

Table of Contents

Table of Contents	1
Foreword	3
Acknowledgement	4
Committees.....	5
General Information	6
Floor Plan.....	7
Detailed Program	
<i>Tuesday, June 24, 2008</i>	
Registration	8
<i>Wednesday, June 25, 2008</i>	
Registration	8
Welcome Remarks and Opening of the Symposium.....	8
Keynote Speaker	8
AM Sessions	8
PM Sessions.....	9
Conference Cocktail and Poster Session	9
<i>Thursday, June 26, 2008</i>	
Registration	14
AM Sessions	14
PM Sessions.....	15
Conference Banquet.....	17
<i>Friday, June 27, 2008</i>	
Registration	17
AM Sessions	17
Closing Remarks	18

Foreword



The potential of electrochemical energy system devices to replace internal combustion engine, in transportation and stationary applications or to provide new applications for mobile systems, have significantly ignited the imagination of automotive companies, electronic companies, utilities, governments, academia and consumers. Then, these technologies also have great potential, and most likely higher volume of applications areas, such as hand-held personal electronic devices, uninterrupted power supply and Auxiliary power supply.

For example, electrochemical systems as proton exchange membrane or polymer electrolyte membrane (PEM) fuel cell stacks produced by Canadian fuel Cell companies have been supplied to several automakers in the world, and demonstrated in many cities around the world in revenue service..

However, before mass production of PEMFC-based devices, additional advances in unit cell materials and design will be required. Technical challenges to commercial success of PEM fuel cells have been identified as cost, durability/reliability/lifetime, electrode performance, freeze/cold start, and power density. To drive performance and cost reduction, new materials must be provided to the systems producers and we may develop thinner proton exchange membranes in combination with more effective nano-electro-catalyst utilization.

On the other hand, greater fundamental understanding of how the device operational conditions impact the electrochemical, chemical, physical and mechanical properties of materials and hence the durability and reliability of the stacks is also essential. The seventh International symposium is designed to survey the advances made up to now in development of New Materials and Nano Materials for Electrochemical. The symposium provides an opportunity for the different research communities to present recent advances in research, development and practices involving electrochemical systems.

We are over one hundred from all around the world and from many disciplines who met to present and hear fifty papers and see forty posters contributions. All are collected on the symposium CD-ROM as extended abstracts. The full paper will be published in the Journal of New Materials for Electrochemical Systems. They will serve as reference on new materials development for electrochemical systems.

The different keynote speakers highlighted the different aspects of new materials for electrochemical systems. In particular Dr. Atanasoski will open the symposium with a comprehensive account on High performance platinum and non-precious metal catalysts for PEM fuel cell application.

All the authors are to be thanked for their prompt provision of high-quality of extended abstracts which have ensured rapid publications. International collaboration across technical, engineering and scientific disciplines for the development of new materials in electrochemical systems is the most important mean for successful electrochemical system implementation in world energy production and consumption.

A handwritten signature in blue ink, appearing to read 'O. Savadogo', with a long horizontal flourish extending to the left.

O. Savadogo
Chairman of the Seventh International Symposium on New Materials
and Nano Materials for Electrochemical Systems

Acknowledgements

We gratefully acknowledge the work contributed by the staff of the «Bureau des Congrès Universitaires» and the «Laboratoire des nouveaux matériaux pour l'énergie et l'électrochimie» of École Polytechnique de Montréal, as well as the financial support of the «Groupement stratégique sur les piles à combustible» and the International Association for Hydrogen Energy.

We extend our sincere appreciation to the members of the organising committee, the International scientific committee and to the invited speakers, session chairs, presenters and authors who provided the materials that made the Sixth International Symposium on New Materials and Nano-Materials for Electrochemical Systems 2008 successful and whose extended abstracts are published in these proceedings.

Special gratitude is expressed to Gessie Brisard and Sébastien Lévesque for the countless hours of effort that led to the successful organization of the conference.

Committees

Organizing Committee

Chairman

O. Savadogo, *École Polytechnique de Montréal, Canada*

Members

G. Brisard, *Université de Sherbrooke, Canada*
R. Lévesque, *Bureau des Congrès Universitaires, Canada*
E. Ndzebet, *Rayovac Corporation, USA*
J. Luo, *Univerty of Alberta, Canada*

International Scientific Committee

R. J. Behm (Germany)	M. Pinéri (France)
G. Brisard (Canada)	P. R. Roberge (Canada)
E. J. Cairns (U.S.A.)	J. Saint-Pierre (U.S.A.)
D. Devilliers (France)	G. Sandi (U.S.A.)
J. P. Dodelet (Canada)	O. Savadogo (Canada)
H. Gasteiger (U.S.A.)	B. Scrosati (Italy)
E. Gonzalez (Brazil)	P. J. Sebastian (Mexico)
M. Grätzel (Switzerland)	D. Thompson (U.K.)
M. M. Jaksic (Yougoslavia)	S. Trasatti (Italy)
C. Lamy (France)	R. Tunold (Norway)
A. Lasia (Canada)	F. J. R. Valera (Mexico)
H. K. Liu (Australia)	T. N. Veziroglu (U.S.A.)
Z. Mao (China)	A. K. Vijh (Canada)
Z. F. Ma (China)	J. Vondrak (Czech Republic)
J. McBreen (U.S.A.)	H. Wendt (Germany)
Z. Ogumi (Japan)	A. Wieckowski (USA)
I. H. Oh (Korea)	W. Wiczorek (Poland)
K. I. Ota (Japan)	D. Wilkinson (Canada)
R. Pattabiraman (India)	S. Y. Zaginaichenko (Ukraine)
O. A. Petrii (Russia)	

General Information

Registration Desk

The registration desk will be located at *La Terrasse*, located 1 floor above the Lobby level of the Delta Centre-Ville Hotel for the duration of the conference.

