



The Electrochemical Society Inc.
Canadian Section Canadienne

FALL SYMPOSIUM D'AUTOMNE

Saturday, September 18, 2010 /
Samedi, 18 septembre 2010

Diverse Electrochemistry

The University of Western Ontario
Chemistry Building
London, Ontario N6A 5B7

Organized by/Organisé par
Zhifeng Ding

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POSTERS / AFFICHES

The max. poster dimensions are 45" x 45". There will be prizes for best student posters. Posters from non-students are also welcome. / Les dimensions des affiches ne doivent pas dépasser 45" x 45". Des prix pour les meilleures affiches étudiantes seront remis.

PROGRAM / PROGRAMME

Seminar Room Location : B&G 0165

- 7:45 Registration/Breakfast in Chem. Bldg. Foyer
8:40 Welcome by Dr. Yining Huang (Chair of Chemistry Department at UWO) and Introduction of Dr. D.W. Shoosmith by Dr. S. Morin

Morning Session (Chair: Dr. Z. Ding)

- 8:50 Canadian Section Electrochemistry Awardee Dr. David W. Shoosmith (The University of Western Ontario) "*Nuclear Fuel - Not Everybodies Favourite Electrochemical System*"
9:20 Dr. Sylvia Morin (York University) "*Photosensitization of nanocrystalline TiO2 thin films with quantum dots*"
9:40 Dr. Bernie Kraatz (The University of Western Ontario) "*Electrochemical Studies of Protein kinases*"
10:00 Dr. Steen B. Schougaard (Université du Québec à Montréal) "*A novel method for ensuring electronic conductivity in composite lithium-ion battery electrodes*"
10:20 **Coffee Break** (Chair: Dr. S. Ramamurthy) **Exhibition from Gamble Technologies, PTI, Heka and London Scientific**
10:45 Dr. Aicheng Chen (Lakehead University) "*Electrochemical Modification and Degradation of Lignin*"
11:05 Mr. Mehdi Rahimi (Dr. Susan R. Mikkelsen's group, University of Waterloo) "*Cyclic Biamperometry at Micro-Interdigitated Electrodes*"
11:25 Dr. Gregory Jerkiewicz (Queen's University) "*Study of the Nature and Strength of the Pt(111)-Ag Bond in UPD Layers*"
11:45 Dr. Oleg Semeniukhin (The University of Western Ontario) "*Intensity Modulated*

Photocurrent Spectroscopy of Organic Solar Cells"

- 12:05 **Lunch**
Exhibition from Gamble Technologies, PTI, Heka and London Scientific

Afternoon Session (Chair: Dr. D.W. Shoosmith)

- 13:30 Dr. Heather Andreas (Dalhousie University) "*Examining carbon surface functionalities as a mechanism of self-discharge in electrochemical capacitors*"
13:50 Dr. Hua-Zhong Yu (Simon Fraser University) "*Charge conduction properties of designed DNA duplex/quadruplex constructs: from biochemical to electrochemical studies*"
14:10 Dr. Elena A. Baranova (University of Ottawa) "*Challenges in inducing Electrochemical Promotion with nano-structured catalysts*"
14:30 Dr. E. Bradley Easton (University of Ontario Institute of Technology) "*Ceramic Carbon Electrodes for Hydrogen Production via the Cu-Cl Thermochemical Cycle*"
14:50 **Coffee Break** (Chair: Dr. J. Noel) **Exhibition from Gamble Technologies, PTI, Heka and London Scientific**
15:15 Dr. Jeffrey Shepherd (Laurentian University) "*Electrochemical Manipulation of DMAP-Stabilized AuNPs*"
15:35 Dr. Xueliang Sun (The University of Western Ontario) "*Nanostructured Materials for Electrochemical Energy Conversion and Storage*"
15:55 Dr. Kagan Kerman (University of Toronto) "*Label-free electroanalysis of proteins and nucleic acids*"
16:15 Dr. J. Clara Wren (The University of Western Ontario) "*Investigating Interfacial Reaction Mechanisms and Kinetics of H₂O₂ Decomposition on Iron Oxide/Hydroxide Surfaces by Electrochemical Methods*"

