

# Sustainable Energy & Fuels

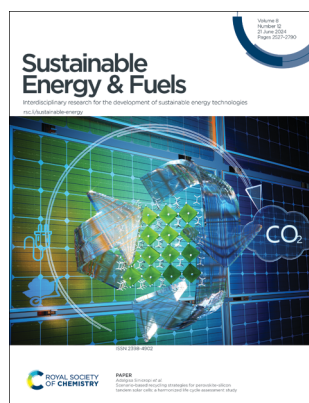
Interdisciplinary research for the development of sustainable energy technologies

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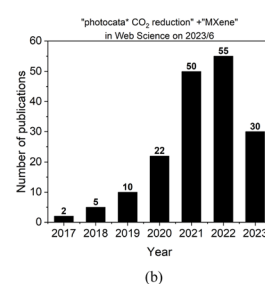
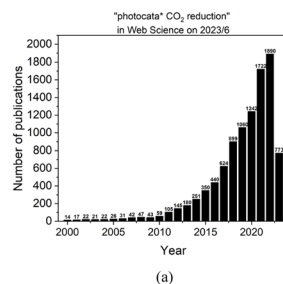
**Inside cover**  
See Durga Prasad Pabba, Annapureddy Venkateswarlu *et al.*, pp. 2583–2592. Image reproduced by permission of Annapureddy Venkateswarlu from *Sustainable Energy Fuels*, 2024, 8, 2583.

## REVIEW

2535

### Progressive MXene-based photocatalytic and electrocatalytic sustainable reduction of CO<sub>2</sub> to chemicals: comprehensive review and future directions

Latiful Kabir, Karna Wijaya and Won-Chun Oh\*

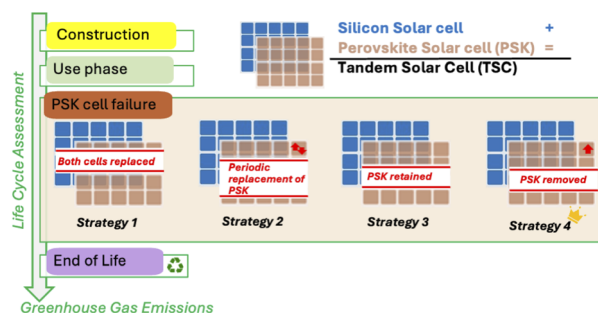


## PAPERS

2570

### Scenario-based recycling strategies for perovskite-silicon tandem solar cells: a harmonized life cycle assessment study

Mercy Jelagat Kipyator, Federico Rossi, Luigi Vesce, Aldo di Carlo, Riccardo Basosi, Maria Laura Parisi and Adalgisa Sinicropi\*



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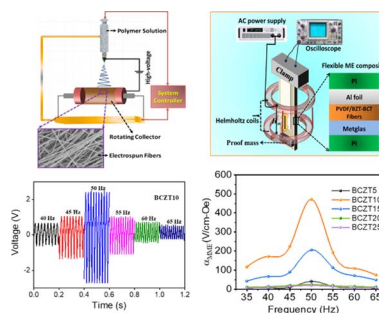
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## Robust magnetic energy harvesting with flexible lead-free poly(vinylidene fluoride)- $\text{Ba}_{0.85}\text{Ca}_{0.15}\text{Ti}_{0.9}\text{Zr}_{0.1}\text{O}_3$ fibers and Metglas-based magnetolectric composites

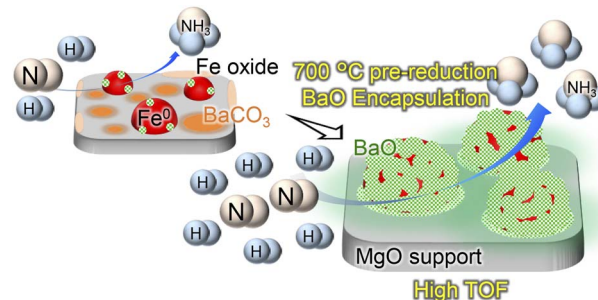
J. Kaarthik, Nayak Ram, Radhamanohar Aepuru, Salla Gangi Reddy, Durga Prasad Pabba\* and Annapureddy Venkateswarlu\*



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## Barium-doped iron nanoparticles supported on MgO as an efficient catalyst for ammonia synthesis under mild reaction conditions

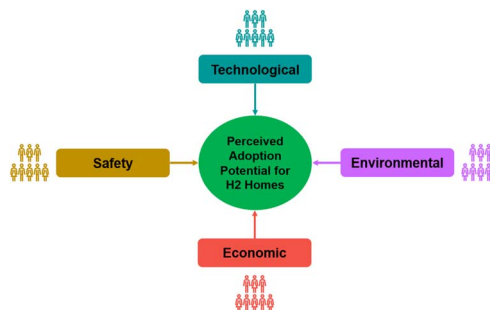
Kohei Era, Katsutoshi Sato,\* Shin-ichiro Miyahara, Takahiro Naito, Kanishka De Silva, Saeid Akrami, Hiroshi Yamada, Takaaki Toriyama, Takehiro Tamaoka, Tomokazu Yamamoto, Yasukazu Murakami, Koji Inazu and Katsutoshi Nagaoka\*



