<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
<th>Title</th>
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<tbody>
<tr>
<td>10:00</td>
<td>Surface</td>
<td>0008 Surface Immobilized Gold Nanoparticles by Organometallic Chemical Vapor Deposition and their Plasmonic Biosensor Applications</td>
<td>Ertorer E., Ip S., Soleimani R., Walker G., Mittler S.</td>
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<td>10:15</td>
<td>Coffee Break</td>
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<td>10:30</td>
<td>0009 Structure of Sub-10 nm Epitaxial Nickel Silicide Films on Silicon (001) Substrate</td>
<td>Arthur Z., Miller K., Chen N., Gaudet S., Yang B., Zhang Z., Lavoie C., Joly Y., Jiang D.T., Chen W.F.</td>
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<td>11:00</td>
<td>0011 Fabrication of Hg/Pt Hemispherical Nanoelectrodes for Localized Quantitative Detection of Mn²⁺</td>
<td>Danis L., Mauseroll J.</td>
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<td>11:15</td>
<td>0012 In-situ Fluorescence Characterization of the Potential Induced Responses of the Aib Peptide Self-Assembled Monolayer</td>
<td>Yu Z.L., Bizzotto D., Maran F.</td>
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<td>11:30</td>
<td>0013 Novel Effects of Doping on Nanowire Growth Rates</td>
<td>Yee R.J., Gibson S.J., Dubrovskii V.G., LaPierre R.R.</td>
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<td>11:45</td>
<td>0014 Microstructural Characterization of Titanium Alloys Plasma Nitrided at Low Temperatures</td>
<td>Farokhzadeh K., Qian J., Edrisy A.</td>
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<td>12:00</td>
<td>0015 Reticular Si Island Growth on a Si(100) Surface</td>
<td>Dedyulin S.N., Fanchini G., Goncharova L.V.</td>
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<td>12:30</td>
<td>End of Session</td>
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14:30 0055  Material Analysis Using Synchrotron Radiation: From Surface Overlayers to Thin Films to Nanocomposites and Interfaces
Sham T.K.

15:15  End of Session

BIO SEB 1200
Biosensors and surface functionalization
Chair(s) - Jungsook Wren

15:15 0056  Photoemission Overview at Canadian Light Source Inc. - From VUV to Hard X-Ray
'Cui X.Y.

15:45 0057  Surface Chemistry and Plasmonic Nanomaterials for Drug and Protein Monitoring
'Masson J.F.

16:15  Coffee Break

16:30 0058  Advances in Surface Plasmon Resonance Imaging Enable Quantitative Measurement of Laterally Heterogeneous Coatings: New Insights into the Enzymatic Degradation of Cellulose Microfibrils
'Raegen A.N., Reiter K., Clarke A.J., Lipkowski J., Dutcher J.R.

17:00  End of Session

Thursday AM

COMP SEB 1200
Student Oral Presentation Competition
Chair(s) - Keith Griffiths

08:15 0063  Nano Pattern Formation during Electropolishing
'Wang Y., 'Kruse P.

08:30 0064  Hydroxyphenol Interaction with Iron Oxide Colloids by Chemical Force Spectroscopy
'Azmi A., Horton J.H.

08:45 0065  Adsorption States of Copper Phthalocyanine on Cu(111)
'Stock T., 'Nogami J.

09:00 0066  The Interactions of Small Molecule Corrosion Inhibitors with Iron Oxides Surfaces and the Origin of Their Mobility
'Chowdhury T., 'Kruse P.

10:00 0072  Class IIa Bacteriocins towards the Detection of Foodborne Pathogens
'Etayash H., Norman L., 'Kaur K., 'Thundat T.

11:00 0073  Development, Evaluation and Surface Behaviour of Metallic Alloy Waste Forms
'Asmussen R.M., Chen J., Zagidulin D., Noël J.J., 'Shoesmith D.W.

11:15 0074  Fano Resonances in the Mid-Infrared Spectra of Single-Walled Carbon Nanotubes
'Lapointe F., Gaufrès E., Tremblay I., Tang N., Desjardins P., 'Martel R.

11:30 0075  Corrosion Behaviour of AGR Simulated Fuels: Evolution of the Fuel Surface
'Rauff-Nisthar N., Boxall C., Wilbraham R., Farnan I., Lee W., Zoltan H., Perkins C.

