

Sustainable Energy & Fuels

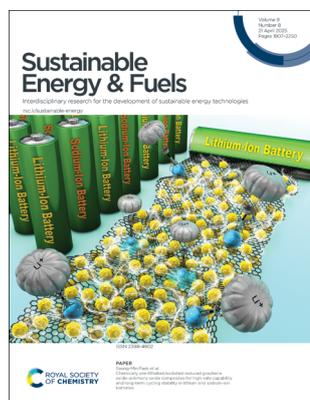
Interdisciplinary research for the development of sustainable energy technologies

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ISSN 2398-4902 CODEN SEFUA7 9(8) 1907–2250 (2025)



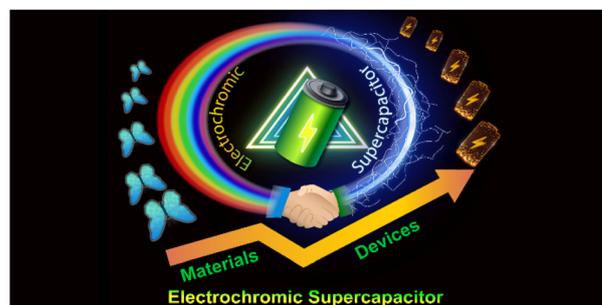
Cover
See Seung-Min Paek *et al.*, pp. 1998–2013. Image reproduced by permission of Seung-Min Paek from *Sustainable Energy Fuels*, 2025, 9, 1998.

REVIEWS

1917

Advances in next-generation electrochromic supercapacitors: emerging applications, challenges and future perspectives

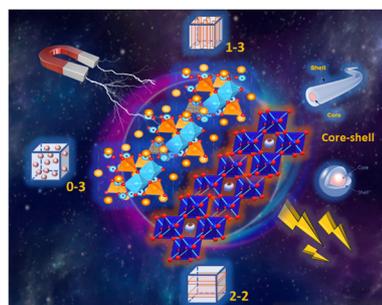
Lingaraj Pradhan, Tapas Kumar Das and Bikash Kumar Jena*



1957

Current advances in magnetoelectric composites with various interphase connectivity types

Youness Hadouch,* Daoud Mezzane, M. 'barek Amjoud, Hana Uršič, Abdelilah Lahmar, Brigita Rozic, Igor Lukyanchuk, Zdravko Kutnjak and Mimoun El Marssi



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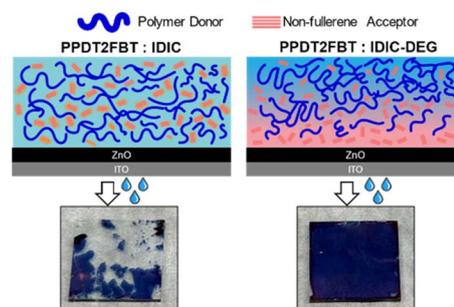
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COMMUNICATION

1993

Vertical phase separation induced highly efficient pseudo-bilayer photoanodes for organic photoelectrochemical cells

Jaehyeong Kim, Soonyong Lee, Yeonjeong Lee, Tack Ho Lee, Jin Young Kim* and Han Young Woo*

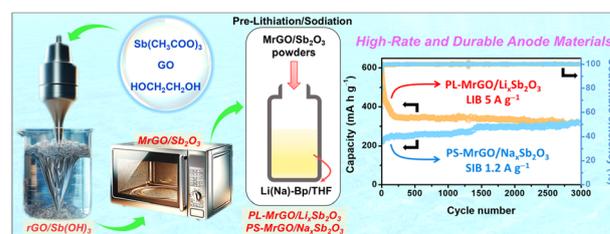


PAPERS

1998

Chemically pre-lithiated/sodiated reduced graphene oxide–antimony oxide composites for high-rate capability and long-term cycling stability in lithium and sodium-ion batteries

