

Sustainable Energy & Fuels

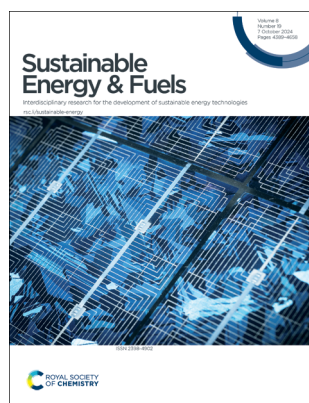
Interdisciplinary research for the development of sustainable energy technologies

rsc.li/sustainable-energy

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 2398-4902 CODEN SEFUA7 8(19) 4389–4658 (2024)



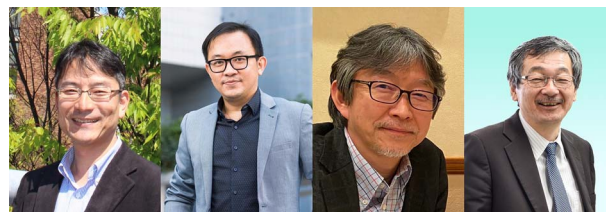
Cover
Image credit Fabian Plock/
EyeEm/Getty Images.

EDITORIAL

4398

Introduction to solar fuels and chemicals: photocatalytic water splitting and CO₂ reduction themed collection

Ryu Abe, Yun Hau Ng, Osamu Ishitani and Kazunari Domen

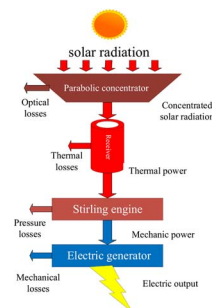


REVIEWS

4399

Characterization of a thermoelectric system based on a solar dish Stirling engine: a review

Lingxuan Kong,* Zhibo Wu, Jiale Jiang, Jing Li and Ning Luo



ChemComm

Uncover new possibilities
with outstanding
preliminary research

Original discoveries, fuelling
every step of scientific progress

rsc.li/chemcomm

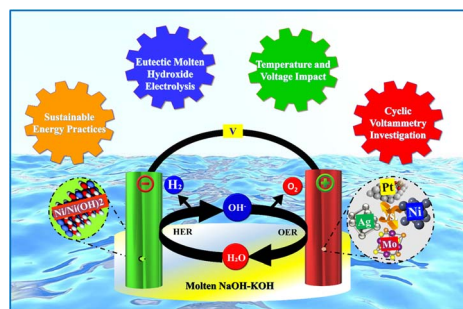
Fundamental questions
Elemental answers

REVIEWS

4429

Critical insights into eutectic molten hydroxide electrolysis for sustainable green hydrogen production

Farooq Sher,^{*} Imane Ziani, Nawar K. Al-Shara, Alexander Chupin, Nađa Horo, Bohong Wang, Saba Rahman, Bilal Fareed and Monica R. Nemțanu

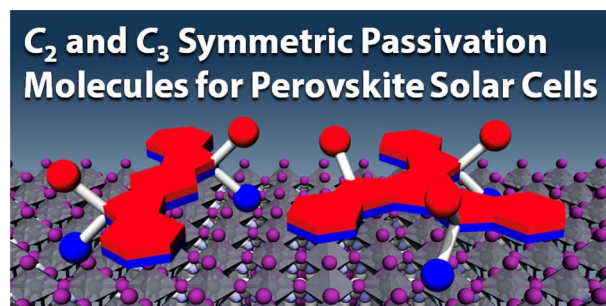


PAPERS

4453

Evolving bifacial molecule strategy for surface passivation of lead halide perovskite solar cells

