppnow

From 17:00 until 19:00

1215 *Understanding the Organization of Polyphenylbenzenes in Molecular Materials* **Arseneault P.-M.**, Gagnon E., Maris T., [†]Wuest J.D.

1216 *Electron Withdrawing Abilities of the Trifluoromethyl Group in the Excited State* **Burns M.D.**, Lukeman M.

1217 *Synthesis of α -(1 \rightarrow 5)-Linked Oligomers of L-Arabinofuranose as Ligands for an Active Site Mutant α -L-Arabinofuranosidase* **Byrns S.C.**, [†]Lowary T.L.

1218 *Non-Linear Effect Study for Catalytic Asymmetric Alkenylboration of α,β -Unsaturated Ketones* **Grosu F.**, Chan A., [†]Chong J.M.

1219 *Attempts to Optimize a Novel Anionic Aromatic Substitution Reaction Involving a Diphenylphosphinoyl Group* **Kiemele E.R.**, [†]Keay B.A.

1220 *Synthesis of New Discotic Liquid Crystals Derived from Trinaphthylenes* **Lynett P.T.**, [†]Maly K.E.

1221 *Towards DNA Modification for Aptamer-Based Structural Probes* **Pallister P.J.**, [†]DeRosa M.C.

UPCP Hall A

Physical

Organizer(s) - Glen Loppnow
Chair(s) - Glen Loppnow

From 17:00 until 19:00

1222 *A Computational Study of Tungsten(II)-Catalyzed Rearrangements of Norbornadiene* **Berner G.M.**, [†]East A.L.L., Mihichuk L., Morcom A.D.

1223 *Effects of Surfactant Doping on the Electrodeposition of Copper in Imidazolium-Based Ionic Liquids* **Bond T.M.**, Burgess I.J., Scott R.W.J., Dash P.

1224 *An Investigation of the Reactivity of Aldimines with Boron Derivatives* **Bushnell E.A.C.**, Gauld J.W., [†]Thadani A.N.

1225 *Computational Studies of C8-Guanine Fluorescent Probes* **Churchill C.D.M.**, Millen A.L., Manderville R.A., [†]Wetmore S.D.

1226 *Porphyry Derivatized Sol-Gels for Investigating Triplet-Triplet Annihilation* **Dasog M.**, Paige M.F., Scott R.W.J., [†]Steer R.P.

1227 *Molecular Dynamics Calculations of Molecular Volumes* **Boon N.**, **Degliant E.**, Dance P., Thiele L., Dinh V., [†]Weinberg N.

1228 *Aluminum Metal Thin Films by Vapour Deposition* **Delahunt J.R.**, [†]Brazeau A.L., [†]Barry S.T.

1229 *Approximate Solutions of Diffusion Equations Describing Reactions in Viscous Media* **Dance P.**, **Edwards E.**, **Basilevsky M.**, [†]Weinberg N.

1230 *Pulse Fourier-Transform NMR Spectroscopy in the Earth's Magnetic Field* **Feland B.**, Wasylishen E., [†]Wasylishen R.E.

1231 *Re-Evaluating the Alkyne Bond* **Field A.P.**, [†]Mawhinney R.C.

1232 *Electro-Optic Effects of Alkyl Thiol-Capped Semiconducting CdTe Nanoparticles in Nematic Liquid Crystals* **Kinhead B.**, Qi H., [†]Hegmann T.

1233 *Computational Studies of Photoabsorption of Substituted Coumarins* **Koh S.**, Timerghazin Q.K., Key J., Cairo C.W., [†]Brown A.

1234 *Comparison of the Selective Reductive Desorption of Alkanethiol SAMs at Au Bead and Planar Electrodes* **Lemay D.M.**, [†]Shepherd J.L.

1235 *Effects of Hydrogen-Bonding on the Vibrational Absorption and Vibrational Circular Dichroism Spectra of Methyl Lactate in Methanol* **Liu Y.**, Losada M., [†]Xu Y.

1236 *Molecular Dynamics Simulations of Solubility Equilibria in Charged Aqueous Solutions of NaCl* **Louwersheimer J.**, McLoughlin C., Verhoef E., [†]Weinberg N.

1237 *Fluorescence-Based Competitive Binding Studies of Cucurbit[n]urils* **O'Brien J.A.**, [†]Wagner B.D.

1238 *Molecular Dynamics Study of Reaction Kinetics in Viscous Media* **Perkins J.**, Edwards E., Dance P., [†]Weinberg N.

1239 *Hydrogen-Bonding Properties of Potential Universal Nucleobases* **Shim J.**, Przybylski J.L., [†]Wetmore S.D.

1240 *Evaporation Dynamics of Aqueous Nanodroplets* **Van Klei C.**, McLoughlin C., Dance P., [†]Weinberg N.

0328 *Bent-Core LC Decorated Gold Nanoparticles: Self-Assembly and Electro-Optic Effects in Mixtures with a Bent-Core SmCP_A Host* **Marx V.M.**, **Girgis H.**, Heiney P.A., [†]Hegmann T.

Wednesday AM

Analytical Chemistry Division

AN1 Salon 5

Analytical and Environmental Toxicology (Joint with EN) (joint with EN1)

Organizer(s) - Chris Le and Xing-Fang Li
Chair(s) - Paul Yang and Jessica Boyd

08:00 1241 *Determination of Perfluorinated Compounds in Environmental Samples by Using HPLC-MS/MS* **Cai Y.**, Cui L., Liao C., **Jiang G.**

08:40 1242 *Chlorinated vs. Chloraminated Drinking Water: Toxicity-Based Identification of Disinfection By-Products Using ESI-MS and ESI-MS/MS* **Richardson S.D.**, Crumley F.G., Fasano F., Plewa M.J., Wagner E.D., Mize T.H., Angel P., Orlando R., Williamson L.N., Bartlett M.G.

09:20 1243 *Simultaneous Analysis of Free Estrogens and their Conjugates in Water at Sub- to Low-Part Per Trillion Levels by Column-Switching Chromatography/Polarity-Switching Tandem Mass Spectrometry* **Qin F.**, Zhao Y.Y., Sawyer M., [†]Li X.F.

09:40 Coffee Break

Chair(s) - Camille Hamula and Hongquan Zhang

10:00 1244 *Molecular Switches and Quantum Dots for Nano-Scale Nucleic Acid Biosensors* **Krull U.J.**, Massey M., Algar W.R.

10:40 1245 *Analytical Applications of Micro Free Flow Electrophoresis (μ FFE)* **Bowser M.T.**, Fonslow B.R., Turgeon R., Mosing R.K.

11:20 1246 *NMR-Based Metabolomics for Assessing Earthworm Stress from Exposure to Sub-Lethal Concentrations of Organic Chemicals in Soil* **Simpson M.J.**, Simpson A.J., McKelvie J.R., Xu Y., Brown S.A.E., Lankadurai B.P., Yuk J.

11:40 1247 *Molecular Characterization of Nickel Species in Aerosols: Comparison of Synchrotron Xanes and Sequential Leaching* **Ajiboye B.**, Warner J., **Cutler J.**, Throssell C., Keller N., Hall G., Eik H., Spiers G., Dutton M.

12:00 End of Session

AN4 Salons 13/14

Nanoscale Materials and Devices for Chemical and Biological Sensing (Joint with MT) (joint with MT5)

Organizer(s) - Stephane Evoy and Wayne Hiebert
Chair(s) - Stephane Evoy

08:00 1248 *Surface Templating Using a Photolabile Terpolymer in Building a Matrix Isolation DNA Biosensor* **Lim Y.**, Krull U.J.

08:20 1249 *Surface Modification of Poly(dimethylsiloxane) with a Perfluorinated Alkoxysilane for Selectivity towards Fluorous Tagged Peptides* **Horton J.H.**, Oleschuk R.D., Wang D.

08:40 1250 *Development of Bioassays Utilizing Electrochemically Grafted Layers on Thin Carbon Films* **Laurentius L.**, [†]McDermott M.T.

09:00 1251 *Stabilization of the Si(111) Organic Interface for Biosensing* **Mischki T.K.**, Lopinski G.P., [†]Wayner D.D.M.

09:20 1252 *Thiamine Catalyzed Bioorthogonal Cross-Coupling of Aromatic Aldehydes on Silicon Surfaces in Aqueous Media* **Hoop K.A.**, Mischki T.K., Lopinski G.P., Wayner D.D.M., [†]Pezacki J.P.

