

Sustainable Energy & Fuels

Interdisciplinary research for the development of sustainable energy technologies

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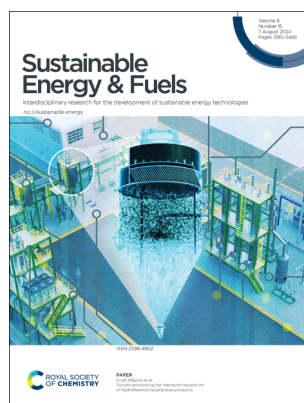
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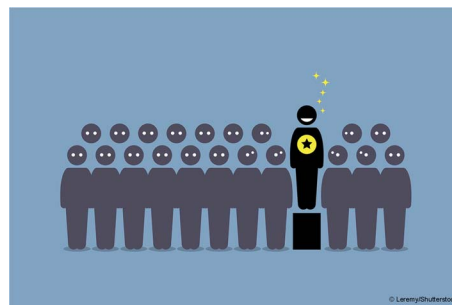
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See Uriah Kilgore *et al.*, pp. 3279–3289. Image reproduced by permission of Battelle Memorial Institute from *Sustainable Energy Fuels*, 2024, 8, 3279.

EDITORIAL

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Outstanding reviewers for *Sustainable Energy & Fuels* in 2023

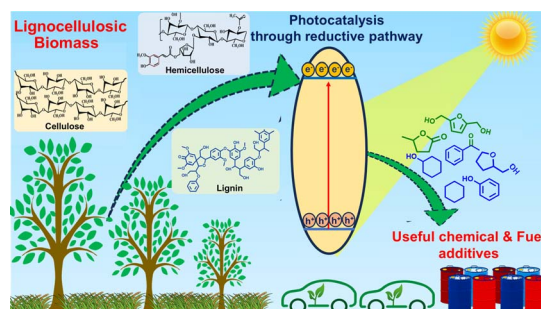


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Heterogeneous photocatalytic valorization of lignocellulosic biomass for chemical and fuel production via reductive pathways

Rajat Ghalta, Arzoo Chauhan and Rajendra Srivastava*



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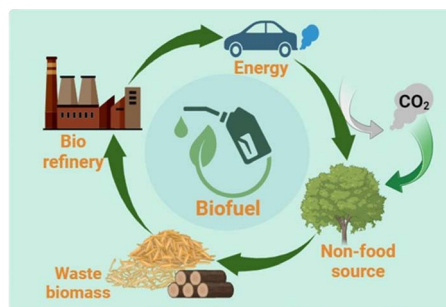
**Fundamental questions
Elemental answers**

REVIEWS

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Advanced biofuels: a path to sustainable energy

Anoth Maharjan, Mi-Reu Kim, Wonho Choi,
Hyoung-Chin Kim and Jung-Ho Park*

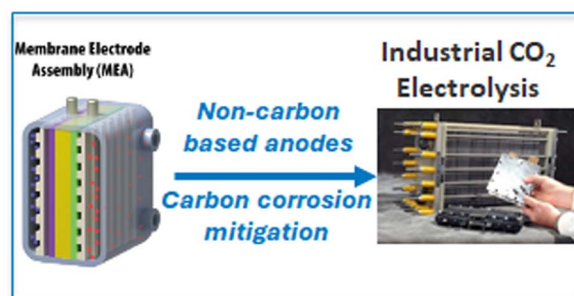


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Carbon corrosion in low-temperature CO₂ electrolysis systems

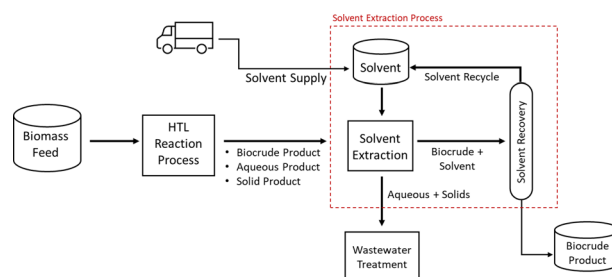
Jack R. Ferrell, III* Mathew Rasmussen
and W. Wilson McNeary