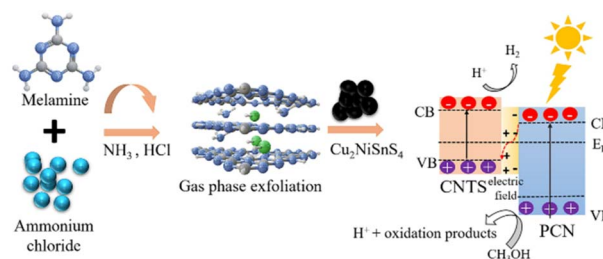
Nanaki Minoi, Fumitaka Ishiwari,^{*} Takuya Omine, Kazuharu Murotani, Ryoosuke Nishikubo and Akinori Saeki^{*}



4461

Cu₂NiSnS₄/g-C₃N₄ S-scheme photocatalysts: interfacial surface trap states vs. hydrogen production

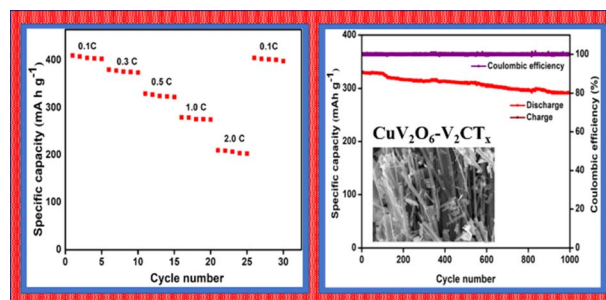
Rugma T. P., Rishi Krishna B. S., K. Priyanga Kangeyan, Neppolian Bernardshaw, Abdullah Saad AlArifi and Sandeep Kumar Lakhera^{*}



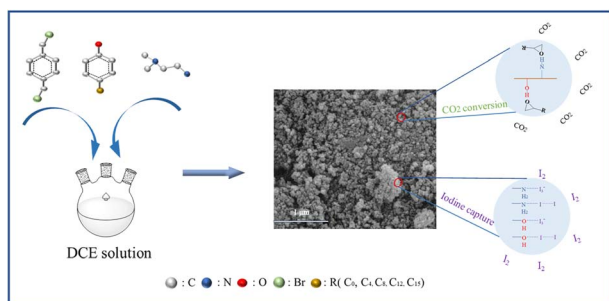
4472

A heterogeneous CuV₂O₆@2D-V₂CT_x MXene nanohybrid as a cathode material for high-capacity and stable aqueous Zn-ion batteries

Lena S, Senthilkumar Ramasamy, Saradh Prasad Rajendra, Mohamad S. AlSalhi, Rajamohan Rajaram and Subramania A.^{*}



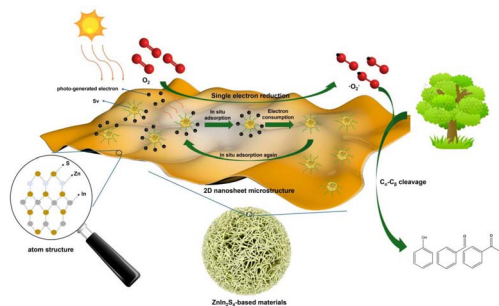
4484



Synthesis of "all-in-one" hypercrosslinked organic polymers: experimental and kinetic models for CO₂ chemical fixation and iodine adsorption

Xuanbo Liu, Yongjing Hao, Xiuli Yan, Yuhang Zhang, Xionglei Wang, Zheng Zhu, Jiajia Yang, Shuangshuo Li, Tao Chang* and Shenjun Qin*

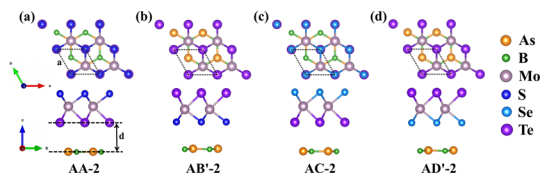
4496



Sulfur vacancy induced radical generation in ZnIn₂S₄ for lignin photocatalytic C_α-C_β cleavage

Jifang Zhang, Jinde Sun, Chengcheng Suo, Wei Li, Sha Luo, Bing Tian, Chunhui Ma* and Shouxin Liu*