09:40 Coffee Break

10:00 1253 *Structural Design of Micro- and Nanomechanical Resonators for Sensing Applications* **Vengallatore S.**

10:40 1254 *Block Copolymer Route to High Throughput Biosensors* **Chen X.**, Poulis B., [†]Bazuin C.G., Prud'homme R.E., Pellerin C.

11:00 1255 *Optical Nanoprobes for Biomolecule Detection* **Bravo-Vasquez J.P.**, Dai S., [†]Fenniri H

11:20 1256 *Ultrasensitive Detection of HIV-1 Protease Using Single Walled Carbon Nanotube/Gold Nanoparticle Modified Electrodes* **Mahmoud K.A.**, Hrapovic S., [†]Luong J.H.T.

11:40 1257 *Nanometric Colorimetric Sensors for Improvised and Conventional Explosives* **Apblett A.W.**, Materer N.F., Barber K.N.

12:00 End of Session

AN5 Salons 15/16

Nanoscale Phenomena in Electrochemistry

Organizer(s) - Richard McCreery
Chair(s) - Richard McCreery

08:20 1258 *Voltammetric Responses of Redox Active Cations and Anions at Electrodes Modified with Amine Functionalized Mesoporous Silica Thin Films* **Villemure G.**, Liu X.

08:40 1259 *Electrochemical and Infrared Spectroscopy Studies of Self-Assembled Monolayers Containing Ionizable Headgroups* **Burgess I.J.**, Rosendahl S.M., Barlow B.C.

09:00 1260 *Electroactive Binary Composition Self Assembled Monolayers* **Lennox R.B.**, Lee L.Y.S., Shepherd J., Kassam A.

09:40 Coffee Break

10:00 1261 *Electrochemiluminescence from CdSe and Carbon Nanocrystals* **Chen Y.**, Haroun S., Zhou J., Booker C.J., [†]Ding Z.

10:40 1262 *Synthesis and Electrochemical Study of Nanoporous Pt-Ir Materials* **Holt-Hindle P.**, [†]Chen A.

11:00 1263 *Quantification of the Spontaneous Chemical Modification of Carbon Black by Diazonium Coupling* **Smith R.D.L.**, Pickup P.G.

11:20 1264 *Nanoscale Two-Component Molecular Layers at Au Surfaces* **Shewchuk D.M.**, [†]McDermott M.T.

11:40 1265 *Molecular Memory Devices Based on Redox Reactions in Molecular Junctions* **McCreery R.L.**, Barman S., Deng F., Wu J.

12:00 End of Session

AN8 Salon 6

Spectroscopy at Surfaces and Interfaces (Joint with PT) (joint with PT10)

Organizer(s) - Alex Brolo and Dennis Hore
Chair(s) - Dennis Hore

08:00 1266 *Near-Field Infrared Nanoscopy and Nanospectroscopy* **Hillenbrand R.**

08:40 1267 *In situ ATR-FTIR Studies on the Adsorption of Organoarsenicals on Iron (Oxyhydr)oxides* **Al-Abadleh H.A.**, Duggal M., Hoang T.

09:00 1268 *In-situ ATR-FTIR Studies on the Interaction of Phosphate Species with Magnesium Surfaces* **Gray-Munro J.E.**, Strong M.

09:20 1269 *Linear Nanostructure Formation of Trimethylene Sulfide-Derived Nanostructures on p- and n-Type H-Silicon(100)-2x1* **DiLabio G.A.**, Dogel S.A., Zikovsky J., Pitters J.L., Wolkow R.A.

09:40 Coffee Break

10:00 1270 *Development of Nano-Structured Electrodes for SERS Studies of Model Biomembranes* **Vezvaie M.**, Brosseau C.L., Kycia A., [†]Lipkowski J.

10:20 1271 *Polarized ATR Spectroscopy Studies of D54-DMPC/Cholesterol Bilayers Coated on Sephadex G50 Beads* **Li J.**, Henry B., [†]Lipkowski J.

10:40 1272 *Examination of Fungal Spores Using Surface Enhanced Raman Scattering* **Izenor M.**, [†]Gough K.M., Kaminsky S.G.W.

11:00 1273 *Design of Nanoparticle-Based Contrast Agents for Live Cell Imaging of Cell Surface Receptors* **Kennedy D.C.**, [†]Pezacki J.P.

11:20 1274 *Structure of Water Molecules at the Interfaces of Silica and Aqueous Salt Solutions: Cation Effects* **Yang Z.**, Li Q., [†]Chou K.C.

11:40 End of Session

Biological and Medicinal Chemistry Division

BM4 Riverview

Chemistry and Biology of Nucleic Acids

Organizer(s) - Andrew MacMillan and Peter Unrau
Chair(s) - Andrew MacMillan and Peter Unrau

08:00 1275 *Discovery of a Novel Amidotransferase Involved in the Modification of Archaeal tRNA* Masiyanise V., Phillips G., Maxwell A., El Yacoubi B., de Crecy-Lagard V., [§]Wata-Reuyl D.

08:40 1276 *Uniform Accuracy in Ribosomal Protein Synthesis* [§]Kothe U., Rodnina M.V.

09:20 1277 *A Study of Cation-Directed Self-Assembly of Guanosine Derivative Using NMR and ESI-MS* Kwan I.C.M., Mo X., She Y.-M., [§]Wu G.

09:40 Coffee Break

10:00 1278 *Nucleic Acid-Small Molecule Interactions: Structure and Binding Studies* [§]Johnson P.E., Tavares T.J., Neves M.

10:40 1279 *Marked for Death: A Role of tRNA^{Arg} in Targeting Proteins for Degradation* [§]Fahlman R.P.

11:00 1280 *In Vitro Screening for High Affinity siRNA Interactions with Hepatitis C Virus RNA* Sagan S., Luebert C., [§]Pezacki J.P.

11:20 1281 *Folding of the S-Adenosylmethionine Riboswitch* Heppell B., [§]Lafontaine D.A.

11:40 1282 *On the Discovery and Mechanism of Catalytic Nucleic Acids with a Protein-Like Repertoire* Perrin D.M., Thomas J.M., Ting R.T., Hollenstein M., Hipolito C., Lam C.

12:00 End of Session

BM8 Salon 3

Small Molecule Drug Design and Development (Joint with OR) (joint with OR11)

Organizer(s) - Amitabh Jha
Chair(s) - Virinder Parmar

08:20 1283 *Greener Biocatalytic Route for the Synthesis of Nucleosides as Small Molecular Weight Drug Candidates* [§]Prasad A.K.

08:40 1284 *Applications of Aziridines in PET Radiopharmaceutical Chemistry: Systematic Ring-Opening of Aziridines with Fluorinating Agents* [§]van Oosten E.M., Stephenson K.A., Wilson A.A., Yudin A.K., Houle S., [§]Vasdev N.

09:00 1285 *Biology Oriented Synthesis* [§]Waldmann H.

09:40 Coffee Break

10:00 1286 *Design and Development of Disease Modifying Agents for Neurological Disorders* [§]Weaver D.F., Carter M.D., Barden C., Lu E., Jacobo S., Gao F., Beshara C., Tiedje K., Buhendwa M.G., Galloway T.

10:40 1287 *Development of Phenothiazine Derivatives for the Treatment of Alzheimer's Disease* [§]Darvesh S., McDonald R.S., Darvesh K.V., Martin E.

11:00 1288 *An Evaluation of Glucose Transport Inhibition as a Mechanism for Sensitizing Resistant Tumor Cells to Death Receptor Signalling* Wood T.E., [§]Batey R.A., [§]Schimmer A.D., Dalili S.

11:20 1289 *Molecular Modeling Study on a Chemically Diverse Series of Cyclogenase-2 Selective Inhibitors: Generation of Predictive Pharmacophore Model Using the Catalyst[®]/HypoGen[®] Module* [§]Chopra M.

11:40 End of Session

Environment Division

EN1 Salon 5

Analytical and Environmental Toxicology (Joint with AN) (joint with AN1)

Organizer(s) - Chris Le and Xing-Fang Li
Chair(s) - Paul Yang and Jessica Boyd

08:00 Joint with AN1 - See AN1

09:40 Coffee Break

10:00 Chair(s) - Camille Hamula and Hongquan Zhang

12:00 End of Session

EN3 Salon 9

Bioinorganic Chemistry-General (Joint with IN) (joint with IN1)

Organizer(s) - Juergen Gailer and Farideh Jalilvand
Chair(s) - Martin Stillman

08:20 1290 *Medicinal Inorganic Chemistry* [§]Orvig C.

