

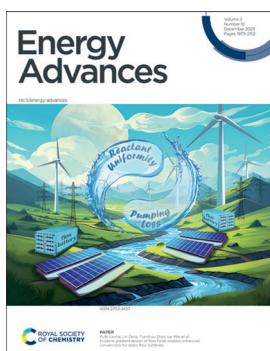
Energy Advances

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.

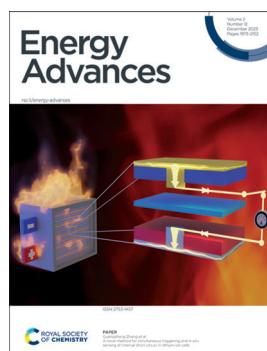
IN THIS ISSUE

ISSN 2753-1457 CODEN EANDBJ 2(12) 1973–2152 (2023)



Cover

See Puiki Leung, Lin Zeng, Tianshou Zhao, Lei Wei *et al.*, pp. 2006–2017. Image reproduced by permission of Lei Wei from *Energy Adv.*, 2023, 2, 2006.



Inside cover

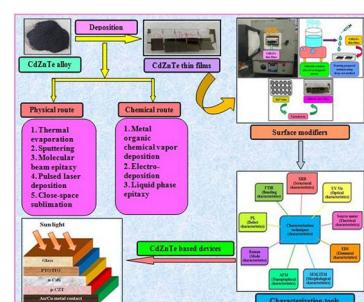
See Guangsheng Zhang *et al.*, pp. 2018–2028. Image reproduced by permission of Guangsheng Zhang from *Energy Adv.*, 2023, 2, 2018. We would like to acknowledge that Madeline Liu supported in making the image and that the software Blender was used in making the image.

REVIEW

1980

CdZnTe thin films as proficient absorber layer candidates in solar cell devices: a review

Ritika Sharma, Sakshi Chuhadiya, Kamlesh, Himanshu and M. S. Dhaka*

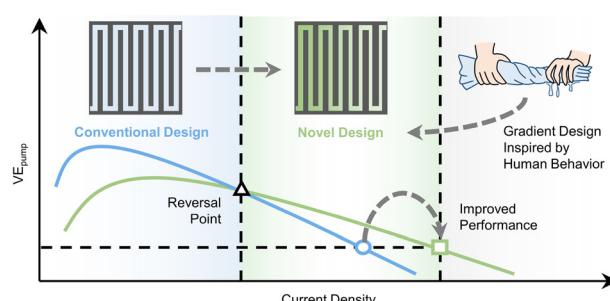


PAPERS

2006

In-plane gradient design of flow fields enables enhanced convections for redox flow batteries

Lyuming Pan, Jianyu Xie, Jincong Guo, Dongbo Wei, Honghao Qi, Haoyao Rao, Puiki Leung,* Lin Zeng,* Tianshou Zhao* and Lei Wei*



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, Alexander John, Emily Ellison, Jack Pitchers,
Clare Fitzgerald

Publisher
Neil Hammond

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

For pre-submission queries please contact

Emma Eley, Executive Editor.

E-mail: 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 0WE.

Energy Advances is a Gold Open Access journal and all articles
are free to read. Please email 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

