

Green Chemistry

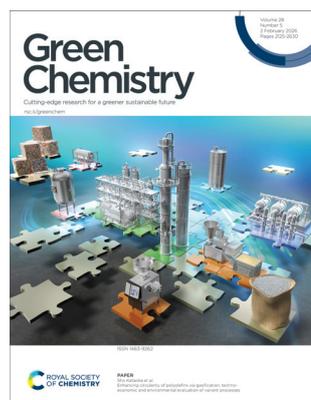
Cutting-edge research for a greener sustainable future

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See Sho Kataoka *et al.*,
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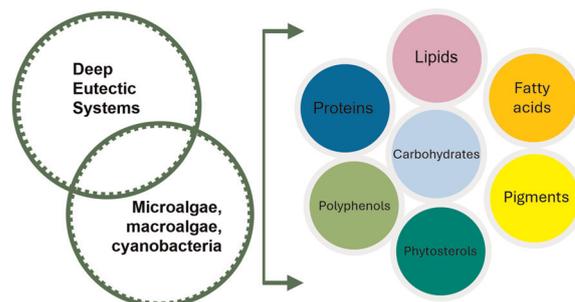
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Kristian Pastor, Ana Rita C. Duarte and Jelena Vladic*

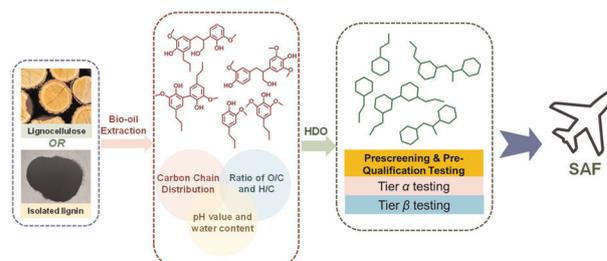


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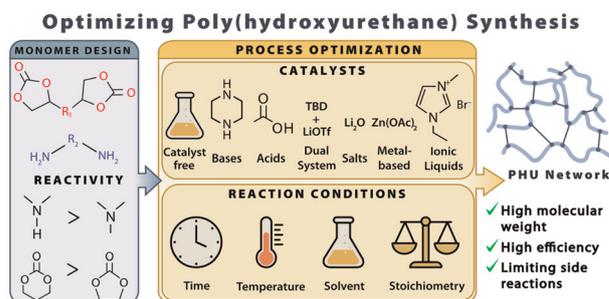
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Optimizing poly(hydroxyurethane) synthesis via cyclic carbonate aminolysis: a comprehensive review

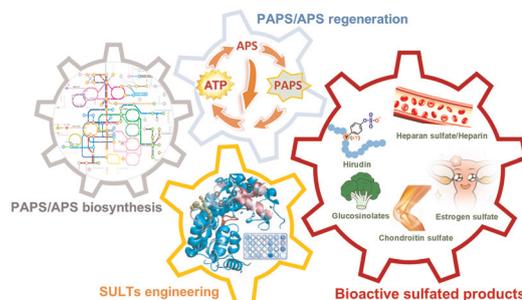
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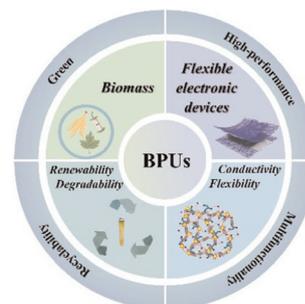
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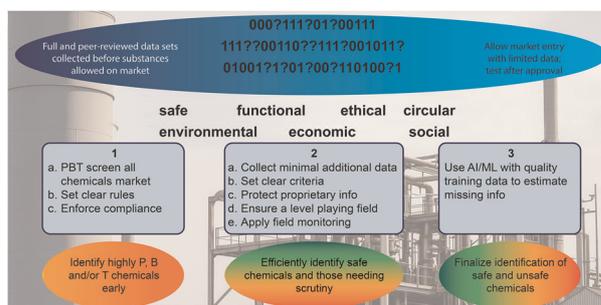


