

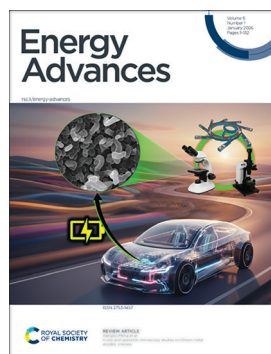
# Energy Advances

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 5(1) 1-132 (2026)



### Cover

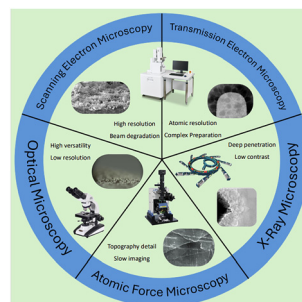
See Xiangbo Meng *et al.*, pp. 7-42.  
Image reproduced by permission of Cameron Mondl and Xiangbo Meng from *Energy Adv.*, 2026, 5, 7.

## REVIEW

7

### *In situ* and *operando* microscopy studies on lithium metal anodes: a review

Ian Lindsey, Cameron Mondl and Xiangbo Meng\*

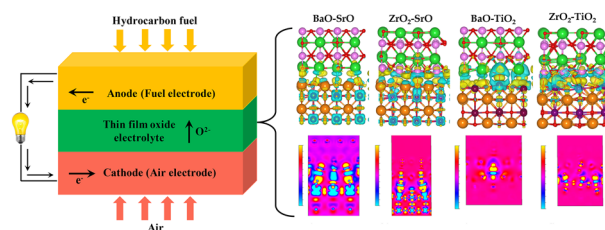


## PAPERS

43

### Interface layer chemistry dependent oxygen defect formation in BaZrO<sub>3</sub>(110)/SrTiO<sub>3</sub>(100) heterostructures

Jason Rakowsky and Pratik P. Dholabhai\*



# 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

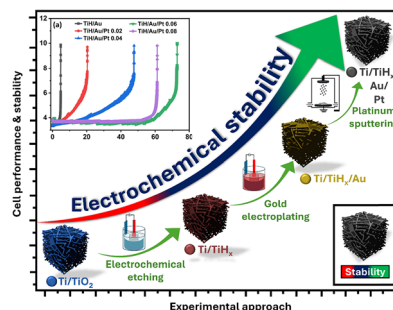
[rsc.li/professional-development](https://rsc.li/professional-development)



56

## Enhancing the durability of Au-coated Ti porous transport layers (PTLs) with a thin Pt top layer for PEM water electrolyzer applications

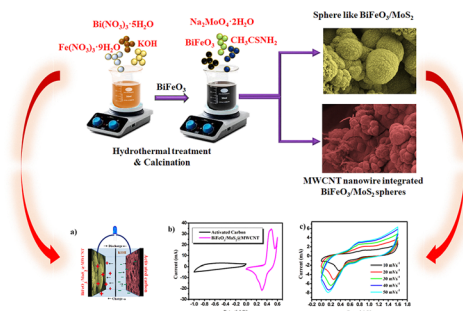
Sukhvant Singh, Aditya Singh, Muhammad Azhar Iqbal and Samaneh Shahgaldi\*



71

## Integration of multiwalled carbon nanotubes with MoS<sub>2</sub>/BiFeO<sub>3</sub>: a hybrid matrix for high-energy asymmetric supercapacitors

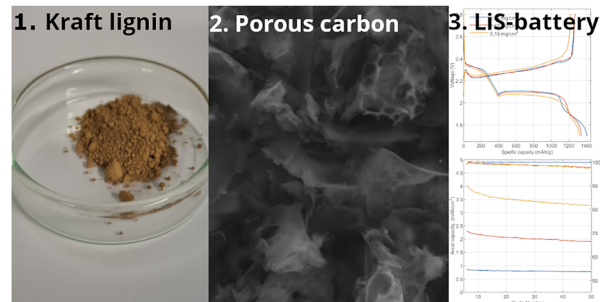
Eman A. Alabdulkarem, Junaid Khan\* and Hussein Alrobei



83

## Molten salt assisted synthesis of a lignin derived porous carbon host for lithium–sulfur battery cathodes

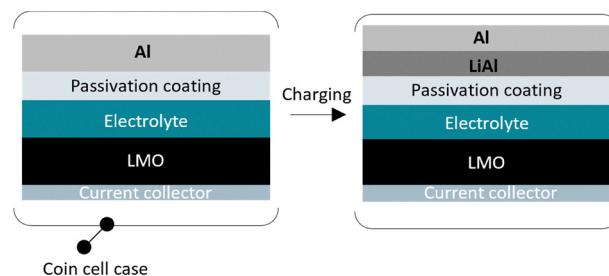
Juhana Jämsén,\* Pauliina Nevalainen, Kirill Murashko and Anna Lähde



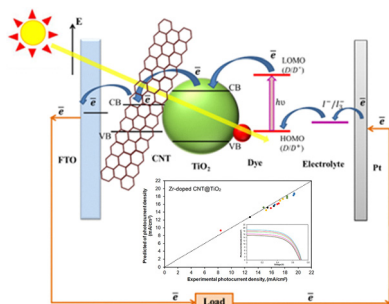
97

## GREENcell – combination of a strain-hardened and passivated Al alloy foil anode with a F-free LiMn<sub>2</sub>O<sub>4</sub> cathode

Kathrin Schad,\* Nicolas Görnert, Christopher Markus Mehlich, Meichen Zhan and Kai Peter Birke



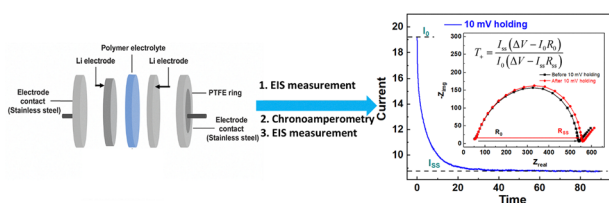
110



### Modeling the photovoltaic characteristics of Zr-doped TiO<sub>2</sub> dye-sensitized solar cells by incorporating CNT@TiO<sub>2</sub>

Mohammad Reza Mohammadi,\* Masoumeh Khomehchi and Aida Mohammadi

119



### Factors controlling the performance of lithium-metal solid-state batteries with polyethylene oxide-based composite polymer electrolytes

Bapi Bera, Douglas S. Aaron and Matthew M. Mench\*

## CORRECTION

130

### Correction: Semitransparent organic and perovskite photovoltaics for agrivoltaic applications

Souk Y. Kim, Noura Rayes, Armen R. Kemanian, Enrique D. Gomez and Nutifafa Y. Doumon\*

