



IAOEES

International Academy of Electrochemical Energy Science

Newsletter

Issue 1 March 2015

www.iaoees.org

Contribution / Advancement / Opportunity

Upcoming Events

EEST2015 conference



Vancouver
Welcome You
August 16, 2015

The International Academy of Electrochemical Energy Science (IAOEES) and Tianjin University will co-hold **The Second International Conference on Electrochemical Energy Science and Technology (EEST2015)** from **August 16 to 22, 2015** in **Vancouver, Canada**. This conference will cover energy storage and conversion technologies employing electrochemical methods, such as fuel cells, batteries/supercapacitors, electrolysis/hydrogen, advanced electrochemical energy materials, electrochemical energy fundamentals, and electrochemical energy industry. It allows researchers, students and engineers gathering for fruitful discussions, and presentation of new results within the conference topics.

Please click the web for details: <http://www.iaoees.org/events/EEST2015/home.php>

Conference special issue and book

EEST2015 is delighted to announce one Journal Special Issue with **Applied Energy**. A **CRC book** entitled "**Carbon Nanomaterials for Electrochemical Energy Technologies – Fundamentals and Applications**" will be edited by the conference as well. Conference attendees are welcome to submit their original contributions to our Special Issue and Conference Book Chapters.

Research News

Photoelectrochemistry

—Nature of Water Splitting on Silicon Nanowires

Utilizing solar energy to split water and produce hydrogen is an ultimate goal for the supply of clean and sustainable energy. The high natural abundance of silicon together with its high fabrication process ability and excellent efficiency in photoelectrical conversion are reasons for its promising role in the utilization of solar energy. **Yujie Xiong's group** found that hydrogen gas can indeed be produced from Si nanowires when illuminated in water, but the reactions are not a real water-splitting process. Instead, the production of hydrogen gas on the Si nanowires occurs through the cleavage of Si-H bonds and the formation of Si-OH bonds. These two types of surface dangling bonds both extract photoexcited electrons, whose competition greatly impacts on carrier lifetime and reaction efficiency.

(*Angew. Chem. Int. Ed.*, DOI: 10.1002/anie.201411200)

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Contact our staff

Job positions

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Achievements

Congratulations! Our IAOEES board members have two papers selected as 2014 Top 5% downloaded reviews in the famous journal of *Energy & Environmental Science*. <http://pubs.rsc.org/en/content/articlehtml/2015/ee/c4ee90056a>

- A review of graphene and graphene oxide sponge: materials synthesis and applications to energy and the environment by **Aiping Yu** and **Jiujun Zhang, et al.**
- Progress in flexible lithium batteries and future prospects by **Huiming Cheng, et al.**

Industry News

Welcome! Six Industry Stars joined our board committee.

Mr. Michael Wang, Mr. Jian Shi, Mr. Binglun Tian, Dr. Liyu Li, Dr. Junbing Yang, and Dr. Harris Yang.

Hydrogen Fuel Cell Cars are in Market!

- Hyundai set to offer first Canadian-market hydrogen fuel-cell vehicle: <http://www.ctvnews.ca/autos/hyundai-set-to-offer-first-canadian-market-hydrogen-fuel-cell-vehicle-1.2122484>
- Toyota Says Swamped by Orders for First Mass Market Fuel Cell Car: <http://www.industryweek.com/energy/toyota-says-swamped-orders-first-mass-market-fuel-cell-car>