

# Sustainable Energy & Fuels

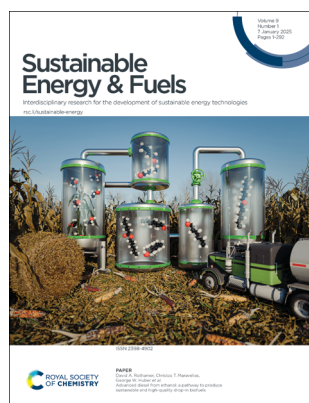
Interdisciplinary research for the development of sustainable energy technologies

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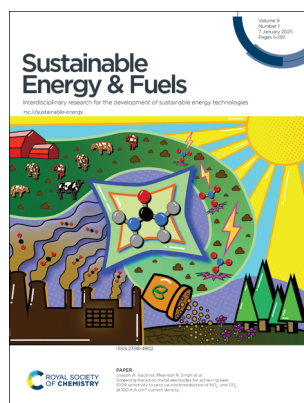
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ISSN 2398-4902 CODEN SEFUA7 9(1) 1–292 (2025)



### Cover

See David A. Rothamer, Christos T. Maravelias, George W. Huber *et al.*, pp. 98–114. Image reproduced by permission of Xin Zou from *Sustainable Energy Fuels*, 2025, 9, 98.



### Inside cover

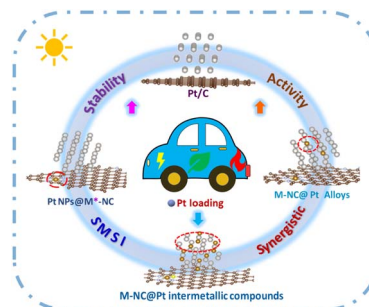
See Joseph A. Gauthier, Meenesh R. Singh *et al.*, pp. 115–128. Image reproduced by permission of Meenesh R. Singh, Crystal Price and Joseph Gauthier from *Sustainable Energy Fuels*, 2025, 9, 115.

## REVIEWS

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### Recent advances in atomically dispersed M–N–C coupled Pt-based oxygen reduction catalysts

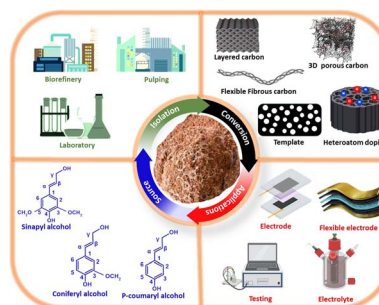
Zigang Zhao, Lezhi Zhan, Pan Guo, Yunkun Dai, Lixiao Shen,\* Yunlong Zhang,\* Guiling Wang,\* Zhenbo Wang\* and Lei Zhao\*



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### Lignin as a sustainable precursor for electrodes and electrolytes of emerging supercapacitors

Ridwan T. Ayinla, Islam Elsayed and El Barbary Hassan\*



# EES Batteries

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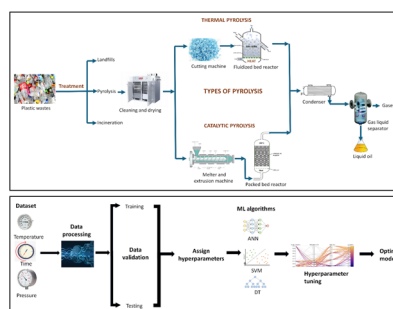
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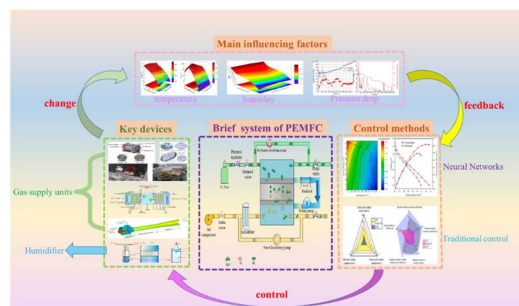
Karnatakam Paavani, Krutika Agarwal, Shah Saud Alam,\*  
Srikanta Dinda and Iyman Abrar\*

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Srikanta Dinda and Iyman Abrar\*



## A review of water management in proton exchange membrane fuel cell systems

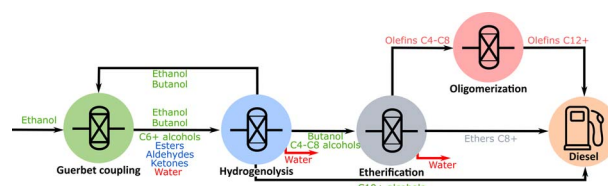
Peihan Qi, Zhenxing Wu,\* Jiegang Mou, Denghao Wu,  
Yuning Gu, Maosen Xu, Zekai Li and Yang Luo



