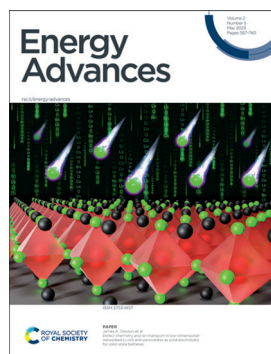


The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

## IN THIS ISSUE

ISSN 2753-1457 CODEN EANDBJ 2(5) 567-740 (2023)



### Cover

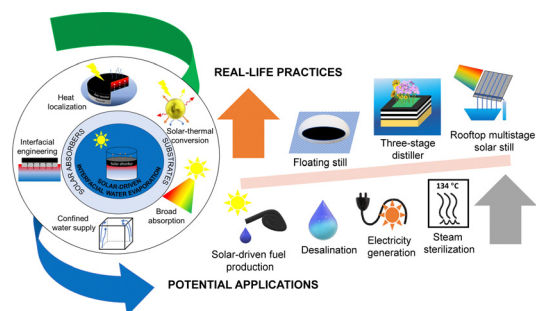
See James A. Dawson *et al.*, pp. 653–666.  
Image reproduced by permission of James A. Dawson from *Energy Adv.*, 2023, 2, 653.

## REVIEW

574

### Review of the progress of solar-driven interfacial water evaporation (SIWE) toward a practical approach

Srishti, Apurba Sinhamahapatra\* and Aditya Kumar

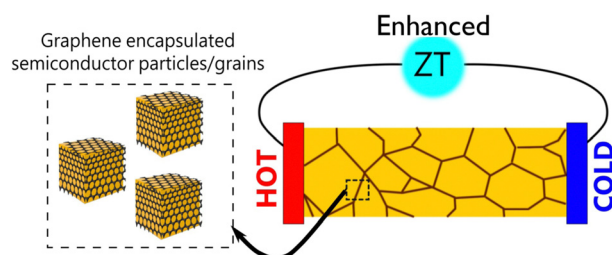


## PERSPECTIVES

606

### The role of graphene in new thermoelectric materials

Rafiq Mulla,\* Alvin Orbaek White, Charles W. Dunnill and Andrew R. Barron\*



**Executive Editor**

Emma Eley

**Editorial Production Manager**

Sarah Whitbread

**Deputy Editor**

Jon Ferrier

**Editorial Assistant**

Alex Holiday

**Publishing Assistant**

Lee Colwill

**Assistant Editors**

Jamie Purcell, Aphra Murray, Alexander John, Emily Ellison, Jack Pitchers

**Publisher**

Neil Hammond

For queries about submitted papers, please contact Sarah Whitbread, Editorial Production Manager in the first instance. E-mail: [energyadvances@rsc.org](mailto:energyadvances@rsc.org)

For pre-submission queries please contact

Emma Eley, Executive Editor.

Email: [energyadvances-rsc@rsc.org](mailto:energyadvances-rsc@rsc.org)

Energy Advances (electronic: ISSN 2753-1457) is published 12 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WF.

Energy Advances is a Gold Open Access journal and all articles are free to read. Please email [orders@rsc.org](mailto:orders@rsc.org) to register your interest or contact Royal Society of Chemistry Order Department, Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK Tel +44 (0)1223 432398; E-mail: [orders@rsc.org](mailto:orders@rsc.org)

Whilst this material has been produced with all due care, the Royal Society of Chemistry cannot be held responsible or liable for its accuracy and completeness, nor for any consequences arising from any errors or the use of the information contained in this publication. The publication of advertisements does not constitute any endorsement by the Royal Society of Chemistry or Authors of any products advertised. The views and opinions advanced by contributors do not necessarily reflect those of the Royal Society of Chemistry which shall not be liable for any resulting loss or damage arising as a result of reliance upon this material. The Royal Society of Chemistry is a charity, registered in England and Wales, Number 207890, and a company incorporated in England by Royal Charter (Registered No. RC000524), registered office: Burlington House, Piccadilly, London W1J 0BA, UK, Telephone: +44 (0) 207 4378 6556.

