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## IN THIS ISSUE

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### Cover

See Francisco J. Martin-Martinez *et al.*, pp. 1271–1282. Image reproduced by permission of Francisco J. Martin-Martinez from *Energy Adv.*, 2024, 3, 1271.



### Inside cover

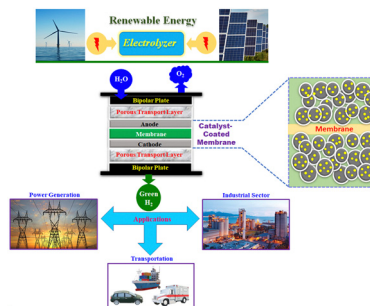
See Hsin-Yi Tiffany Chen, Tsan-Yao Chen *et al.*, pp. 1283–1292. Image reproduced by permission of Hsin-Yi Tiffany Chen from *Energy Adv.*, 2024, 3, 1283.

## REVIEWS

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### Recent advancements in catalyst coated membranes for water electrolysis: a critical review

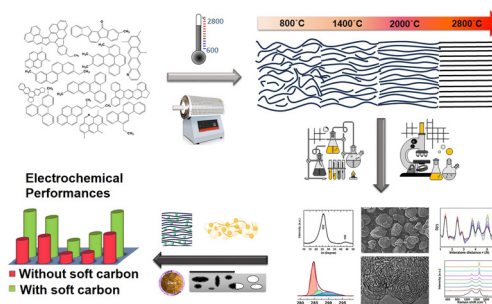
Rajangam Vinodh,\* Tamilazhagan Palanivel, Shankara Sharanappa Kalanur and Bruno G. Pollet\*



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### Soft carbon in non-aqueous rechargeable batteries: a review of its synthesis, carbonization mechanism, characterization, and multifarious applications

Shuvajit Ghosh, Mohammad Zaid, Jyotirekha Dutta, Monira Parvin and Surendra K. Martha\*



# EES Catalysis

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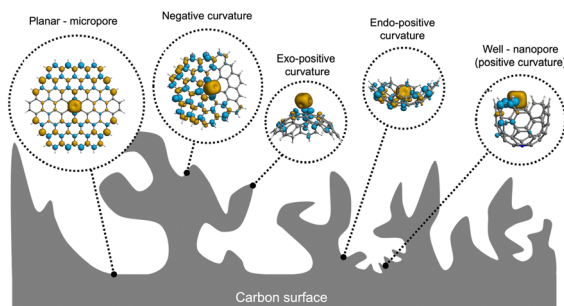
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Fundamental questions  
Elemental answers





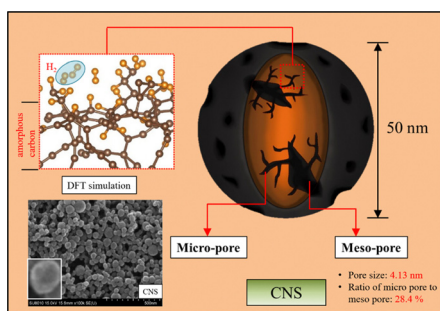
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### Understanding the role of nitrogen-doping and surface topology in the binding of Fe(III)/Fe(II) to biobased carbon electrodes

Anna Bachs-Herrera, Isaac Vidal-Daza, Emre B. Boz, Antoni Forner-Cuenca and Francisco J. Martin-Martinez\*

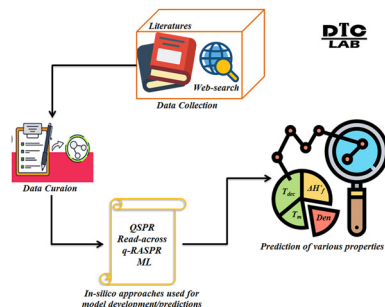
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### Glucose-based highly-porous activated carbon nanospheres (g-ACNSs) for high capacity hydrogen storage

Fan-Gang Tseng, Dinesh Bhalothia, Kuan-Hou Lo, Cheng-Huei Syu, Ying-Cheng Chen, Amita Sihag, Che-Wen Wang, Hsin-Yi Tiffany Chen\* and Tsan-Yao Chen\*

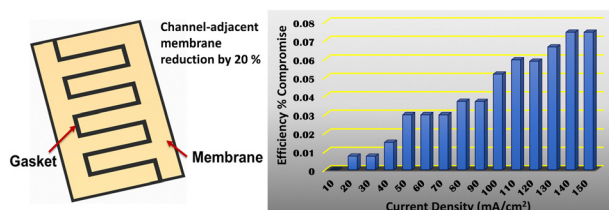
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### Predicting the performance and stability parameters of energetic materials (EMs) using a machine learning-based q-RASPR approach

Shubham Kumar Pandey and Kunal Roy\*

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### Organized macro-scale membrane size reduction in vanadium redox flow batteries: part 2. Flow-field-informed membrane coverage distribution