09:00 1291 *Interactions of the Anti-Cancer Ru(III)-Complexes with Human Serum Transferrin* Cetinbas N., [§]Walsby C.J.

09:20 1292 *Probing the Effects of Redox-Mediated Protein Misfolding in Biology: Exploring the Role of Sulfur-Based Redox Events in Disease* [§]Kennepohl P., Karunakaran-Datt A., Martin-Covelli D., Diaconescu V.

09:40 Coffee Break

Chair(s) - Pierre Kennepohl

10:00 1293 *Understanding Iron Acquisition in Staphylococcus aureus: Studies Using Magnetic Circular Dichroism Spectroscopy and Mass Spectrometry* Pluym M., Tiedemann M., Muryoi N., Heinrichs D.E., [§]Stillman M.J.

10:20 1294 *Investigation of Glucosamine Conjugates as Potential ^{99m}Tc-Based Imaging Agents* [§]Bowen M.L., Chen Z.F., Adam M.J., [§]Orvig C.

10:40 1295 *Casting Light on the Brain* [§]Nichol H., McCrear R.P.E., Tse J., Popescu B.F.Gh.

11:00 1296 *Employing the Raman Signature of Carborane in Cellular Imaging* Duguay D., Kennedy D.C., Burchell T., Pezacki J.P., [§]Richeson D.S.

11:20 1297 *Spectroscopic Studies of Methyl Coenzyme M Reductase (MCR): A Bio-Organometallic Enzyme* [§]Telser J., Kunz R.C., Dey M., Ragsdale S.W., Lees N.S., [§]Hoffman B.M.

11:40 1298 *Investigating the Biological Chemistry of Nitroxyl* [§]Bohle D.S., [§]Phillips H.A.

12:00 End of Session

Industrial Chemistry

IC3 Hall D Foyer

Professional Chemists and Science Policy Forum

Organizer(s) - Gerry Tertzakian and Wendy Lam
Chair(s) - Michael Gaultois and Wendy Lam

08:00 Introductory Remarks

08:15 What Professions are Chemistry Graduates in? How Chemists Apply their University Training to Industrial, Business or Management Pursuits Panel - Sunil Chaudhary, Steve Kuznicki, Leslie May, Mary Jane McKay-Carey and Chris Swyngedouw

10:00 Coffee Break

Science Policy Forum

10:30 The Professional Chemist: Right to Practice? Panel - Pierre Beaumier, Roger Cowles, Jeff Cutler, Jim Frazee, David Naranjit, Adrian Pritchard, Dave Schwass and Paul West

The CSC Science Policy Forum will address professional status, accreditation and contributions to science policy. Panelists will discuss the environmental drivers and present an update on their respective chemistry association.

12:00 End of Session

Inorganic Chemistry

IN1 Salon 9

Bioinorganic Chemistry-General (Joint with EN) (joint with EN3)

Organizer(s) - Juergen Gailer and Farideh Jalilvand
Chair(s) - Martin Stillman

08:20 Joint with EN3 - See EN3

09:40 Coffee Break

10:00 Chair(s) - Pierre Kennepohl

12:00 End of Session

IN3 Salon 8

Catalysis (Joint with OR) (joint with OR3)

Organizer(s) - Cathleen Crudden and Steve Westcott
Chair(s) - Laura Turculet and Michael Shaver

08:00 1299 *Updates on Natural Zeolite Assisted Cracking of Oil Sands and Light Hydrocarbon Extraction of Bitumen* Yin H., Junaid A.S.M., Wei W., An W., McCaffrey W.C., [§]Kuznicki S.M.

08:20 1300 *Profiling an Optimal Pt(II) Based Methane Activation Catalyst by Density Functional Theory* Zhu H., [§]Ziegler T.

08:40 1301 *Group 3 Amidate Complexes: Fundamental Reactivity and Applications in Hydroamination and ϵ -Caprolactone Ring-Opening Polymerization* Stanlake L.J.E., [§]Schafer L.L.

09:00 1302 *Highly Active Catalysts for Ring Opening Polymerization of Lactide* [§]Mehrkhodavandi P., Douglas A.F., Labourdette G.

09:20 1303 *A New and Remarkably Active Family of Transfer Hydrogenation Precatalysts that do not Feature an Ancillary Ligand N-H Functionality* Lundgren R.J., Rankin M.A., [§]Stradiotto M.

09:40 Coffee Break

10:00 1304 *Aluminum Catalyzed Cyclotrimerization of Dimethylcyanamide and Substituted Guanidines* Priem J., Rowley C.N., Dornan P., Woo T.K., Barry S.T., [§]Richeson D.S.

10:20 1305 *New Approaches in Palladium Catalyzed Coupling Reactions: Design of Direct Routes to Carbon-Carbon Bond Formation* Arndtsen B.A., Black D.A., Beveridge R., Lu Y.

10:40 1306 *Palladium-Catalyzed Olefin Dioxygenation* Li Y., Song D., Dong V.M.

11:00 1307 *Iron Catalysts for C-C Bond Formation and Epoxidation Reactions* [§]Kozak C.M.

11:20 1308 *Simulating the "True" Dynamics of Catalytic Reactions: Transition Path Sampling in Organometallic Chemistry* Rowley C.N., [§]Woo T.K.

11:40 1309 *Reactivity of Phosphinimide-Supported Titanium(IV) Cations with Non-Traditional Monomers* Friesen D.M., Parvez M., [§]Piers W. E.

12:00 End of Session

IN4 Salon 11

Conjugated Materials and Heterocycles (Joint with OR) (joint with OR6)

Organizer(s) - Alison Thompson
Chair(s) - James Wisner

08:00 1310 *Synthesis, Structures, and Investigations of Schiff Base Macrocycles* [§]MacLachlan M.J., Frischmann P.D., Hui J.K.-H., Jiang J., Shpopsowitz K.E.

08:20 1311 *Alternating Pyrimidine-Thiophenes: New Co-Monomers for Electropolymerization for Hybrid Organic and Metal Coordinating Polymers* Bolduc A., Dufresne S., [§]Skene W.G.

08:40 1312 *Electron-Fuelled Molecular Motors Based on Star-Shaped Ruthenium Complexes with Conjugated or Insulating Spacers* [§]Rapenne G.

09:00 1313 *Directing Self-Assembly in 2D and 3D by Combined Use of Metal Coordination and Hydrogen Bonding* [§]Wuest J.D., Duong A., Helzy F., Ryan P.E., Telfer S., Hamilton T.D.

09:40 Coffee Break

Chair(s) - Natia Frank

10:00 1314 *Electron Deficient BODIPY Dyes: Structure, Electronic Properties and Reactivity* Bonnier C., [§]Piers W.E., Parvez M.

10:20 1315 *Synthesis and Reactivity of Dipyrinato Alkali-Metal Complexes* Al-Sheikh Ali A., Cipot-Wechsler J., Chapman E., [§]Thompson A.

10:40 1316 *Cationic Dipyrromethene Boron Compounds for Anion Sensing* Hudnall T. W., [§]Gabbai F.P.

11:20 1317 *Boron Dipyrromethene Dyes: A Toolbox for Molecular Photonics and Light Emitting Devices* Ziessele R.

12:00 End of Session

IN5 Salon 12

Main Group Chemistry: A Symposium in Honour of Neil Burford, Tristram Chivers and Richard Oakley

Organizer(s) - Roland Roesler and Robin Hicks
Chair(s) - Charles Macdonald

08:00 1318 *Phenalenyl-Based Neutral Radical Conductors* Haddon R.C.

08:40 1319 *Main Group Radicals: Approaching the Metallic State* Leitch A.A., Oakley R.T., Robertson C.M., Dube P.A.

09:00 1320 *Voltammetry and EPR Investigations of Unsaturated Binary S,N Compounds* Roemmele T.L., [§]Chivers T., [§]Boeré R.T.

