

IN THIS ISSUE

ISSN 3033-4071 CODEN EBAA5 1(1) 1–210 (2025)



Cover

See Xiaodong Shi,
Xinlong Tian *et al.*,
pp. 161–171.

Image reproduced
by permission of
Xinlong Tian from
EES Batter., 2025, **1**, 161.

EDITORIAL

8

Introducing *EES Batteries*

Qiang Zhang

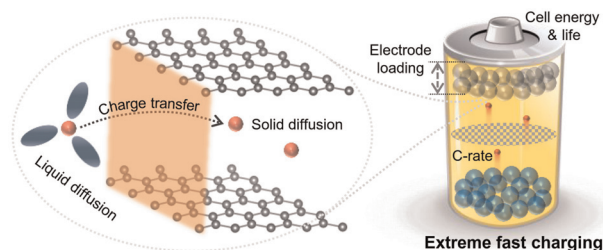


PERSPECTIVE

9

Principles and trends in extreme fast charging lithium-ion batteries

Yu-Xing Yao, Lei Xu, Chong Yan* and Qiang Zhang*



Industrial Chemistry & Materials

GOLD
OPEN
ACCESS

[View Article Online](#)

Focus on industrial chemistry
Advance material innovations
Highlight interdisciplinary feature

Innovative.
Interdisciplinary.
Problem solving

APCs currently waived

Learn more about ICM
Submit your high-quality article

 **@IndChemMater**

 **@IndChemMater**

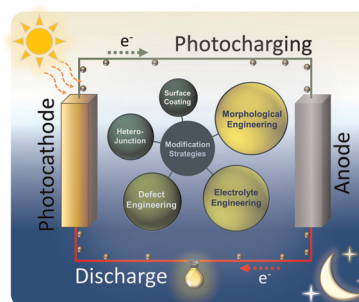
rsc.li/icm

REVIEWS

23

A review of the design and strategies for photoassisted rechargeable metal-ion batteries

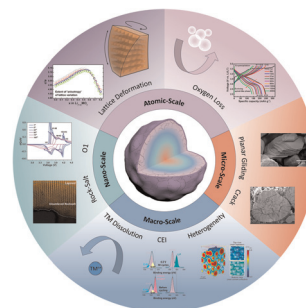
A. Soundarya Mary, Ganesh Mahendra, Rahuldeb Roy, Mukhesh K. Ganesha and Ashutosh K. Singh*



73

Microscopic electrochemical–mechanical coupling in layered cathodes under high-voltage and fast-charging conditions

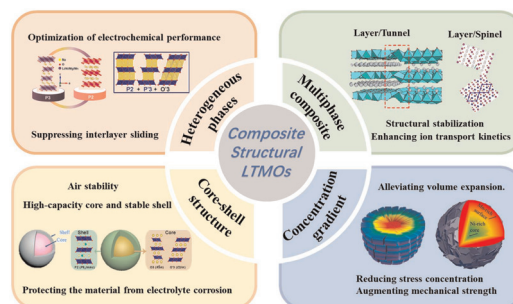
Ziqi Wu, Chenchen Zhang, Mengyi Zheng, Chaoyuan Zeng, Wen Yang* and Ruiwen Shao*



100

Recent progress and perspectives on composite structural layered transition metal oxides for sodium-ion batteries

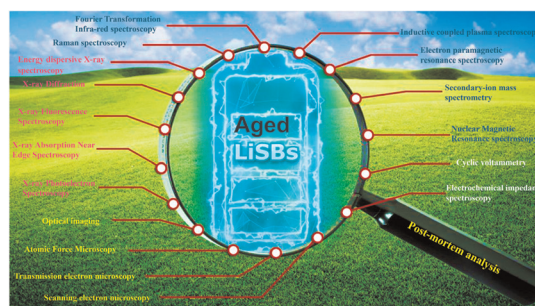
Zhiyang Fan, Yichen Li, Jiawei Pan, Zhiyou Zhou, Weipeng Li, Taifan Yang, Haihan Zhang, Chengyong Shu,* Weibo Hua, Yuping Wu* and Wei Tang*