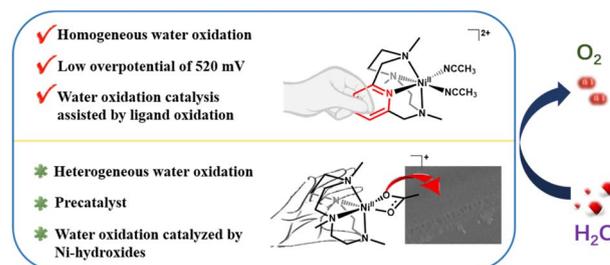
Minseop Lee, Gi-Chan Kim and Seung-Min Paek*



2014

Efficient homogeneous electrochemical water oxidation catalysed by macrocyclic nickel complexes with redox non-innocent pyridine coordination structures

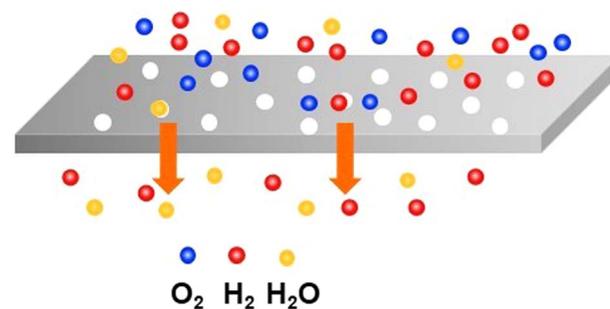
Junqi Lin,* Jinlin Hu, Zhichao Qi, Lianghui Zhang, Zezhen Wang, Xiangming Liang* and Zhijun Ruan*



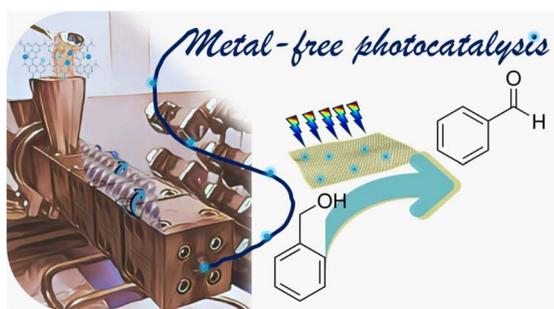
2022

A polyfluorene-based electrolyte membrane for hydrogen/oxygen gas separation under humidified conditions

Shoji Miyanishi,* Kaede Matsuta and Takeo Yamaguchi*



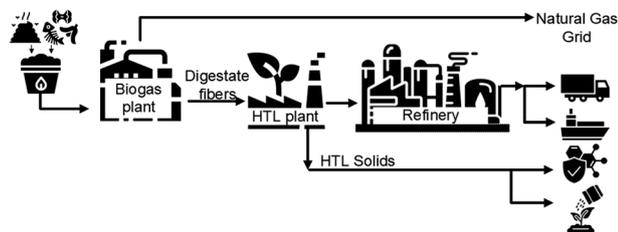
2031



Metal-free graphitic carbon nitride/carbon-dots composites: unveiling mechanochemical synthesis opportunities

Ilaria Bertuol, Lucía Jiménez-Rodríguez, Rafael R. Solís, Patrizia Canton, Maurizio Selva, Mónica Calero, Alvise Perosa, Daily Rodríguez-Padrón* and Mario J. Muñoz-Batista*