09:20 1321 *A Novel Approach to the Preparation of a 1,3,2-Dithiazolobenzo-1,3,2-dithiazol-4,8-dione Utilizing the Twofold Cycloaddition and Oxidation Chemistry of SNS⁺* Mailman A., [§]Passmore J.

09:40 Coffee Break

10:00 1322 *Fine Tuning Ferromagnetism in Heavy Atom Radicals* Robertson C.M., Leitch A.A., [§]Cvrkalj K., Myles D.J.T., Reed R.W., Dube P.A., [§]Oakley R.T.

10:20 1323 *New Ferrocenyl Reagents for Passivating the Surfaces of Metal-Chalcogen Nanoclusters* [§]**Corrigan J.F.**, MacDonald D.G., Ahmar S., Vijayaratnam N.

10:40 1324 *Methylaluminum Oxane Speciation by ESI-MS* **Henderson M.A.**, McIndoe J.S.

11:00 1325 *Mixed Dichalcogenoimidodiphosphinates Containing Tellurium* **Robertson S.D.**, Chivers T.

11:20 1326 *The Multiple Phases of 4,5,6,7-Tetrafluorobenzo-2,1,3-telluradiazole* Cozzolino A.F., Elder P.J., **Vargas-Baca I.**

11:40 1327 *Synthesis of Cationic Selenium-Nitrogen Rings, Element Chalcogen Coordination Compounds and Unusual Rearrangements* Dutton J.L., Martin C.D., [§]**Ragogna P.J.**

12:00 End of Session

IN6 Salon 4

Nanotechnology: Nanoparticles, Nanowires and Quantum Dots (Joint with MT) (joint with MT7)

Organizer(s) - Jonathan Veinot, Eric Henderson and Arnold Kell
Chair(s) - Jonathan Veinot

08:00 1328 *Commercial Nanoparticle Manufacture with Confined Impinging Jet Reactor* **Siddiqui S. W.**, Unwin P., Kresta S.

08:20 1329 *Multifunctional Nanoparticle Clusters* **Paquet C.**, Somaskandan K., Jakubek Z., Simard B.

08:40 1330 *Single-Domain Antibody-Modified Superparamagnetic Nanoparticles for the Selective Isolation of Staphylococcus aureus* **Kell A.J.**, Ryan S., van Faassen H., Tanha J, Simard B.

09:00 1331 *Removal of Residual Metal Catalysts with Iron/Iron Oxide Nanoparticles from Coordinating Environments* [§]**Macdonald J.E.**, Veinot J.G.C.

09:20 1332 *Gold Nanoparticles from a Photochemical Perspective: Excited State Reactivity of Reducing Agent Precursors and Metal Salts* [§]**McGilvray K.L.**, Yuan N., Kerluke R., Scaiano J.C.

09:40 Coffee Break

10:00 1333 *Structural Tuning of Gold and Bimetallic Nanoparticle Catalysts* [§]**Scott R.W.J.**

10:40 1334 *Control of the Local Structure, Electronic Behavior and Surface Properties of Au-Pd Bimetallic Nanoparticles Using Mixed Capping Molecules* Liu F., Cook S.C., Padmos J.D., [§]**Zhang P.**

11:00 1335 *Gas-Phase Shell Formation Processes on Metal Nanoparticles* [§]**Pedersen D.B.**, Wang S., Liang S.

11:20 1336 *Surfactant and Cross-Linker Influence on Gold Nanoparticle Agglomeration During Sol-gel Encapsulation* [§]**Vreugdenhil A.J.**, Malcolm A.C., Parnis J.M.

11:40 1337 *Shape Selectivity via Light: Photochemical Synthesis of Crystalline Gold Nanoplates and Nanospheres* [§]**Banks J.T.**, McKelvey J.I., Holt J., Correia M.

12:00 End of Session

Macromolecular Science and Engineering Division

MS2 Salon 2

Functional Polymer Architectures and their Applications (Joint with MT) (joint with MT2)

Organizer(s) - Derek Gates
Chair(s) - Elizabeth Gillies and Kalai Saravanamuttu

08:00 1338 *Synthesis, Characterization and Curing of a New Methacrylate- and Acrylate-Based Monomers for Dental Restorative Resins* **Ghaemy M.**, [§]Bekhradnia S., Heidaripour M.

08:20 1339 *Synthesis and Self-Assembly of Poly(ferrocenyldimethylsilane)-b-Poly(-benzoyloxycarbonyl-L-lysine) Diblock Copolymers* **Wang Y.**, Kim K.T., Manners I., Winnik M.A.

08:40 1340 *Poly(methylenephosphine) Homo- and Copolymers Bearing Conjugated Substituents* **Chun C.P.**, Gates D.P.

09:00 1341 *Addition Polymerization of Group 14 Metallenes* **Pavelka L.C.**, Holder S.J., Baines K.M.

09:20 1342 *Strained [1]Metallacyclophanes with Aluminum and Gallium in Bridging Positions. First Steps Towards New Polymers* Lund C.L., Schachner J.A., [§]**Müller J.**, Quail J.W.

09:40 Coffee Break

10:00 1343 *Stereoselective Self-Assembly of Functional Polymers with Gold Atoms in the Backbone* **Puddephatt R.J.**

10:40 1344 *Utilizing the Coordination Chemist's Toolbox to Make a Luminescent Zinc(II)/Au(CN)₂-Based Ammonia Sensor* **Katz M.J.**, [§]Leznoff D.B.

11:00 1345 *Donor-Acceptor Graft Copolymers Based on Fullerene-Functionalized Poly(3-alkylthiophenes)* **Gholamkhas B.**, Chen X., Peckham T., Holdcroft S.

11:20 1346 *Reversible Amplified Fluorescence Quenching in Dithienylethene Functionalized Polythiophenes* **Kunz T.K.**, Wolf M.O., Finden J.G., Branda N.R.

11:40 1347 *Luminescent Polymers Based on Dithieno[3,2-b:2',3'-d]phosphole Building Blocks: Valuable Materials for Sensory and Light-Harvesting Applications* [§]**Baumgartner T.**

12:00 End of Session

Materials Chemistry Division

MT2 Salon 2

Functional Polymer Architectures and their Applications (Joint with MS) (joint with MS2)

Organizer(s) - Derek Gates
Chair(s) - Elizabeth Gillies and Kalai Saravanamuttu

08:00 Joint with MS2 - See MS2

12:00 End of Session

MT3 Salon 7

Fundamentals and Applications of Carbon Nanotubes and Fullerenes (Joint with OR) (joint with OR7)

Organizer(s) - Yuming Zhao and Benoit Simard
Chair(s) - Benoit Simard

08:00 1348 *Carbon Nanotube Field-Effect Transistors: Scientific Considerations and Prospective* [§]**Martel R.**

08:40 1349 *Nitrogen-Doped Carbon Nanotubes: Structure and Nitrogen Amount Control* **Liu H.**, Zhang Y., Li R., Sun X., Mérel P., Désilet S.

09:00 1350 *Conducting Polymer-Carbon Nanotube Composites as Supercapacitor Electrode Materials* **Huber T.A.**, Kopac M.C.

09:40 Coffee Break

Chair(s) - Richard Martel

10:00 1351 *Asymmetric Functionalization of Carbon Nanotubes* [§]**Perepichka D.F.**

10:40 1352 *Functionalization of [60]Fullerene and Single-Walled Carbon Nanotubes with π -Conjugated Oligomers* **Zhao Y.**, Zhou N., Wang L., Rice N.A.

11:00 1353 *Tailoring Properties of Carbon Nanotubes by Chemical Functionalization: Diazonium and [2+1]Cycloaddition Reactions* [§]**Cabana J.**, Lavoie S., Paillet M., Élyse E., Martel R., McBreen P.

11:20 1354 *Mesoporous Transition Metal Oxide Alkali Fulleride Composites* [§]**Antonelli D.**, Trudeau M., Hu X.