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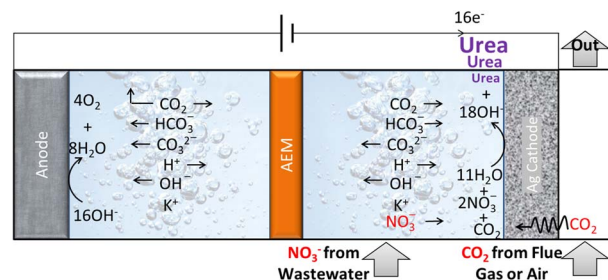
## Advanced diesel from ethanol: a pathway to produce sustainable and high-quality drop-in biofuels

Juan-Manuel Restrepo-Flórez, Javier E. Chavarrio,  
Emmanuel Canales, Dustin Witkowski,  
Srinath Subramanian, Paolo Cuello-Peñaloza,  
David A. Rothamer,\* Christos T. Maravelias\*  
and George W. Huber\*

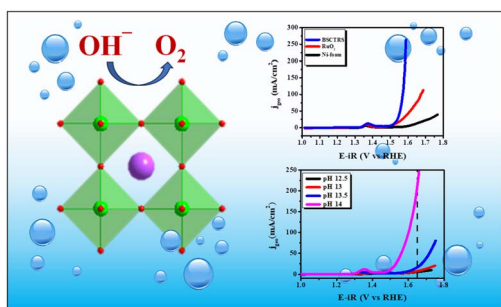


## Screening transition metal electrodes for achieving near 100% selectivity to urea *via* electroreduction of NO<sub>3</sub><sup>-</sup> and CO<sub>2</sub> at 100 mA cm<sup>-2</sup> current density

Nishithan C. Kani, Ishita Goyal, Samuel A. Olusegun,  
Sreenivasulu Chinnabattigalla, Rajan R. Bhawnani,  
Ksenija D. Glusac, Joseph A. Gauthier\*  
and Meenesh R. Singh\*



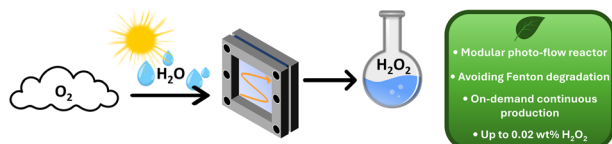
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Sujan Sen and Tapas Kumar Mandal\*

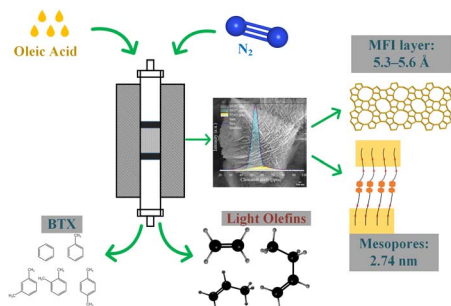
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Thomas Freese, Jelmer T. Meijer, Matteo Miola, Paolo P. Pescarmona and Ben L. Feringa\*

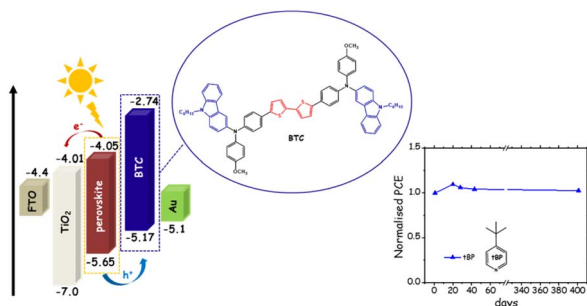
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### Hierarchical ZSM-5 nanosheets for production of light olefins and aromatics by catalytic cracking of oleic acid

Haoyu Liu, Wenbo Luo, Ke Wang, Yanlin Wang and Hong Yuan\*

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### Cooperating with additives: low-cost hole-transporting materials for improved stability of perovskite solar cells

Paavo Mäkinen, Daniele Conelli, G. Krishnamurthy Grandhi, Gian Paolo Suranna, Paola Vivo\* and Roberto Grisorio\*

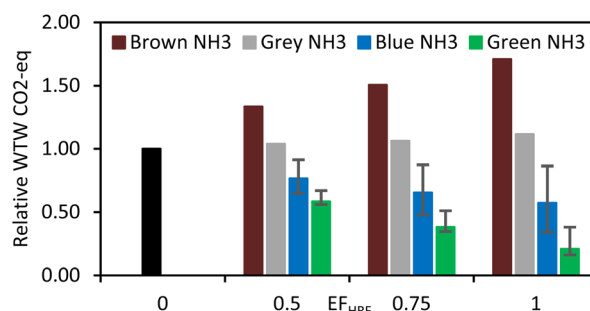


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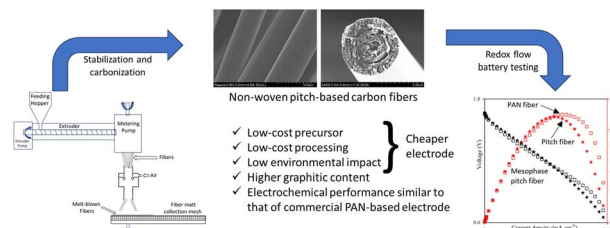
Payam Shafie,\* Alain DeChamplain and Julien Lepine