119

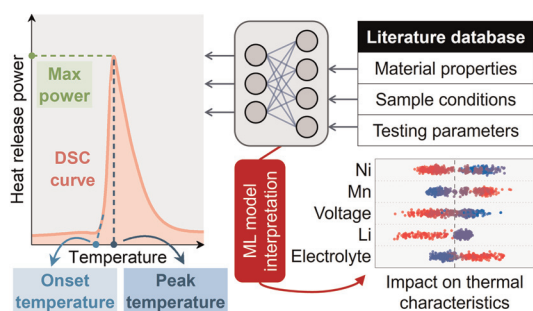
Analytical techniques for studying cell aging in lithium–sulfur batteries

Ritu Malik, Vijay K. Tomer* and Mohini Sain



COMMUNICATION

153

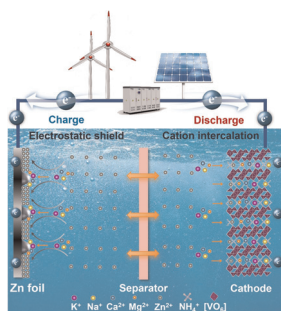


Disentangling multifactorial impacts on cathode thermochemical properties with explainable machine learning

Yujian Sun, Xilin Xu, Luyu Gan, Sichen Jiao, Shuangshuang Han, Yajun Zhao, Yan Li, Xiqian Yu,* Jizhou Li,* Hong Li* and Xuejie Huang

PAPERS

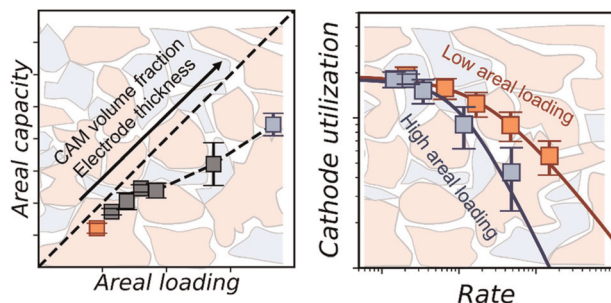
161



Natural seawater-based electrolytes for zinc-ion batteries

Chuancong Zhou, Zhenming Xu, Min Chen, Qing Nan, Jie Zhang, Yating Gao, Zejun Zhao, Zhenyue Xing, Jing Li, Peng Rao, Zhenye Kang, Xiaodong Shi* and Xinlong Tian*

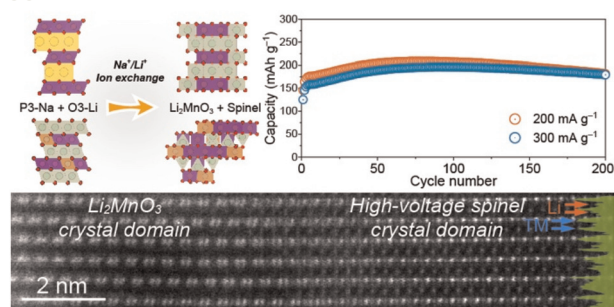
172



Transport characterization of solid-state Li_2FeS_2 cathodes from a porous electrode theory perspective

Tim Bernges,* Lukas Ketter, Bianca Helm, Marvin A. Kraft, Kimberly A. See and Wolfgang G. Zeier*

185



A highly stable Mn-based cathode with low crystallinity Li_2MnO_3 and spinel functional units for lithium-ion batteries

Shiqi Liu, Yinzong Wang, Dongdong Xiao, Haifeng Li, Tianhao Wu, Boya Wang, Guangxing Hu, Lingqiao Wu, Yulong Wang, Guoqing Wang, Nian Zhang and Haijun Yu*



Rapid construction of a tellurium artificial interface to form a highly reversible zinc anode

Young-Hoon Lee, Eunbin Park, Yunseo Jeoun, Sung-Ho Huh, Kwang-Soon Ahn,* Yung-Eun Sung* and Seung-Ho Yu*