12:00 End of Session

MT5 Salons 13/14

Nanoscale Materials and Devices for Chemical and Biological Sensing (Joint with AN) (joint with AN4)

Organizer(s) - Stephane Evoy and Wayne Hiebert
Chair(s) - Stephane Evoy

08:00 Joint with AN4 - See AN4

12:00 End of Session

MT7 Salon 4

Nanotechnology: Nanoparticles, Nanowires and Quantum Dots (Joint with IN) (joint with IN6)

Organizer(s) - Jonathan Veinot, Eric Henderson and Arnold Kell
Chair(s) - Jonathan Veinot

08:00 Joint with IN6 - See IN6

12:00 End of Session

Organic Chemistry Division

OR3 Salon 8

Catalysis (Joint with IN) (joint with IN3)

Organizer(s) - Cathleen Crudden and Steve Westcott
Chair(s) - Laura Turculet and Michael Shaver

08:00 Joint with IN3 - See IN3

12:00 End of Session

OR6 Salon 11

Conjugated Materials and Heterocycles (Joint with IN) (joint with IN4)

Organizer(s) - Alison Thompson
Chair(s) - James Wisner

08:00 Joint with IN4 - See IN4

09:40 Coffee Break

10:00 Chair(s) - Natia Frank

12:00 End of Session

OR7 Salon 7

Fundamentals and Applications of Carbon Nanotubes and Fullerenes (Joint with MT) (joint with MT3)

Organizer(s) - Yuming Zhao and Benoit Simard
Chair(s) - Benoit Simard

08:00 Joint with MT3 - See MT3

10:00 Chair(s) - Richard Martel

12:00 End of Session

OR10 Salon 1

Organocatalysis

Organizer(s) - Michel Gravel
Chair(s) - Michel Gravel

08:40 1355 *New Developments in Asymmetric Catalysis: Chiral Hydrogen Bond Donors as Enantioselective Catalysts* Gondi V.B., Hagihara K., Malerich J., [§]**Rawal V.H.**

09:20 1356 *Mechanistic Insight into Phosphine Catalyzed [4+2] vs [2+2+2] Annulations* [§]**Dudding T.**, Fonovic B., Kwon O.

09:40 Coffee Break

Chair(s) - Travis Dudding

10:00 1357 *Binaphthol-Catalyzed Reactions of Boronates* **Chong J.M.**

10:40 1358 *Direct and Waste-Free Organocatalytic Amidations and other Reactions of Carboxylic Acids at Room Temperature* **Al-Zoubi R.M.**, Marion O., Hall D.G.

11:00 1359 *Lewis Base-Catalyzed Diels-Alder Reactions* Sánchez-Larios E., [§]**Gravel M.**

11:20 1360 *Asymmetric Catalysis Using Chiral Nucleophilic Carbenes* [§]**Rovis T.**

12:00 End of Session

OR11 Salon 3

Small Molecule Drug Design and Development (Joint with OR) (joint with BM8)

Organizer(s) - Amitabh Jha
Chair(s) - Virinder Parmar

08:20 Joint with BM8 - See BM8

11:40 End of Session

Physical, Theoretical and Computational Division

PT3 Salon 10

Computational and Theoretical Chemistry

Organizer(s) - Pierre-Nicholas Roy, Alexander Brown and Mariusz Klobukowski
Chair(s) - Mariusz Klobukowski

08:00 1361 *Proton Transport Through Just-in-Time EVB, a Born-Oppenheimer/EVB Hybrid Method for Molecular Dynamics Simulations* [§]**Hristov I.H.**, Paul R., Paddison S.J.

08:20 1362 *Size Scaling in Families of Different Protein Folds* **Rogerson P.**, [§]Arteca G.A.

08:40 1363 *On the Structure and Dynamics of Secondary n-Alkyl Ions* [§]**East A.L.L.**, Bucko T., Hafner J.

09:00 1364 *Combining the Advantages of an Iterative Eigensolver and a Contracted Basis to Compute Energy Levels of CH₅⁺* Wang X.G., [§]**Carrington T.**

09:40 Coffee Break

10:00 1365 *Quantum Mode-Coupling Theory: Formulation and Applications to Normal and Supercooled Quantum Liquids* **Rabani E.**

10:40 1366 *Crystallization of Molecular Liquids: From Techniques to Understanding* [§]**Kusalik P.G.**

11:00 1367 *The Jamming Landscape for Confined Hard Discs* Ashwin S.S., [§]**Bowles R.K.**

11:20 1368 *Permeation of Nitric Oxide Through Lipid Bilayer Membranes* **Issack B.B.**, Peslherbe G.H.

11:40 1369 *Validation of Phosphatidylcholine Lipid Force Fields in the Tensionless NPT Ensemble* **Taylor J.**, Whiteford N., Bradley G., ³Watson G.W.

12:00 End of Session

PT5 Hall D

Frontiers of Molecular Spectroscopy: A Symposium in Honour of Michael Gerry

Organizer(s) - Yunjie Xu and Wolfgang Jäger
Chair(s) - Nicholas Walker

08:00 1370 *The Effects of Self-Aggregation and Solvents on the Vibrational Circular Dichroism and Optical Rotation Measurements of Glycidol* **Yang G.**, ³Xu Y.

08:20 1371 *Improper Hydrogen Bonds in Binary Methanol Solutions* ³**Keefe C.D.**, Gillis E.A.L.

08:40 1372 *On One Hand But Not the Other: Quantum Chemical Studies of Optical Rotation and Circular Dichroism* ³**Crawford T.D.**

09:20 1373 *Hydration of Propylene Oxide: Structural Solvation Probed with VCD Spectroscopy and Computer Simulations* Losada M., Nguyen P., ³**Xu Y.**

09:40 Coffee Break

10:00 1374 *Chiral Recognition in Jet-Cooled Complexes: The Role of Conformational Flexibility* **Zehnacker A.**

10:40 1375 *Competing Hydrogen Bond Topologies in Chiral Self-Recognition: Direct Rotational Spectroscopic Detection of Four 2-Fluoroethanol Dimers in the Gas Phase* Borho N., Liu X., ³Xu Y.

11:00 1376 *Circular Dichroism Exhibited by a Class of Achiral Rosette Nanotubes* ³**Hemraz U.D.**, Johnson R.S., Fenniri H.

11:20 1377 *Chirality Transfer from Chiral Solutes and Surfaces to Nearby Solvent* ³**Cann N.M.**, Wang S.

12:00 End of Session

PT10 Salon 6

Spectroscopy at Surfaces and Interfaces (Joint with AN) (joint with AN8)

Organizer(s) - Alex Brolo and Dennis Hore
Chair(s) - Dennis Hore

08:00 Joint with AN8 - See AN8

11:40 End of Session

Wednesday PM

Analytical Chemistry Division

AN1 Salon 5

Analytical and Environmental Toxicology (Joint with EN) (joint with EN1)

Organizer(s) - Chris Le and Xing-Fang Li
Chair(s) - Feiyue Wang and Shengwen Shen

13:20 1378 *Tracking the Pathway of Arsenic Metabolism* **Thomas D.**

14:00 1379 *Biotransformation and Distribution of Arsenic in Biological Tissues* ³**Reimer K.J.**, Moriarty M., Koch I.

14:20 1380 *Mechanistic Investigation of Enhanced Benzo[a]pyrene Induced DNA Adducts in the Presence of Arsenic* **Guthrie J.W.**, Lee J., ³Le X.C., Weinfeld M.

14:40 1381 *Advanced Analysis of Lead in Human Teeth and Bones* **Martin R.R.**, Naftel S.J., Nelson A., Mithoowani H., Francis J., Stakiw J., Shoty W., Krachler M.

15:00 Coffee Break

Chair(s) - Tony McKnight-Whitford and Claire McGuigan

15:20 1382 *Liquid Chromatography/Mass Spectrometry Analysis of Pesticides and Emerging Organic Pollutants in Environmental Samples* **Yang P.**, Hao C., Zhao X.

16:00 1383 *New Developments in the Design and Performance of a Thermally Assisted Membrane Interface for the On-Line Analysis of VOCs and SVOCs in Air and Water Samples* **Ghafari S.**, Davey N.G., Krogh E.T., Gill C.G.

16:20 1384 *Remediation of Metal Oxyanion-Contaminated Soils with Zero Valent Iron* ³**Rivero-Huguet M.**, ³Marshall W.D.

16:40 1385 *Methylmercury-Thiol Complexes in the Intracellular and Extracellular Environments* **Wang F.**, Lemes M.

17:00 End of Session

AN4 Salons 13/14

Nanoscale Materials and Devices for Chemical and Biological Sensing (Joint with MT) (joint with MT5)

Organizer(s) - Stephane Evoy and Wayne Hiebert
Chair(s) - Wayne Hiebert

13:20 1386 *Electrochemical Biosensing Based on Titanium Dioxide Nanotube Arrays* **Kafi A.K.M.**, ³Chen A.

