

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 3(8) 1757-2068 (2024)



Cover

See Filipe M. Santos, Verónica de Zea Bermudez *et al.*, pp. 1766–1843. Image reproduced by permission of Verónica de Zea Bermudez from *Energy Adv.*, 2024, 3, 1766.



Inside cover

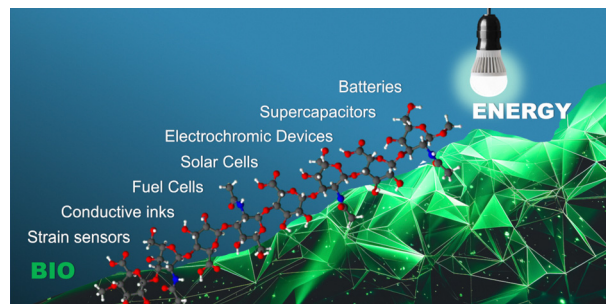
See Zhefeng Xu, Yueming Li *et al.*, pp. 1844–1868. Image reproduced by permission of Yueming Li from *Energy Adv.*, 2024, 3, 1844.

REVIEWS

1766

Looking beyond biology: glycosaminoglycans as attractive platforms for energy devices and flexible electronics

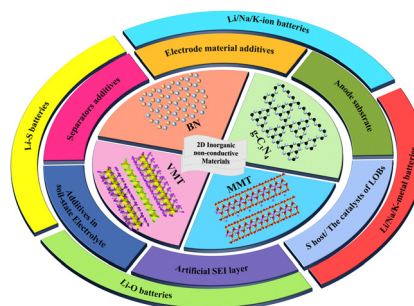
Filipe M. Santos,* Silvia C. Nunes and Verónica de Zea Bermudez*



1844

Recent progress in 2D inorganic non-conductive materials for alkali metal-based batteries

Yuxi Shen, Zengquan Zhu, Zhefeng Xu* and Yueming Li*



EES Catalysis

GOLD
OPEN
ACCESS

Exceptional research on energy and environmental catalysis

Open to everyone. Impactful for all

rsc.li/EESCatalysis

Fundamental questions
Elemental answers

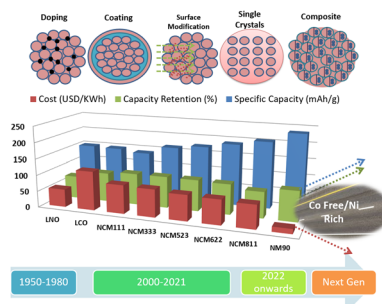


REVIEWS

1869

Challenges and opportunities using Ni-rich layered oxide cathodes in Li-ion rechargeable batteries: the case of nickel cobalt manganese oxides

Jitendra Pal Singh,* Harsha Devnani, Aditya Sharma, Weon Cheol Lim, Archana Dhyani, Keun Hwa Chae and Sangsul Lee

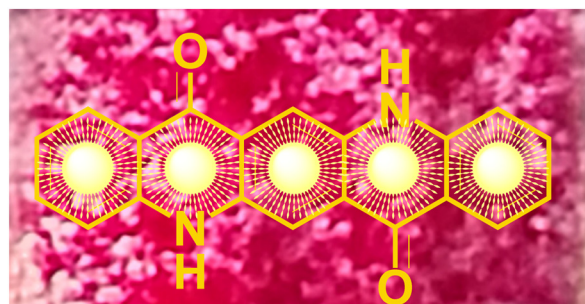


PERSPECTIVE

1894

Quinacridone dyes: versatile molecules and materials for photo- and photoelectrochemical processes

Elena Rossin, Yunshuo Yang, Martina Chirico, Greta Rossi, Pierluca Galloni* and Andrea Sartorel*

