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Energy Advances

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Cover
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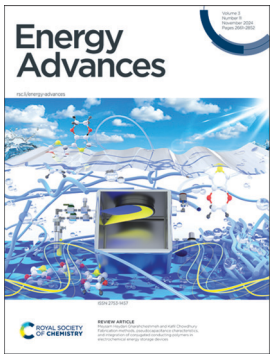


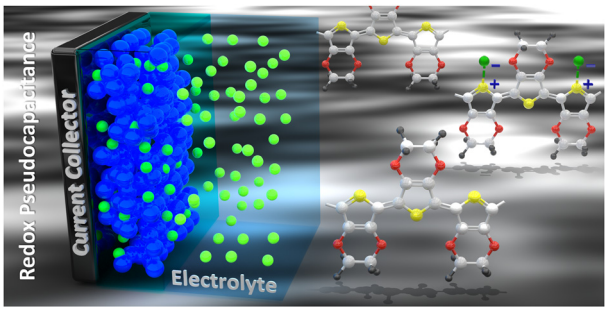
Inside cover
See Meysam Heydari Gharahcheshmeh and Kafil Chowdhury, pp. 2668–2703. Image reproduced by permission of Meysam Heydari Gharahcheshmeh and Andres de Casas from *Energy Adv.*, 2024, **3**, 2668.

REVIEWS

2668

Fabrication methods, pseudocapacitance characteristics, and integration of conjugated conducting polymers in electrochemical energy storage devices

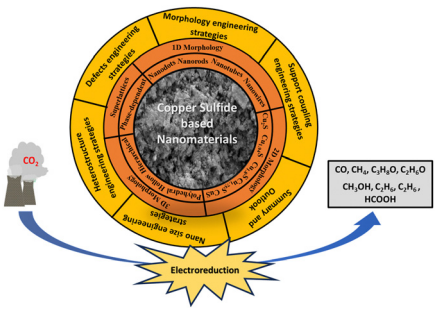
Meysam Heydari Gharahcheshmeh* and Kafil Chowdhury



2704

Controlled synthesis of copper sulfide-based catalysts for electrochemical reduction of CO_2 to formic acid and beyond: a review

Anirban Mukherjee, Maryam Abdinejad,* Susanta Sinha Mahapatra and Bidhan Chandra Ruidas*



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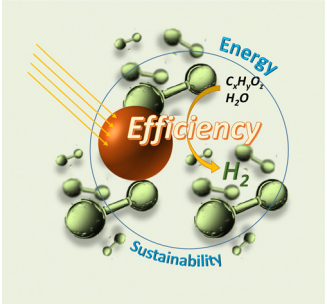
PERSPECTIVE

2738

Efficiency in photocatalytic production of hydrogen: energetic and sustainability implications

Rocío Sayago-Carro, Luis José Jiménez-Chavarriga, Esperanza Fernández-García, Anna Kubacka* and Marcos Fernández-García*

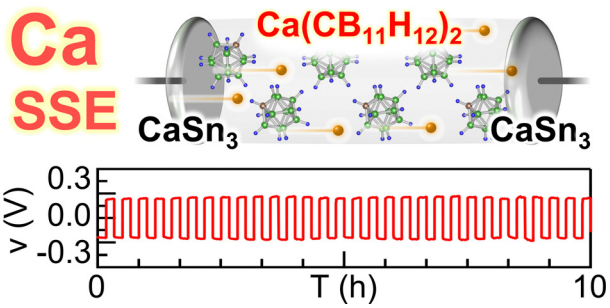


COMMUNICATION

2758

Investigating the ion conductivity and synthesis conditions of calcium monocarborane solid-state electrolytes

Takara Shinohara, Kazuaki Kisu,* Shigeyuki Takagi and Shin-ichi Orimo*

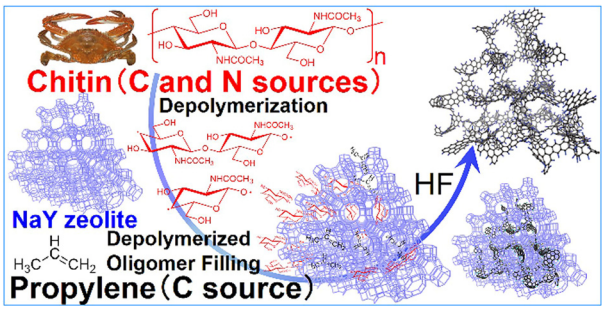


PAPERS

2764

Synthesis of N-doped zeolite-templated carbons *via* depolymerized oligomer filling: applications in EDLC electrodes

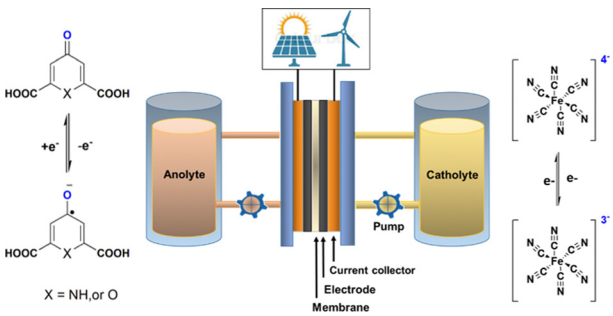
Hiroyuki Itoi,* Chika Matsuoka, Ginga Saeki, Hiroyuki Iwata, Shinichiroh Iwamura, Keigo Wakabayashi, Takeharu Yoshii, Hirotomo Nishihara and Yoshimi Ohzawa



