



## Upcoming Events

### **EEST2016 conference Kunming China. Aug 16-22, 2016**

The International Conference on Electrochemical Energy Science and Technology 2016 (EEST2016) is the third conference organized by the International Academy of Electrochemical Energy Science (IAOEES). The technical program of EEST2016 will have plenary, keynote, invited speeches and poster presentations focusing on electrochemical energy research, development and applications. EEST2016 will be the venue for energy storage and conversion technologies employing electrochemical methods, such as fuel cells, batteries, supercapacitors, photoelectrochemical cells, and so on.

**Deadline for abstract submission: April 30, 2016**

**Submit abstracts to email: [eest2016@iaoees.org](mailto:eest2016@iaoees.org)**

## Achievements

### **Congratulations:**

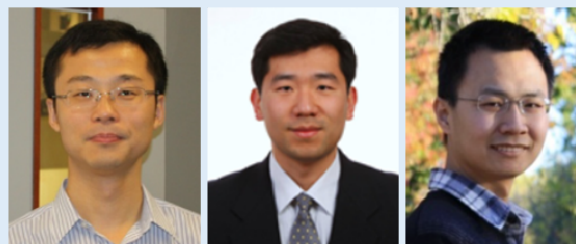
❖ Prof. **Li-Jun Wan**, our Board Committee Steering member of the International Academy of Electrochemical Energy Science (IAOEES), was appointed **the 9th president of University of Science and Technology (USTC), China**. He was selected as an academician of the Chinese Academy of Sciences (CAS) in 2009. He is mainly engaged in the scanning probe microscopy, electrochemistry and nanomaterials science, in which he was ranked among the TOP 100 Highly Cited Researchers 2014 by Thomson Reuters.



❖ Prof. **Jun Chen** and Prof. **Yongyao Xia**, our Board Committee members of the International Academy of Electrochemical Energy Science (IAOEES), were selected as the chairman of Chinese Society of Electrochemistry, while Prof. **Lin Zhuang** and Prof. **Wei Xing** were the vice-chairmen. (Aug. 2015)



❖ Prof. **Gang Liu**, Prof. **Lin Gu**, and Prof. **Hui Wu**, our Board Committee members of the International Academy of Electrochemical Energy Science (IAOEES), obtained support of Excellent Young Funding (优青) from Natural Science Foundation of China (NSFC). NSFC awards 400 young researchers as 优青 under 38 year old each year.



Our IAOEES board member Prof. **Jiujun Zhang** and Prof. **Jinli Qiao** have three papers being selected as **Top 1%** highly cited papers.

- A review of catalysts for the electroreduction of carbon dioxide to produce low-carbon fuels. **Chem. Soc. Rev.**, 2014,43, 631
- Alkaline polymer electrolyte membranes for fuel cell applications. **Chem. Soc. Rev.**, 2013,42, 5768
- A Review of Graphene-Based Nanostructural Materials for Both Catalyst Supports and Metal-Free Catalysts in PEM Fuel Cell Oxygen Reduction Reactions. **Adv. Energy Mater.** 2014, 4, 1301523

## Advertise

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### **Job positions**

Yuyu Liu

e-mail: [yuyu.liu@iaoees.org](mailto:yuyu.liu@iaoees.org)

phone: +81-90-6008-9342

### **Industry/Company**

Joey Jung

e-mail:

[joey.jung@iaoees.org](mailto:joey.jung@iaoees.org)

phone: +1-778-952-1633

Editors-in-Chief: Liang Li, Shuhui Sun, Yuyu Liu;

Associate Editors: Ian Chen, Jay Sui, Jinli Qiao, Joey Jung, Lei Zhang, Andy Sun, Zhongwei Chen, Michael Wang, Jiujun Zhang



# IAOEES

International Academy of Electrochemical Energy Science

# Newsletter

Issue 3 November 2015

[www.iaoees.org](http://www.iaoees.org)