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Solvent processing for improved separation of hydrothermal liquefaction products

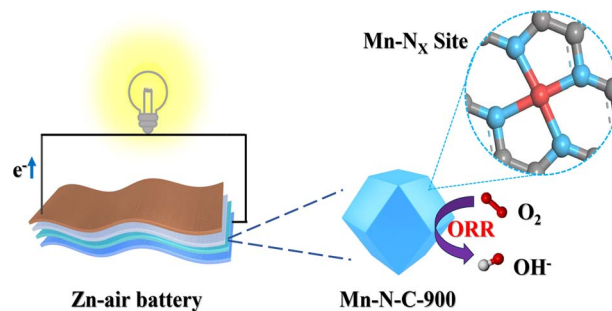
Uriah Kilgore,* Emily Diaz, Ben Spry, Yuan Jiang,
Shuyun Li, Andrew Schmidt and Michael R. Thorson



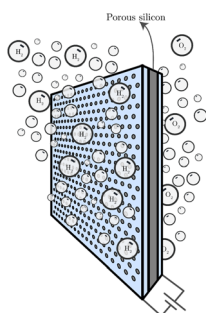
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Manganese, nitrogen co-doped porous carbon with high-loading active sites as the oxygen reduction catalyst for Zn–air batteries

Hao Xu,* Yuxuan Gao, Ruopeng Li,* Weiyan Sun,
Xiangyu Lu, Jie Bai and Peixia Yang



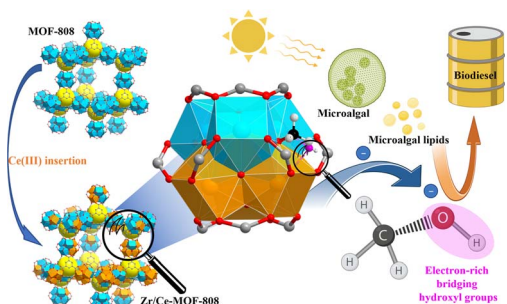
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A zero-gap silicon membrane with defined pore size and porosity for alkaline electrolysis

Akash Raman,* Sjoerd van der Werf, Cavit Eyövgge, Miguel Angel Rodriguez Olguin, Stefan Schlautmann, David Fernández Rivas, Bastian Mei, Han Gardeniers and Arturo Susarrey-Arce*

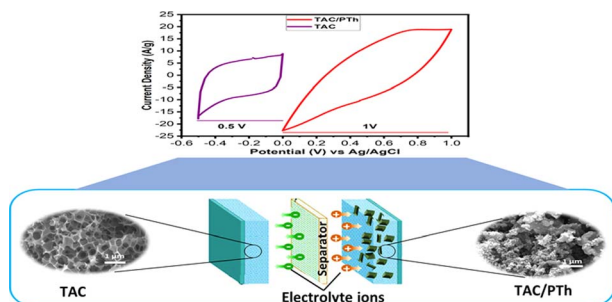
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Enhanced hydroxyl bridge-mediated microalgal lipid conversion via mixed-valence Zr/Ce-MOF-808 catalysts at reduced temperatures

Lei Qian, Jun Cheng,* Kai Xin, Hao Guo, Yuxiang Mao, Jiacan Tu and Weijuan Yang

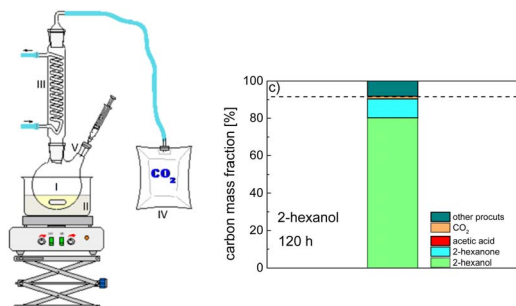
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Development of a high-performance asymmetrical supercapacitor based on conductive polythiophene and waste tissue paper-derived porous carbon