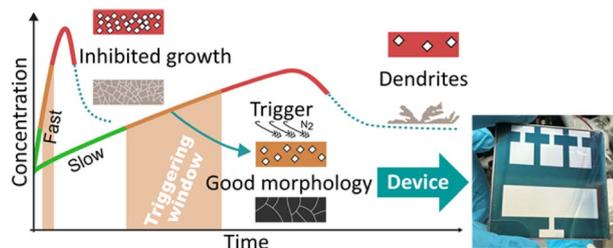
2045



Waste valorization: harnessing biogas plant residues for fuel production

Violeta Carolina Wills* and Julie Katerine Rodriguez

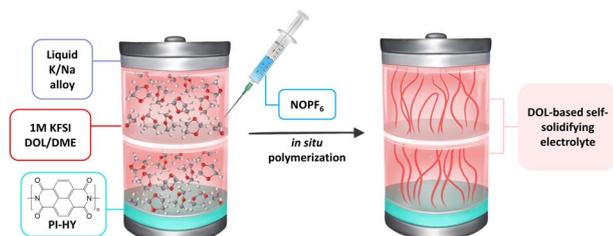
2063



Printing of tin perovskite solar cells via controlled crystallization

Xuan Li, Giuseppe Nasti, Chris Dreessen, Janardan Dagar, Rico Meitzner, Davide Amoroso, Pier Luca Maffettone, Thomas Kirchartz, Eva Unger, Antonio Abate* and Stoichko D. Dimitrov*

2072



Exploring 1,3-dioxolane polymerization initiated by NOPF₆: a universal approach to self-solidifying electrolytes for high-capacity retention potassium batteries

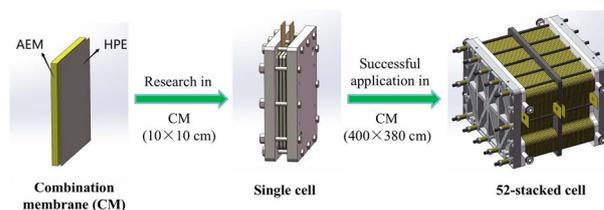
Elena V. Shchurik, Yuriy Baluda, Olga A. Kraevaya, Sergey M. Aldoshin and Pavel A. Troshin*



2079

Improving anion exchange membrane stability with hydrophilic polyethylene for advanced aqueous organic redox flow batteries

Chenggang Li, Mei Han, Rui Han and P. Chen*



2087

Boosting large scale capacitive harvesting of osmotic power by dynamic matching of ion exchange kinetics

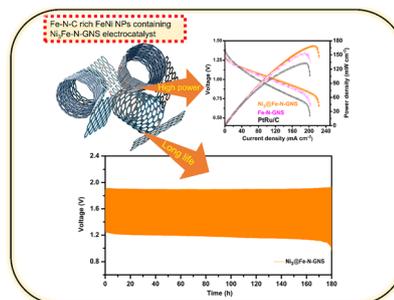
Nicolas Chapuis and Lydéric Bocquet*



2098

Boosting bifunctional oxygen electrocatalysis by integrating Fe–N_x moieties and FeNi nanoparticles for highly efficient and long-life rechargeable zinc–air batteries

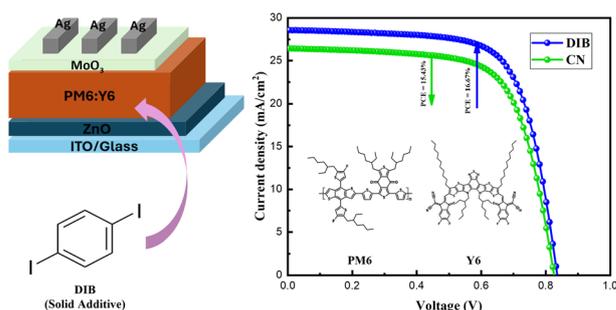
Zubair Ahmed, Jekaterina Kozlova, Kaupo Kukli, Arvo Kikas, Vambola Kisand, Alexey Treshchalov, Maike Käärik, Jaan Leis, Jaan Aruväli and Kaido Tammeveski*



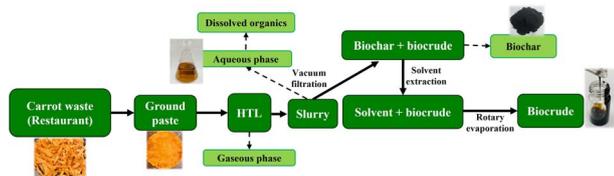
2109

Enhancing the efficiency of non-fullerene organic solar cells by using a volatilizable solid additive system

