

The Second International Workshop on Nano Materials for Energy Conversion (NMEC-2)

Report to ISE (Division 3)

From 17-20 November 2014, the ISE Sponsored Meeting, *Second International Workshop on Nano Materials for Energy Conversion* (NMEC-2), was taken place at the University of Science, Vietnam National University – Ho Chi Minh City (VNU-HCM), Vietnam. The workshop was organized by University of Science/Applied Physical Chemistry Lab. (APCLab) and VNU-HCM in partnership with LEPMI-University Grenoble Alpes (France).

Currently, Vietnam is one of the countries that strongly endure the effects of global warming. Therefore, the renewable and sustainable energy is a matter of great interests of Vietnamese government. The purpose of this event was to introduce high-impact research in the field of nano-materials for energy conversion and preservation as well as to explore new discoveries in fuel cells, solar cells, lithium batteries, nano-catalysts and electrode materials. This workshop is also a place to network, exchange information, as well as strengthen the ties between attending scientists all over the world in the field of nano-materials.

Follow NMEC-1 in 2012, NMEC-2 workshop was a real success.

Contributions by the workshop topics:

- Electrochemistry and energy conversion- *4 contributions*
- Fuel Cell - *13 contributions*
- Lithium and rechargeable batteries - *14 contributions*
- Modeling, computation - *5 contributions*
- Nano materials, nano catalysts, MOFs, ZIFs - *13 contributions*
- Photovoltaics, photocatalysis - *16 contributions*
- Supercapacitors - *6 contributions*

As an extension to this workshop, on November 17th, 2014, four special-topic lectures, *Solid oxide fuel cells: state-of-the-art and challenges for commercialization*, *PEMFC characterisation and diagnosis by Electrochemical Impedance Spectroscopy*, *Structure-Electrochemistry relationships in electrode materials for Li and Li-ion batteries* and *Structural investigation of electrode materials for Lithium batteries using Raman microspectrometry*, were given at the University of Science. These lectures were taught by E. Djurado, Y. Bultel, Jean-Pierre PEREIRA-RAMOS, and Rita BADDOUR-HADJEAN, respectively.

70 presentations were presented during two-day workshop (18-19 November, 2014) including 36 orals and 34 posters. The authors came from 18 countries (Denmark, France, Germany, India, Italy, Japan, Korea, Philippines, Poland, Russia, Singapore, South Africa, Spain, Taiwan, Turkey, United Kingdom, United States, and the host country, Vietnam). 18 invited speeches

were made by famous international scientists, including G. Bidan, Y. Bultel, E. Djurado (France), A. Di Carlo (Italy), Y. Maeda, M. Ohtaki (Japan), S. Mho (Korea), R. Rocheleau (USA), Ho Sy Thoang (Vietnam), etc. There were approximately 180 attendees in the workshop and short courses.

NMEC-2 could not have been held successfully without the contribution and support of many organizations and people. We highly acknowledge the support of International Electrochemical Society (ISE), Office of Naval Research Global (ONRG, USA), Vietnam Ministry of Science and Technology (MOST), Vietnam National Foundation of Science and Technology Development (NAFOSTED), Vietnam National University – Ho Chi Minh City (VNU-HCM) and other organizations and companies. We would like to thank the authors, invited speakers, tutorial presenters and all the participants for their contribution to the scientific program of the workshop. We would like to express our gratitude to all the personnel of the organization and program committees, who have contributed much time and efforts to bring a big success to the Second International Workshop on Nano-materials for Energy Conversion.

Date: 4 December, 2014

Chairman: **Acad. NGUYEN Van Hieu**

Co-chairs: **Elisabeth DJURADO, NGUYEN Thi Phuong Thoa and VU Hai Quan**