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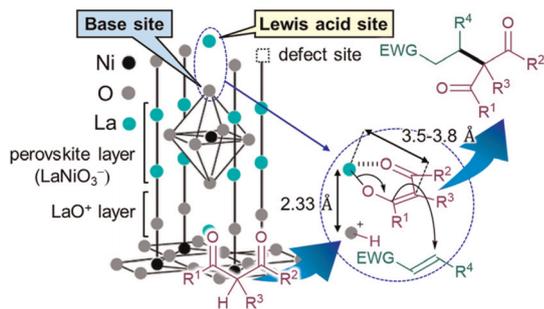
Avoiding tomorrow's chemical mistakes today

Jeroen B. Guinée* and Martina G. Vijver



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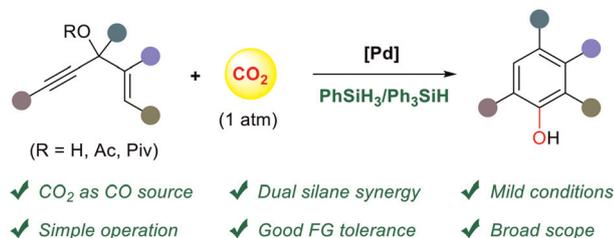
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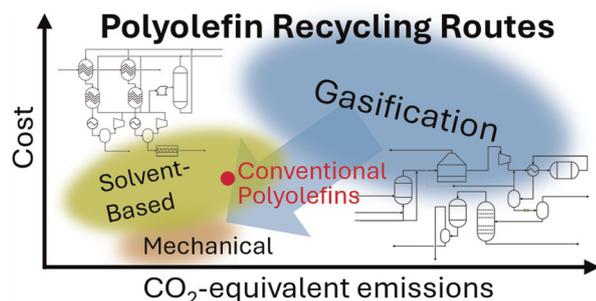


Dual silane-promoted palladium catalysis: synthesis of phenols from carbon dioxide and 1,4-enynes

Zhongrong Xu, Ting Zhao, Wenxin Jiang, Yanwei Ren, Chaorong Qi* and Huanfeng Jiang*

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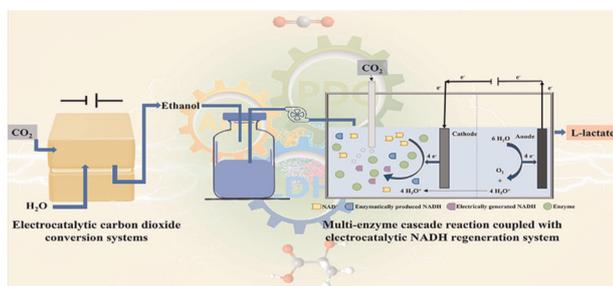
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Benjamin Caudle, Thuy T. H. Nguyen and Sho Kataoka*

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A multi-enzyme cascade coupled with electrochemistry for efficient synthesis of L-lactate from carbon dioxide

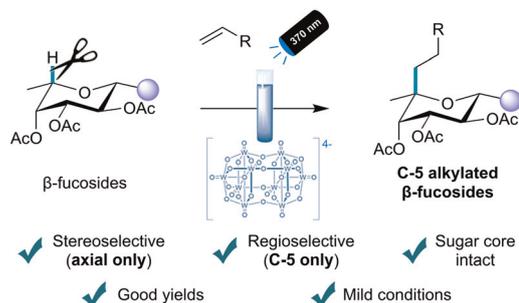
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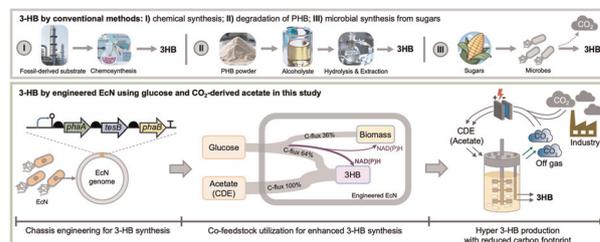
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Hyperproduction of 3-hydroxybutyrate using engineered probiotic *E. coli* Nissle 1917 from glucose and CO₂-derived acetate