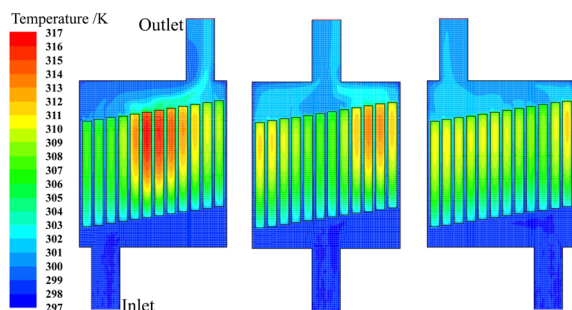
4507



Two-dimensional h-BAs/MoXTe (X = S, Se) heterojunctions with high photocatalytic performance and high photoelectric conversion efficiency

Yuliang Mao* and Zhiwei Zhang

4519



Study on the impact of battery pack arrangement on temperature uniformity distribution

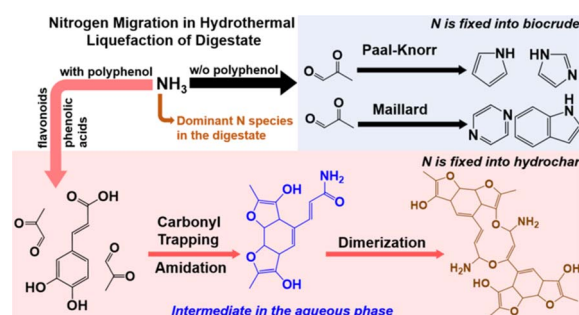
ZhongXing Ji and Chao Zhang*



4533

Hydrothermal coliquefaction of anaerobic digestate with polyphenolic extracts from agricultural byproducts producing nearly nitrogen-free biocrude oil

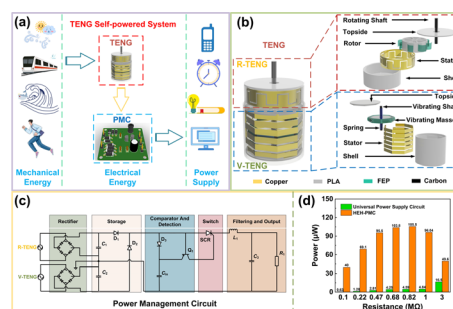
Hanifrahmawan Sudiby^{*}, Budhijanto Budhijanto, Crispin Celis, Aqiela Mahannada, Ahmad Suparmin, Joko Wintoko, Dwi Joko Prasetyo and Muslih Anwar



4550

Intermittent control switch characteristics of triboelectric electric hybrid energy harvesting devices and power management circuits

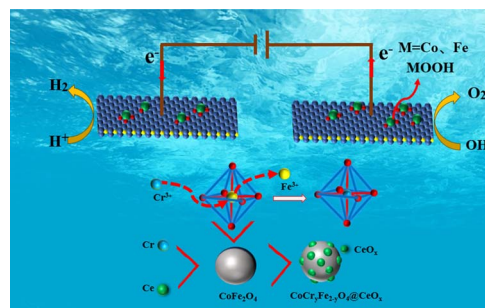
Xin Yu, Mingxing Cui, Wendong Qi, Xinrui Li, Yuhang Xing, Xiaolei Lu, Shitong Yang, Jing Zhao^{*} and Changhong Jiang^{*}



4561

Cr-doped CoFe_2O_4 nanorod array modified by oxygen vacancy-rich cerium oxide as an efficient bifunctional total water splitting catalyst

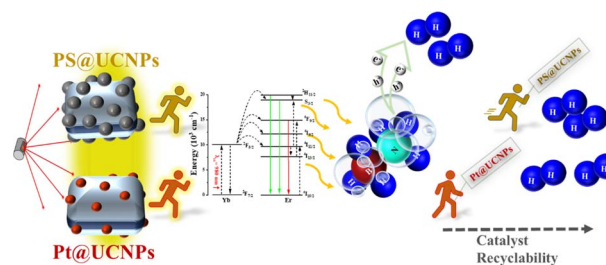
Yulin Duan, Zhengang Guo,^{*} Hua-nan Zhang, Tingting Wang and Jifan Zhang