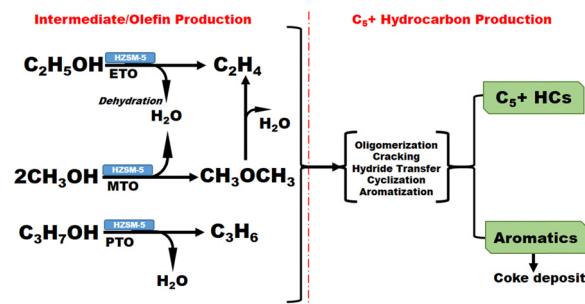
Bronston P. Benetho, Abdulmonem Fetyan and Musbaudeen O. Bamgbofa\*



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### Performance evaluation of a newly developed transition metal-doped HZSM-5 zeolite catalyst for single-step conversion of C<sub>1</sub>–C<sub>3</sub> alcohols to fuel-range hydrocarbons

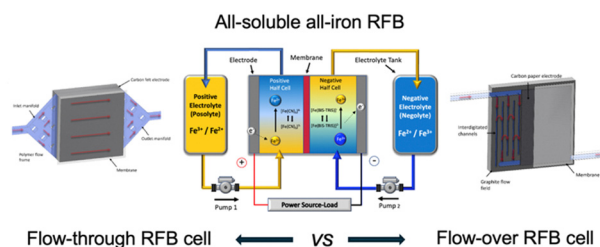
Ifeanyi Michael Smarte Anekwe,\* Bilainu Oboirien and Yusuf Makarfi Isa



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### All-iron redox flow battery in flow-through and flow-over set-ups: the critical role of cell configuration

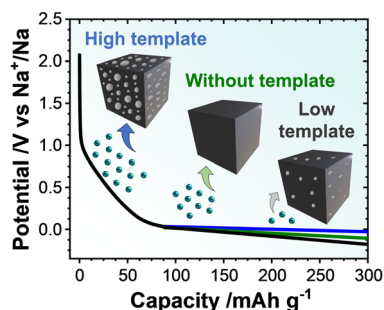
Josh J. Bailey, Maedeh Pahlevaninezhad, H. Q. Nimal Gunaratne, Hugh O'Connor, Kate Thompson, Pranav Sharda, Paul Kavanagh, Oana M. Istrate, Stephen Glover, Peter A. A. Klusener, Edward P. L. Roberts\* and Peter Nockemann\*



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### The impact of templating and macropores in hard carbons on their properties as negative electrode materials in sodium-ion batteries

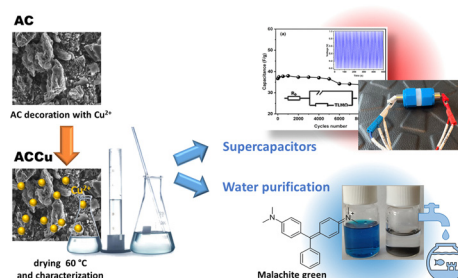
Sofiia Prykhodska, Konstantin Schutjajew, Erik Troschke, Leonid Kabarov, Jonas Eichhorn, Felix H. Schacher, Francesco Walenzus, Daniel Werner and Martin Oschatz\*



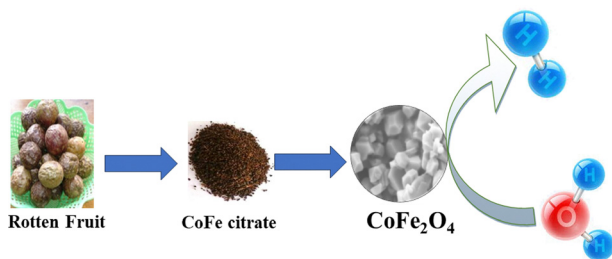
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### Carbon framework modification; an interesting strategy to improve the energy storage and dye adsorption

Monika Michalska, Paulina Pietrzyk-Thel, Kamil Sobczak, Mathijs Janssen and Amrita Jain\*



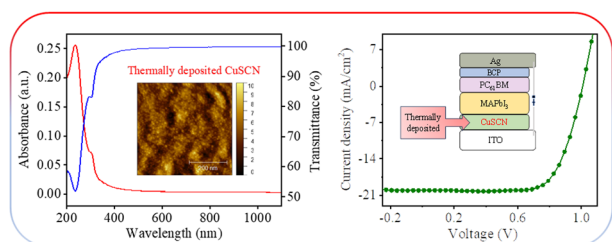
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### Green synthesis of cobalt ferrite from rotten passion fruit juice and application as an electrocatalyst for the hydrogen evolution reaction

