

Thursday, November 20th	
Time	
8:00	Registration
9:00	Opening ceremony
9:20	<p><b>Optimizing Silicon Anodes for Li-Ion Batteries</b></p> <p style="text-align: center;">Helmut Föll</p> <p style="text-align: center;">Institute for Materials Science, University of Kiel, Germany</p>
10:10	<p><b>Controlling lithium-ion insertion behavior in MWCNT@TiO<sub>2</sub> electrodes by composition and heat treatment</b></p> <p style="text-align: center;"><u>P. Acevedo-Peña</u>, M. Ramírez and M.E. Rincón</p> <p style="text-align: center;">Institute of Renewable Energies, UNAM, Mexico</p>
10:30	<p><b>Pechini synthesis of Na<sub>3</sub>V<sub>2</sub>(PO<sub>4</sub>)<sub>2</sub>F<sub>3</sub>/C as cathode for ion batteries</b></p> <p style="text-align: center;"><u>Lorena L. Garza-Tovar</u> , Nayely Pineda-Aguilar, Luis C. Torres-González</p> <p style="text-align: center;">Faculty of Chemical Sciences , UANL, Mexico</p>
10:50-13:00	<p>Poster session (see program below) / Equipment exhibition (Keithley, BioLogic)</p>
13:00	<p><b>Organic Lithium Batteries: the next generation of rechargeable batteries</b></p> <p style="text-align: center;">Ignacio González</p> <p style="text-align: center;">Chemistry and Physics Department, UAM Iztapalapa, Mexico</p>
13:50	<p><b>SEI formation on Carbon-based electrodes</b></p> <p style="text-align: center;">G. Ramos Sánchez<sup>1,2</sup>, P. Balbuena<sup>1</sup></p> <p style="text-align: center;"><sup>1</sup>Chemical Engineering Department, Texas A&amp;M University, USA <sup>2</sup>Chemistry Department of UAM Iztapalapa, Mexico</p>
14:10	<p><b>Transport phenomena in a liquid metal electrode</b></p> <p style="text-align: center;">A. Beltrán</p> <p style="text-align: center;">Institute for Materials Research, Morelia Campus, UNAM. Michoacan, Mexico</p>
14:30	Lunch break

16:10	<p><b>Development of electrochemical energy conversion microdevices</b></p> <p>Luis Gerardo Arriaga</p> <p>Center of Electrochemical Research and Technological Development, Queretaro, Mexico</p>
17:00	<p><b>Surface Modification of Carbon Materials for Improved Capacitance</b></p> <p><u>A. Karina Cuentas-Gallegos</u>, Marino Adán-Benítez, Margarita Miranda-Hernández.</p> <p>Institute for Renewable Energies, UNAM, Temixco, Morelos, Mexico</p>
17:20	<p><b>Electrochemical synthesis of Co(OH)<sub>2</sub>: Temperature effect and their electrochemical behavior</b></p> <p><u>V. Parra-Elizondo</u>, B. Escobar-Morales and D. Pacheco-Catlalán</p> <p>Center of Scientific Research of Yucatan, Yucatan, Mexico</p>
17:40-18:00	Coffee break
18:00	<p><b>Thermal and thermochemical energy storage in concentrating solar power plants</b></p> <p>Camilo A. Arancibia Bulnes</p> <p>Institute for Renewable Energies, UNAM, Temixco, Morelos, Mexico</p>
19:00	Gala dinner

<b>Posters</b>	
	<p><b>Polymer electrolytes for lithium ion batteries: synthesis, thermal and electrochemistry properties</b></p> <p>Judith Cardoso<sup>1</sup>, Dora Nava<sup>1</sup>, Gregorio Guzmán<sup>1</sup>, and Ignacio González<sup>2</sup></p> <p><sup>1</sup> Physics Department. DCBI, UAMI, Mexico  <sup>2</sup>Chemistry Department. DCBI, UAMI, Mexico</p>
	<p><b>Study of energy storage in composites C-Ag, C-Chlorophyll, Chlorophyll- Colloidal Silver deposited on cellulose paper</b></p> <p>M.A. Quiroga de la Torre<sup>1</sup>, M.A. Santana-Rojas<sup>1</sup>, S.J. Castillo<sup>2</sup></p> <p><sup>1</sup>Technological Institute of Hermosillo, Sonora, Mexico  <sup>2</sup>Departament of Physics Research, UNISON, Sonora, Mexico</p>

## **Energy storage for biomedical applications: the state of the art**

G. Herrera-Caballero<sup>1</sup>, V. M. Juárez-Flores<sup>1</sup>, H. A. Medrano-Martínez<sup>1</sup>, A. G. Muñoz-Tlapanco<sup>1</sup>, E. E. Nava-Campos<sup>1</sup>, M. Ramírez-Nava<sup>1</sup>, J. A. Velázquez Juárez<sup>1</sup>, M. L. García-Cruz<sup>1</sup>, E. Quiroga-González<sup>2</sup>