Walia Binte Tarique,* Ashraf Hossain Howlader, Shahriyar Safat Dipta, Ayush Pratik and Ashraf Uddin*



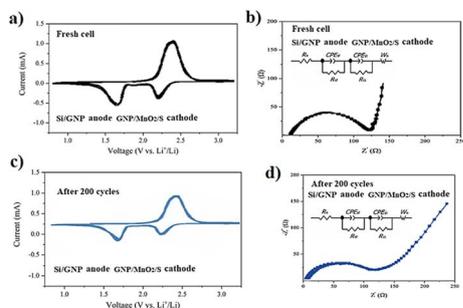
2119



Optimization and characterization of biocrude produced from hydrothermal liquefaction of food waste

Kshanaprava Dhalsamant and Ajay K. Dalai*

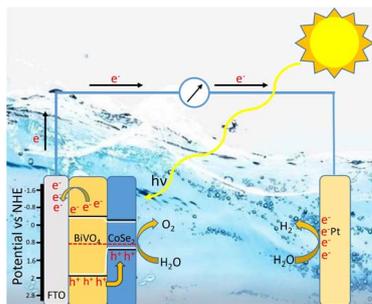
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Interfacial synergy of pre-lithiation silicon anodes and GNP/MnO₂/S cathodes for lithium polysulfides in silicon–sulfur batteries studied *via* DFT

Navid Aslfattahi,* Maryam Sadat Kiai, Deniz Karatas, Nilgun Baydogan, Lingenthiran Samylingam, Kumaran Kadirgama* and Chee Kuang Kok

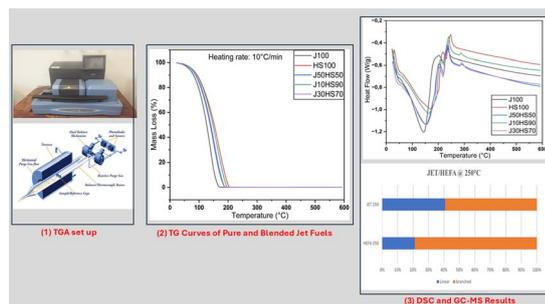
2149



Electrodeposited CoSe₂ supported on BiVO₄ as an efficient photoanode for the enhanced photoelectrochemical water oxidation

M. Nikandish, D. Taherinia* and S. Ghasemian

2159



Thermal behaviour and combustion characteristics of JET A-1, HEFA-derived SAF and their blends for aeronautical applications

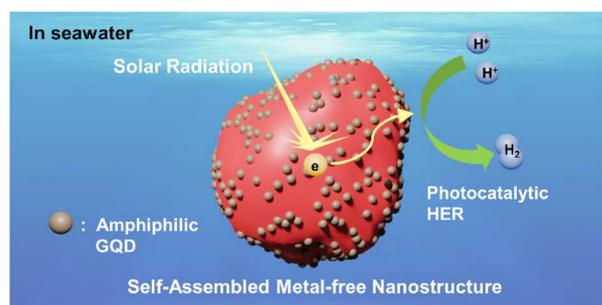
Abdulwasiu Muhammed Raji,* Brady Manescau, Khaled Chetehouna, Christelle Roudaut,* Laurent Lemee and Mehrad Tarighi



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Amphiphilic self-assembled dye-sensitized graphene quantum dots for efficient hydrogen evolution in seawater

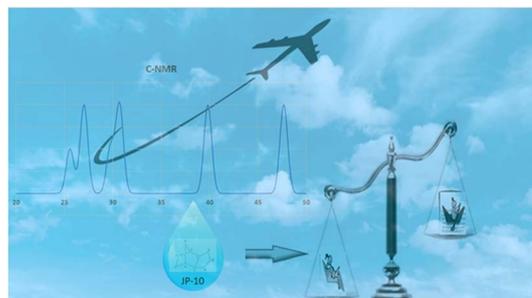
Hyunho Park* and Soo Young Park*



2184

Deciphering the electronic and NMR fingerprints of JP-10 fuel: a DFT study of *exo*-chair versus *exo*-boat isomers