13:40 1387 *Aptamer-Based Electrochemical Sensors for the Detection of Adenosine* **Jiang Z.**, ³Yu H.Z.

14:00 1388 *Surface-Attached Biomolecules and Cells Studied by Thickness Shear Mode Acoustic Wave Sensors* **Wang X.**, ³Thompson M.

14:20 1389 *Weighing of Biomolecules, Single Cells and Single Nanoparticles in Fluid Using Suspended Microchannel Resonators* **Godin M.**, Burg T., ³Manalis S.R.

15:00 Coffee Break

15:20 1390 *Inkjet Printed Gold Electrode Arrays for On-Chip Electrochemical Modulation of DNA Monolayers* ³**Li Y.C.**, ³Yu H.Z.

15:40 1391 *Bacteria Seeing Red: Isolation and Detection of Bacteria in Resource-Poor Settings Using Silica, Paper and Bacteriophage* **Voss R.**, ³Brook M.A.

16:00 1392 *A Mixed Oligonucleotide and Oligomer Film on Silica-Based Substrates to Enhance Biosensing Selectivity* **Wong A.K.Y.**, ³Krull U.J.

16:20 1393 *A Nanoscience Approach for Detecting Exudates in the Rhizosphere of Agricultural Soils* ³**Sultan Y.**, ³DeRosa M.C., Monreal C, Schnitzer M

16:40 1394 *Sulfide-Functionalized Organosilicates as Coatings for Fibre-Optic Heavy Metal Sensors* **Cipot-Wechsler J.**, Du J., Lobe-Comeras J.M., Barnes J., ³Crudden C.M., Looock H.-P.

17:00 End of Session

AN9 Salons 15/16

General

Organizer(s) - Mark McDermott
Chair(s) - Roderick Chisholm and Dwayne Shewchuk

13:20 1395 *The Border Air Quality and Meteorological Study (BAQS-Met): Analytical Applications* **McLaren R.**, Halla J.D., Nuaaman I., Brook J.

13:40 1396 *On-Line Environmental Monitoring in the Field Using Membrane Introduction Tandem Mass Spectrometry* Etzkorn J.M., Davey N.G., Thompson A.J., Leung R., LeBlanc C.W., Ghafouri S., Krogh E.T., ³**Gill C.G.**

14:00 1397 *Characterization of Bio-Oils from Agricultural and Forestry Waste as Pesticides* **Booker C.J.**, Vogel T., Gloor A., Bedmutha R., Scott I.M., Conn K.L., Xu R., Ferrante L., Berruti F., Briens C., ³Yeung K.K.C.

14:20 1398 *UV Resonance Raman Spectroscopy as a Robust Spectroscopic Tool for Direct Analysis of Sunscreen Formulations* **Oladepo S.A.**, ³Loppnow G.R.

14:40 1399 *Determination of Naphthenic Acid Concentration in Oil Sands Derived Liquid Using Photoacoustic Spectroscopy* **Billinghurst B.E.**, ³Michaelian K.H., Rahimi P., Alem T., Arboleda P.

15:00 Coffee Break

15:20 1400 *Origin and Speciation of Volatile Phosphorus in Gelled Hydrocarbons for Oil Well Stimulation* **Lawrence S.C.**, Warrender N., ³Dhillon S.

15:40 1401 *The Surface Characterization and Determination of Localized Corrosion Kinetics on Hyper-Stoichiometric UO_{2+x}* **He H.**, Qin Z., Keech P., Noel J.J., Ding Z., Shoosmith D.W.

16:00 1402 *Improving Conductivity of Protic Ionic Liquids with Heterocyclic Bases* ³**Rocheffort D.**, Mayrand-Provencher L.

16:20 End of Session

Biological and Medicinal Chemistry Division

BM4 Riverview

Chemistry and Biology of Nucleic Acids

Organizer(s) - Andrew MacMillan and Peter Unrau
Chair(s) - Andrew MacMillan and Peter Unrau

13:20 1403 *Development of a New Class of Ribozyme and Study of the Folding Pathway of HDV Ribozyme* ³**Perreault J.P.**, Beaudoin J.D., Raymond C.

14:00 1404 *A Novel and Highly Selective DNAzyme Sensor for Mercury Cations* **Hollenstein M.**, Hipolito C., ³Perrin D.M.

14:20 1405 *Aging-Related Oxidative DNA Damage: Charge Transfer through Telomeric Guanine Quadruplexes* **Cheng A.K.H.**, Huang Y.C., Sen D., ³Yu H.Z.

14:40 1406 *A Pyrrolocytosine Analogue that Forms a Fourth Hydrogen Bond to Guanosine* **Wojciechowski F.**, ³Hudson R.H.E.

15:00 Coffee Break

15:20 1407 *Applying Rolling Circle Amplification to DNAzyme Mediated Reactions for Biosensing* ³**Li Y.**, Ali M.M., Zhao W., Brook M.A., Pelton R.

16:00 1408 *Design and Selection of Minimalist Protein-DNA Interactions* ³**Shin J.A.**

16:20 1409 *Progress and Prospects in Aptamer-Based Biosensors* ³**DeRosa M.C.**

16:40 1410 *6S RNA Interactions with E. coli RNAP Characterized Using in vitro Selection* Shephard L., Dobson N., ³**Unrau P.J.**

17:00 End of Session

BM8 Salon 3

Small Molecule Drug Design and Development (Joint with OR) (joint with OR11)

Organizer(s) - Amitabh Jha
Chair(s) - Lakshmi Kotra

13:20 1411 *Development of Natural Products Based Anti-Inflammatory and Antihypertensive Drugs* ³**Parmar V.S.**

14:00 1412 *Synthesis and Evaluation of Osteotropic Fluoroquinolone Prodrugs for the Prevention and Treatment of Osteomyelitis* ³**Rafai Far A.**, Tanaka K.S.E., Houghton T.J., Kang T., Dietrich E., Lafontaine Y., Arhin F.F., Sarmiento I., Liu J., Srikumar R., Fadhill I., Laquerre K., Ostiguy V., Lehoux D., Moeck G., Parr T.R.

14:20 1413 *Development of 3,5-bis(Benzylidene)-4-piperidone Analogs as Potent Antineoplastic Agents that Overcome Multidrug Resistance Mechanisms* **Das U.**, Das S., Sakagami H., Molnar J., Kawase M., Balzarini J., De Clercq E., ³Dimmock J.R., Stables J.P.

14:40 1414 *Protecting the Intellectual Property for Medicinal Drugs and Other Inventions* **Mitchell M.**

15:00 Coffee Break

15:20 1415 *Carbocyclic Analogs of Penicillins: Effects of Substitution on Conformation and Hemiketal Stability* **Johnson J.W.**, Evanoff D.P., Goodfellow V.J., ³Dmitrienko G.I.

15:40 1416 *Cardiovascular Agents: Renin Inhibitors* **Kasani A.**, Stier M., Holsworth D.D., Maiti S.

16:00 1417 *Design of Anti-inflammatory Cyclooxygenase and/or Lipoxygenase Inhibitors, Including Nitric Oxide Donor Prodrugs, Devoid of Adverse Ulcerogenic and Cardiovascular Effects* ³**Knaus E.**

16:40 End of Session

Environment Division

EN1 Salon 5

Analytical and Environmental Toxicology (Joint with AN) (joint with AN1)

Organizer(s) - Chris Le and Xing-Fang Li
Chair(s) - Feiyue Wang

13:20 Joint with AN1 - See AN1

15:00 Coffee Break

15:20 Chair(s) - Tony McKnight-Whitford and Claire McGuigan

17:00 End of Session

EN3 Salon 9

Bioinorganic Chemistry-General (Joint with IN) (joint with IN1)

Organizer(s) - Juergen Gailer and Farideh Jalilvand
Chair(s) - Ray Turner

14:00 1418 *X-Ray Spectroscopic Studies of the Active Sites of Molybdenum Enzymes* ³**George G.N.**, Doonan C.J., Pushie M.J., Wilson H.L., Rajagopalan K.V.