4575

Near-infrared driven photocatalytic hydrogen production from ammonia borane hydrolysis using heterostructure-upconverted nanoparticles

Bushra Maryam, Muhammad Asim,^{*} Hamna Qayyum, Lun Pan, Ji-Jun Zou^{*} and Xianhua Liu^{*}



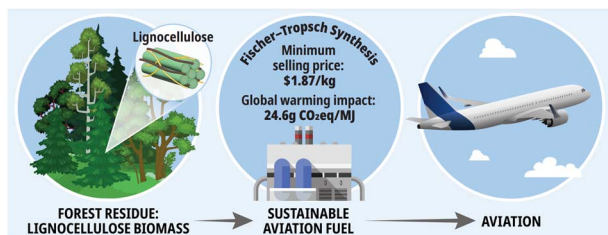
4588



Unlocking the value of food waste: sustainable production of ethylene glycol over low-cost Ni–W catalysts supported on glucose-derived carbons

Lucília Sousa Ribeiro,* Rafael Gomes Morais, José Joaquim de Melo Órfão and Manuel Fernando Ribeiro Pereira

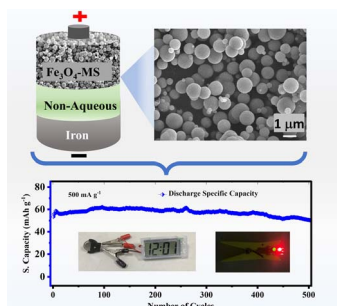
4602



Techno-economic and environmental impacts assessments of sustainable aviation fuel production from forest residues

J. P. Ahire,* R. Bergman, T. Runge, S. H. Mousavi-Awwal, D. Bhattacharyya, T. Brown and J. Wang

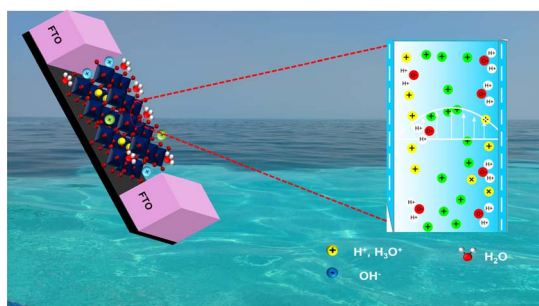
4617



Ultrafast charging/discharging and highly stable non-aqueous iron-ion batteries using iron oxide (Fe_3O_4) microspheres as an efficient cathode material

Jitendra Kumar Yadav, Bharti Rani, Priyanka Saini, Anant Prakash Pandey and Ambesh Dixit*

4628



Moisture-induced ionovoltic electricity generation using lead free 2-dimensional $\text{Cs}_3\text{SbBiBr}_9$ perovskite

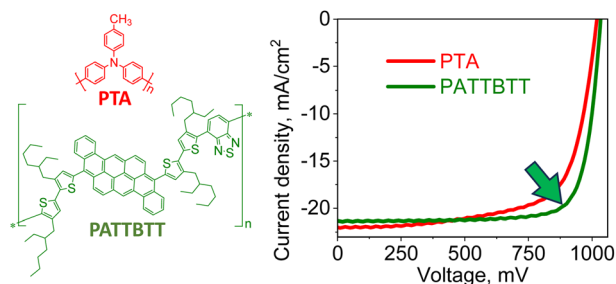
Ashna K. Pramod and Sudip K. Batabyal*



4638

A new type of pyranthrene-based copolymer as a promising hole-transport material for perovskite solar cells

Azat F. Akbulatov,* Ekaterina A. Khakina, Nikita A. Emelianov, Olga A. Kraevaya, Lyubov A. Frolova and Pavel A. Troshin



4646

Oxidative esterification of ethylene glycol in methanol to methyl glycolate over Au/ZnO catalysts: effect of preparation methods

Xueyang Ren, Jie Zheng, Jinxian Zhao,* Yanhong Quan and Jun Ren*