On Tuesday, June 24, it will be open from 17:00 until 19:00.

On Wednesday, June 25, it will be open from 7:30 until 18:30.

On Thursday, June 26, it will be open from 7:30 until 17:25.

On Friday, June 27, it will be open from 8:00 until 10:40.

You must wear your name tag at all times to identify yourself and gain admission to the sessions.

Information and Messages

Any request for information of a general nature can be addressed at the registration desk. While sessions are under way, delegates will not be interrupted.

Technical Support

Presentation rooms are equipped with a computer and a data/LCD projector. Should you need any technical assistance with the audiovisual equipment, please contact us at the registration desk prior to your presentation.

Banquet

The Banquet will be held on Thursday, June 26, at the restaurant «Modavie» in the old-port of Montreal with a live Jazz band! Bus will be leaving at 18:00 from the Hotel Lobby (casual dress) and we will return at around 22:00. Be sure to have your Banquet ticket with you!

If you have specific food restrictions or allergies and are going to attend the banquet, please notify us at the registration desk as soon as possible.

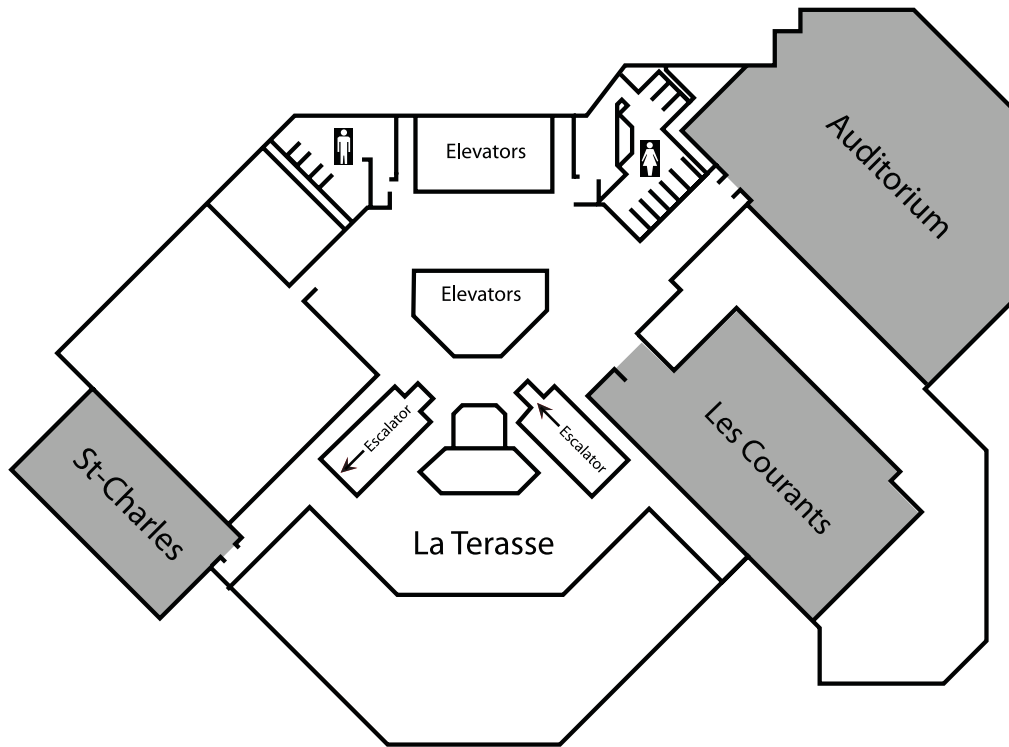
Internet Access

An Internet Café will be available near the registration desk during the opening hours of the registration desk. Additionally, a wireless access point will be available for the New Materials 2008 participants broadcasting from the registration desk using the following SSID and WEP-64 encryption key:

SSID: BCU-CONFERENCE

WEP-64 Key: ABCDE12345

Floor Plan



Delta Centre-Ville
777 University Street
Montréal, Quebec
H3C 3Z7
Canada

Telephone: +1 (514) 879-1370
Telephone (Toll-Free): +1 (888) 890-3222
Fax: +1 (514) 879-1831

Website: <http://www.deltahotels.com/hotels/hotels.php?hotelId=35>

Detailed Program

Tuesday, June 24, 2008

17:00 - 19:00

Registration (La Terrasse)
(no other activities will occur during this day)