11:45 0076  IR Photodetector Based on Multiple Quantum Dot Confinement within InP/InAsP Nanowires
'Kuyanov P., LaPierre R.R.

12:00 0077  Influence of Surface Modification on Dispersion Energy and Mechanical Properties of Polymer/NCC Nanocomposites
'Khoshkava V., 'Kamal M.R.

12:15 0078  Experimental Investigation of Photo-Initiated Chemical Vapor Deposition (PICVD) as a Potential Scalable Nanoparticle Functionalization Technology
'Dorval Dion C.A., 'Tavares J.R.

12:30  End of Session

Thursday PM

Mustang Lounge W
Posters
From 12:35 until 14:30

The Poster Session will be held in conjunction with a sandwich lunch and a commercial exhibition in the Mustang Lounge West in the University Community Centre

Presenters should be at their posters between 13:00 and 14:15
| Thursday PM | 0079 | Surface Canada 2013 | 0108 | Thursday PM |
| May 09, 2013 | 0108 | May 09, 2013 |

0079 Exploring the Mechanism of Enantiomeric Separations Using a Proline-Based Chiral Stationary Phase. **Arjumand R.,** $Horton J.H.$

0080 Understanding and Preparation of Sharp Metallic Tips Via Electrochemical Etching. **Awez Mohammad A.,** $Wang Y.,$ $Kruse P.$


0082 Hard X-Ray Photoemission Spectroscopy at Canadian Light Source. **Xiao Q.F.,** $Cui X.Y.,$ $Hu Y.F.,$ $Sham T.K.$

0083 Electron Mediation through Double Stranded DNA Modified with Diphenylphenanthroline (dpp) Coordinated with Cu. **Dauphin Ducharme P.,** $Rosati F.,$ $Salvatore D.,$ $Toader V.,$ $Sleiman H.F.,$ $Mauzeroll J.$


0085 Reduction Kinetics of Nickel Oxide in the Presence of Metal Sulfate Additives. **Foran G.,** $Grossuitti J.,$ $Rowntree P.A.$

0086 Synthesis of Small Water-Soluble Diazirine-Functionalized Gold Nanoparticles for Biological Applications. **Ghiassian S.,** $Workentin M.S.$

0087 Surface Analytical Studies of Gramicidin A in a Floating Bilayer Lipid Membrane. **Goodall B.L.,** $Quirk A.,$ $Lipkowski J.$

0088 Near-Infrared Electrogenerated Chemiluminescence Emission Using Au$_2$I$_4$ Clusters. **Hesari M.,** $Ding Z.,$ $Workentin M.S.$


0090 The Effect of Water Radiolysis on Film Formation on 316L Stainless Steel at 25 °C and 80 °C in Mildly Basic Conditions. **Knapp Q.W.,** $Musa A.Y.,$ $Wren J.C.$


0092 Enhanced Electrochemical Performance of Porous Carbon-Sulfur Cathode by Atomic Layer Deposition. **Li X.,** $Liu J.,$ $Li X.,$ $Xiao B.,$ $Li R.,$ $Sun X.$

0093 Structural Characterization of Even and Odd Alkanethiol Self-Assembled Monolayers on Au(111) by MDS and IRRAS. **Lyagusha A.,** $Read S.T.,$ $Rowntree P.A.$


0095 Electron-Induced Oxygen Attachment on n-Alkanethiolate SAMs Studied by Electron Stimulated Desorption. **Massey S.,** $Bass A.D.,$ $Sanche L.$


0097 Effect of Water Radiolysis on Oxide Film Formation on Inconel 600 in Mildly Basic Solutions. **Mizzi D.,** $Musa A.Y.,$ $Wren J.C.$

0098 Processing and Optoelectronic Characterization of Solution Processed Metal Oxide Thin Films as Buffer Layers in Organic Solar Cells. **Mochtasebi A.,** $Stubhan T.,$ $Brabec C.J.$

0099 Surface Area and Pore Analysis of Pre- and Post-Reduced Nickel Oxide. **Moore M.,** $Rowntree P.A.$

0100 Microscopy Studies Aimed at Understanding the Dissolution Sites of Nickel. **Moula M.G.,** $Huang H.,$ $Lipkowski J.$

0101 Adsorption and Decomposition of Formic Acid on Co(0001). **Ould Hamou C.A.,** $Giorgi J.B.$

0102 Microscopic Surface Deformation on Si(111) Due to Defects Induced by Ion Bombardment. **Piercy P.PAPER WITHDRAWN**

0103 The Influence of pH and Carbonate Concentration on the Electrochemical Reactivity of Gd-Doped Uranium Dioxide (UO$_2$). **Razdan M.,** $Shoesmith D.W.$