14:20 1419 *An Investigation of the Structures of Copper-Thiomolybdate Complexes* **Slamova D.**, **Reid R.S.**

14:40 1420 *The Kinetics of Thiomolybdate Interconversions* **Clark R.J.**, **Reid R.S.**

15:00 Coffee Break

Chair(s) - Helen Nichol

15:20 1421 *Cucurbit[7]uril Complexes of Vitamin B₁₂ and Coenzyme B₁₂* ³**Macartney D.H.**, Wang R.

15:40 1422 *Integrated Paramagnetic Resonance of Biologically Relevant High-Spin Co(II)* ³**Tierney D.L.**, Myers W.K., Breece R.M.

16:00 1423 *Synthesis of Iron(II) Complexes of L-Threonic Acid: Studies on the Stability Constants of Binary and Ternary Iron(II) Complexes of L-Threonic Acid-Amino Acids* **Yu L.**, Huakuan L., Siying G. **PAPER WITHDRAWN**

16:20 1424 *Determination of Blood Plasma Metalloproteins by SEC-ICP-AES* **Manley S.A.**, Byrns S., Brown P., [§]Gailer J.

16:40 1425 *Metalloprotein Biocatalysis in Ionic Liquids* Taylor S.A., [§]Walsby C.J.

17:00 End of Session

Industrial Chemistry

IC2 Hall D Foyer

Job Searches: Marketing Yourself

Organizer(s) - Gerry Tertzakian and Wendy Lam
Chair(s) - Mary Fairhurst and Roger Cowles

13:45 Introductory Remarks

14:00 What Do Employers Look For? Whom Do Employers Hire? How to Market Yourself? Panel - Pierre Beaumier, Sunil Chaudhary, Umesh Karnik, Andrew Scholte and Zhongxin Zhou

16:30 End of Session

Inorganic Chemistry

IN1 Salon 9

Bioinorganic Chemistry-General (Joint with EN) (joint with EN3)

Organizer(s) - Juergen Gailer and Farideh Jalilehvand
Chair(s) - Ray Turner

14:00 Joint with EN3 - See EN3

15:00 Coffee Break

15:20 Chair(s) - Helen Nichol

17:00 End of Session

IN3 Salon 8

Catalysis (Joint with OR) (joint with OR3)

Organizer(s) - Cathleen Crudden and Steve Westcott
Chair(s) - Chris Kozak and Cathleen Crudden

13:20 1426 *Parameters for σ -Donation and π -Backdonation Capabilities of Diiminepyridine Type Ligands* Zhu D., Budzelaar P.H.M.

13:40 1427 *Transition Metal Complexes Supported by New Pincer Ligands Featuring Formally Anionic Heavier Main Group Element Donors: Synthesis and Applications in Catalysis* [§]Turculet L., MacInnis M.C., MacLean D.F.

14:00 1428 *Charged Ligands for Mass Spectrometric Analysis of Catalytic Reactions* [§]McIndoe J.S., Farrer N.J., Vikse K., Chisholm D.M.

14:20 1429 *Mechanistic Aspects of Ruthenium Catalyzed Olefin Metathesis* [§]Piers W.E., Romero P.E., van der Eide E.F., Leitao E.M.

15:00 Coffee Break

15:20 1430 *Investigations into Homogeneous Copper(II) Systems for Ethylene Polymerization* [§]Olson J.A., [§]Foley S.R., Quail J.W.

15:40 1431 *Unusual Carbenes Generated by Nucleophilic Attack on Chelating Isocyanide Fragments* Yu I., Wallis C., Mehrkhodavandi P.

16:00 1432 *Highly Reusable, Chiral Catalyst-Organic Frameworks Made by Alternating ROMP Assembly* [§]Bergens S.H., Ralph C.K., Sullivan A.D., Hass H.

16:40 1433 *Positionally Grafting Functionality onto Mesoporous Silicates* Webb J.D., [§]Crudden C.M.

17:00 End of Session

IN4 Salon 11

Conjugated Materials and Heterocycles (Joint with OR) (joint with OR6)

Organizer(s) - Alison Thompson
Chair(s) - Mark MacLachlan

13:20 1434 *Thiophene Substitution in Spin-Transition Complexes: Toward Multifunctional Metallopolymers* [§]Lemaire M.T., Djukic B., Britten J.F., Dube P.A., Razavi F.

13:40 1435 *Flexible Molecular Wires? Synthesis and Properties of Polynes* [§]Chalifoux W.A., Ferguson M.J., Tykwinski R.R., Lucotti A., Tommasini M., Fazzi D., Del Zoppo M., Zerbi G.

14:00 1436 *Electrogenerated Chemiluminescence of New Thiophene-Containing Compounds* Price J.T., Chan Y., McDonald R., Ding Z., [§]Jones N.D.

14:20 1437 *The Use of N-Heterocyclic Compounds for Chemical Hydrogen Storage* Wechsler D., Cui Y., Carrier A., Davis B., Whitney R.A., [§]Jessop P.G.

14:40 1438 *Spin-Delocalized Conjugated Polymers for Organic Spintronic Materials* [§]Frank N.L., Dooley B.M., Yan B., Zsombor M., Bowles S.E., Samanta S.

15:00 End of Session

IN5 Salon 12

Main Group Chemistry: A Symposium in Honour of Neil Burford, Tristram Chivers and Richard Oakley

Organizer(s) - Roland Roesler and Robin Hicks
Chair(s) - Roland Roesler

13:20 1439 *Some New Developments in the Cationic Chemistry of the Group 13 and 15 Elements* Cowley A.H.

14:00 1440 *Synthesis and Reactivity of Boron-Bridged Ansa-Metallocene Metal Complexes* [§]Mallov I., Dawson K., Burchell T.J., [§]Richeson D.S.

14:20 1441 *Boron-Nitrogen Heterocycles as Ligands in Transition Metal Multi-Decker Sandwich Complexes* Borau-Garcia J., Ly H.V., Parvez M., [§]Roesler R.

14:40 1442 *Affecting Intermolecular Bonding in Dimethylthallium(III) Aryloxides and Thiolates* [§]Briand G.G., Decken A., MacDonald D.J., McKelvey J.I., Zhou Y.

15:00 Coffee Break

15:20 1443 *Coinage Metal Complexes of Selenium Diimides* Laitinen R.S., Risto M., Takaluoma T., Oilunkaniemi R., Bajorek T., Chivers T.

15:40 1444 *Synthesis, Characterization, Crystal Structures and DFT Calculations of Donor-Acceptor Indium(III) and Gallium(III) Trihalide Complexes of Bulky Triarylphosphines* Ma G., Chen F., McDonald R., Ferguson M.J., [§]Cavell R.G., Wasylshen R.E.

16:00 1445 *Novel Boron and Boron-Nitrogen Heterocycles* [§]Piers W.E., Bosdet M.J.D., Jaska C.J., Wood T.K., Mercier L.G., Bonnier C., Parvez M.

16:40 End of Session

IN6 Salon 4

Nanotechnology: Nanoparticles, Nanowires and Quantum Dots (Joint with MT) (joint with MT7)

Organizer(s) - Jonathan Veinot, Eric Henderson and Arnold Kell
Chair(s) - Eric Henderson

Inorganic Chemistry Division Award for Graduate Work in Inorganic Chemistry Lecture presented by Ludovico Cademartiri

13:20 1446 *An Example of Curiosity-Driven Nanochemistry: Juggling Nanocrystals, Nanorods, Nanowires, Photonic Crystals, and Mesoporous Materials* [§]Cademartiri L.

14:00 1447 *Monodisperse Poly(3,4-ethylenedioxythiophene)-Silica Microspheres: Synthesis and Assembly into Crystalline Colloidal Arrays* Kelly T.L., Yamada Y., Che S.P.Y., Yano K., [§]Wolf M.O.

14:20 1448 *Placing Erbium Ions in the Vicinity of Silicon Nanocrystals: A New Chemical Approach* Rodriguez Núñez J.R., Hessel C.M., Henderson E.J., [§]Veinot J.G.C., Meldrum A.

14:40 1449 *Synergy of Slow Photon and Chemically Amplified Photochemistry in Platinum Nanocluster Loaded Inverse Titania Opals* [§]Chen J.I.L., von Freyman G., Loso E., Choi S.Y., Kitaev V., [§]Ozin G.A.

15:00 Coffee Break

15:20 1450 *Enhancing the Blue Emission of Eu²⁺ Inside a Photonic Crystal* [§]Bovero E., van Veggel F.C.J.