Wednesday, June 25, 2008

7:30 - 18:30	Registration
8:20 - 8:35	Welcome Remarks and Opening of the Symposium Room: Auditorium
8:20	Dean of École Polytechnique de Montréal
8:30	Symposium Chairman Address
8:35	<i>Keynote Speaker</i> (NMES08-57) High performance platinum and non-precious metal catalysts for PEM fuel cell application <i>R. Atanasoski</i> <i>3M Corporate R&D, United States of America</i>
9:20	<i>Invited Speaker</i> (NMES08-29) Spectroscopy in Fuel Cell Catalysis Research <i>A. Wieckowski</i> <i>University of Illinois at Urbana-Champaign, USA</i>
10:00 - 10:20	Coffee break
10:20 - 12:00	Room: Auditorium Co-Chairpersons: <i>G. Brisard (Université de Sherbrooke, Canada)</i> <i>O. Savadogo (École Polytechnique de Montréal, Canada)</i>
10:20	<i>Invited Speaker</i> (NMES08-63) Development of Non-Platinum Cathode for PEFC <i>A. Ishihara, S. Mitsushim, and K-I Ota</i> <i>Yokohama National University, Yokohama, Japan</i>
11:00	<i>Invited Speaker</i> (NMES08-08) Characterization of Positive Electrode/Electrolyte Interphase in Lithium Batteries. <i>N. Dupré, J.F. Martin, P. Soudan and D. Guyomard.</i> <i>Université de Nantes, Nantes, France</i>
11:40	<i>Invited Speaker</i> (NMES08-10) Hydrogen Storage Based on Physisorption Using Dilithium Phthalocyanine <i>L. G. Scanlon, W. A. Feld, P.B Balbuena, G. Sandi, F. Duan, K.A. Underwood, J. Mack, M.A. Rottmayer and M. Tsao</i> <i>Air Force Research Lab, Wright-Patterson AFB, Ohio, USA</i> <i>Wright State University, Dayton, Ohio, USA</i> <i>Texas A&M University, College Station, Texas, USA</i> <i>Argonne National Laboratory, Argonne, Illinois, USA</i> <i>University of Cincinnati, Cincinnati, Ohio, USA</i>

12:20 –13:30	Lunch Time (on your own)
13:30 - 15:30	<p>SESSION I Room: Auditorium Chairpersons: <i>G. Brisard (Université de Sherbrooke, Canada)</i> <i>O. Savadogo (École Polytechnique de Montréal, Canada)</i></p>
13:30	<p>(NMES08-33) Determination of the Rate Constants for the Oxygen Reduction Reaction <i>A.Racz, T. Walter and U. Stimming</i> <i>Technical University of Munich, Germany</i></p>
13:55	<p>(NMES08-14) Multivalent Ion Conducting Solids <i>Nobuhito Imanaka</i> <i>Osaka University, Osaka, Japan</i></p>
14:20	<p>(NMES08-19) Preparation and Characterization of Hybrid Nafion/Silica/PTA Membranes for Redox Flow Batteries <i>V.Glibin, V.Pupkevich, L.Svirko, and D.Karamanev</i> <i>University of Western Ontario, London, Ontario, Canada</i></p>
14:45	<p>(NMES08-12) Preparation of Hybrid Proton Exchange Membranes Based On HPA/clay Complexes and Thermoplastic Polymers <i>A. Mokrini, P.Y. Vuillaume and L. Robitaille</i> <i>Industrial Materials Institute, National Research Council, Boucherville, Québec, Canada</i></p>
14:55-15:15	Coffee break
15:15 - 16:55	<p>SESSION I Room: Auditorium Co-Chairpersons: <i>G. Brisard (Université de Sherbrooke, Canada)</i> <i>O. Savadogo (École Polytechnique de Montréal, Canada)</i></p>
15:15	<p>(NMES08-92) Concept of Catalyst Development <i>Ulrich Stimming, Rainer Bußar</i> <i>Technical University of Munich (TUM), Germany</i></p>
15:50	<p>(NMES08-38) Epifluorescence imaging of ultrathin electrochemically switchable Nafion films <i>L. M. Moretto, T. Kohls, A. Chovin, P. Ugo, N. Sojic,</i> <i>Université de Bordeaux 1</i> <i>University of Venice, Italy</i></p>
16:15 – 18:30	<p>Conference Cocktail and Poster Session Room: Les Courants</p>
	<p>(NMES08-07) Electrosynthesis of Nanocomposite PbO₂-TiO₂ and PbO₂-ZrO₂ Materials for Electrochemical Systems <i>A. B. Velichenko, V. A. Knysh, T. V. Luk'yanenko and D. Devilliers</i> <i>Ukrainian State Chemical Technology University, UKRAINE</i> <i>Université Pierre et Marie Curie-Paris 6, France</i></p>
	<p>(NMES08-13) Corrosion Behaviour of Cr/Ni Alloy Coated Ferritic Stainless Steel in Simulated Cathodic PEMFC Environments <i>M. Rendon, J. T. Perez-Quiroz, J. Porcayo, S. V. Rivas, L. G. Arriga and G. Orozco</i> <i>Centro de Investigación y Desarrollo Tecnológico en Electroquímica, México</i> <i>Instituto Mexicano del Transporte, Sanfandila, México</i> <i>Instituto de Investigaciones Eléctricas, Cuernavaca, Morelos, México</i></p>