16:35 **Exhibition from Gamble Technologies, PTI, Heka and London Scientific.**

Poster Session / Affiches, Wine and Cheese Reception in MSA 1st Floor Atrium

- 1 Jennie Eastcott (UOIT), "Fuel Cell Electrode Structures Containing Sulfonated Organosilane-Based Proton Conductors"
- 2 Brent Sherar (UWO), "The Influence of Sulphide on Carbon Steel Corrosion"
- 3 Laura Prest (UOIT), "Electrochemical Investigation of Naphthoquinone-impregnated Corrosion Suppression Coatings"
- 4 Alex Qing Ni (U of T), "Improved Efficiency of Electro-oxidation by Fenton's Reaction for Wastewater Treatment"
- 5 Scott Smith (Laurentian), "Electrochemical Investigations of the Oxidative Response of Alkylthiols with Polycrystalline Au: Evidence of Au Roughening"
- 6 Peter Keech (UWO), "Impedance analysis of the anodic dissolution of uranium dioxide in aqueous carbonate/bicarbonate solutions"
- 7 Zack Qin (UWO), "Finite Element Modelling of Electrochemical Systems and Processes"
- 8 Kevin O'Neil (UWO), "AFM Phase Studies of the Local Properties of Electronically Conducting Polymers as a Function of Preparation Conditions and Treatment"
- 9 Malika Ammam (UOIT), "Glucose Sensor"
- 10 Melissa Gail Faichuk (UWO), "Corrosion Resistant Properties of S.M.A. T Alloy 600"
- 11 Xifei Li (UWO), "Nitrogen Doped Carbon Nanotubes and SnO₂/Graphene as Anode Materials for High Performance Lithium Ion Batteries"
- 12 Yongliang Li (UWO), "Controlled Synthesis of MnOx Nanostructures as Catalysts for Li/O₂ Batteries"
- 13 Dongsheng Geng (UWO), "Non-Noble Metal Oxygen Reduction Electrocatalysts Based on Carbon Nanotubes with Controlled Nitrogen Contents"
- 14 Xueyuan Zhang (UWO), "Influence of Temperature, Potential, pH and Gamma Irradiation on Carbon Steel Corrosion"
- 15 Kevin James Daub (UWO), "Effects of γ -Radiation on Carbon Steel Corrosion"
- 16 Mihnea Ioan Ionescu (UWO), "Synthesis of advanced carbon nanomaterials and nanocomposites"
- 17 Tom Stockmann (UWO), "Electrochemical evaluation PUREX/TRUOX ligand extraction at an aqueous | 1,2-dichloroethane and an aqueous | room temperature ionic liquid micro-interface"
- 18 David Lepage (UQAM), "A new process for covering LiFePO₄ by a conductive polymer"
- 19 Hao Liu (UWO), "Synthesis and Characterization of Regular and Nitrogen-doped Carbon Nanotubes"
- 20 Dongniu Wang (UWO), "Controlled Synthesis of SnO₂ Nanostructures by Hydrothermal Method as Anodes of LIB"
- 21 Jinli Yang (UWO), "Core-Shell LiFePO₄/Carbon Nanocables Synthesized by Hydrothermal Route for Li-Ion Batteries"
- 22 Hesam Dadafarin (McGill), "Characterization of the self-assembled monolayers on 316L stainless steel: corrosion and stability study"
- 23 Irshad Ali (McGill), "Electrochemical reduction of NAD⁺ on glassy carbon electrode: Kinetic and adsorption studies"
- 24 Saad Ghareba (McGill), "12-Aminododecanoic acid as corrosion inhibitor for carbon steel"
- 25 Mohammad Harati (UWO), "Electrodeposition of Low-Cost, Earth Abundant and Non-Toxic Absorbing Layer for High Efficiency Photovoltaic Devices"
- 26 Dong Fu (UWO), "An electrochemical study of hydrogen peroxide decomposition on single phase iron oxides"
- 27 Xiangrong Zhang (UWO), "The Mechanism of Oxygen Reduction on Oxide-Covered Ni-Cr-Mo and Ti Alloys"
- 28-29 Raheleh Partovi-Nia (UWO), "Electrochemical Studies of the Interactions of Congo Red and β -Sheet Breaker Peptides with β -Amyloid Films (Cys-Ab12-28)"
- 30 Mohtashim H. Shamsi (UWO), "Discrimination of the single nucleotide DNA mismatches at different sequence positions by electrochemical impedance spectroscopy"
- 31 Sanela Martić (UWO), "Ferrocene-ATP Conjugates as Sensing Probes for Src and Erk Protein Kinase Activity"
- 32 Farkhondeh Fathi (UWO), "Electrochemical preparation of silver nanoparticles and their use as a sensor for the detection of cyanide"
- 33 Mahmoud Labib (UWO), "Toward an early diagnosis of HIV infection: an electrochemical approach for detection of HIV-1 reverse transcriptase enzyme"
- 34 Sarah Danielle Stewart (UWO), "Corrosion of Ag-Ag₂O in Iodide Solutions: A Potential Radioiodine Immobilization Route"
- 35 Ryan Seenath (UWO), "Scaffolded Vesicles: A Potential Nutraceutical Delivery System"
- 36 Janet Baron Gavidia (Guelph), "Electrochemical characterization of the gold-thiosulfate interface under leaching conditions"
- 37 Jing Zhang (UWO), "Facilitated Transfer of Metal Cations across water/RTIL microinterfaces by octyl(phenyl)-N,N-diisobutylcarbamoylmethylphosphine oxide"
- 38 Falong Jia (UWO), "Electrodeposition of Cu, In, Ga, and Se on Mo substrate from non-aqueous solution"
- 39 Jia Jia (UWO), "Scanning electrochemical microscopy of CIGS photovoltaic films"
- 40 Mengni Zhang (UWO), "SECM study of single live cancer cells: Vitamine C effect on respiratory burst"
- 41 Joshua Byers (UWO), "Atomic Force Microscopy Studies of Carbon Nitride Films"
- 42 Xiangbo Meng (UWO), "Atomic Layer Deposition: A New Technique to Synthesize Nanocomposites for Renewable Energy Conversion and Storage"
- 43 Jian Chen (UWO), "The Rate Controlling Reactions for Copper Corrosion in Anaerobic Aqueous Sulphide Solutions"
- 44 Tingjie Li (UWO), "Lab-on-a-CD for Parallel Blood Analysis"
- 45 Radu Ciprian Racovita (UWO), "Studies of the Effect of Dithiols on the Electrochemical Properties of 2,2'-Bithiophene and Poly(2,2'-bithiophene)"
- 46 Linda Wu (UWO), "The influence of pH and carbonate ions on the oxidation of hydrogen peroxide on UO₂ in alkaline solutions"