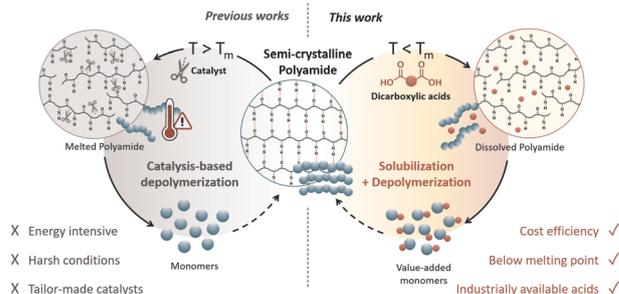
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Polyamide depolymerization: unlocking polymer dissolution with dicarboxylic acids

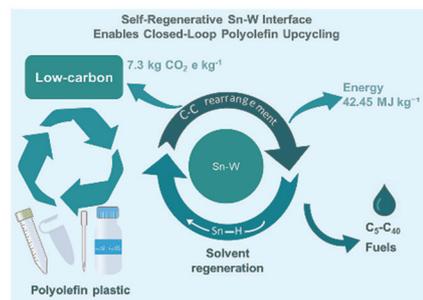
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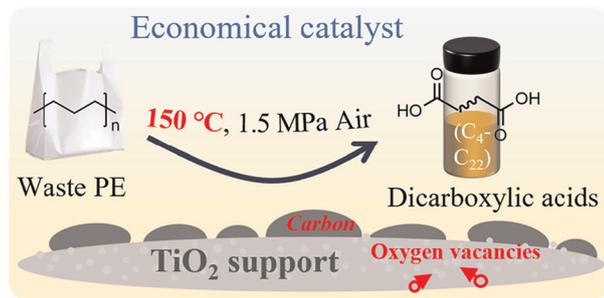
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A self-regenerative Sn–W/ γ -Al₂O₃ catalyst for low-carbon and scalable polyolefin upcycling via tandem dehydrogenation–metathesis

Chuanya Li, Qianfeng Zhou, Changhu Leng, Yongchao Wang, Chenyang Ma, Junlei Zhang* and Zhi-Jun Li*



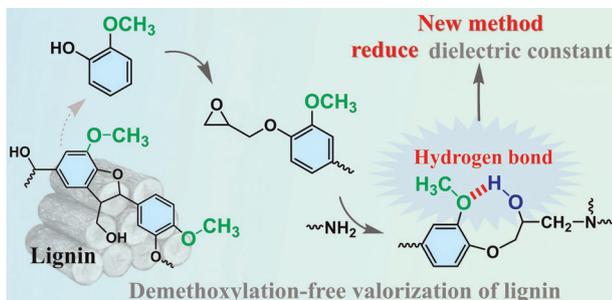
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Carbon-modified TiO₂ catalysts for oxidative upcycling of waste polyethylene to dicarboxylic acids

Yi Hao, Kaili Wang, Rongrong Jia, Ping Cheng, Liyi Shi, Xiang Wang and Lei Huang*

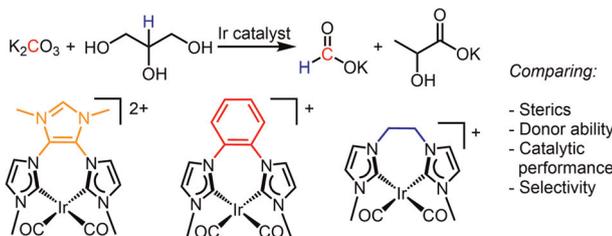
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Leveraging lignin's *ortho*-methoxy groups for intramolecular hydrogen bonding to reduce the dielectric constant of epoxy resins