<sup>1</sup> Faculty of Electronics, UPAEP. Puebla, Mexico

<sup>2</sup>Institute for Physics, BUAP. Puebla, Mexico

## **Morphological and structural characterization of $\text{Li}_4\text{Ti}_{5-x}\text{Fe}_x\text{O}_{12}$ ( $x=0$ , **0.1** and **0.2**)/C electrospun nanofiber mats with potential application such anode in Li-ion batteries**

R.A. Hernandez-Carrillo<sup>1</sup>, D.I. García-Gutierrez<sup>2</sup>, L. Garza-Tovar<sup>1</sup>, E.M. Sanchez-Cervantes<sup>1</sup>

<sup>1</sup> Faculty of Chemical Sciences, UANL, Mexico

<sup>2</sup> Center of Innovation, Research and Development in Technology and Engineering, UANL, Mexico

## **$\text{V}_2\text{O}_5$ -MWCNT and $\text{VOPO}_4$ -MWCNT Composites for lithium-ion battery Cathodes**

M. Adán-Benítez, P. Acevedo-Peña, M.E. Rincón and A.K. Cuentas-Gallegos

Institute for Renewable Energies, UNAM, Temixco, Morelos, Mexico

## **Synthesis of $\text{RE}_{0.5+x-y}\text{Bi}_y\text{Li}_{0.5-3x}\text{TiO}_3$ perovskites (RE=La and Pr).**

N. Fernández<sup>1</sup>, P. Escribano<sup>2</sup>, E. Cordoncillo<sup>2</sup>, H. Beltrán<sup>2</sup>, M. F. García-Sánchez<sup>3</sup>, L. C. Romero-Ibarra<sup>4</sup>, N. Masó<sup>2</sup>

<sup>1</sup>Department of Inorganic Chemistry, Faculty of Chemistry, UH, Cuba

<sup>2</sup>Department of Inorganic and Organic Chemistry, Universitat Jaume I, Castellon, Spain

<sup>3</sup>Professional Interdisciplinary Unity of Engineering and Advanced Technologies, IPN, Mexico

<sup>4</sup> UAM, Mexico

## **Battery anodes composed of Si microwires prepared by a combination of chemical etching techniques**

O. Pérez-Díaz, E. Quiroga-González, N. R. Silva-González

Institute for Physics, BUAP, Puebla, Mexico

**Electrochemical behavior of carbon electrodes obtained by chlorination of  $Zr(C_5H_5)_2Cl_2$  at different reaction times**

D.J. Araujo-Pérez<sup>1</sup>, P. González-García<sup>1</sup>, M.E. Poisot-Vazquez<sup>2</sup>, L. García-González

<sup>1</sup> Center of Research in Micro and Nanotechnology, UV, Veracruz, Mexico

<sup>2</sup>Institute of Applied Chemistry, UNPA, Oaxaca, Mexico

**Development of electrochemical capacitors from water lily  
(*Eichhornia crassipes*)**

I.L. Andrade-Martínez<sup>1</sup>, M.E. Poisot-Vázquez<sup>2</sup>, P.G. González, L. García-González, T. Hernández-Quiroz<sup>2</sup>

<sup>1</sup> Center of Research in Micro and Nanotechnology, UV, Veracruz, Mexico

<sup>2</sup>Institute for Applied Chemistry, UNPA, Oaxaca, Mexico

**Behavior analysis in heliostat's spot for fault detection**

J. Pacheco<sup>1</sup>, B. Al Baalbaki<sup>1</sup>, V. Benitez<sup>2</sup>, C. Iriarte<sup>2</sup>

<sup>1</sup> Electrical and Computer Engineering Department, The University of Arizona, USA

<sup>2</sup> Industrial Engineering Department, UNISON, Mexico

Friday, November 21st	
Time	
9:00	<p><b>Investigation of Li-ion battery using X-ray microscopy at nano-/meso- scales</b></p> <p>Yijin Liu</p> <p>Stanford Synchrotron Radiation Lightsource, SLAC National Accelerator Laboratory, Menlo Park, CA, USA</p>
9:50	<p><b>Nanostructure and electrochemical behavior of molybdenum carbide derived carbons</b></p> <p><u>P.G. González</u><sup>1</sup>, E. Urones-Garrote<sup>2</sup>, D. Ávila-Brande<sup>3</sup>, L.C. Otero-Díaz<sup>3</sup></p> <p><sup>1</sup>Center of Research in Micro and Nanotechnology, UV, Veracruz, Mexico  <sup>2</sup>Inorganic Chemistry Departament Universidad Complutense, Madrid, Spain  <sup>3</sup>National Center of Electronic Microscopy, Universidad Complutense, Spain</p>
10:10	<p><b>Optimal charging conditions for top performance of silicon microwire anodes</b></p> <p>Enrique Quiroga-González</p> <p>Institute for Physics, BUAP, Puebla, Mexico</p>
10:30-11:00	Coffee break
11:00	<b>Round table</b>
12:30	Closing ceremony
13:00	Tours in the city may be offered