

# Sustainable Energy & Fuels

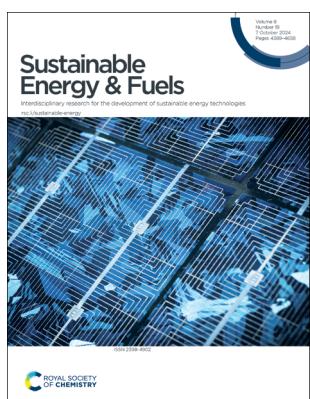
Interdisciplinary research for the development of sustainable energy technologies

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## IN THIS ISSUE

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**Cover**  
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## EDITORIAL

**4398**

### Introduction to solar fuels and chemicals: photocatalytic water splitting and CO<sub>2</sub> reduction themed collection

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

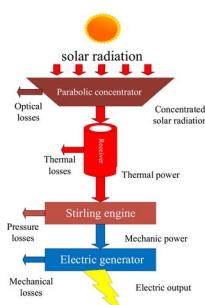


## REVIEWS

**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



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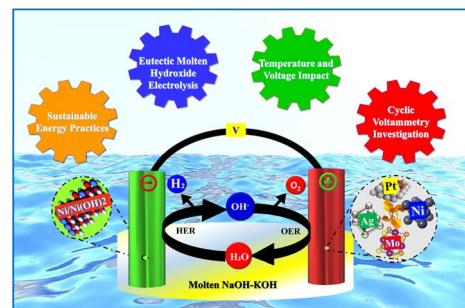
**Fundamental questions  
Elemental answers**

## REVIEWS

4429

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

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

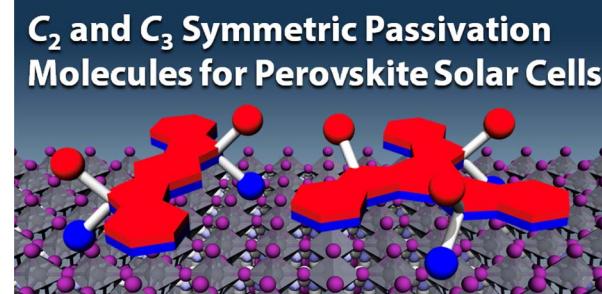


## PAPERS

4453

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

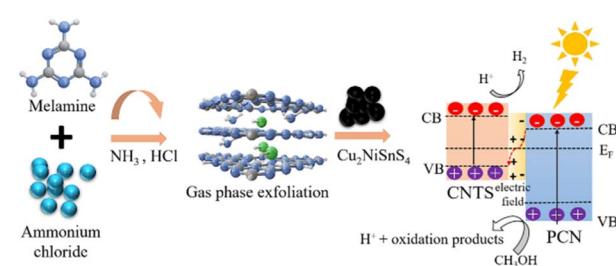
Nanaki Minoi, Fumitaka Ishiwari,\* Takuya Omine, Kazuharu Murotani, Ryosuke Nishikubo and Akinori Saeki\*



4461

## $\text{Cu}_2\text{NiSnS}_4/\text{g-C}_3\text{N}_4$ S-scheme photocatalysts: interfacial surface trap states vs. hydrogen production

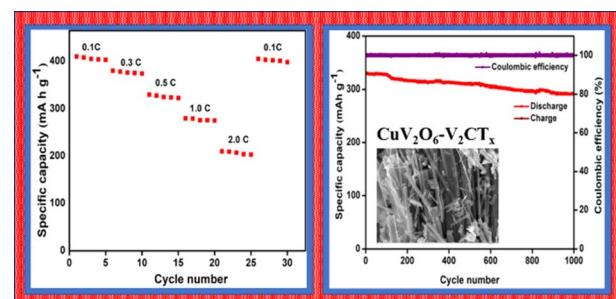
Rugma T. P., Rishi Krishna B. S., K. Priyanga Kangeyan, Neppolian Bernaurdshaw, Abdullaah Saad AlArifi and Sandeep Kumar Lakhera\*