(NMES08-17) Preparation of a New Proton Conducting Silicon Membrane for Miniature Fuel Cells

*Y-T Chen and S. Ha, and S-O Kim,
National Chiao Tung University, Taiwan, Republic of China
Washington State University, WA, United States of America*

(NMES08-22) Synthesis of Pt-Fe Alloy on MWCNTs as Oxygen Reduction Electrocatalyst

D. Morales, L. Alvarez-Contreras, V. Baglío, A.S. Aricò, R. Ornelas, G. Orozco and L.G. Arriaga

*Centro de Investigación y Desarrollo Tecnológico en Electroquímica, Parque Tecnológico Querétaro, Sanfandila, México; Centro de Investigación en Materiales Avanzados, Chihuahua, México,
CNR-ITAE, Messina, Italy,
Tozzi Renewable Energy, Mezzano, Italy*

(NMES08-23) Novel Route to Synthesize Pt-WS₂ Nanoparticles for Electrochemical Applications

*Y. Gochi-Ponc, D. Morales, F. Chiñas-Castillo, L.G. Arriaga and G Alonso-Nuñez
Instituto Tecnológico de Oaxaca, Mexico*

(NMES08-24) Tailoring the properties of Faujasite Zeolites for Fuel Cell Applications

*V.Felice and A. C. Tavares
Institut National de la Recherche Scientifique, Université du Québec, Varennes, Québec, Canada*

(NMES08-26) Electrochemical Performances of SnPO₄-Coated

LiNi_{1/3}Mn_{1/3}Co_{1/3}O₂ Cathode Materials for Li-Ion Batteries

*Hyun-Soo Kim, Ke-Tack Kim, Woo-Seong Kim, and Hal-Bon Gu
Korea Electrotechnology Research Institute, Changwon, Republic of Korea
Daejung EM Co., Republic of Korea
Chonnam National University, Gwangju, Republic of Korea*

(NMES08-27) EIS Study of the Redox Reaction of Fe(CN)₆^{3-/4-} at Glassy Carbon Electrode via Diazonium Reduction in Aqueous and Acetonitrile Solutions

*M. Khoshroo and A. Rostami ,
University of Mazandaran, Babolsar, Iran*

(NMES08-30) Kinetics of the Oxygen reduction Reaction on Supported Ru-based Catalyst in the Presence of Ethanol

*F.J. Rodríguez Varela and S.E. González Ramírez
Centro de Investigación y de Estudios Avanzados Unidad Saltillo, México*

(NMES08-37) Phase selective preparation of brookite and anatase TiO₂ nanopowder and their thin films using different precipitation procedure

*R. Chauhan and L. Bahadur
Banaras Hindu University, Varanasi, INDIA*

(NMES08-41) Electrocatalytic studies of iridium based clusters for the oxygen reduction and hydrogen oxidation reactions in 0.5 M H₂SO₄, in the presence of fuel cell contaminants.

*J. Uribe-Godínez, R. H. Castellanos, O. Jiménez-Sandoval, E. Borja-Arco and A. Altamirano-Gutiérrez
Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, Mexico
Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada-Querétaro, Mexico*

(NMES08-42) Rhodium based clusters for oxygen reduction and hydrogen oxidation in 0.5 M H₂SO₄, tolerant to methanol and carbon monoxide, respectively.

J. Uribe-Godínez, O. Jiménez-Sandoval, R. H. Castellanos, E. Borja-Arco and A. Altamirano-Gutiérrez

Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, Mexico

Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada-Querétaro, Mexico

(NMES08-46) Measurement of Methanol Crossover Through Nafion 117 and PVA-Blend-PSSA Membranes Using Cyclic Voltammetry

A. Cruz-García¹, J. Uribe-Godínez¹, O. Jiménez-Sandoval¹ and R. H. Castellanos²
Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional (Cinvestav), Unidad Querétaro, Querétaro, México

2 Centro de Investigación en Ciencia Aplicada y Tecnología Avanzada-Querétaro, Querétaro, México.

(NMES08-48) A DFT Study of Ru, Rh, Pd, Os, Ir, and Pt Clusters as Catalysts for Methane Dissociation in a Direct Methane Fuel Cell (DMHFC)

G. Psogianakis, A. St-Amant and M. Ternan

University of Ottawa, Ottawa, Ontario, Canada

EnPross Incorporated, Ottawa, Ontario, Canada

(NMES08-52) Differential Electrochemical Mass Spectrometry Study of Pt and PtSn Nanocatalysts for Direct Ethanol Fuel Cells

F. Saidani, P. Bommersbach, D. Rochefort, D. Guay, M. Mohamedi

Institut National de la Recherche Scientifique, Université du Québec, Varennes, Québec, Canada

Université de Montréal, Montréal, Québec, Canada

(NMES08-53) EQCM Studies of Ethanol Oxidation on Pt and Pt-Sn Nanoparticles for Direct Ethanol Fuel Cells

P. Bommersbach, M. Chaker, M. Mohamedi, and D. Guay

Institut National de la Recherche Scientifique, Université du Québec, Varennes, Québec