- 47 Dmitrij Zagidulin (UWO), "Intergranular Corrosion Resistance of Sigma-3 Grain Boundaries in Alloy 22"
- 48 Ajit Mishra (UWO), "Crevice Corrosion Behaviour of Corrosion Resistant Ni-Cr-Mo Alloys in Hot Saline Solutions"
- 49 Mayuri Razdan (UWO), "Electrochemical Reduction of Hydrogen Peroxide on Uranium Dioxide in the pH Range 3 to 4"

17 :45 Poster Award Announcement

REGISTRATION / ENREGISTREMENT

Registration fee will be collected at the meeting (cash or check), and will include the breakfast, coffee, lunch and W & C reception. / Les frais d'enregistrement sont payés le jour du symposium (espèces ou chèque). Ils incluent le petit déjeuner, café, déjeuner et le vin et fromages.

Membre ECS Member	\$50
Non-membre / Non-membre	\$60
Membre étudiant ECS Student Member	\$20
Étudiant non-membre/Student Non-member	\$30

Application forms for student travel assistance:
www.electrochem.org/ecs/sections/cana/cana.htm#a
 Bourse étudiante pour frais de conférence

HOTELS

Blocks of rooms have been released after August 16th, but you may still try:

Delta London Armouries

325 Dundas Street London Ontario, N6B 1T9
 Tel: (519) 640-5004 or 1-800-668-9999
 Fax: (519) 679-3957

Hotel at Windermere Manor

200 Collip Circle, London, Ontario N6G 4X8,
 Tel.: (519) 858-1391

Website: <http://www.windmeremanor.com/maps.htm>

Please let us know if they do not have anything for you and you require assistance.