**Advertisement sales:**

Tel +44 (0) 1223 432246; Fax +44 (0) 1223 426017;

E-mail [advertising@rsc.org](mailto:advertising@rsc.org)

For marketing opportunities relating to this journal, contact [marketing@rsc.org](mailto:marketing@rsc.org)

# Energy Advances

[rsc.li/energy-advances](http://rsc.li/energy-advances)

*Energy Advances* is a multidisciplinary journal that publishes research across a broad scope of topics, and welcomes work that contributes to developments throughout energy science and related fields. We offer an inclusive home to advances across the spectrum of energy science – from central concepts to exciting research at the nexus of subdisciplines.

## Editorial Board

**Editor-in-Chief**

Volker Presser, Leibniz Institute for New Materials, Germany

Michael Naguib, Tulane University, USA  
Guang Feng, Huazhong University of Science and Technology (HUST), China

Anita Ho-Ballie, University of Sydney, Australia  
You Han, Tianjin University, China

**Associate Editors**

B. Layla Mehdi, University of Liverpool, UK

Matthew Suss, Israel Institute of Technology, Israel

## Advisory Board

Sarbajit Banerjee, Texas A&M University, USA  
Sudip Chakraborty, Harish-Chandra Research Institute (HRI) Allahabad, India  
Graeme Cooke, University of Glasgow, UK  
Benjamin Dietzek, Friedrich Schiller University Jena, Germany  
Liming Ding, National Center for Nanoscience and Technology, China  
Baizeng Fang, The University of British Columbia, Canada  
John Gordon, Brookhaven National Laboratory, USA  
Shaojun Guo, Peking University, China  
Kui Jiao, Tianjin University, China

Dattaray Late, CSIR-National Chemical Laboratory, India  
Yan Lu, Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Germany  
Heather MacLean, University of Toronto, Canada  
Hoi Ri Moon, Ulsan National Institute of Science and Technology, Korea  
Thuc-Quyen Nguyen, University of California Santa Barbara, USA  
Petr Nikrityuk, University of Alberta, Canada  
Kenneth Ozoemena, University of the Witwatersrand, South Africa  
Kristin Persson, University of California,

USA, and Lawrence Berkeley National Laboratory, USA  
Jenny Pringle, Deakin University, Australia  
Jürgen Steimle, Universität des Saarlandes, Germany  
Valeska Ting, University of Bristol, UK  
Ajayan Vinu, The University of Newcastle, Australia  
Naoaki Yabuuchi, Yokohama National University, Japan  
Aldo José Gorgatti Zarbin, Universidade Federal do Paraná (UFPR), Brazil  
Qiang Zhang, Tsinghua University, China  
Hongcai Zhou, Texas A&M University, USA

## Information for Authors

Full details on how to submit material for publication in Energy Advances are given in the Instructions for Authors (available from <http://www.rsc.org/authors>).

Submissions should be made via the journal's homepage: [rsc.li/energy-advances](http://rsc.li/energy-advances)

Authors may reproduce/republish portions of their published contribution without seeking permission from the Royal Society of Chemistry, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)–Reproduced by permission of the Royal Society of Chemistry.

This journal is © The Royal Society of Chemistry 2023.

Apart from fair dealing for the purposes of research or private study for non-commercial purposes, or criticism or review, as permitted under the Copyright, Designs and Patents Act 1988 and the Copyright and Related Rights Regulation 2003, this publication may only be reproduced, stored or transmitted, in any form or by any means, with the prior permission in writing of the Publishers or in the case of reprographic reproduction in accordance with the terms of licences issued by the Copyright Licensing Agency in the UK. US copyright law is applicable to users in the USA.