4472

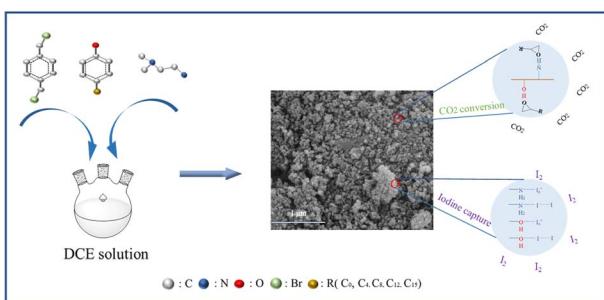
## A heterogeneous $\text{CuV}_2\text{O}_6@2\text{D-V}_2\text{CT}_x$ MXene nanohybrid as a cathode material for high-capacity and stable aqueous Zn-ion batteries

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



## PAPERS

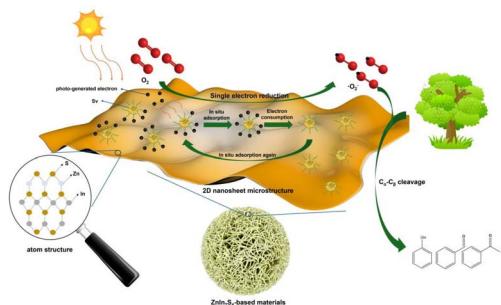
4484



**Synthesis of “all-in-one” hypercrosslinked organic polymers: experimental and kinetic models for CO<sub>2</sub> 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\*

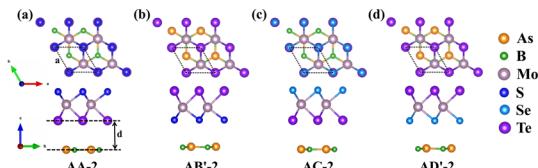
4496



**Sulfur vacancy induced radical generation in ZnIn<sub>2</sub>S<sub>4</sub> for lignin photocatalytic C<sub>α</sub>-C<sub>β</sub> cleavage**

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

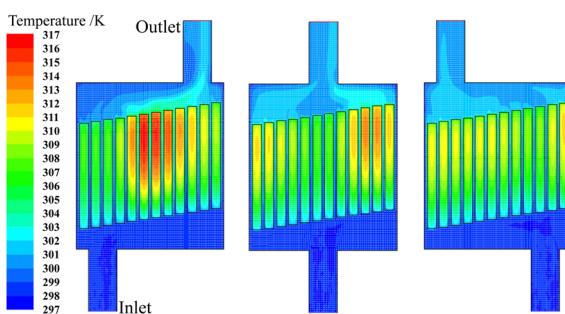
4507



**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\*

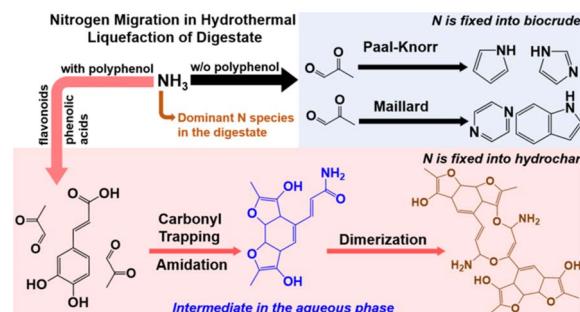


## PAPERS

4533

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

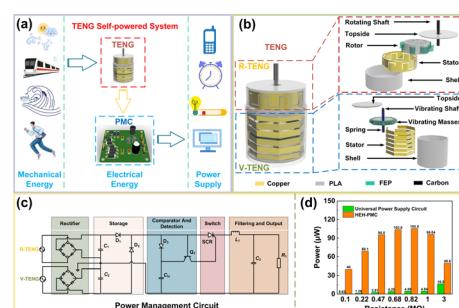
Hanifrahmawan Sudibyo,\* Budhijanto Budhijanto, Crispin Celis, Aqielah Mahannada, Ahmad Suparmin, Joko Wintoko, Dwi Joko Prasetyo and Muslih Anwar