DIRECTIONS

The symposium will be held at the UWO campus in the Chemistry Building (registration and breakfast in Chemistry foyer, and exhibition from Gamble Technologies, PTI, Heka and London Scientific, poster presentations and reception in Materials Science Addition of the Chemistry Building) and Biological and Geological Sciences Building (B&G Building for Seminars) located at 1151 Richmond Street.

UWO Campus Map



Driving to UWO:

When traveling from the 401, exit on Wellington Road, exit 186 and go north on Wellington Rd. Continue on Wellington Rd. and turn left on to Pall Mall St. Turn right on to Richmond St. Continue on Richmond St. and turn left on to University Dr. (TD Bank at the lights) to enter UWO campus. Continue on University Dr., past Perth Dr. intersection and drive up the campus hill.

The Chemistry Building is in between Natural Science and Biological and Geological Sciences Buildings. For parking, continue on University Dr., which turns into Middlesex Dr. then into Elgin Dr. (same street, different names), until you see a parking lot with an attendant. Parking is located at the Medical Sciences Lot just before Western Rd.

The closest coin entry lot is the Visual Arts Lot. From Richmond St., turn left on to University Dr. to enter UWO campus then continue on it until Perth Dr. intersection. Turn right at Perth Dr. and just past the Labatt Visual Arts building is the coin entry lot.

To enter the Chemistry Building, enter between Natural Science and Biological and Geological Sciences Building for registration.

Bus Route

When staying at the Delta London Armouries, you can take London Transit to get to UWO campus. Exact cash fares are \$2.75 for adults.

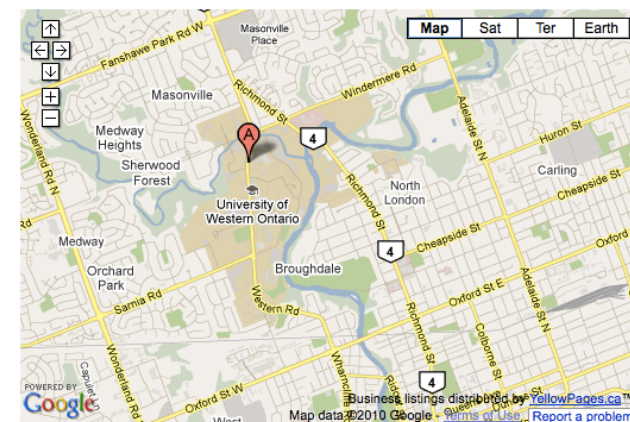
Take the 2 Dundas bus. The bus stop will be located on Dundas St. The 2 Dundas bus will take you to UWO campus from the Delta hotel and will stop at the Natural Science Building. The Chemistry Building is beside Natural Science.

You can ask the bus driver to confirm that the 2 Dundas bus is heading towards UWO campus.

Taxi

There are a number of taxi services available. Please ask the hotel front desk for a taxi number. Inform your taxi driver that you are heading to the Natural Science Building. The Chemistry Building is beside Natural Science.

The University of Western Ontario on Google Maps



All day weekend parking at UWO lots with attendants is \$5.00. Weekend parking at automated lots is available (Coins only) for \$4 – Exact Change Required.

**ECS Canadian Section Canadienne
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2009-2010**

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2. Christa Brosseau (Saint Mary's)
3. Bradley Easton (UOIT)
4. Michael Freund (Manitoba)
5. Thamara Laredo (Guelph)
6. Kristin Poduska (MUN)
7. Jeffrey Shepherd (Laurentian)
8. David Wilkinson (UBC)

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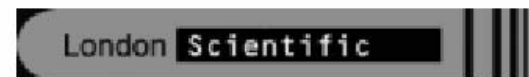
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