Registered charity number: 207890

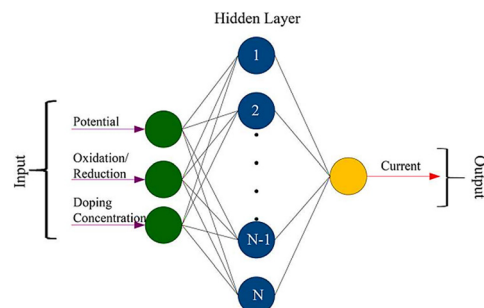


## PERSPECTIVES

615

### Artificial intelligence-navigated development of high-performance electrochemical energy storage systems through feature engineering of multiple descriptor families of materials

Haruna Adamu, Sani Isah Abba, Paul Betiang Anyin, Yusuf Sani and Mohammad Qamar\*

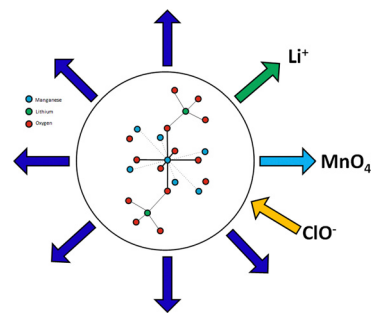


## COMMUNICATION

646

### Oxidative dissolution of lithium and manganese from lithium manganospinel ( $\text{LiMn}_2\text{O}_4$ ): towards climate-smart processes for critical metal recycling

Rhys A. Ward,\* Dávid Kocsis\* and Jay D. Wadhawan\*

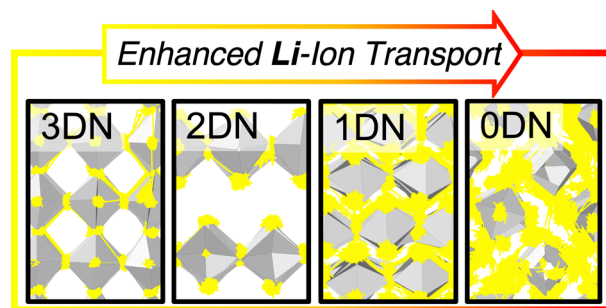


## PAPERS

653

### Defect chemistry and ion transport in low-dimensional-networked Li-rich anti-perovskites as solid electrolytes for solid-state batteries

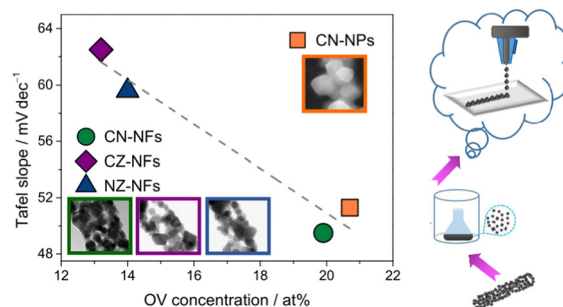
Ana Carolina Coutinho Dutra, George E. Rudman, Karen E. Johnston and James A. Dawson\*



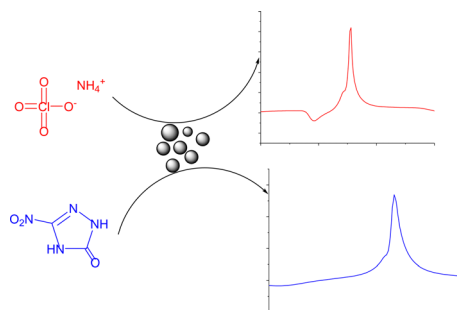
667

### Evaluation of electrospun spinel-type high-entropy ( $\text{Cr}_{0.2}\text{Mn}_{0.2}\text{Fe}_{0.2}\text{Co}_{0.2}\text{Ni}_{0.2}$ ) $_3\text{O}_4$ , ( $\text{Cr}_{0.2}\text{Mn}_{0.2}\text{Fe}_{0.2}\text{Co}_{0.2}\text{Zn}_{0.2}$ ) $_3\text{O}_4$ and ( $\text{Cr}_{0.2}\text{Mn}_{0.2}\text{Fe}_{0.2}\text{Ni}_{0.2}\text{Zn}_{0.2}$ ) $_3\text{O}_4$ oxide nanofibers as electrocatalysts for oxygen evolution in alkaline medium