Prashant Dubey, Rekha Yadav, Priyanka H. Maheshwari, R. K. Seth and Shashank Sundriyal*

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Thermo-oxidative aging of linear and branched alcohols as stability criterion for their use as e-fuels

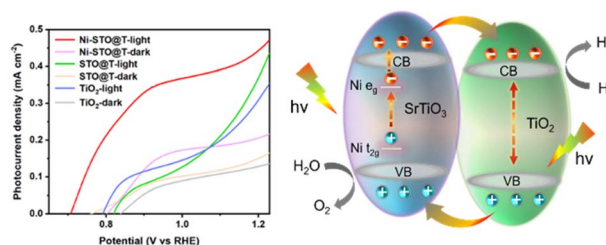
Anne Lichtinger, Maximilian J. Poller, Olaf Schröder, Julian Türck, Thomas Garbe, Jürgen Krah, Markus Jakob and Jakob Albert*



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Coordination of Ti^{3+} and Ni^{3+} to promote the electrocatalytic OER properties of $\text{SrTiO}_3/\text{TiO}_2$ heterojunctions

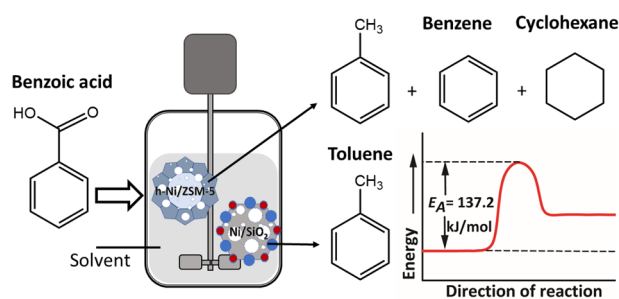
Yanqin Bi, Zenghua Zhao,* Jianhua Qian, Liangliang Chen and Chunyang Duan*



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Catalytic hydrodeoxygenation of benzoic acid as a bio-oil model compound: reaction and kinetics using nickel-supported catalysts

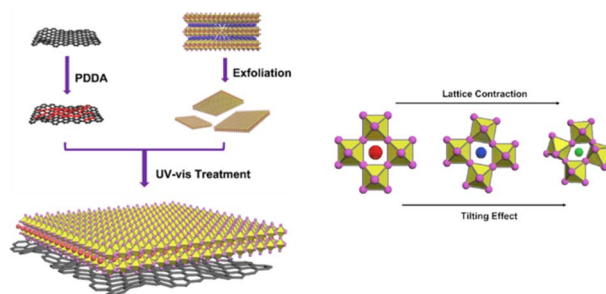
Mustapha Yusuf, Gary A. Leeke and Joseph Wood*



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Tuning 2D perovskite–graphene layered composite for photocatalysis

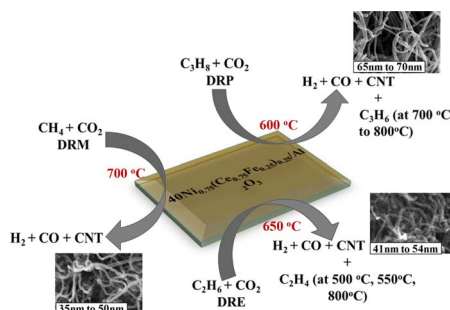
Haozhe Zhang, Yanjie Wang, Wentian Niu, Tatchamapan Yoskamtorn, Mingyu Luo, Robert Tayler, Sarah Day and Shik Chi Edman Tsang*



