

Sustainable Energy & Fuels

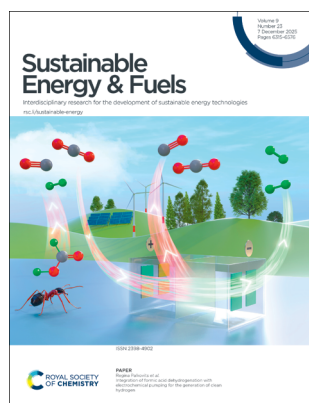
Interdisciplinary research for the development of sustainable energy technologies

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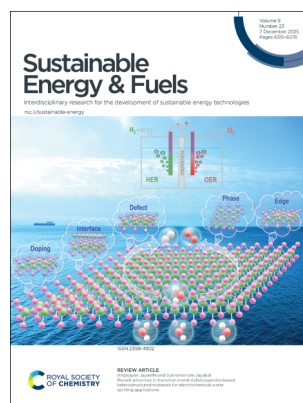
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See Regina Palkovits *et al.*, pp. 6439–6446. Image reproduced by permission of RWTH Aachen University from *Sustainable Energy Fuels*, 2025, 9, 6439.



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EDITORIAL

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Introduction to next-generation battery technologies beyond lithium

Chunmei Ban,* Guillermo A. Ferrero,* Marta Sevilla* and Feixiang Wu*

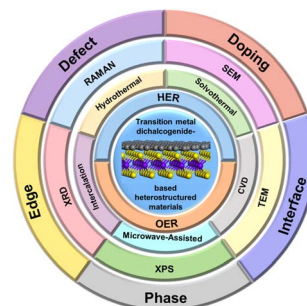


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Recent advances in transition metal dichalcogenide-based heterostructured materials for electrochemical water splitting applications

Angappan Jayanthi and Subramaniam Jayabal*



Environmental Science: Atmospheres

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Fundamental questions
Elemental answers

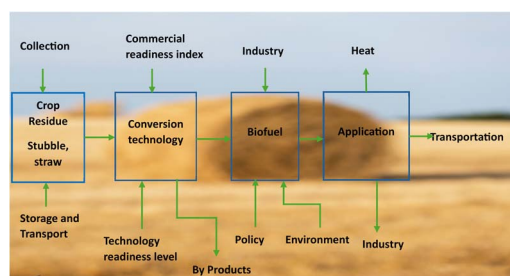


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Feasibility of biofuel production from crop stubble/straw in Australia: challenges and opportunities

M. A. Sattar,* M. A. Hosen and M. Johnstone



Crop residue to biofuel in Australia

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Recent advances in mesoporous nanostructured materials and nanohybrids for supercapacitor applications: a review

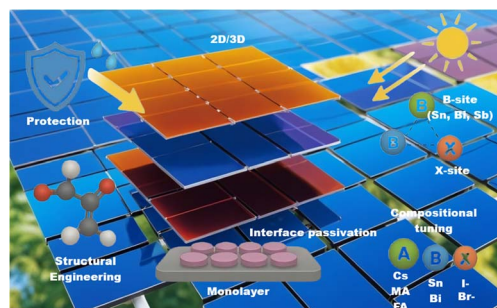
Mayank Pandey,* Kalim Deshmukh,* Preetinder Kaur, Ammar Zidan, Süleyman Aşır, Surinder Singh,* Naveen Kumar, Prasanta Kumar Sahoo, Suresh Sundaramurthy, S. K. Mehta, Deniz Türkmen and Niraj Kumar



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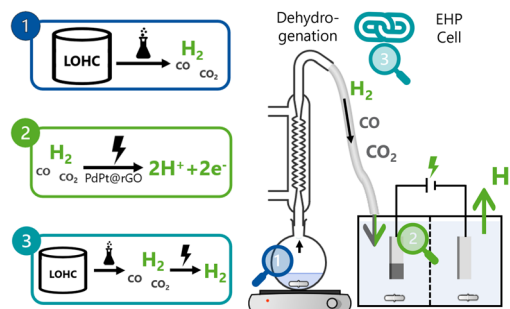