Fengyuan Zhang, Haoyang Jin, Haoyu Shen, Longtao Wang, Shanshan Dai, Shuai Du, Shuaiqi Yang, Ben-Lin Hu and Songqi Ma*

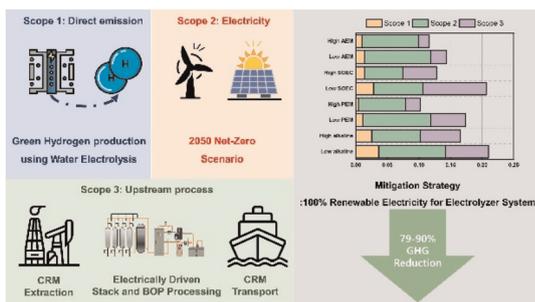
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Impact of linking groups in chelating bis-carbene iridium catalysts for transfer hydrogenation of inorganic carbonates with glycerol

Marvin L. Richter, Eduardo Peris and Sergio Gonell*

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Green hydrogen from water electrolysis: supply chain emissions assessment and net-zero pathways

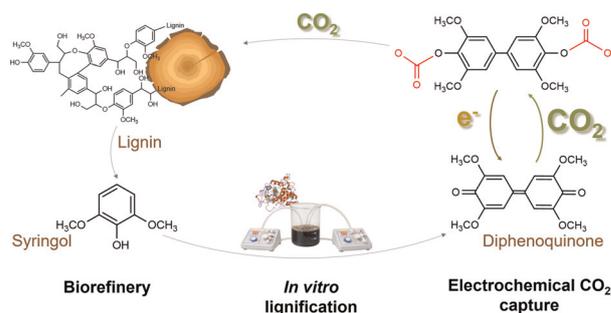
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Visible light-mediated stereoselective haloalkylation of bicyclic alkenes

Yan Tang, Devendar Ponnamp, Zhifeng Ma, Xiong Tao, Long Sun, Hekun Yang, Jingchao Chen* and Baomin Fan*

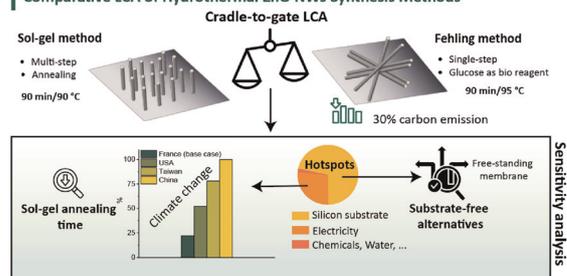


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Comparative cradle-to-gate life cycle assessment of hydrothermal zinc oxide nanowire synthesis methods

Jamie Silk, Soline Beitone, Mayrazul Hoque, Céline Ternon, Damien Evrard and David Riassetto*

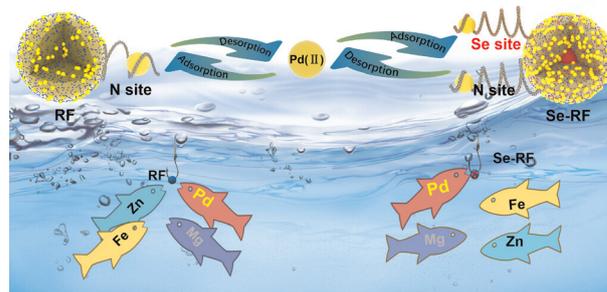
Comparative LCA of Hydrothermal ZnO NWs Synthesis Methods



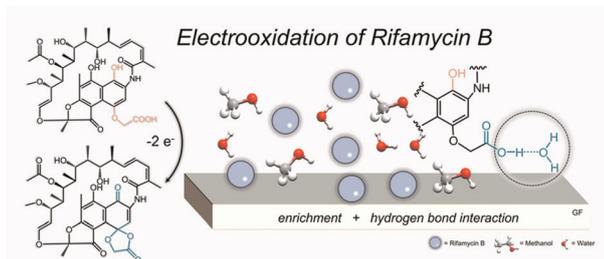
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Bait-and-anchor strategy in dual N/Se-engineered resins for electrostatic-chelation cascade Pd(II) recovery from extreme environments

