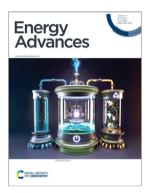
# **Energy Advances**

# rsc.li/energy-advances

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

## IN THIS ISSUE

ISSN 2753-1457 CODEN EANDBJ 4(7) 813-960 (2025)



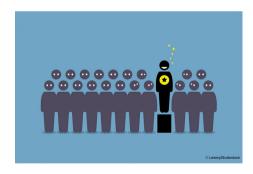
#### Cover

Image reproduced by permission of National **Energy Technology** Laboratory.

## **EDITORIAL**

819

Outstanding Reviewers for Energy Advances in 2024

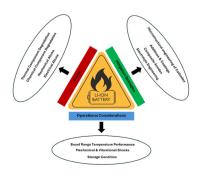


### **REVIEW**

820

A comprehensive review of lithium-ion battery components degradation and operational considerations: a safety perspective

Idris T. Adebanjo, Juliana Eko, Anita G. Agbeyegbe, Simuck F. Yuk, Samuel V. Cowart,\* Enoch A. Nagelli, F. John Burpo, Jan L. Allen,\* Dat T. Tran, Nishma Bhattarai, Krishna Shah, Jang-Yeon Hwang and H. Hohyun Sun\*





# Advance your career in science

with professional recognition that showcases your **experience**, **expertise** and **dedication** 

# Stand out from the crowd

Prove your commitment to attaining excellence in your field

# Gain the recognition you deserve

Achieve a professional qualification that inspires confidence and trust

# Unlock your career potential

Apply for our professional registers (RSci, RSciTech) or chartered status (CChem, CSci, CEnv)

# Apply now

rsc.li/professional-development

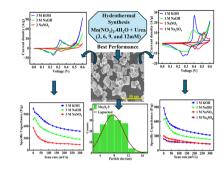


#### **PAPERS**

878

Urea-driven hydrothermal synthesis of Mn<sub>2</sub>O<sub>3</sub>: electrochemical performance across various electrolytes for supercapacitor applications

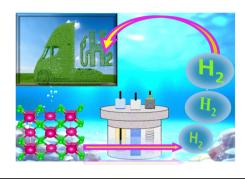
Alisha Dhakal,\* Felio Perez and Sanjay R Mishra\*



896

Oxygen vacancy assisted hydrogen evolution reaction over CeO2-based solid solutions

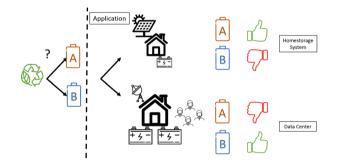
Saraswati Roy and Sounak Roy\*



910

Full life cycle assessment of an industrial lead-acid battery based on primary data

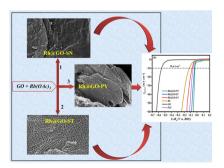
Friedrich B. Jasper,\* Manuel Baumann, Milosch Stumpf, Andreas Husmann, Bernhard Riegel, Stefano Passerini and Marcel Weil



930

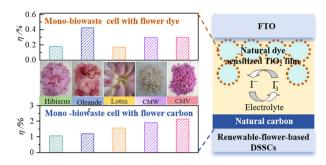
Methodological advances for the development of surface engineered carbon nanoarchitectures as a sustainable probe towards high performance hydrogen evolution reaction

Shokat Hussain, Raheela Akhter, Numan Maroof Butt, Srinibas Beura, S. M. Nizam Uddin\* and Shrikant S. Maktedar\*



## **PAPERS**

947



Renewable flower-based dye-sensitized solar cells using natural dye and natural carbon counter electrode

Shunjian Xu, Ping Huang,\* Wei Zhong, Yongping Luo, Haiyan Fu, Zonghu Xiao, Hong Jin and Yike Liu\*