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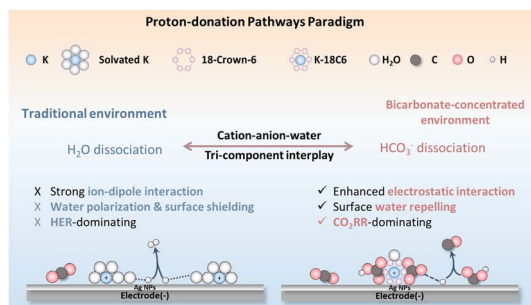
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Integration of formic acid dehydrogenation with electrochemical pumping for the generation of clean hydrogen

Fabian Ketter, Shwetambara Jha, Sonja D. Mürtz and Regina Palkovits*



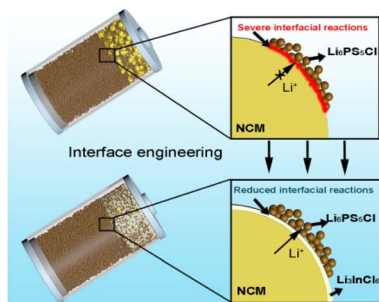
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Cation solvation engineering for enhanced CO₂ electroreduction

Haoran Zhang, Tianxiang Yan, Akhmat Fauzi, Jianlong Lin, Yaxin Jin, Yihan Xu, Zhanpeng Liang, Tribidasari A. Ivandini and Sheng Zhang*

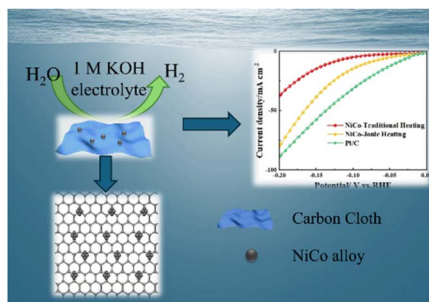
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Constructing stable cathode interfaces with halide-sulfide dual electrolytes for all-solid-state lithium batteries with enhanced electrochemical performance

Wenzhuang Liu, Jiahao Li, Jinghua Wu* and Xiayin Yao*

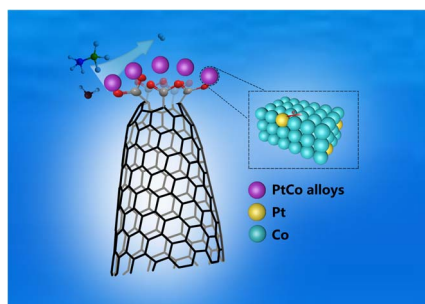
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Ultrafast synthesis of NiCo alloy catalysts by Joule heating for the electrocatalytic hydrogen evolution reaction

Wence Ma, Zhiyuan Niu, Haidong Wang, Jinlong Li, Kaixin Zhu, Weiguang Ma and Xu Zong*

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Dual engineering of electronic structure and nanoconfinement for high-efficiency ammonia borane hydrolysis over PtCo-oxCNH catalysts

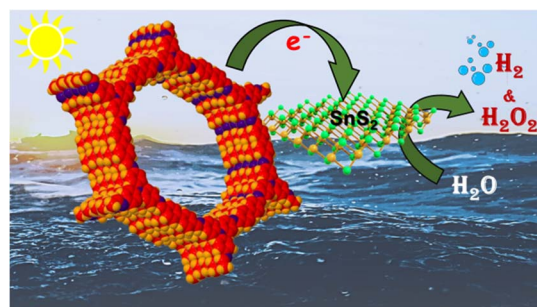
Weixia Li, Wenjing Yi, Runzi Liao, Houfa Chen and Xinzheng Yue*



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Visible-light-driven green hydrogen and hydrogen peroxide production using a 2D porous organic polymer engineered with 2D SnS₂

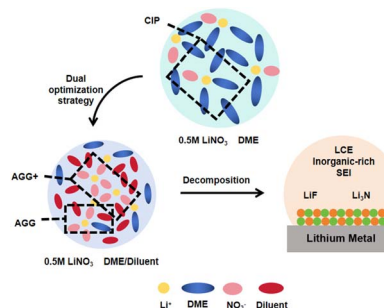
Mainak Sarkar, Pekham Chakraborty, R. V. Singh, Mrinal R. Pai, Mahboob Alam, Sk. Manirul Islam* and Ahmed Mohamed Tawfeek



