

# Sustainable Energy & Fuels

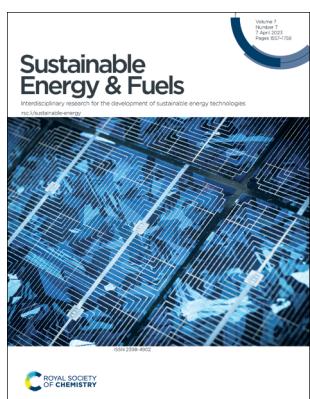
Interdisciplinary research for the development of sustainable energy technologies

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ISSN 2398-4902 CODEN SEFUA7 7(7) 1557–1758 (2023)



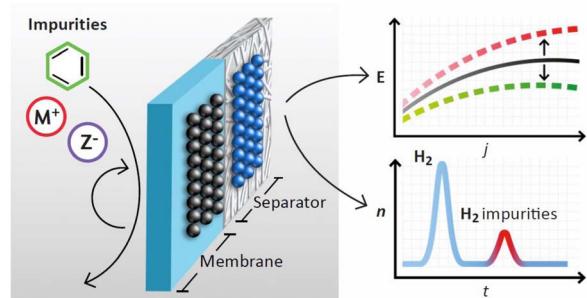
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### Impact of impurities on water electrolysis: a review

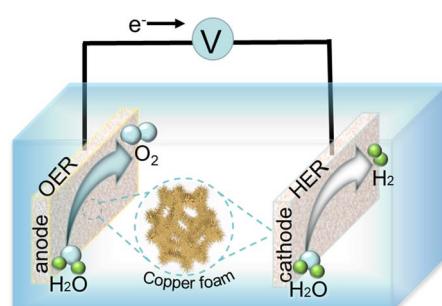
Hans Becker, James Murawski, Dipak V. Shinde, Ifan E. L. Stephens,\* Gareth Hinds and Graham Smith\*



1604

### Development of copper foam-based composite catalysts for electrolysis of water and beyond

Jiaming Wang, Yuting Hu, Feiyu Wang, Yatao Yan,\* Yang Chen, Mengting Shao, Qianhui Wu,\* Shoupu Zhu,\* Guowang Diao and Ming Chen\*



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# Sustainable Energy & Fuels

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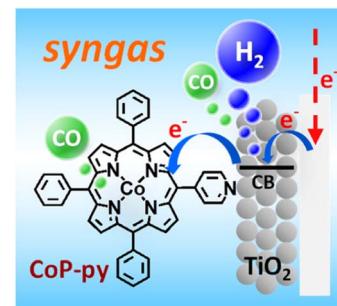


## COMMUNICATION

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**Efficient syngas production with controllable CO : H<sub>2</sub> ratios based on aqueous electrocatalytic CO<sub>2</sub> reduction over mesoporous TiO<sub>2</sub> films modified with a cobalt porphyrin molecular catalyst**

Hironobu Ozawa,\* Ryoma Kikunaga, Hajime Suzuki, Ryu Abe and Ken Sakai\*

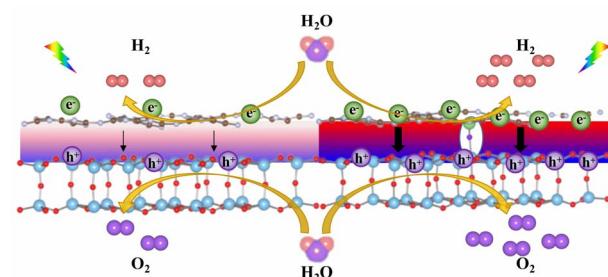


## PAPERS

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**A Li–F co-doped g-C<sub>3</sub>N<sub>4</sub>/TiO<sub>2</sub>-B(001) heterostructure as an efficient hydrogen evolution photocatalyst**