0106 Electrochemical STM Study of Trichogin Molecules Aggregation in Lipid Monolayer. **Smetanin M.,** $Lipkowski J.$

0107 Quantifying the Local Rate of Hydrogen Emission from Magnesium Alloys Using Scanning Electrochemical Microscopy. **Snowden M.E.,** $Tafeshe U.M.,$ $Dauphin Ducharme P.,$ $Mauzeroll J.$

0108 Photocurrent Enhancement of a Low Cost, One-Pot CuInS$_2$:Light Absorbing Layer. **Tapley A.,** $Hart C.,$ $Vaccarello D.,$ $Ding Z.,$ $Love D.A.$
0109  A Study on Different Surface Characteristics of Polypropylene/ Montmorillonite Nanocomposites in Acidic Solution  *Tolei A.S., $Mousavi S.H., Janghorban K.

0110  Thermal Transformations and Low Energy Electron Irradiation of 1,3,5-Trimethylbenzene on Au(111) Surfaces and on Alkanethiol SAMs  Vandergust A., Rowntree P.A.


0112  The Influence of Dissolved Metal Species on Radiation-Induced Steel Corrosion and H2 Production  Yakabuskie P.A., Pejman S., Joseph J.M., Wren J.C.

0113  Tribological and Chemical Behavior of AM60 Mg Alloy with TiO2 Deposition Film Produced by Plasma Electrolytic Oxidation  Yi R., Nie X.


0115  Characterization of Tribofilms Generated from Zinc Dialkyldithiophosphate and Serpentine Studied by X-Ray Absorption Spectroscopy  Zhao F., Kasrai M., Sham T.K., Bai Z.M.

OTHER  SEB 1200

Other relevant surface studies
Chair(s) - Lyudmila Goncharova

14:30  The Effect of Hydrophilic Ligands on the Formation of Gold Nanoparticle Monolayer Films at the Air/Water Interface  Bradford S.M., Meli M.-V.

14:45  Enabling in situ Real-Time Characterization of Interfaces with Quartz Crystal Microbalance with Dissipation Monitoring  Poggi M.A.P., Jaiswal A., Dixon M.C.

15:00  Selected Studies on the Surface Chemistry of Iron Oxide Nanoparticles under Geoechemical and Atmospheric Conditions  Al-Abadleh H.A.

15:15  XPS Characterization of Oil Saturated Quartz (Sands), Core and Carbonate Cores  Molero H., Pereira-Almao P.


15:45  Hunt for Ferromagnetic Behavior of Strontium Titanate  Lobacheva O., Chavahra M., Sham T.K., Goncharova L.V.

16:00  Coffee Break

16:15  End of Session

MET  SEB 1200

Metal, oxide, thin film and mineral surfaces
Chair(s) - Lyudmila Goncharova


17:00  Study of Self-Assembled Monolayers as Buffer Layers in Organic Photovoltaic Devices  Lyubarskaya Y.L., Angel F.A., Shestopalov A.A., Tang C.W.


18:00  End of Session

Friday AM

NANO  SEB 1200

Nanomaterials and nanopatterning
Chair(s) - François Lagugné-Labarthet

08:15  Fabrication and Characterization of Metallic Nanostructures for Plasmonic Photovoltaics  Merlen A., Sangar A., Torchio P., Lagugné-Labarthet F.

08:30  MD Simulation of Mica Surface Pattern Formation in Solution  Xu M., Merschrod S E.F.

08:45  Pattern Recognition and Characterization for Surface Self-Assembly Imaging  Suderman R.J., Lizotte D., Abukhdeir N.M.

09:00  2D XANES-XEOL Mapping: Observation of Enhanced Band Gap Emission in ZnO Nanowire Arrays  Wang Z.Q., Sham T.K.
09:15 0133  Radiation-Induced Nanoparticle Formation under Steady-State Radiolysis: Comparison of the Fe, Co and Cr Systems

09:30 0134  Manipulating the Morphology and Surface Chemistry of Nanoporous Metals for Potential (Electro)catalytic Applications
Newman R.C., Vega A.A.

10:00  Coffee Break

10:15 0135  Strategies for Controlled Assembly at the Nanoscale
*Rosei F.