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

For marketing opportunities relating to this journal,
contact marketing@rsc.org

Energy Advances

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

Associate Editors

B. Layla Mehdi, University of Liverpool, UK

Michael Naguib, Tulane University, USA

Guang Feng, Huazhong University of Science
and Technology (HUST), China

Matthew Suss, Form Energy, USA

Yu Han, Tianjin University, China

Wai-Yeung (Raymond) Wong, The Hong

Kong Polytechnic University, Hong Kong,
China

Advisory Board

Nirmala Grace Andrews, Vellore Institute of Technology, India	Shaojun Guo, Peking University, China	USA, and Lawrence Berkeley National Laboratory, USA
Sarbjit Banerjee, Texas A&M University, USA	Kui Jiao, Tianjin University, China	Jenny Pringle, Deakin University, Australia
Sudip Chakraborty, Harish-Chandra Research Institute (HRI) Allahabad, India	Dattaray Late, CSIR-National Chemical Laboratory, India	Jürgen Steinle, Universität des Saarlandes, Germany
Graeme Cooke, University of Glasgow, UK	Yan Lu, Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Germany	Valeska Ting, University of Bristol, UK
Benjamin Dietzek, Friedrich Schiller University Jena, Germany	Heather MacLean, University of Toronto, Canada	Shenghao Wang, Shanghai University, China
Liming Ding, National Center for Nanoscience and Technology, China	Hoi Ri Moon, Ulsan National Institute of Science and Technology, Korea	Ajayan Vinu, The University of Newcastle, Australia
Baizeng Fang, The University of British Columbia, Canada	Thuc-Quyen Nguyen, University of California Santa Barbara, USA	Naoaki Yabuuchi, Yokohama National University, Japan
John Gordon, Brookhaven National Laboratory, USA	Petr Nikrityuk, University of Alberta, Canada	Aldo José Gorgatti Zarbin, Universidade Federal do Paraná (UFPR), Brazil
Anita Ho-Baillie, University of Sydney, Australia	Kenneth Ozoemena, University of the Witwatersrand, South Africa	Qiang Zhang, Tsinghua University, China
	Kristin Persson, University of California,	Hongcui 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

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

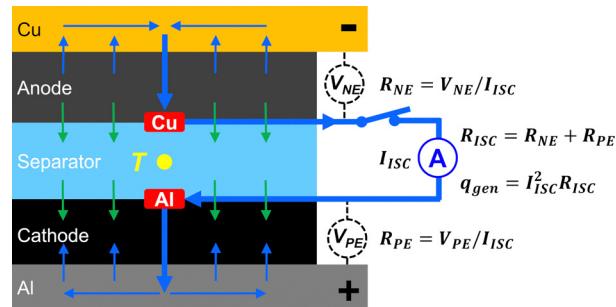


PAPERS

2018

A novel method for simultaneous triggering and *in situ* sensing of internal short circuit in lithium-ion cells

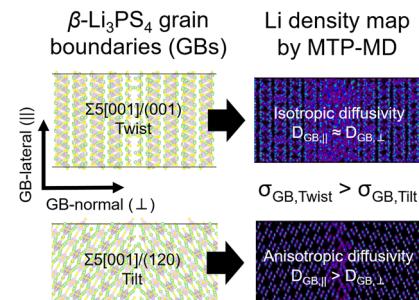
Mary K. Long, Siyi Liu and Guangsheng Zhang*



2029

Lithium dynamics at grain boundaries of β -Li₃PS₄ solid electrolyte

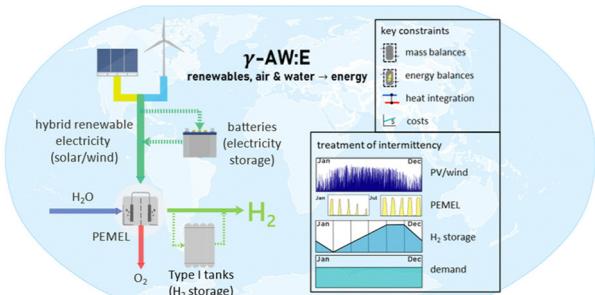
Randy Jalem, Manas Likhit Holekevi Chandrappa, Ji Qi, Yoshitaka Tateyama and Shyue Ping Ong*



2042

Quantifying global costs of reliable green hydrogen

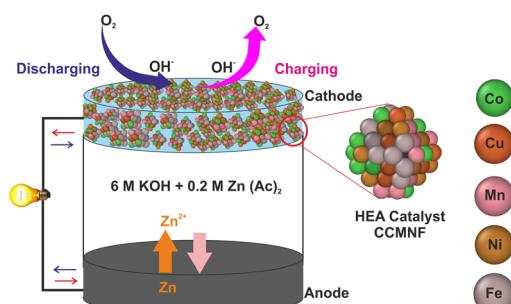
D. Freire Ordóñez, C. Ganzer, T. Halldanarson, A. González Garay, P. Patrizio, A. Bardow, G. Guillén-Gosálbez, N. Shah and N. Mac Dowell*



2055

Understanding the evolution of catalytically active multi-metal sites in a bifunctional high-entropy alloy electrocatalyst for zinc–air battery application

Chetna Madan, Saumya R. Jha, Nirmal Kumar Katiyar, Arkaj Singh, Rahul Mitra, Chandra Sekhar Tiwary,* Krishanu Biswas* and Aditi Halder*