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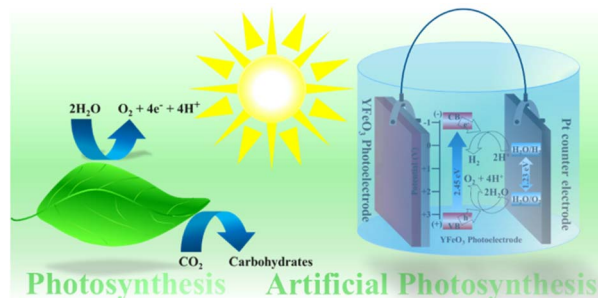
Abena A. Williams, Sagar V. Kanhere, Amod A. Ogale and Mark E. Roberts\*



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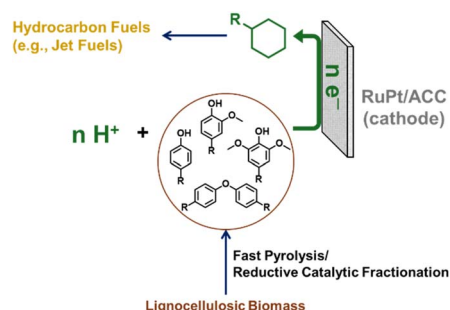
Bandar Y. Alfaifi, Hameed Ullah,\* Xin Jiang\* and Asif Ali Tahir\*



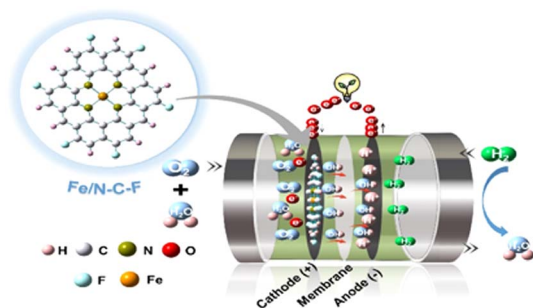
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### Electrocatalytic conversion of biomass-derived oxygenated aromatics to cycloalkanes

Meheryar R. Kasad, James E. Jackson and Christopher M. Saffron\*



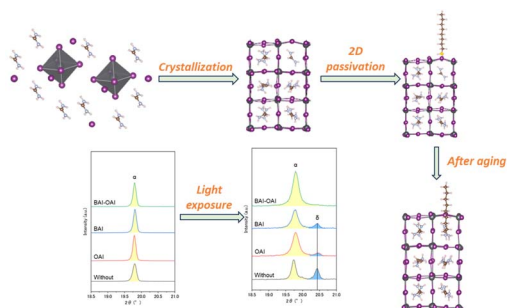
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### Fluorine-rich Schiff base ligand derived Fe/N–C–F and Co/N–C–F catalysts for the oxygen reduction reaction: synthesis, experimental validation, and DFT insights

Sumanta Kumar Das, Shaik Gouse Peera, Aiswarya Kesh, Prabakaran Varathan and Akhila Kumar Sahu\*

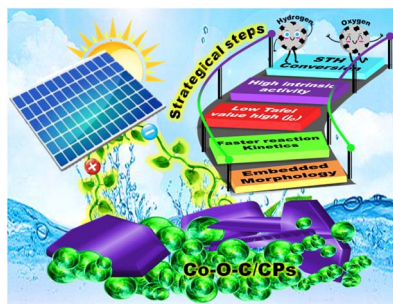
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### Mixed 2D-cation passivation towards improved durability of perovskite solar cells and dynamics of 2D-perovskites under light irradiation and at high temperature

Santa Mondal, Naoto Eguchi, Naoyuki Nishimura, Yoyo Hinuma, Kohei Yamamoto, Atsushi Kogo, Takuro N. Murakami\* and Hiroyuki Kanda\*

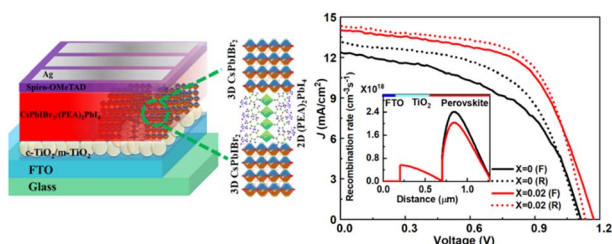
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### Interfacial engineering of a bifunctional electrocatalyst with outstanding catalytic performance, high intrinsic activity and solar-to-hydrogen conversion efficiency

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Tapas Das, Faisal Farooq, Parul Garg, Sakal Singla, Asim Guchhait\* and Ashok Bera\*



# Cobalt-doped vanadium nitride composite carbon hollow spheres for enhanced lithium–sulfur battery performance: overcoming sulfur dissolution and the shuttle effect

Jiangnan Zhang, Yanshuang Meng\* and Fuliang Zhu\*