2778

Tautomerism and nucleophilic addition influence the performance of aqueous organic redox flow batteries of chelidamic acid and chelidonic acid

Surya Prakash, Alagar Ramar, Fu-Ming Wang,* Kefyalew Wagari Guji, Citra Deliana Dewi Sundari and Laurien Merinda



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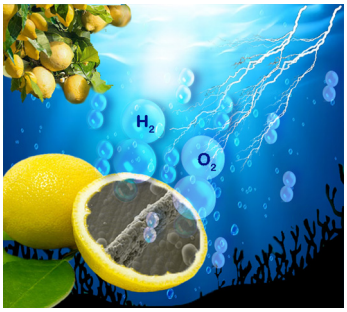
PAPERS

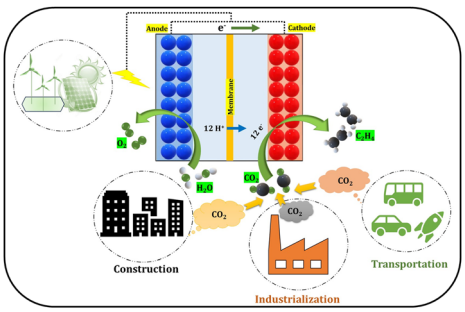
2790



Ag–NiP deposited green carbon channel embedded NiP panels for sustainable water splitting

Revathy B. Nair, A. Anantha Krishnan, Aneesh Kumar M. A., Sivaraj Rajendran, Sreehari Harikumar, Vidhya C., M. Ameen Sha, Thomas Mathew, Sajith Kurian* and P. S. Arun*

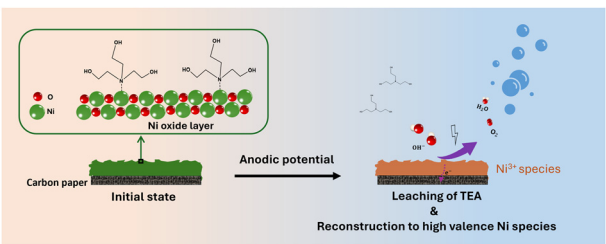
2801



Boosting ethylene yield *via* a synergistic 2D/0D nanostructured VCu layered double hydroxide/TiO_2 catalyst in electrochemical CO_2 reduction

Sneha S. Lavate and Rohit Srivastava*

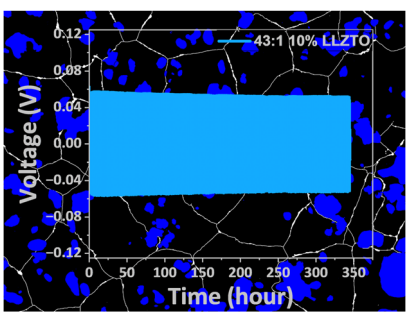
2812



Triethanolamine-assisted surface reconstruction of nickel oxide for efficient oxygen evolution reaction

Jiayun Zhang, Ruth Knibbe* and Ian Gentle*

2820



Competing effects of low salt ratio on electrochemical performance and compressive modulus of PEO-LiTFSI/LLZTO composite electrolytes

Jiaxin Zhang, Valeria Perez, ThomasJae Garcia, Dan-il Yoon, David Wagner, Yanika Schneider, Min Hwan Lee, Sang-Joon John Lee* and Dahyun Oh*

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PAPERS

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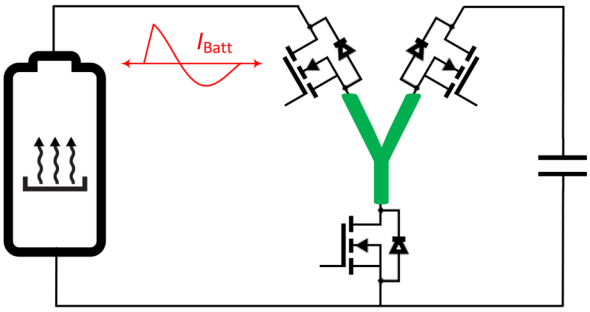
A high frequency alternating current heater using the advantages of a damped oscillation circuit for low voltage Li-ion batteries

Joachim Oehl,* Andreas Gleiter, Daniel Manka, Alexander Fill and Kai Peter Birke



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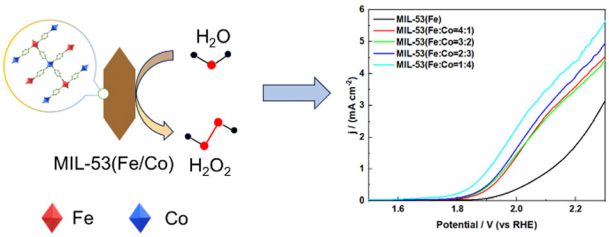
Effective electrochemical water oxidation to H_2O_2 based on a bimetallic Fe/Co metal–organic framework

Kunpeng Liu, Xu Wang, Nan Wang,* Ruiyong Zhang,* Meinan Yang, Baorong Hou and Wolfgang Sand