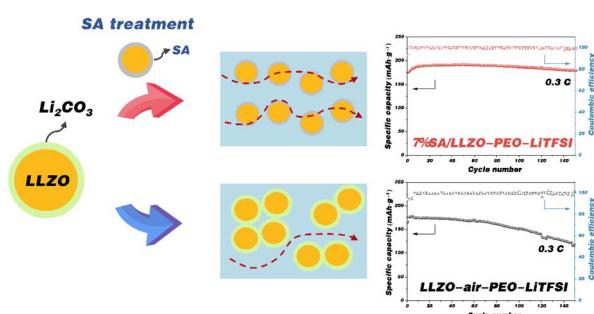
Xiaojia Yuan, Shuhan Tang and Xiaojie Liu\*



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**Salicylic acid treated Li<sub>7</sub>La<sub>3</sub>Zr<sub>2</sub>O<sub>12</sub> achieves dual functions for a PEO-based solid polymer electrolyte in lithium metal batteries**

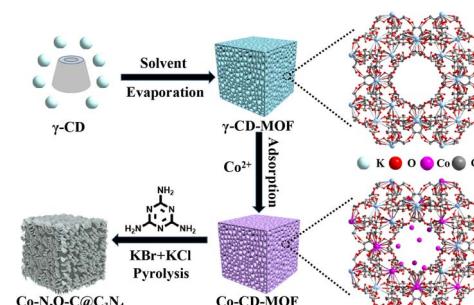
Wen He, Hui Ding, Chuandong Li, Xu Chen and Wensheng Yang\*



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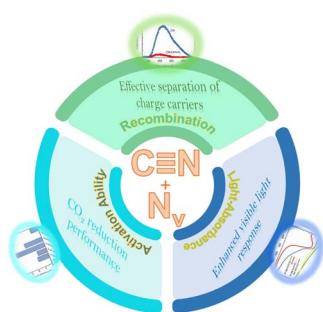
**γ-CD-MOF-derived heterostructures as bifunctional electrocatalysts for rechargeable zinc–air batteries**

Ruirui Chai, Xinxin Sang,\* Shiguo Ou, Jiahao Li, Junling Song and Dawei Wang\*



## PAPERS

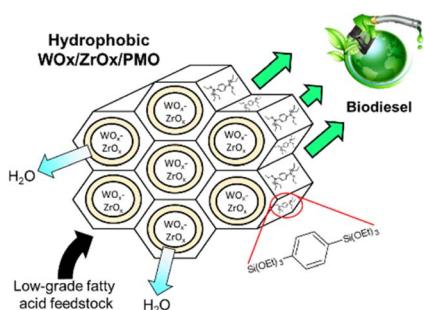
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**The cooperative role of nitrogen defects and cyano-group functionalization in carbon nitride towards enhancing its  $\text{CO}_2$  photoreduction activity**

Shreya Singh, Pankaj Tiwari, Guguloth Venkanna, Kamal K. Pant\* and Pratim Biswas\*

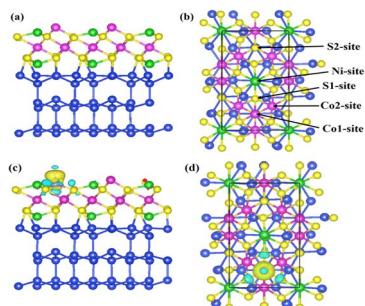
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**$\text{WO}_x/\text{ZrO}_x$  functionalised periodic mesoporous organosilicas as water-tolerant catalysts for carboxylic acid esterification**

Vannia C. dos Santos-Durndell, Lee J. Durndell,\* Mark A. Isaacs, Adam F. Lee\* and Karen Wilson\*

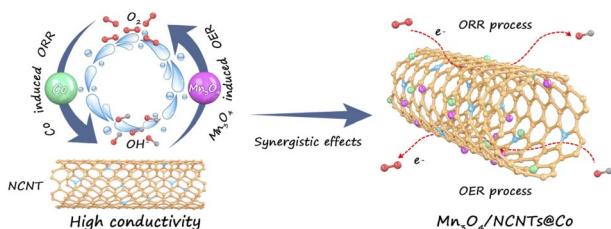
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**$\text{NiCo}_2\text{S}_4$  cocatalyst supported Si nanowire heterostructure for improved solar-driven water reduction: experimental and theoretical insights**