(NMES08-54) Preparation and Characterization of Binderless Carbon Nanostructured Catalyst Support for DMFC

Z. Hamoudi, B. Aïssa, M. A. El Khakani, M. Mohamedi

Institut National de la Recherche Scientifique, Université du Québec, Varennes

(NMES08-59) Electrochemical Oxidation of H₂S in SOFC: Sources of Potential Loss

V. Vorontsov, K. T. Chuang and J. L. Luo

University of Alberta, Edmonton, Alberta, Canada

(NES08-64) Immobilization of Carbon Nanotubes and Methallophthalocyanines on Conductive surfaces by Electrochemical means for electroanalytical purposes

A. P. Gutierrez, C. Richard^a, S. Griveau^a, S. G. Granados, J. H. Zagal and F. Bedioui
ENSCP, Paris, France

Universidad de Guanajuato, Mexico

Universidad de Santiago de Chile, Santiago, Chile

(NMES08-67) α-IRON (III) OXIDE NANORODS FOR SUPERCAPACITOR ELECTRODE ACTIVE MATERIALS

B. Wang, H. Liu, D. Wexler, J. Park, K. Konstantinov, G.X. Wang

University of Wollongong, Wollongong, Australia

(NES08-68) STUDY OF COBALT (II, III) OXIDE NANOCRYSTALS FOR ELECTROCHEMICAL SUPERCAPACITORS

*B. Wang, X.P. Shen, J. Park, K. Konstantinov, G.X. Wang
University of Wollongong, Wollongong, Australia*

(NMES08-69) Nano-crystalline Nickel Copper oxide/carbon composite fabricated by in-situ spray pyrolysis technique as an anode material for lithium-ion batteries

N.O. Payne, K. Konstantinov, B. Wang, S.L. Chou, J. Wang, G.X. Wang University of Wollongong, Wollongong, Australia

(NMES08-70) THE PREPARATION OF THIN OXIDE FILMS AND COATINGS FOR ENERGY APPLICATIONS THROUGH NOVEL DIPCOATING METHODS

*J. Barnes, B. Wang, K. Konstantinov, G.X. Wang, T. Devers, S. Hoste
University of Wollongong, Wollongong, Australia*

(NMES08-71) In-Situ Polymerization: A novel Solvent-Free Route For Thermally-Stable Proton-Conductive Membranes

*T. Xu, J-J. Woo, S-J. Seo, S-H. Moon
Gwangju Institute of Science and Technology, Republic of Korea*

(NMES08-78) Study of Charge Transfer Reaction in a Microbial Fuel Cell

*E. Martin, B. Tartakovsk, O. Savadogo
École Polytechnique de Montréal, Montréal, Québec, Canada
Institut de Recherche en Biotechnologie, Montréal, Québec, Canada*

(NMES08-79) Potentiodynamic polarization assays on magnetic materials for new medical micro-devices

*P. Pouponneau, O. Savadogo, T. Napporn, L'H. Yahia and S. Martel.
École Polytechnique de Montréal, Montréal, Canada*

(NMES08-81) Low Pt Content of Carbon Supported Pt-Ni-TiO₂ Nanotube Electrocatalysts for Direct Methanol Fuel Cell

*Q-Z Jiang, X. Wu, Z-F Ma
Shanghai Jiao Tong University, Shanghai, China*

(NMES08-82) Low-temperature fabrication of TiO₂ nanocrystalline film electrodes for dye-sensitized solar cells

*G. B. Shan, K. E. Lee, C. Charboneau, G. P. Demopoulos, R. Gauvin and O. Savadogo
McGill University, Montreal, Québec, Canada
École Polytechnique de Montréal, Montréal, Québec, Canada*

(NMES08-83) Investigations of Pd-Cu electrocatalyst for oxygen reduction reaction in acidic media with RDE method

*F. Fouda-Onana, S. Bah and O. Savadogo,
École Polytechnique de Montréal, Montréal, Québec, Canada*

(NMES08-84) New Process of the preparation of catalyzed Gas Diffusion Electrode for PEM Fuel Cells based on Ultrasonic Direct Solution Spray Reaction Method

*K. Oishi and O. Savadogo
École Polytechnique de Montréal, Montréal, Québec, Canada*

(NMES08-85) Characterization of chemically deposited low-cost II-VI thin films solar cells: modifying effects with catalytic silicotungstic acid (STA)

E. N. Petuenju and O. Savadogo,
École Polytechnique de Montréal, Montréal, Québec, Canada*

(NMES08-86) The effect of silicotungstic acid concentration on the optoelectronic properties of thin films CdS-CdTe deposited on various conducting glasses

*M. Ocampo and O. Savadogo,
École Polytechnique de Montréal, Montréal, Québec, Canada*

(NMES08-88) Direct glycerol PEM fuel cell (DGFC)

*H. Tian and O. Savadogo
École Polytechnique de Montréal, Montréal, Québec, Canada*

(NMES08-89) The effect of alkaline doping conditions on Polybenzimidazole (PBI) membrane properties for Alkaline Polymer Electrolyte fuel cell application

*H. Tian and O. Savadogo
École Polytechnique de Montréal, Montréal, Québec, Canada*