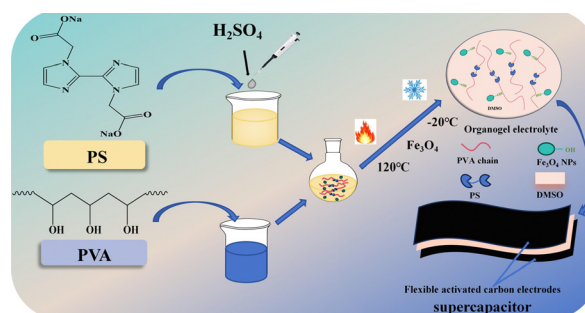


COMMUNICATION

1905

Magnetic soft organogel supercapacitor electrolyte for energy storage

Xinxian Ma,* Jiuzhi Wei, Yuehua Liang, Juan Zhang, Enke Feng, Zhenxing Fu and Xinning Han*

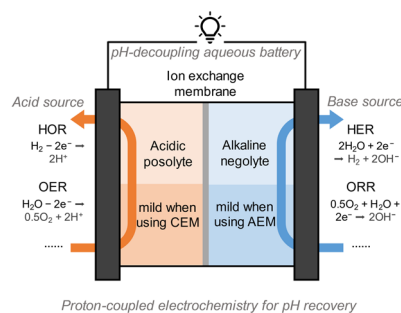


PAPERS

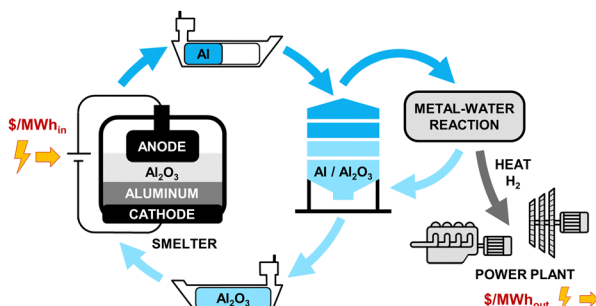
1911

Single-membrane pH-decoupling aqueous batteries using proton-coupled electrochemistry for pH recovery

Dawei Xi, Zheng Yang, Abdulrahman M. Alfaraidi, Yan Jing, Roy G. Gordon and Michael J. Aziz*



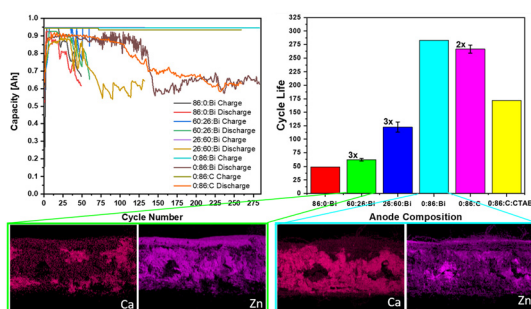
1919



Techno-economic assessment of aluminum as a clean energy carrier to decarbonize remote industries

Pascal Boudreau,* Michael Johnson and Jeffrey M. Bergthorson

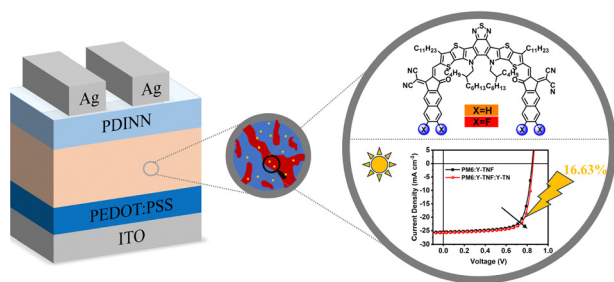
1932



Performance and failure mechanisms of alkaline zinc anodes with addition of calcium zincate ($\text{Ca}[\text{Zn}(\text{OH})_3]_2 \cdot 2\text{H}_2\text{O}$) under industrially relevant conditions

Patrick K. Yang, Damon E. Turney,* Michael Nyce, Bryan R. Wygant, Timothy N. Lambert, Stephen O'Brien, Gautam G. Yadav, Meir Weiner, Shinju Yang, Brendan E. Hawkins and Sanjoy Banerjee

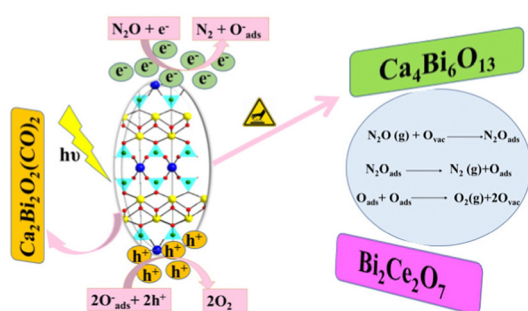
1948



Employing a similar acceptor material as the third component to enhance the performance of organic solar cells