2601

## Heterogeneous preferences for living in a hydrogen home: an advanced multigroup analysis

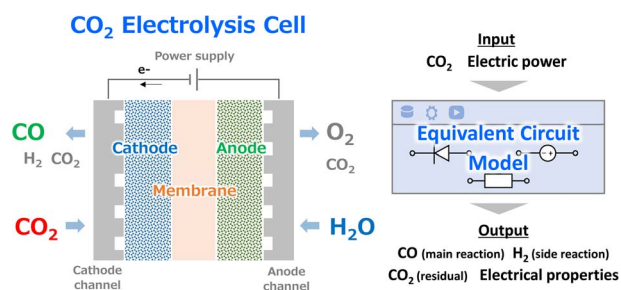
Joel A. Gordon,\* Nazmiye Balta-Ozkan, Anwar Ul Haq and Seyed Ali Nabavi



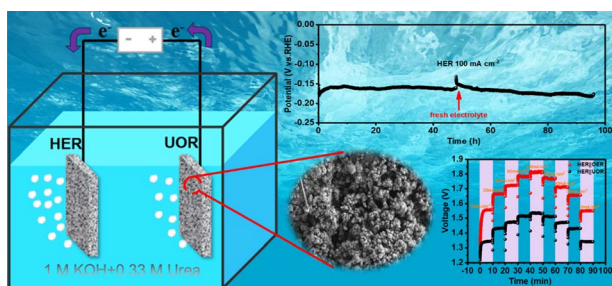
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## Equivalent circuit models for predicting electrical and gas output characteristics of $\text{CO}_2$ electrolysis cells

Yuki Kudo,\* Akihiko Ono, Satoshi Mikoshiba and Ryota Kitagawa



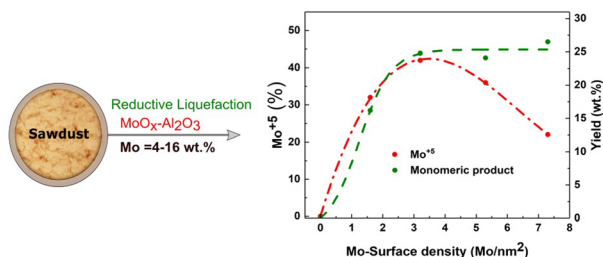
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### Co-doped MnS/NiS/Ni<sub>3</sub>S<sub>2</sub> grown *in situ* on hydrophilic nickel foam for energy-efficient urea-assisted alkaline hydrogen production

Haojie Ma, Muzaffar Ahmad Boda, Yang Zhou, Chenhao Shi and Zhiguo Yi\*

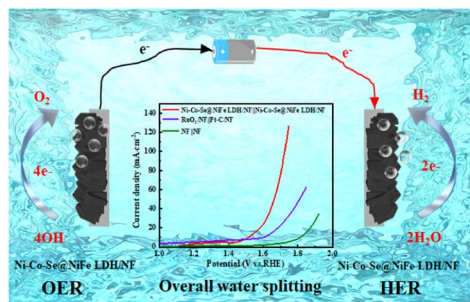
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### One-pot reductive liquefaction of sawdust to renewables over MoO<sub>x</sub>-Al<sub>2</sub>O<sub>3</sub> variants: insight into structure-activity relationships

Muhammad Abdus Salam, Quoc Khanh Tran, Phuoc Hoang Ho, You Wayne Cheah, Joanna Wojtasz-Mucha, Christian Kugge, Elham Nejadmoghaddam, Louise Olsson and Derek Creaser\*

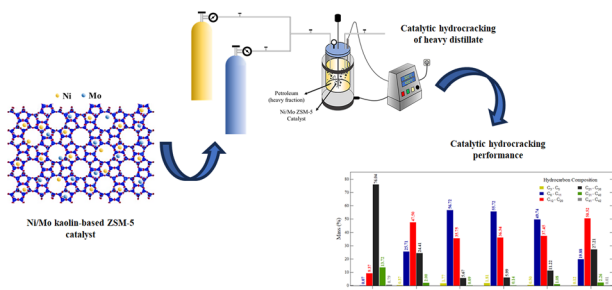
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### Modulation and engineering of MOF-derived transition metal selenides/NiFe LDH for application in electrocatalytic hydrogen evolution

Jin Liang,\* Hang Luo, Tian Lei and Guang Yang

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### Synthesis and optimization of Ni/Mo-impregnated kaolin-based ZSM-5 as a catalytic hydrocracking catalyst for heavy petroleum distillates

Donanta Dhaneswara, Jaka Fajar Fatriansyah, Toto Sudiro, Sri Harjanto, Mohd Sufri Mastuli, Andreas Federico and Ratu Ulfiati\*