(NMES08-90) Palladium-alloy Catalysts as Ethanol Tolerant Cathodes for Direct Alcohol Fuel Cell Applications

*O. Savadogo and F. J. Rodríguez Varela,
École polytechnique de Montréal, Montréal, Canada.
Centro de Investigación y de Estudios Avanzados, Unidad Saltillo, Saltillo-
Monterrey, Mexico*

(NMES08-91) Electrochemical Behaviour and Nanoscale Characteristics of CNT-based Fibers as New Substrate for Cell Growth

*S. Polizu, O. Savadogo, M. Maugey, M. Rouabhia, P. Poulin, L'H. Yahia
École Polytechnique de Montréal, Montréal, Québec, Canada
Centre de Recherche Paul Pascal, CNRS, Bordeaux, France
Université Laval, Québec, Canada*

(NMES08-93)-Catalytic activity of carbon-supported electrocatalysts for Direct Ethanol Fuel Cell applications

F.J. Rodríguez Varela+ and O. Savadogo#
CINVESTAV-Unidad Saltillo, México
École Polytechnique de Montréal*

(NMES08-94) Electroactive Ethanol Tolerant Pt-alloy Cathodes for DEFC Applications

F.J. Rodríguez Varela+ and O. Savadogo#
CINVESTAV-Unidad Saltillo, México
École Polytechnique de Montréal*

(NMES08-95) Elaboration and Characterisation of Pd-Cr alloys for PEM Fuel cells

*Bah Souleymane, F. Fouda –Onana et O. Savadogo,
École Polytechnique de Montréal*

18:30

End of Sessions

Thursday, June 26, 2008

7:30 - 17:25	Registration
8:00 - 10:25	SESSION II A Room: Auditorium Chairperson: <i>R. Atanasoski</i> <i>3M Corporate R&D, United States of America</i>
8:00	Invited Speaker (NMES08-60) Effects of Microstructure and composition of Anode Pt based Electro-catalysts on Performance of Direct Alcohol Fuel Cells <i>L. Jiang, H. Li^a, S. Yan, G. Sun, Q. Xin</i> <i>Dalian Institute of Chemical Physics, Dalian, China</i>
8 : 35	Invited Speaker (NMES08-80) Development of Nanosized Electro-catalysts for Direct Ethanol Fuel Cells <i>M. Mohamedi</i> <i>Institut National de la Recherche Scientifique, Université du Québec, Varennes, Québec, Canada</i>
9:10	(NMES08-28) Anode Catalysts for Direct Formic Acid Fuel Cells (DFAFC) <i>X. Yu and Peter G. Pickup, Memorial University of Newfoundland, St. John's, Newfoundland, Canada</i>
9:35	NMES08-75) Sputter Deposition on Gas Diffusion Electrodes on Pt-Au Nanoclusters for Methanol Oxidation <i>L. Giorgi, R. Giorgi, S. Gagliardi, E. Serra, M. Alvisi, M.A. Signore</i> <i>ENEA Casaccia Research Center, Physics Technologies & New Materials, Italy</i> <i>ENEA Brindisi Research Center, Physics Technologies & New Materials, Italy</i>
10 :00	NMES08-43) Synthetesis and Characterisation of Nanoparticles for Direct Ethanol Fuel Cell <i>S. Beyhan, F. Kadirgan, C. Coutanceau and J-M. Léger</i> <i>Istanbul Technical University, Turkey</i> <i>Université de Poitiers, Poitiers, France</i>
10:25 -10:40	Coffee Break
10:40- 12:20	SESSION IIB (parallel) Room: Auditorium Chairperson: <i>Peter G. Pickup (Memorial University of Newfoundland, St. John's, Newfoundland, Canada)</i>
10:40	(NMES08-44) Ni-YSZ-Ce_{0.9}Sr_{0.1}VO₃ AND Ce_{0.7}Sr_{0.3}V_{0.5}Cr_{0.5}O₃ as Anode Materials for Sulfur Tolerant Direct Methane SOFCs <i>N. Danilovic, K.T. Chuang and J.L. Luo</i> <i>University of Alberta, Edmonton, Alberta, Canada</i>
11 :05	(NMES08-45) Examination of Carbon Deposition Behaviour on Vanadium Based Anodes for SOFCs <i>N. Danilovic, Z.R. Xu, K.T. Chuang, J.L. Luo, V. Alzate and J. Hi;</i> <i>University of Alberta, Edmonton, Alberta, Canada</i> <i>University of Calgary, Alberta, Canada</i>
11:30	(NMES08-58) Ternary Transition Metal Sulfide Anodes for SOFC Operating on H₂S <i>V. Vorontsov, K. T. Chuang and J. L. Luo</i> <i>University of Alberta, Edmonton, Alberta, Canada</i>