Kun Wang,* Haolei Bai, Cheng Zhang, Chunxiao Sun, Shuyang Sang, Yuechen Li, Zekun Chen, Jia'nan Hu, Xiaojun Li, Lei Meng* and Yongfang Li

1956



Exploration of bismuth-based materials for photocatalytic decomposition of N_2O

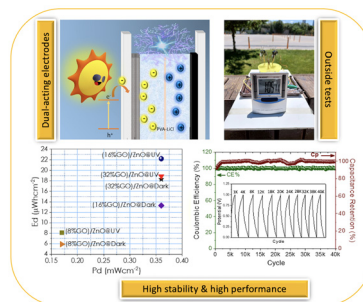
Shalu Atri,* Sitharaman Uma, Rajamani Nagarajan, Maros Gregor, Tomas Roch, Miroslava Filip Edelmannova, Martin Reli, Kamila Koci, Martin Motola and Olivier Monfort*



1965

Zinc oxide nanoflake/reduced graphene oxide nanocomposite-based dual-acting electrodes for solar-assisted supercapacitor applications

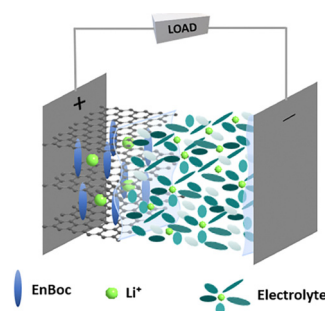
Cigdem Tuc Altaf, Tuluhan Olcayto Colak, Arpad Mihai Rostas, Crina Socaci, Mihaela Diana Lazar, Lucian Barbu Tudoran, Mohamad Hasan Aleinawi, Feray Bakan Misirlioglu, Ipek Deniz Yildirim, Emre Erdem, Nurdan Demirci Sankir* and Mehmet Sankir*



1977

van der Waals gap modulation of graphene oxide through mono-Boc ethylenediamine anchoring for superior Li-ion batteries

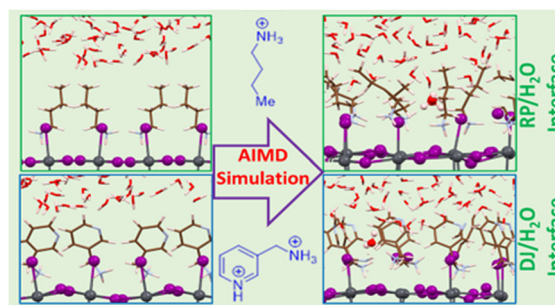
Sneha Mandal, Vijayamohan K. Pillai,* Mano Ranjana Ponraj, Thushara K M, Jebasingh Bhagavathsingh,* Stephan L. Grage, Xihong Peng, Jeon Woong Kang, Dorian Liepmann, Arunachala Nadar Mada Kannan, Velmurugan Thavasi and Venkatesan Renugopalakrishnan



1992

Understanding moisture stability and degradation mechanisms of 2D hybrid perovskites: insights from *ab initio* molecular dynamics simulations

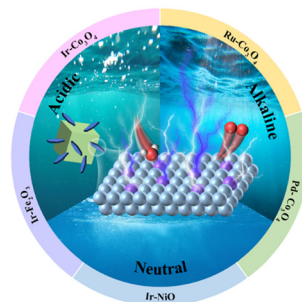
Eti Mahal, Surya Sekhar Manna, Sandeep Das and Biswarup Pathak*