Fan Wu, Hao Li,* Chuangen Zheng, Yanan Huang and Jianming Pan*



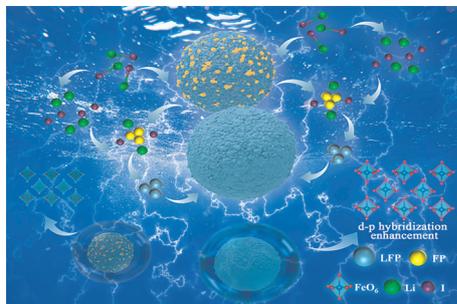
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Functional-group compatible electrooxidation synthesis of the key antibiotic intermediate rifamycin O

Lihao Liu, Shaoming Zhu, Kai Li, Yuhang Wang, Suiqin Li, Jiahui He, Pan Hu, Chuang Qi, Ruixiang Liang, Xing Zhong* and Jianguo Wang

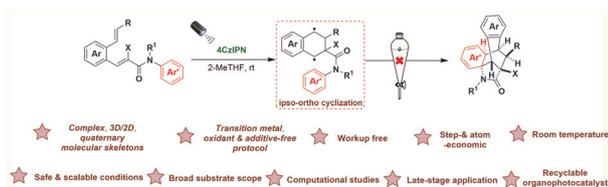
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Green direct recycling of spent LiFePO₄ via electronic structure reconstruction and reinforced Fe–O d–p orbital hybridization for enhanced energy storage performance

Zonghao Xu, Zongyu Guan, Yan Song, Xiran Zhao, Yaodong Yuan, Zhipeng Yan, Junhang Tian, Xueyi Sun,* Biwei Xiao* and Weidong Zhuang*

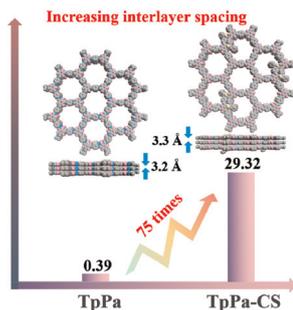
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Green and sustainable dearomative cycloaddition of arenes via visible-light energy transfer catalysis: an atom-economical synthesis of N-heterocyclic skeletons

Babasaheb Sopan Gore, Hsing-Yin Chen* and Jeh-Jeng Wang*

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Expanding COF layer stacking distances for enhanced photocatalytic activity

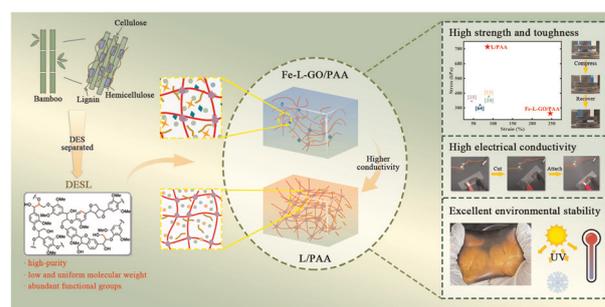
Jiyuan Zang, Haiqin Liu, David James Young, Zhi-Gang Ren and Hong-Xi Li*



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DES-separated bamboo lignin-reinforced DES gels with high conductivity, strength, flexibility, and environmental stability

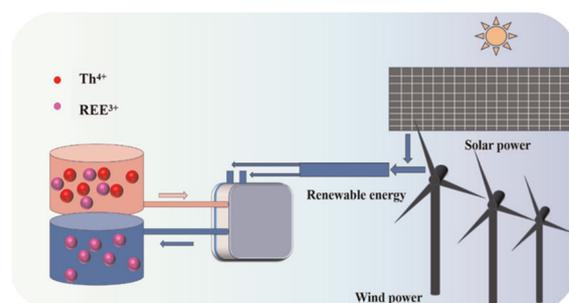
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Electrochemical selective recovery of thorium from rare earths using an amidoxime modified graphite felt electrode