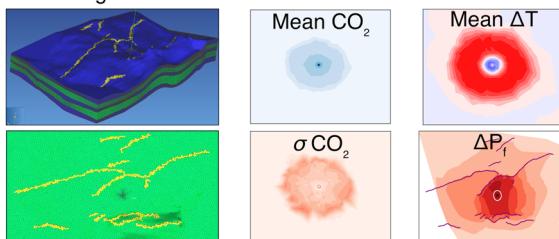


PAPERS

2069

Offshore CO₂ Storage

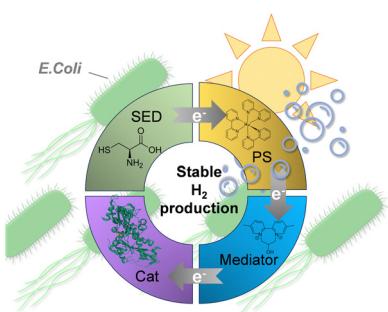
Geologic Model



Assessing reservoir performance for geologic carbon sequestration in offshore saline reservoirs

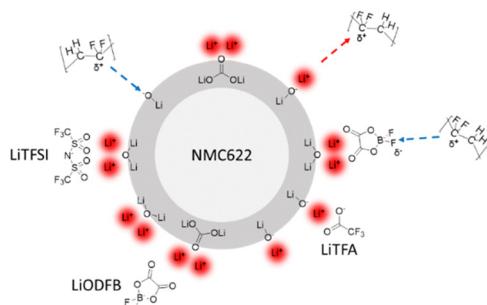
Lars Koehn,* Brian W. Romans and Ryan M. Polyea

2085

*E. coli*-based semi-artificial photosynthesis: biocompatibility of redox mediators and electron donors in [FeFe] hydrogenase driven hydrogen evolution

Mira T. Gamache, Larissa Kurth, Dawit T. Filmon, Nicolas Plumeré and Gustav Berggren*

2093



Electrochemical investigation of fluorine-containing Li-salts as slurry cathode additives for tunable rheology in super high solid content NMP slurries

Francesco Colombo,* Marcus Müller, Andreas Weber, Noah Keim, Fabian Jeschull, Werner Bauer and Helmut Ehrenberg

2109



Cobalt–iron layered double hydroxide nanosheet-wrapped nitrogen-doped graphite felt as an oxygen-evolving electrode

Noor Fatima Shahid, Ahsan Jamal, Gulfaam-ul Haq, Maham Javed, Muhammad Saifullah and Mohsin Ali Raza Anjum*

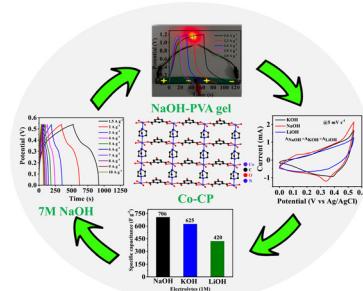


PAPERS

2119

Exploring the feasibility of a two-dimensional layered cobalt-based coordination polymer for supercapacitor applications: effect of electrolytic cations

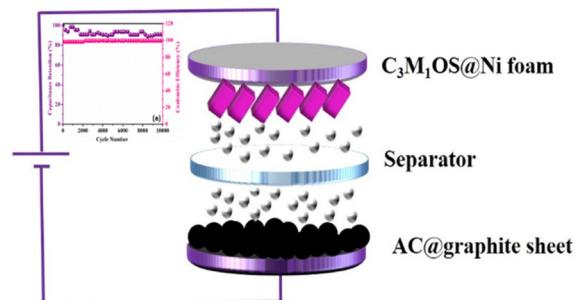
Rakesh Deka, Shashank Rathi and Shaikh M. Mobin*



2129

Compositionally variant bimetallic Cu–Mn oxysulfide electrodes with meritorious supercapacitive performance and high energy density

Heba M. El Sharkawy, Abdussalam M. Elbanna, Ghada E. Khedr and Nageh K. Allam*



2140

Efficient procedure for biodiesel synthesis from waste oil and *t*-butylation of resorcinol using a porous microtube polymer-based solid acid

Zhijin Guo and Xuezheng Liang*

