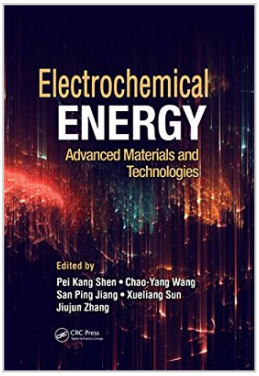

Electrochemical Energy: Advanced Materials and Technologies (Electrochemical Energy Storage and Conversion)

From CRC Press

Electrochemical Energy: Advanced Materials and Technologies (Electrochemical Energy Storage and Conversion) From CRC Press

Electrochemical Energy: Advanced Materials and Technologies covers the development of advanced materials and technologies for electrochemical energy conversion and storage. The book was created by participants of the International Conference on Electrochemical Materials and Technologies for Clean Sustainable Energy (ICES-2013) held in Guangzhou, China, and incorporates select papers presented at the conference.

More than 300 attendees from across the globe participated in ICES-2013 and gave presentations in six major themes:

- Fuel cells and hydrogen energy
- Lithium batteries and advanced secondary batteries
- Green energy for a clean environment
- Photo-Electrocatalysis
- Supercapacitors
- Electrochemical clean energy applications and markets

Comprised of eight sections, this book includes 25 chapters featuring highlights from the conference and covering every facet of synthesis, characterization, and performance evaluation of the advanced materials for electrochemical energy. It thoroughly describes electrochemical energy conversion and storage technologies such as batteries, fuel cells, supercapacitors, hydrogen generation, and their associated materials. The book contains a number of topics that include electrochemical processes, materials, components, assembly and manufacturing, and degradation mechanisms. It also addresses challenges related to cost and performance, provides varying perspectives, and emphasizes existing and emerging solutions.

The result of a conference encouraging enhanced research collaboration among

members of the electrochemical energy community, **Electrochemical Energy: Advanced Materials and Technologies** is dedicated to the development of advanced materials and technologies for electrochemical energy conversion and storage and details the technologies, current achievements, and future directions in the field.

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Editorial Review

Review

"It covers a wide range of topics in the area of electrochemical energy storage and conversion ... It can be used as a reference for courses on energy storage and conversion. It can also be used as a reference for researchers in the field of electrochemical energy storage and conversion."
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?Hasuck Kim, Daegu Gyeongbuk Institute of Science and Technology (DGIST), Korea

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Pei Kang Shen obtained his BSc in electrochemistry at Xiamen University in 1982. He received his PhD in chemistry at Essex University in 1992. From then on, he has been working at Essex University, Hong Kong University, the City University of Hong Kong, and the South China University of Technology. Since 2001, he has served as a professor and director of Advanced Energy Materials Research Laboratory at the Sun Yat-sen University, Guangzhou, China. He is the author of more than 300 publications. His research interests include fuel cells and batteries, electrochemistry of nanomaterials and nanocomposite functional materials, and electrochemical engineering.

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