11 :55	<p>(NMES08-62) Single-Chamber Micro Solid Oxide Fuel Cells With Coplanar Electrodes <i>M. Kuhn, T. Napporn, M. Meunier, S. Vengallatore, and D. Therriault</i> <i>École Polytechnique de Montréal, Montréal, Canada</i> <i>McGill University, Montréal, Canada.</i></p>
10:40 - 12:20	<p>SESSION II C (parallel) Room: St-Charles Chairperson: <i>H. K. Liu (University of Wollongong, Australia)</i></p>
10:40	<p>(NMES08-36) Characterization of CuInS₂ Nanoparticles and Composite Films for Application in an Electrochemical Photovoltaic Cell <i>C. M. Cirtiu, R. Taibi, A. Hammami and B. Marsan</i> <i>Université du Québec à Montréal, Montréal, Québec, Canada</i></p>
11:05	<p>(NMES08-65) (Effects of Carboxyl and Ester Anchoring Groups on Solar Conversion Efficiencies of TiO₂ Dye-Sensitized Solar Cells <i>A. Sepehrifard, A. Stublla, S. Haftchenary, S. Chen, P. Potvin and S. Morin</i> <i>York University, Toronto, Ontario, Canada</i></p>
11:30	<p>(NMES08-74) Sensors properties of an alkylamine-intercalated kaolinite material towards the voltammetric preconcentration of [Ru(CN)₆]⁴⁻ at a clay-modified electrode <i>I. K. Tonlé, B. B. Rose G, T. Diaco, E. Ngameni and C. Detellier</i> <i>University of Ottawa, Ottawa, Ontario, Canada</i></p>
11:55	<p>(NMES08-56) The replacement of solar energy in rural areas to prevent desertification (Case study: Aran and Bidgol region) <i>M. S. Zakikhani, S. Feiznia; M. Nasri, A. Jalali</i> <i>Azad University, Iran</i> <i>University of Tehran, Iran</i></p>
12:20 - 13:30	Lunch Time (on your own)
13:30 - 15:15	<p>SESSION II D (parallel) Room: Auditorium Chairperson: <i>M. Mohamedi (INRS-Énergie Matériaux, Université du Québec, Canada))</i></p>
13:30	<p><i>Invited Speaker</i> (NMES08-61) Energy Storage System Integration for Fuel Cell Electric Vehicle Z-F MA <i>Shanghai Jiaotong University, Shanghai, P R. China</i></p>
14:00	<p>(NMES08-06) Modification of Titanium Electrodes by a Noble Metal Deposit <i>D. Devilliers, E. Mahé</i> <i>Université Pierre et Marie Curie-Paris 6, France</i></p>
14:25	<p>(NMES08-09) Electrocatalytic hydrogenation of organic molecules on conductive new catalytic material <i>D. Tountain, A. Brisach-Wittmeyer, P. Nkeng, G. Poillarat, H. Menard</i> <i>Université de Strasbourg, Strasbourg, France</i> <i>Université de Sherbrooke, Sherbrooke, Québec, Canada</i></p>
14:50	<p>(NMES08-50) Development of Nanomaterials for URFC and SPE Electrolyzer Applications <i>V. Antonucci, V. Bagli, A. Di Blasi, C. D'Urso, R. Ornela, L. Arriaga, A.S. Aricò;</i> <i>CNR-ITAE, Messina, Italy,</i> <i>Tozzi Apparecchiature Elettriche SpA, Italy</i> <i>CIDETEQ, Querétaro, México</i></p>

13:30 - 15:15	<p align="center">SESSION II E (parallel) Room: St-Charles Chairperson: <i>G. Brisard (Université de Sherbrooke, Canada)</i></p>
13:30	<p align="center">(NMES05-35) Ru Oxide Supercapacitors <i>X. Liu, and P. G. Pickup</i> <i>Memorial University of Newfoundland, St. John's, Newfoundland, Canada</i></p>
14:10	<p align="center">(NMES08-31) Synergistic Ru oxide/carbon cloth nanocomposites for supercapacitors <i>X. Liu, P. G. Pickup</i> <i>Memorial University of Newfoundland, St. John's, Newfoundland, Canada</i></p>
14:35	<p align="center">(NMES08-08) On the feasibility of aqueous process for LiFePO₄ composite electrode elaboration. <i>W. Porcher, P. Moreau, C. Payen, S. Jouanneau, B. Lestriez and D. Guyomard</i> <i>Commissariat à l'énergie atomique, Grenoble, France</i> <i>Université de Nantes, Nantes, France</i></p>
15:00 - 15:20	Coffee break
15:20 - 17:00	<p align="center">SESSION II D Continued (parallel) Room: Auditorium Chairperson: <i>S. Morin (York University, Canada)</i></p>
15:20	<p align="center">(NMES08-25) The Electron Conductivity Change of Poly (O-Aminophenol) After its Desactivation and Subsequent Re-activation <i>R. Tucceri, Universidad Nacional de La Plata, Argentina</i></p>
15:45	<p align="center">(NMES08-20) Electron Transfer Reactions to Probe the Electrode/Solution Interface <i>F. Capitanio, E. Guerrini, A. Colombo, S. Trasatti</i> <i>University of Milan, Italy</i> <i>Institut National de la Recherche Scientifique, Université du Québec, Varennes, Québec</i></p>
16:10	<p align="center">NMES08-47) Innovative Application of AC-Voltammetry in the Characterization of Oxide Nanolayers Formed on Metals. V. Bueno, L. Lazzari, M. Ormellesse, P. Spinelli <i>Politecnico di Milano, Milan, Italy</i> <i>Politecnico di Torino, Torino, Italy</i></p>
16:35	<p align="center">(NMES08-18) Investigation of Physical Properties and Surface Morphology of Cu Nanolayer Deposited on glass and (Al, Fe) Thin Films by DC Magnetron Sputtering <i>Parvin Alizadeh Eslam; Saeed Nasiri Lahegh; Mahmood Ghorannevis; Shahram Morad; Parviz Aberumand, Islamic Azad University, Iran</i></p>
15:20 - 17 :00	<p align="center">SESSION II E Continued (parallel) Room: St-Charles Chairperson: <i>K. Lee (NRC, Institute of Fuel Cell, Canada)</i></p>
15:20	<p align="center">(NMES08-11) Electrochemical Properties of Flame Spray-Pyrolyzed Vanadium Oxide Cathode Nanomaterial in Lithium Battery <i>S-H Ng, T. J. Patey, R. Büchel, F. Krumeich, J-Z Wang, H-K Liu, S. E. Pratsinis, and P. Novák</i> <i>University of Wollongong, Wollongong, Australia</i></p>