15:40 1451 *Effect of 2D Plasmonic Nanostructures on the Behaviour of Supported Model Cell Membrane* Uddin Ahamad N., [§]Ilanoul A.

16:00 1452 *NIR and Upconverted Emissions from Silica and Zirconia Coated LaF₃ Nanoparticles* Sangeetha N.M., [§]van Veggel F.C.J.

16:20 1453 *Enhanced Red Up-Conversion from Silica Coated LaF₃ Nanoparticles Doped with Yb and Ho* Pichaandi J.M., Sivakumar S., [§]van Veggel F.C.J.

16:40 End of Session

Materials Chemistry Division

MT3 Salon 7

Fundamentals and Applications of Carbon Nanotubes and Fullerenes (Joint with OR) (joint with OR7)

Organizer(s) - Yuming Zhao and Benoit Simard
Chair(s) - Yuming Zhao

13:20 1454 *Polymer-Carbon Nanotube Composites: Synthesis, Properties, and Potential Applications* Cheng F., Imin P., Behal S., Lawson G., Bahun G.J., [§]Adronov A.

14:00 1455 *Chemistry of Reduced Single-Walled Carbon Nanotubes and their Applications in High Performance Composites* Guan J.W., Martinez-rubi Y., Simard B.

14:20 1456 *CNTs/Polymer Nanocomposites for Electromagnetic Interference Shielding* Al-Saleh M., Gelves G.A., [§]Sundraraj U.

14:40 1457 *Further Progress toward the Synthesis of Nanotube Segments (Aromatic Belts)* Yao T., Yu H., [§]Bodwell G.J.

15:00 Coffee Break

Chair(s) - Alex Adronov

15:20 1458 *Carbon Clusters Containing Transition Metals* [§]Baird M.C.

16:00 1459 *Attaching Dendrimers to Carbon-Rich Molecular Systems Using Click Chemistry* Mahmud I., Zhao Y.

16:20 End of Session

MT5 Salons 13/14

Nanoscale Materials and Devices for Chemical and Biological Sensing (Joint with AN) (joint with AN4)

Organizer(s) - Stephane Evoy and Wayne Hiebert
Chair(s) - Wayne Hiebert

13:20 Joint with AN4 - See AN4

17:00 End of Session

MT7 Salon 4

Nanotechnology: Nanoparticles, Nanowires and Quantum Dots (Joint with IN) (joint with IN6)

Organizer(s) - Jonathan Veinot, Eric Henderson and Arnold Kell
Chair(s) - Eric Henderson

13:20 Joint with IN6 - See IN6

13:20 Inorganic Chemistry Division Award for Graduate Work in Inorganic Chemistry Lecture presented by Ludovico Cademartiri

16:40 End of Session

Organic Chemistry Division

OR3 Salon 8

Catalysis (Joint with IN) (joint with IN3)

Organizer(s) - Cathleen Crudden and Steve Westcott
Chair(s) - Chris Kozak and Cathleen Crudden

13:20 Joint with IN3 - See IN3

17:00 End of Session

OR6 Salon 11

Conjugated Materials and Heterocycles (Joint with IN) (joint with IN4)

Organizer(s) - Alison Thompson
Chair(s) - Mark MacLachlan

13:20 Joint with IN4 - See IN4

15:00 End of Session

OR7 Salon 7

Fundamentals and Applications of Carbon Nanotubes and Fullerenes (Joint with MT) (joint with MT3)

Organizer(s) - Yuming Zhao and Benoit Simard
Chair(s) - Yuming Zhao

13:20 Joint with MT3 - See MT3

Chair(s) - Alex Adronov

16:20 End of Session

OR10 Salon 1

Organocatalysis

Organizer(s) - Michel Gravel
Chair(s) - Sunil Pansare

13:20 1460 *Single Enantiomer Hydrazides in Cycloaddition Reactions* [§]Ogilvie W.

14:00 1461 *Studies on Organocatalytic Asymmetric Ketone-Nitroalkene Michael Addition Reactions* Heath R.L., [§]Pansare S.V.

14:20 1462 *Building Carbohydrates via Dioxanone Aldol Chemistry: How We Drifted into Organocatalysis* Majewski M., Niewczas I., Palyam N.

15:00 End of Session

OR11 Salon 3

Small Molecule Drug Design and Development (Joint with OR) (joint with BM8)

Organizer(s) - Amitabh Jha
Chair(s) - Lakshmi Kotra

13:20 Joint with BM8 - See BM8

16:40 End of Session

Physical, Theoretical and Computational Division

PT3 Salon 10

Computational and Theoretical Chemistry

Organizer(s) - Pierre-Nicholas Roy, Alexander Brown and Mariusz Klobukowski
Chair(s) - Alexander Brown

13:20 1463 *Simulated Electronic Structure Calculation Approach to Molecular Mechanics* **Hollett J.W.**, Poirier R.A.

13:40 1464 *Theoretical Investigation of "S-Nitrosohemoglobin"* **Koch D.M.**, Peslherbe G.H., *English A.M.

14:00 1465 *Theoretical Study of Through-Space and Through-Bond Electron Transfer within Positively Charged Peptides in the Gas Phase* ***Simons J.**, Neff D., Sobczyk M.

14:40 1466 *Applications of Quantum Capping Potentials* **Johnson E.R.**, DiLabio G.A.

15:00 Coffee Break

15:20 1467 *Quantum Mechanics and Molecular Mechanics: Could They/Should They Play a Key Role in Systems Biology? What's Possible? What's Not?* **Salahub D.R.**

16:00 1468 *Olefin Selectivity in the Fe-Based Fischer-Tropsch Synthesis: A DFT Approach* ***Lo J.M.H.**, Ziegler T.

16:20 1469 *Self-Consistent Combinations of 3D-RISM-KH Method with ab initio Quantum Chemistry and Molecular Dynamic Theories: New Developments* **Gusarov S.**, Luchko T., Tuszynski J., *Kovalenko A.

16:40 1470 *Actinyl Complexes in Highly Alkaline Media: Chemical Questions Answered* ***Schreckenbach G.**, Shamov G.A., Wren J.E.C.

17:00 End of Session

PT5 Hall D

Frontiers of Molecular Spectroscopy: A Symposium in Honour of Michael Gerry

Organizer(s) - Yunjie Xu and Wolfgang Jäger
Chair(s) - Corey Evans

13:20 1471 *Synchrotron Far Infrared Spectroscopy: Higher Resolution and Longer Wavelengths at the Canadian Light Source* **McKellar A.R.W.**, Appadoo D.R.T.

13:40 1472 *Rotational Analysis of the Ring-Puckering Modes of Heterocycles Using Infrared Synchrotron Radiation* ***van Wijngaarden J.A.**

14:00 1473 *Probing Novel High-Pressure Structures by Vibrational Spectroscopy* ***Song Y.**

14:20 1474 *Does Platinum(II) Form 4, 5 or 6-Coordinated Complexes in Aqueous Solution?* ***Jalilehvand F.**, Laffin L.

14:40 1475 *Lights, Action, Camera: Making Movies of Molecules with Femtosecond Electron Diffraction* ***Siwick B.J.**, van Oudheusden T., de Jong E.F., van der Geer S.B., Op't Root W.P.E., Luiten O.J.

15:00 Coffee Break

15:20 1476 *Optical Coherence between Quantum Dots: A New Type of Bond?* ***Cramb D.T.**, Heuff R.F., Marrocco M.

15:40 1477 *Aromatic Ring Rotation and Bending Induced by Metal Coordination* ***Yang D.-S.**

16:00 1478 *High Resolution Laser Spectroscopy of Transition Metal Monophosphides* ***Adam A.G.**, Tokaryk D.W., Balfour W.J., Downie L.E., Slaney M.E., Granger A.D.

16:20 1479 *Rotational Spectroscopy of Single Carbonyl Sulfide (OCS) Molecules Embedded in Superfluid Helium Nanodroplets* ***Lehnig R.**, **Raston P.**, Jäger W

16:40 1480 *IR Spectroscopy at the Canadian Light Source: The ν_{11} Fundamental and $\nu_{16}+\nu_{18} \leftarrow \nu_{18}$ Hot Band of Trans-Acrolein* Shi H., Xu L.-H., **Lees R.M.**, Tokaryk D.W., McKellar A.R.W., Appadoo D.R.T.

17:00 End of Session