S. Gopalakrishnan, Mihir Ranjan Sahoo, Avijeet Ray, Nirpendra Singh, S. Harish, E. Senthil Kumar and M. Navaneethan\*

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**Biomass chitosan-derived Co-induced N-doped carbon nanotubes to support  $\text{Mn}_3\text{O}_4$  as efficient electrocatalysts for rechargeable Zn–air batteries**

Wenshu Zhou, Yanyan Liu, Dichao Wu, Limin Zhou, Gaoyue Zhang, Kang Sun, Baojun Li and Jianchun Jiang\*

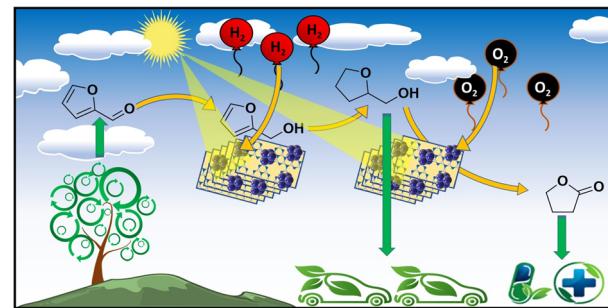


## PAPERS

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**Photocatalytic selective conversion of furfural to  $\gamma$ -butyrolactone through tetrahydrofurfuryl alcohol intermediates over Pd NP decorated  $\text{g-C}_3\text{N}_4$**

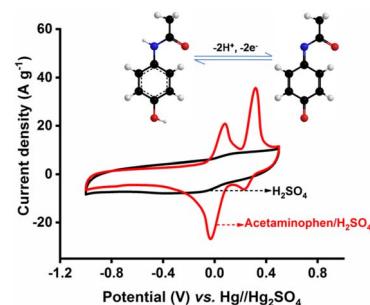
Rajat Ghalta and Rajendra Srivastava\*



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**Acetaminophen: a novel redox-additive for snowballing the energy density of flexible supercapacitors**

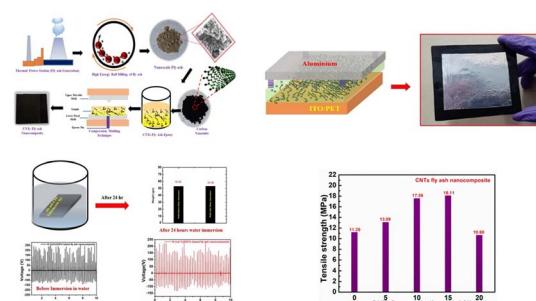
M. Sandhiya, D. Ponraj Jenis, V. Sudha, S. M. Senthil Kumar, R. Thangamuthu and M. Sathish\*



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**Sustainable robust waste-recycled ocean water-resistant fly ash-carbon nanotube nanocomposite-based triboelectric nanogenerator**

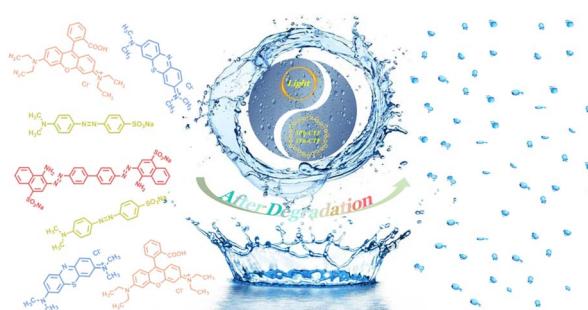
Ashish Kumar Chaturvedi, Simadri Badatya, Asokan Pappu, Avanish Kumar Srivastava and Manoj Kumar Gupta\*



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**A novel covalent triazine-based frameworks as photocatalysts for the degradation of dyes under visible light irradiation**

Yajing Du, Haoqiang Ai, Yun Liu and Hongzhi Liu\*



## CORRECTION

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**Correction: One-pot synthesis of ordered nanoporous amorphous H-Zn-aluminosilicate for catalysis of bulky molecules**

Jitendra Diwakar, Nagabhatla Viswanadham,\* Saurabh Kumar, Adarsh Kumar and Sandeep K. Saxena