16:45	<p>(NMES08-73) Substrate-Bound Tyrosinase Electrode Using Gold Nanoparticles Anchored To Pyrroloquinoline Quinone For A Pesticide Biosensor</p> <p><i>G-Y Kim, M-S Kang, J. Shim, and S-H Moon</i> <i>Gwangju Institute of Science and Technology, Republic of Korea</i></p>
16:10	<p>(NMES08-39) Ordered Micro-arrays of Optoelectrochemical Nanosensors With Electropolymerized Thin Film for DNA Detection RDERED MICROARRAYS OF OPTO-</p> <p><i>F. Deiss, P. Garrigue, S. Laurent, T. Livache, and N. Sojic</i> <i>Université de Bordeaux 1, France</i> <i>CREAB - CEA-GIDRFMC, Grenoble, France</i></p>
16:35	<p>(NMES08-15) Fabrication and Electrical Resistivity of Mo-doped VO₂ Thin Films Coated on Graphite Conductive Plates by a Sol-gel Method</p> <p><i>W. Choi, H-Mi Jung, S. Um</i> <i>Hanyang University, Republic of Korea</i></p>
17:00	<p>(NMES08-16) An Investigation on the electrocatalytic properties of polypyrrole films on the kinetics of oxygen reduction reaction in PEMFC</p> <p><i>M. Saremi, S. Sharifi Asl and Sh. Kazemi</i> <i>University of Tehran, Iran</i></p>
17:25	End of Sessions
18:00	Conference Banquet – Restaurant Modavie <u>Bus will be leaving at 18:00 from the Hotel Lobby</u>

Friday, June 27, 2008

9:00 - 10:40	Registration
9:00- 10:25	<p>SESSION III Room: Auditorium Chairperson: <i>D. Devilliers (Université Pierre et Marie Curie, France)</i></p>
9:00	<p>Invited Speaker (NMES08-87) The Role of Surface Morphology in Nanocatalyst Engineering <i>V. Stamenkovic</i> <i>Argonne National Laboratory, Argonne, United States of America</i></p>
9:35	<p>(NMES08-76) Non-Platinum Electrocatalysts for PEM Fuel Cells <i>K. Lee, L. Zhang, Z. Shi, R. Hui and J. Zhang</i> <i>Institute for Fuel Cell Innovation, National Research Council of Canada, Vancouver, BC, Canada</i></p>
10:00	<p>(NMES08-55) Carbon nanostructures as Catalyst support for Polymer electrolyte membrane fuel cells <i>S.K. Natarajan and J. Hamelin</i> <i>Université du Québec à Trois-Rivières, Trois-Rivières, Canada</i></p>
10:25 - 10:40	Coffee break

10:40 - 12:25	<p align="center">SESSION III Continued Room: Auditorium <i>Chairperson:</i> <i>A. Wieckowsky (University of Illinois at Urbana Champaign, USA)</i></p>
10:40	<p align="center">(NMES08-32) Mesoporous TiO₂- an alternative material for PEM fuel cells catalyst support <i>T. B. Do, M. Ruthkosky and M. Cai, University of Michigan, USA</i> <i>Research and Development Center, General Motors, Warren, MI, United States of America</i></p>
11: 05	<p align="center">(NMES08-66) Pt-decorated Au Nanoparticles: Highly Active Catalyst for Fuel Cell Reactions <i>N. Kristia and, X. Wang</i> <i>(Nanyang Technological University, Singapore)</i></p>
11:30	<p align="center">(NMES08-49) Characterization of Self-assembled Electrodes based on Au-Pt Nanoparticles for PEMFC Application <i>E. Valenzuela, P.J. Sebastian, S.A. Gamboa, U. Pal, I. Gonzalez,</i> <i>Universidad Politécnica de Chiapas, México</i> <i>UNAM, Temixco, México</i> <i>Universidad Autónoma de Puebla, México</i> <i>Universidad Autónoma Metropolitana, México</i></p>
11:55	Closings remarks
12:05	End of the Symposium