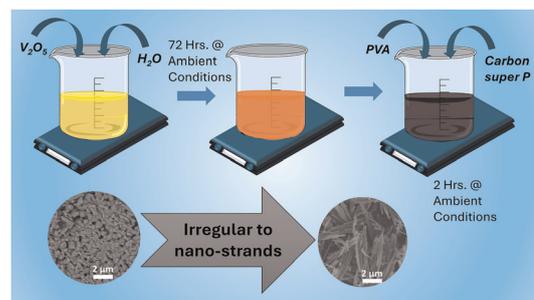
Peilin Lei, Yun Gao and Xiaoqi Sun*



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Bilayered V₂O₅ nanostrands with a PVA-based cathode slurry for high-performance and sustainable zinc-ion batteries

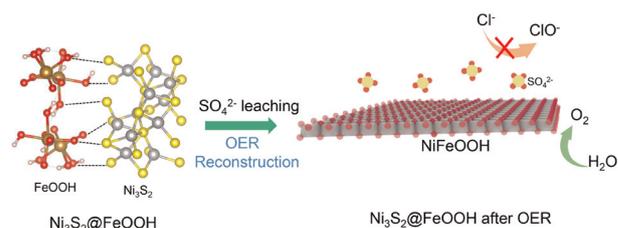
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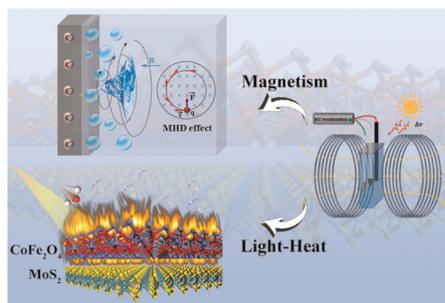
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A simple self-corrosion method constructs a Ni₃S₂@FeOOH heterostructure enabling industrialized seawater oxidation

Yujie Yuan, Ziyu Yang, Hao Wang, Tong Wu, Xiaoyi Zhang, Lin Chen, Zhaohuan Wei,* Rui Wang, Ch. Venkata Reddy, Jaesool Shim* and Hui Tang*



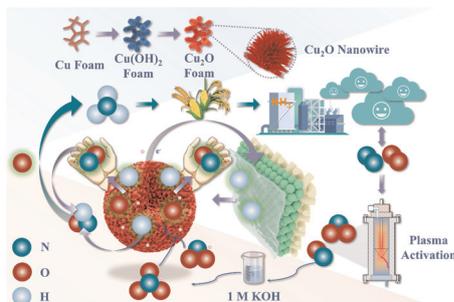
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Multi-field coupling of photothermal effects and magnetism for boosting the electrocatalytic hydrogen evolution reaction performance

Chong Liu, Lianqing Yu,* Nannan Chen, Yichao Huang,* Yaping Zhang and Haifeng Zhu

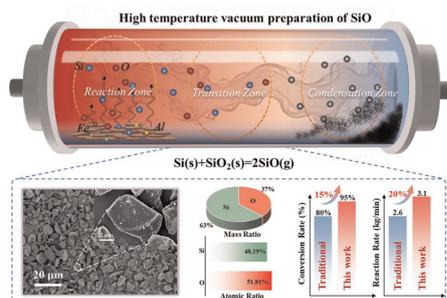
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Plasma-driven electrocatalytic ammonia synthesis: a pulsed NO_x replenishment strategy

Chenxi Man, Zhiyuan Xu, Bingtao Xie, Shuai Zhang, Bangdou Huang, Dengke Xi, Xuekai Pei, Leslie Petrik, Cheng Zhang* and Tao Shao*