Contribution / Advancement / Opportunity

## EEST2015 Report

*The International Conference on Electrochemical Energy Science and Technology 2015 (EEST2015), the second annual Conference on Electrochemical Energy Science and Technology (EEST2015) was successfully held from **August 17-22th, 2015** at the beautiful Point Grey campus of the **University of British Columbia (UBC)** in **Vancouver, BC, Canada**.*

*The conference, co-organized by the **International Academy of Electrochemical Energy Science (IAOEES)** and **Tianjin University (TJU)** in China, attracted **over 220** leading scientists from more than **20** different countries to hear presentations from world renowned researchers in five major technology streams including: Fuel Cells; Batteries/Supercapacitors; Electrolysis/Hydrogen; Electrochemistry Fundamentals; and Electrochemical Industry.*

*Throughout the three day conference, the attendees was immersed in the latest state of the art electrochemical knowledge by **7** exceptional plenary talks, **over 100** keynote speeches, invited talks, and oral presentations. This remarkable program was organized by IAOEES Management Team led by Dr. **Jiujun Zhang**, Adjunct Professor of UBC and President of IAOEES, and Dr. **Wenbin Hu**, Dean of the Materials and Engineering School of TJU.*

## 2015 International Conference on Electrochemical Energy Science and Technology (EEST2015)

*University of British Columbia, Vancouver, BC, Canada, August 17 -22, 2015,*

*organized by International Academy of Electrochemical Energy Science (IAOEES) and Tianjin University (TJU)*



*Editors-in-Chief: Liang Li, Shuhui Sun, Yuyu Liu;*

*Associate Editors: Ian Chen, Jay Sui, Jinli Qiao, Joey Jung, Lei Zhang, Andy Sun, Zhongwei Chen, Michael Wang, Jiujun Zhang*





### Highlight Members



**Professor Zhongwei Chen** is Canada Research Chair in Advanced Materials for Clean Energy, Director of Collaborative Graduate Program in Nanotechnology, Director of Applied Nanomaterials & Clean Energy Laboratory at University of Waterloo, and Vice President of the International Academy of Electrochemical Energy Science (IAOEES).

Dr. Chen research interests are in the development of advanced energy materials for zinc-air batteries, lithium-ion batteries and fuel cells. Prior to joining the faculty at Waterloo in 2008, he was focusing on the advanced fuel cell catalysts and membranes research in the Los Alamos National Laboratory (LANL) at New Mexico and University of California - Riverside, USA. He has published 1 book, 6 book chapters and more than 130 peer reviewed journal articles (>10,000 citations, H-index, 43 by Google Scholar) including Nature Communications, JACS, Angewandte Chemie, Advanced Materials, Advanced Energy Materials, Energy & Environmental Science, Nano Letters and ACS Nano.

Dr. Chen is also listed as inventor on 15 US/international patents, with two licensed to start-up companies in USA. He also founded Wattech Power Inc., a company to commercialize the zinc-air flow battery technology in September 2015. He also serves as an editorial board member for peer-reviewed journals including Scientific Reports (Nature Publishing), Frontiers in Fuel Cells, Canadian Journal of Basic and Applied Sciences and the Vice President of the International Academy of Electrochemical Energy Science (IAOEES).



### Research News

#### Lithium-ion Batteries - High Energy and Durable Silicon Anodes

Our researchers report that they have developed a low-cost and long-lasting "next generation" silicon battery they hope to bring to market in the near future. The most critical challenge the high energy silicon Li-ion battery faced was the loss of energy that occurs when silicon contracts and then expands by as much as 300 per cent with each charge cycle.

To overcome this problem, Canada Research Chair Professor Zhongwei Chen's team developed a flash heat treatment for fabricated silicon-based lithium-ion electrodes that minimizes volume expansion while boosting the performance and cycle capability of lithium-ion batteries. "The economical flash heat treatment creates uniquely structured silicon anode materials (3.4 mAh/cm<sup>2</sup>) that deliver extended cycle life to more than 2000 cycles with increased energy capacity of the battery," said Professor Chen.

**More information:** Evidence of covalent synergy in silicon-sulfur-graphene yielding highly efficient and long-life lithium-ion batteries.

**Nature Communications**, 6:8597 | DOI: 10.1038/ncomms9597