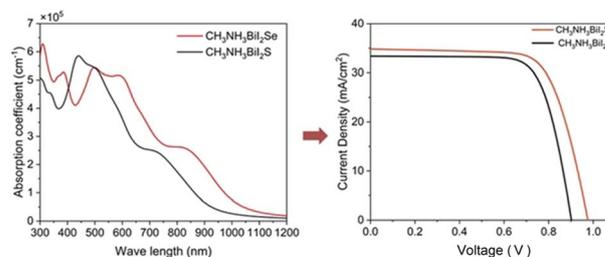
Feng Wang* and Vladislav Vasilyev



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Eco-friendly bismuth halide chalcogenide perovskites for solar energy harvesting

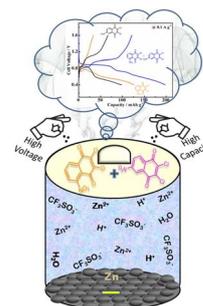
Jayawardane Thambugalage Sanjeevani Thakshila Jayawardane, Udugama Korallalage Don Muditha Akmal, Dengwei Hu, Pradeep Kumara Wijesekara Abeygunawardhana and Galhenage Asha Sewvandi*



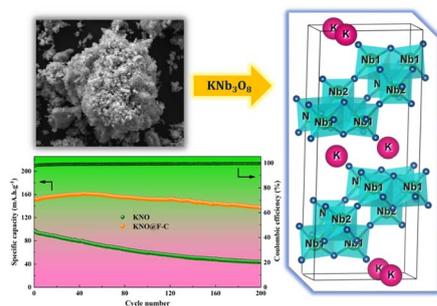
2207

Fusion of nitro isomers of naphthoquinone enhances capacity and cyclability in Zn-ion batteries

Richa Gupta, Nikhil George Mohan, John Bell, Ashok Kumar Nanjundan* and Kothandaraman Ramanujam*



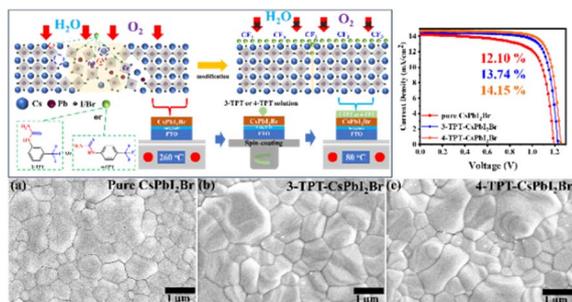
2217



Influence of carbon and fluorine on potassium niobate anode material for sodium-ion battery applications

Y. Bhaskara Rao and C. André Ohlin*

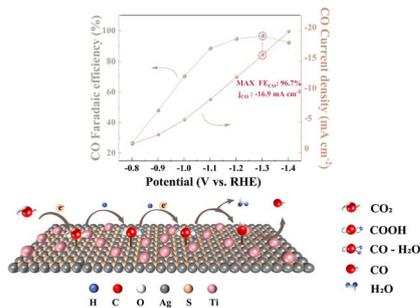
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Enhanced performance of carbon-based CsPbI₂Br perovskite solar cells using interfacial modifiers

Haoju Li, Yuhang Liang, Changzhong Wang, Guangli Liu, Huang Cheng, Raochen Xie, Longxiang Luo and Yannan Qian*

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Sulfhydryl modified silver-titanium oxide to effectively and stably promote the electrocatalytic reduction of carbon dioxide to CO

Qian Zhang, Chenyu Yan, Zheng Tang, Ya Zhang and Honggui Wang*