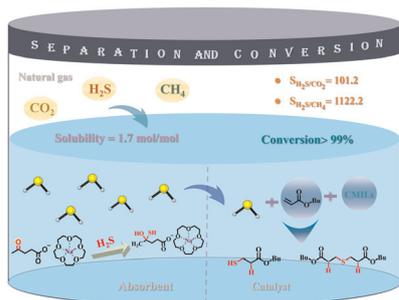
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Upcycling photovoltaic silicon waste into SiO anode materials

Xiang Guan, Jianghao Shi, Jijun Lu,* Liao Shen, Kuixian Wei, Fengshuo Xi, Xiuhua Chen, Chengrong Tan, Wenhui Ma* and Shaoyuan Li*

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Carbonyl-functionalized metallic ionic liquids via coordination for efficient hydrogen sulfide separation and conversion using α,β -unsaturated carboxylate esters

Keyi Huang, Chengqi Zhao, Zixuan Xu, Qing Zhao, Huiqin Xu, Xiaomin Zhang,* Leizhi Zheng* and Youting Wu*

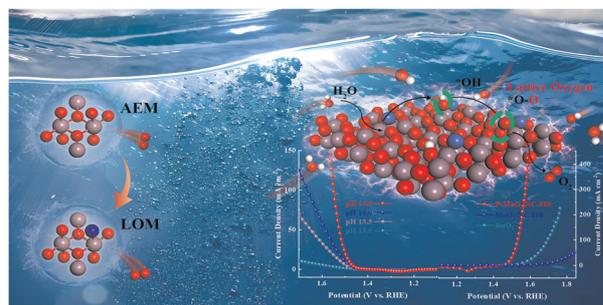


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Unlocking the activity of lattice oxygen in P-engineered MoO₂ for efficient oxygen evolution reaction: a d-band center modulation perspective

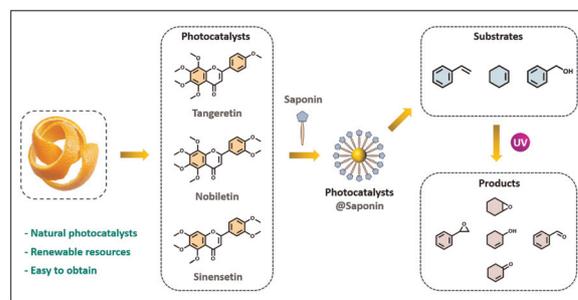
Yi Xu, Fanshu Yuan,* Xiaotian Xie, Jinhui Tong, Cheng Min, Qian Zhang, Jie Tang, Jie Liu, Tingting Lv and Qianli Zhang*



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The AIE-active flavonoids in orange peel for photocatalytic oxidation reactions

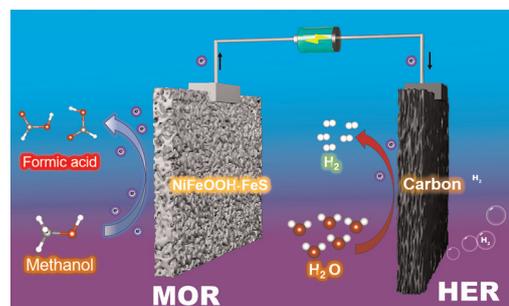
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FeS-decorated nickel iron hydroxide with a regulated coordination environment towards improved methanol oxidation reaction

Xianglong Hu, Quande Lu, Xingchen Zhou, Xiaofeng Long, Mengyu Wang, Xueliang Jiang and Huan Yang*



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Cyclodesulfurization reaction catalyzed by artificial metalloenzymes containing cobalt protoporphyrin IX cofactors under green aqueous solvent conditions

Xinjia Yu, Yutong Li, Fengxi Li, Shenhan Xie, Liang Li, Hong Zhang,* Zhi Wang* and Lei Wang*