10:45 0136  Research on Heavy-Duty Anticorrosive Nano-Coatings for 16MnR Steel Containers

11:00 0137  Imaging and Electronic Structure of Iron Encapsulated within Pod-Like Carbon Nanotubes Studied by Scanning Transmission X-Ray Microscopy

11:15 0138  Ultrathin Nanofilm: Structure, Function and Degradation
*Giorgi J.B., Paul D.K., Karan K.

11:30  End of Session

SCAN  SEB 1200

Scanning probe and high resolution electron microscopy
Chair(s) - François Lagugné-Labarthet

11:30 0139  Biology as Surface Science: Advantages of Surface-Science Tools in Understanding Biological Materials
*Merschrod S.E.F.

11:45 0140  Surfaces and Interfaces Analysis with Electron Microscopy
*Botton A., Stambula S., Gauquelin N., Rossouw D., Zhu G.-Z., Prabhudev S., Bellido-Sosa E., Bugnet M.

12:00 0141  Friction Contrast on Atomically Thin Lubricants: CVD-Grown Graphene on Polycrystalline Copper Foils

12:15 0142  One-Dimensional Metallic Chains on Germanium Surfaces
Melnik S., *Gallagher M.C.

12:30  End of Session

Friday PM

ELEC  SEB 1200

Electrochemistry/physics/chemistry of solid/liquid interfaces
Chair(s) - Zhifeng Ding

14:00 0143  Highly Porous and Preferentially \{100\} - Oriented Pt Electrode for Electrocataylsis and Energy Conversion
*Guay D.

14:30 0144  Modeling Hydrogen Permutation through a TiO₂ Film and Pd
Qin Z., Zeng Y., Norton P.R., *Shoesmith D.W.

14:45 0145  Photochemically Accessed Highly Efficient Heterogeneous Catalysts for the Water Oxidation Reaction
Trudel S., Berlinguette C.P., Fagan R., Prévot M.S., Smith R.D.L.

15:00 0146  Oxidation of Formic Acid at Pd Electrodes
Sacci R.L., Harrington D.A.

15:15  Coffee Break

15:30 0147  Electrochemical and Surface Characterization of Oxide Films Formed on Steels in Radiation Environments
*Wren J.C.

15:45 0148  Scanning Electrochemical Microscopy
Detection of Hydrogen Generated by Corrosion of AM50 Magnesium Alloys

16:00 0149  Electrodeposition of Fluorine Doped PbO₂ on 316L Stainless Steel as Use as Bipolar Plates in PEMFCs
Mohammadi N., *Yari M., Allahkaram S.R.

16:15 0150  X-Ray Absorption Spectroscopy Study of Advanced Lithium-Ion Battery Cathode Materials for Electric Vehicles

16:30 0151  Three-Dimensional Kinetic Monte Carlo Simulations of Electrodeposition under Galvanostatic Conditions
Treuratanaphitak T., Pritzker M., Abukheide N.M.

17:00 0152  A Set of Mathematical Equations for Solving One-Dimensional Steady State Problems in Interfacial Electrochemistry which Include Coupled Homogenous and Heterogeneous Reactions
Reda M.

17:15  End of Session

Saturday AM

WORK  SEB 1200

Workshop on Experimental Techniques to Investigate Surfaces
09:00 0154  Surface Science Research at Synchrotrons
Ellis T.

09:30 0155  Photoemission Spectroscopy
Cui X.Y.

10:00  Coffee Break

10:30 0156  Secondary Ion Mass Spectrometry: Techniques and Applications in Materials Characterization
Dimov S.

11:15 0157  X-Ray Photoelectron and Auger Spectroscopy (XPS and SAM/AES)
Biesinger M.
12:00  Sandwich Lunch

**Saturday PM**

**WORK SEB 1200**

**Workshop on Experimental Techniques to Investigate Surfaces**

12:35  0158  *Electron Beam Lithography for Plasmonics*

Lagugné-Labarthet F.

13:00  0159  *Applications of FIB/SEM to Nanofabrication and Surface Analysis*

Simpson T.

13:20  0160  *Ion Beam Analysis Modification for Current Issues in Surface Science*

Goncharova L.V.

14:05  0161  *Scanning Electrochemical Microscopy with Scanning Electron Microscopy and Other Techniques*

Ding Z.

14:50  0162  *Various Techniques for Studying Electrochemical Energy Storage*

Sun X.

15:35  End of Session