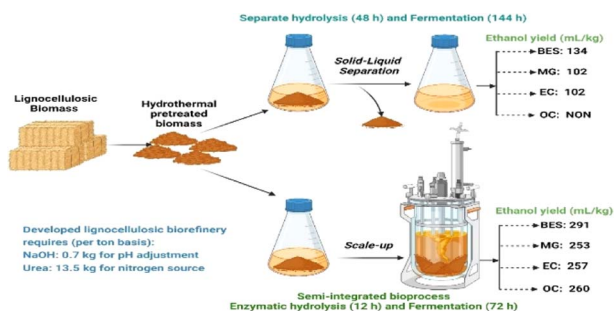
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Dry reforming of HCs (methane, ethane, and propane) over a $40\text{Ni}_{0.75}(\text{Ce}_{1-x}\text{Fe}_x)_{0.25}/\text{Al}_2\text{O}_3$ catalyst: a comparative study

Akanksha Singh Rajput and Taraknath Das*



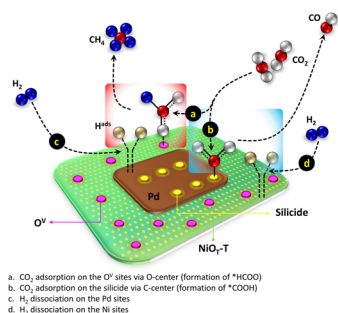
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Sustainable strategies to achieve industrial ethanol titers from different bioenergy feedstocks: scale-up approach for better ethanol yield

Narendra Naik Deshavath, William Woodruff and Vijay Singh*

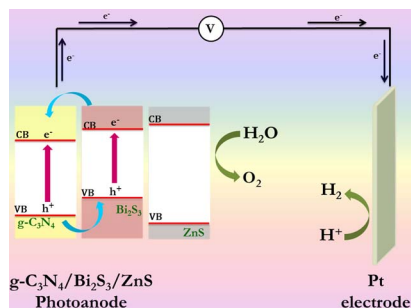
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Oxygen vacancies coupled with surface silicide facilitate CO₂ activation at near-room temperature for efficient methane productivity on Ni-oxide supported Pd nanoparticles

Thomas Yang, Amisha Beniwal, Dinesh Bhalothia,* Che Yan, Chia-Hsin Wang and Tsan-Yao Chen*

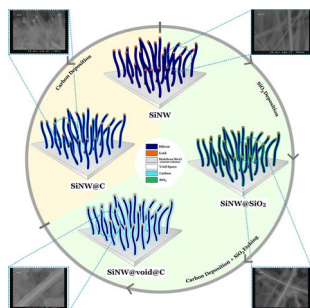
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Rational design of a g-C₃N₄/Bi₂S₃/ZnS ternary heterojunction photoanode for improved solar water splitting

Merin Joseph, Bhagatram Meena, Rosmy Joy, Sneha Joseph, Rajesh Kumar Sethi, Sebastian Nybin Remello, Suja Haridas* and Challapalli Subrahmanyam*

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Superior performance of silicon nanowires@void@carbon on a conductive substrate as a scalable binder-free anode electrode for lithium-ion batteries

Mohammadreza Yasoubi, Alireza Habibi, Soraya Hoornam, Zeinab Sanaee* and Shams Mohajerzadeh

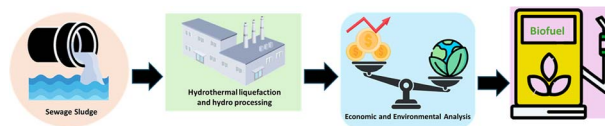


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Hydrothermal liquefaction integrated with wastewater treatment plants – life cycle assessment and technoeconomic analysis of process system options

Paraskevi Karka,* Ib Johannsen
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Synergistic construction of an iron nitride embedded graphitic carbon nitride heterostructure electrocatalyst as a potential candidate to accelerate overall water electrolysis

Venkatachalam Ashok, Arunagiri Gayathri,
Murugan Vijayarangan and Jayaraman Jayabharathi*