Rochelin Prosper Medang, Roussin Lontio Fomekong, Edwin Akongnwi Nforna, Hypolite Mathias Tedjiekeng Kamta, Cédrik Ngnintedem Yonti, Patrice Kenfack Tsobnang,\* John Ngolui Lambi and Dieudonné Bitondo

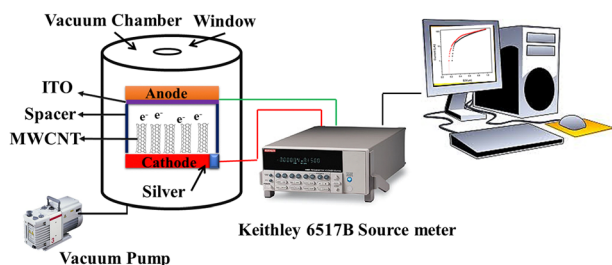
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### Thermally deposited copper(i) thiocyanate thin film: an efficient and sustainable approach for the hole transport layer in perovskite solar cells

Rashi Kedia, Manisha Balkhandia, Manisha Khatak, Neeraj Chaudhary and Asit Patra\*

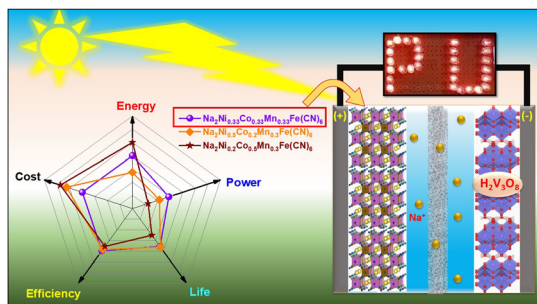
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### Excellent field emission with enhanced photodetection behavior of multiwalled carbon nanotubes: experimental and theoretical study

Utkarsh Kumar, Arpit Verma, Ravi Kant Tripathi,\* B. C. Yadav,\* Toton Haldar, V. V. Tyagi, C. K. Dixit and Wen-Min Huang

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### Prussian blue analogues with Na<sub>2</sub>Ni<sub>x</sub>Co<sub>y</sub>Mn<sub>z</sub>Fe(CN)<sub>6</sub>-multimetallc structures as positive and hydrogen vanadate as negative electrodes in aqueous Na-ion batteries for solar energy storage applications

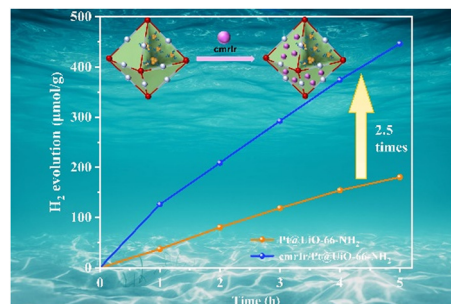
Pappu Naskar, Biplab Biswas, Sourav Laha\* and Anjan Banerjee\*



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### Iridium complex modified MOFs for enhancing photocatalytic hydrogen evolution

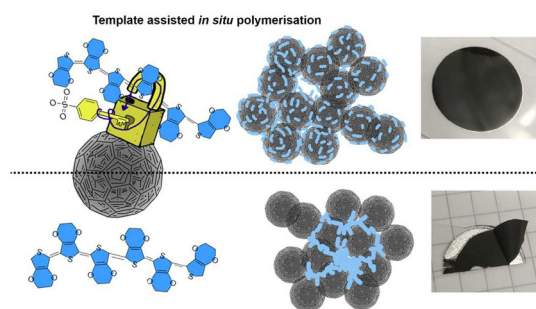
Yue Wang, Yifan Huang, Shihan Liu, Shuaichuan Cui, Yifan Zhang\* and Pengyang Deng\*



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### In situ polymerization of EDOT onto sulfonated onion-like carbon for efficient pseudocapacitor electrodes

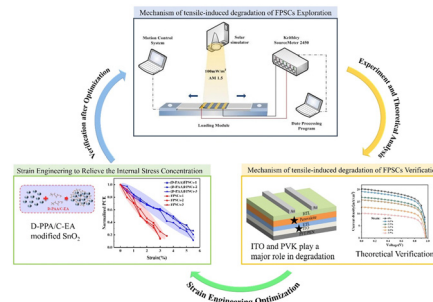
Christian Bauer, Maximilian Kirchner and Anke Krueger\*



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### Mechanism and regulation of tensile-induced degradation of flexible perovskite solar cells

Meihe Zhang, Yuzhao Qiang, Zhihao Li, Zhen Li and Chao Zhang\*



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### Steady states and kinetic modelling of the acid-catalysed ethanolysis of glucose, cellulose, and corn cob to ethyl levulinate

Conall McNamara,\* Ailís O'Shea, Prajwal Rao, Andrew Ure, Leandro Ayarde-Henríquez, Mohammad Reza Ghaani, Andrew Ross and Stephen Dooley