Claudia Triolo, Simon Schweidler, Ling Lin, Gioele Pagot, Vito Di Noto, Ben Breitung\* and Saveria Santangelo\*



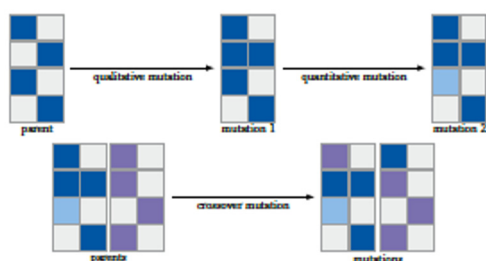
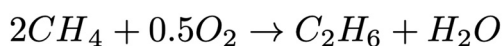
679



### Graphene oxide based nickel–copper–zinc and copper–zinc cobaltite: catalysts for the thermolysis of ammonium perchlorate and nitrotriazolone

Pragnesh N. Dave\* and Ruksana Sirach

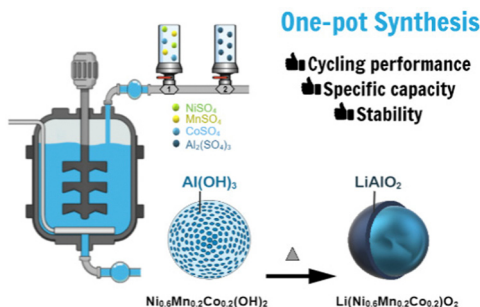
691



### Prediction of suitable catalysts for the OCM reaction by combining an evolutionary approach and machine learning

Carlotta L. M. von Meyenn and Stefan Palkovits\*

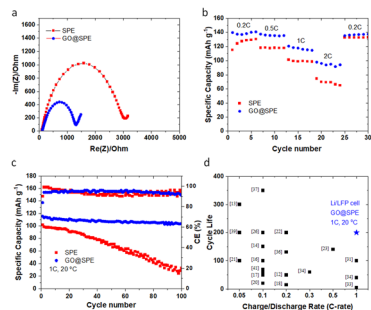
701



### One-pot synthesis of $\text{LiAlO}_2$ -coated $\text{LiNi}_{0.6}\text{Mn}_{0.2}\text{Co}_{0.2}\text{O}_2$ cathode material

Ouardia Touag, Gaël Coquil, Mathieu Charbonneau, Gabrielle Foran, Amrita Ghosh, Denis Mankovsky and Mickaël Dollé\*

712



### Fast rate lithium metal batteries with long lifespan enabled by graphene oxide confinement

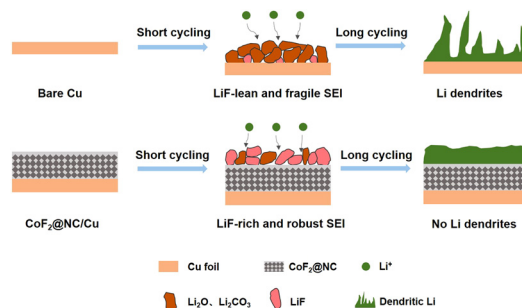
Vahid Jabbari, Vitaliy Yurkiv, Alireza Ghorbani, Farzad Mashayek and Reza Shahbazian-Yassar\*



725

### An *in situ* LiF-enriched solid electrolyte interphase from CoF<sub>2</sub>-decorated N-doped carbon for dendrite-free Li metal anodes

Xiaopan Jin, Gaoxu Huang, Xianming Zhao, Guoli Chen, Mengjia Guan and Yongsheng Li\*



733

### Photo-assisted electrochemical CO<sub>2</sub> reduction at a boron-doped diamond cathode

Goki Iwai, Andrea Fiorani,\* Jinglun Du and Yasuaki Einaga\*