4550

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

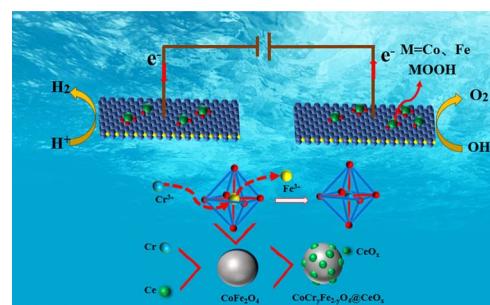
Xin Yu, Mingxing Cui, Wendong Qi, Xinrui Li, Yuhang Xing, Xiaolei Lu, Shitong Yang, Jing Zhao\* and Changhong Jiang\*



4561

## Cr-doped $\text{CoFe}_2\text{O}_4$ nanorod array modified by oxygen vacancy-rich cerium oxide as an efficient bifunctional total water splitting catalyst

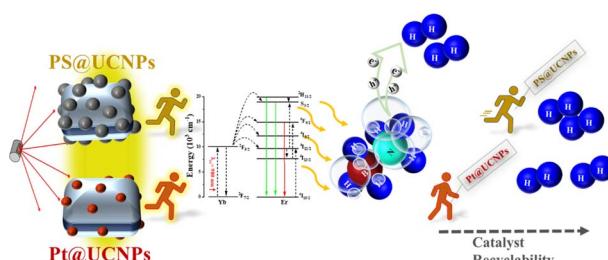
Yulin Duan, Zhengang Guo,\* Hua-nan Zhang, Tingting Wang and Jifan Zhang



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\*



## PAPERS

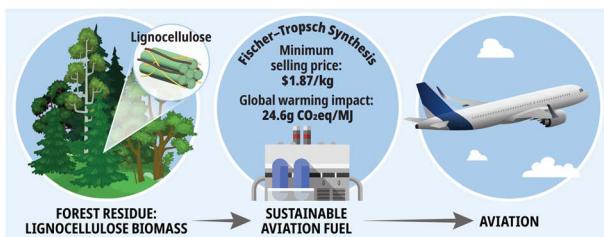
4588



### 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

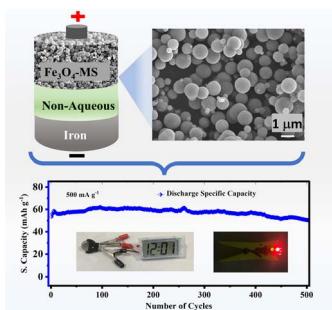
4602



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

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

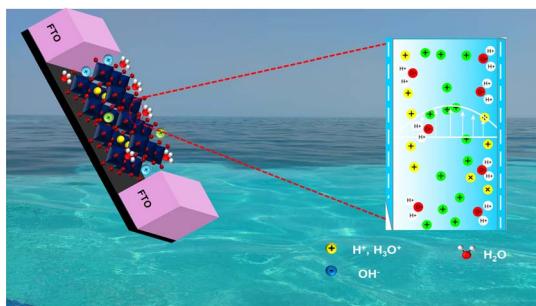
4617



### Ultrafast charging/discharging and highly stable non-aqueous iron-ion batteries using iron oxide ( $\text{Fe}_3\text{O}_4$ ) microspheres as an efficient cathode material

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

4628



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

Ashna K. Pramod and Sudip K. Batabyal\*

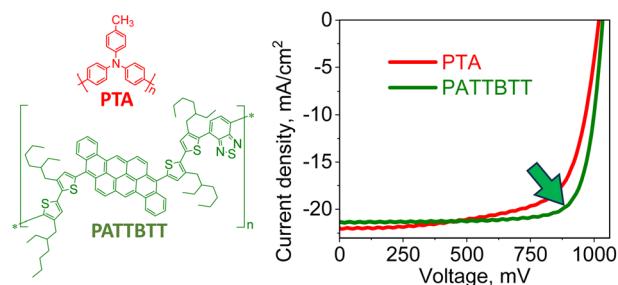


## PAPERS

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\*