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Low-concentration electrolyte with lithium nitrate as the sole salt for constructing a LiF/Li₃N inorganic composite SEI and enabling stable lithium metal battery cycling

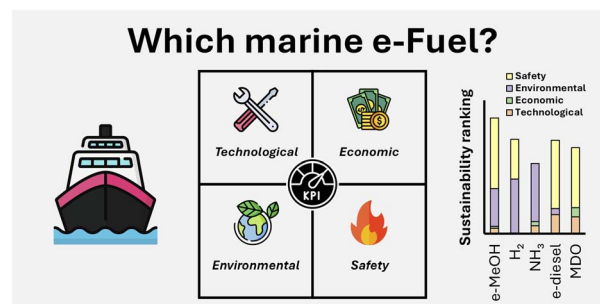
Xuanzhong Wen, Qiu Chen, Pan Luo, Mingshan Wang,* Li Liao, Yin Shen, Xiaoshuang Luo, Jialin Song, Michael Zaiser* and Xing Li*



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Quantitative sustainability assessment of e-fuels for maritime transport

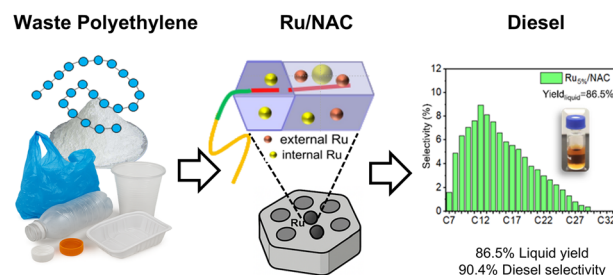
Francesco Zanobetti, Andrea Bernardi, Gianmaria Pio, Diego Freire Ordóñez, David Danaci, Benoît Chachuat,* Valerio Cozzani and Nilay Shah



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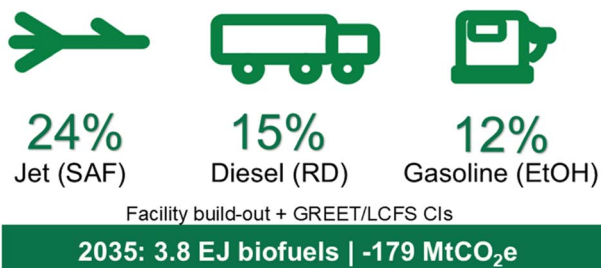
Upcycling polyethylene into diesel-range hydrocarbons over Ru catalysts confined in thermally stable mesoporous N-doped carbon

Shitong Yu, Zhenghang Ren, Kaige Wang, Rui Xiao, Zhicheng Luo* and Huiyan Zhang*



PAPERS

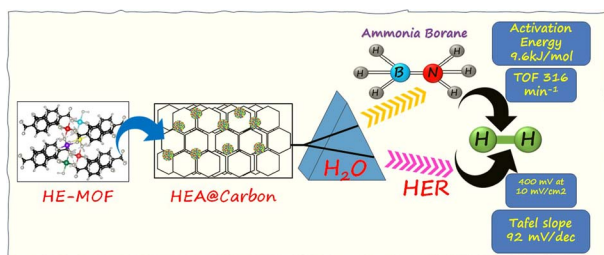
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Life cycle greenhouse gas emissions and carbon intensity of U.S. fuel use and projection for the next 10 years-based on built capacity and expansion plans

Tai-Yuan Huang, Doris Oke* and Troy R. Hawkins

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Unveiling the Multifaceted Potential of HEA@Carbon

Magnetically recoverable high-entropy alloy catalyst in carbon matrix for ammonia borane-driven hydrogen evolution and electrocatalytic hydrogen production

Manish Ramesh Shingole, Siddhartha Kolay, Asheesh Kumar, P. Ruz, V. Sudarsan and Seemita Banerjee*

CORRECTION

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Correction: Advances and strategies in scalable coating techniques for flexible perovskite solar cells

Hou-Chin Cha, Shih-Han Huang, Chia-Feng Li, Feng-Yu Tsai, Wei-Fang Su* and Yu-Ching Huang*