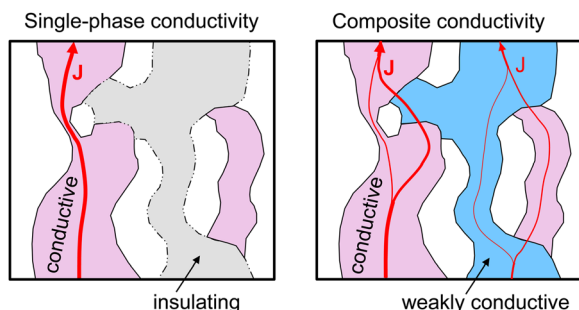
2002

Universal synthesis strategy for preparation of transition metal oxide electrocatalysts doped with noble metal single atoms for oxygen evolution reaction

Jingyao Wang, Yiming Zhu, Xuepeng Zhong, Zhiwei Hu, Wei-Hsiang Huang, Chih-Wen Pao, Hongfei Cheng,* Nicolas Alonso-Vante* and Jiwei Ma*



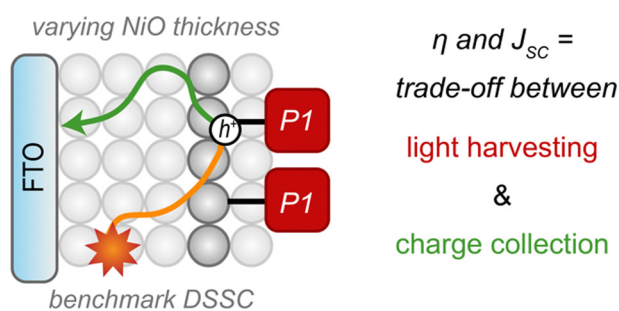
2013



Effective transport properties of porous composites applied to MIEC SOC electrodes

Philip Marmet,* Lorenz Holzer, Thomas Hocker, Gernot K. Boiger and Joseph M. Brader

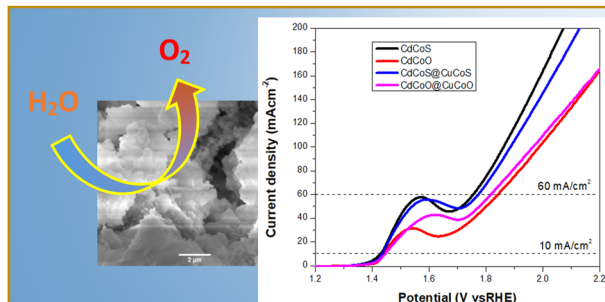
2035



Slow hole diffusion limits the efficiency of p-type dye-sensitized solar cells based on the P1 dye

Maria B. Brands, Olivier C. M. Lugier, Kaijian Zhu, Annemarie Huijser, Stefania Tanase and Joost N. H. Reek*

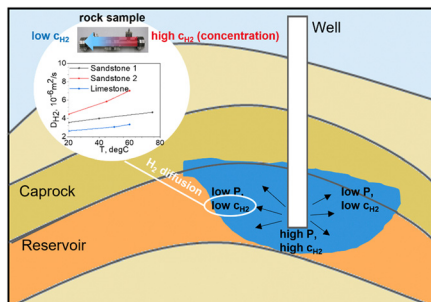
2042



Unrevealing the potential of multicomponent metal-ion incorporation and sulfide modification in cobalt oxide for efficient water oxidation

Muzzayab Masood, Muhammad Aamir,* Muhammad Ejaz Khan, Muhammad Sher, Khush Bakhat Akram, Hafiz Zahid Shafi, Hamad Almohamadi,* M. d. Akhtaruzzaman and M. d. Shahiduzzaman

2051



Temperature dependence of hydrogen diffusion in reservoir rocks: implications for hydrogen geologic storage

Yun Yang,* Amber Zandanel, Shimin Liu, Chelsea W. Neil, Timothy C. Germann and Michael R. Gross



CORRECTION

2066

Correction: Copper and iron co-doping effects on the structure, optical energy band gap, and catalytic behaviour of Co_3O_4 nanocrystals towards low-temperature total oxidation of toluene

Hippolyte Todou Assaouka, Issah Ngouh Nsangou, Daniel Manhouli Daawe, Daniel Onana Mevoa, Abraham Atour Zigla, Patrick Ndouka Ndouka and Patrick Mountapmbeme Kouotou*

Open Access Article. Published on 08 August 2024. Downloaded on 4/27/2026 3:27:31 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