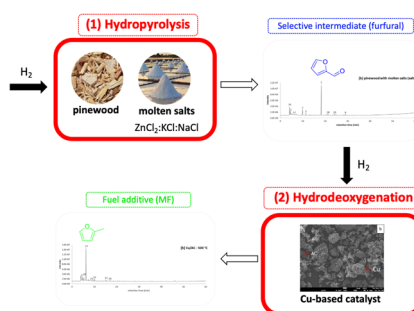




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## 2-Methylfuran from pinewood by molten-salt hydrolysis and catalytic hydrogenation of the furfural intermediate

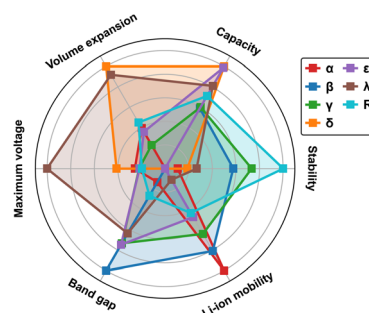
Adriana Estrada León,<sup>\*</sup> Leidy Marcela Ulloa-Murillo, Stef Ghysels, Daniel Nowakowski, Wolter Prins and Frederik Ronsse



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## First-principles evaluation of MnO<sub>2</sub> polymorphs as cathode material in lithium-ion batteries

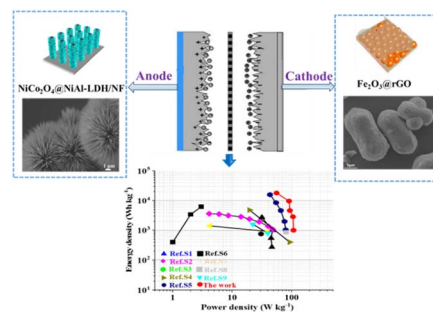
Wenyu Sun,<sup>\*</sup> Christine A. Orme, Marcus A. Worsley and Liwen F. Wan<sup>\*</sup>



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## Facile fabrication of novel efficient NiCo<sub>2</sub>O<sub>4</sub>@NiAl-LDH/NF and high electrochemical performance Fe<sub>2</sub>O<sub>3</sub>@rGO electrodes for hybrid supercapacitors

Xiaoxuan Liu, Wenwen Tan, Zao Jiang, Yu Hao, Yong Wang, Jingyi Ye, Qi Feng,<sup>\*</sup> Longjun Xu and Chenglun Liu<sup>\*</sup>



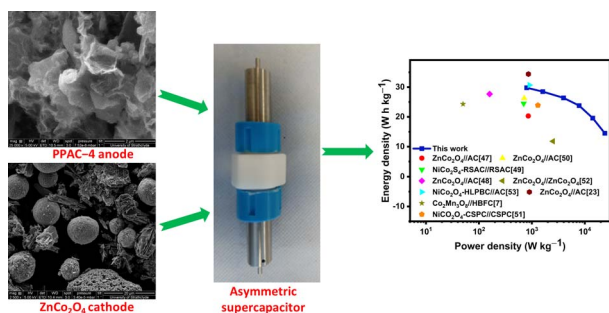
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## A single-electrode mode triboelectric nanogenerator based on natural leaves for harvesting energy

Peng Zhang, Xiaofei Bu, Liangsong Huang, Yuxia Li, Zhongkai Zhao, Ranran Yang, Liqun Yang and Kun Zhang<sup>\*</sup>



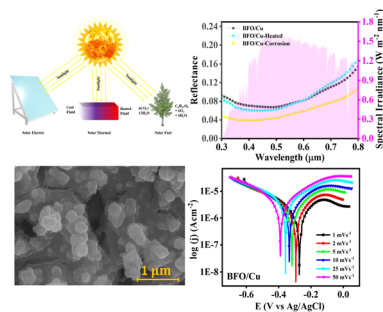
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## Sheet-like ZnCo<sub>2</sub>O<sub>4</sub> microspheres and pomelo peel waste-derived activated carbon for high performance solid state asymmetric supercapacitors

Kiran Kumar Reddy Reddygunta, Lidija Šiller and Aruna Ivaturi\*

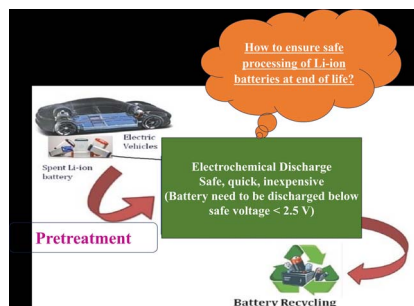
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## BiFeO<sub>3</sub> perovskite-based all oxide ambient stable spectrally selective absorber coatings for solar thermal application

Aryaveer Singh, Chandra Prakash, Priyambada Sahoo and Ambesh Dixit\*

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## Enhanced electrochemical discharge of Li-ion batteries for safe recycling

Neha Garg,\* Simo Pekkinen, Eduardo Martínez González, Rodrigo Serna-Guerrero, Pekka Peljo and Annukka Santasalo-Aarnio

