

Green Chemistry

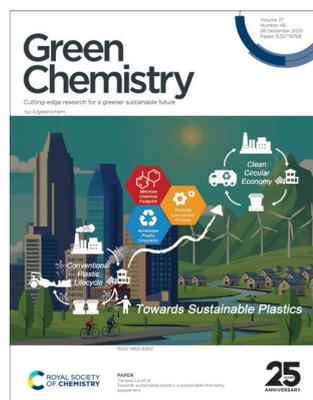
Cutting-edge research for a greener sustainable future

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Cover

See Jianguo Liu *et al.*, pp. 15472–15484.

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Inside cover

See Md Maksudur Rahman *et al.*, pp. 15338–15373.

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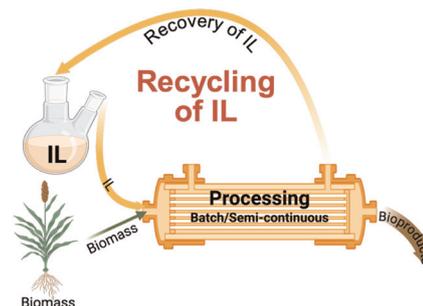
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CRITICAL REVIEWS

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Advances in ionic liquid recycling for lignocellulosic biomass pretreatment

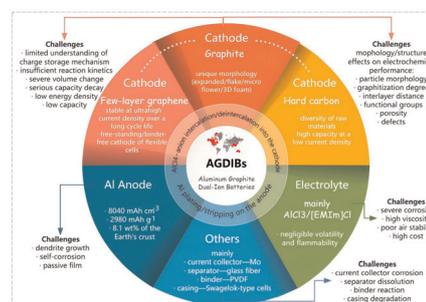
Md Maksudur Rahman, Hemant Choudhary, Blake A. Simmons, John M. Gladden and Alberto Rodriguez*



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Aluminum–graphite dual-ion batteries: recent advances and challenges

Hui Shi, Anastasia A. Teck, Laura Lander and Maria-Magdalena Titirici*



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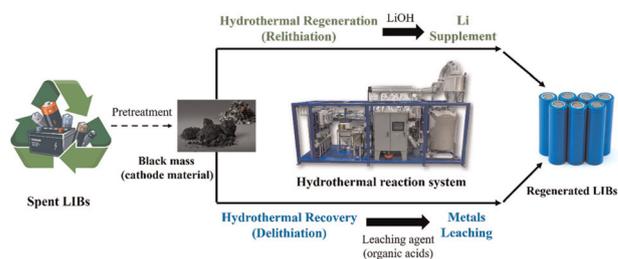
Fundamental questions
Elemental answers

CRITICAL REVIEWS

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Recycling of spent lithium-ion batteries via the hydrothermal process

Yafei Shen

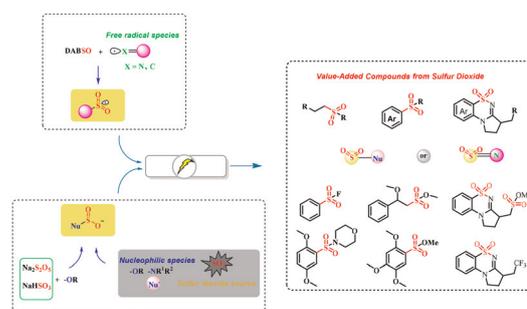


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15442

Electrochemical sulfonylation with sulfur dioxide: a sustainable strategy for organic synthesis

Zhi-Long Lei, Hai-Tao Tang and Ying-Ming Pan*

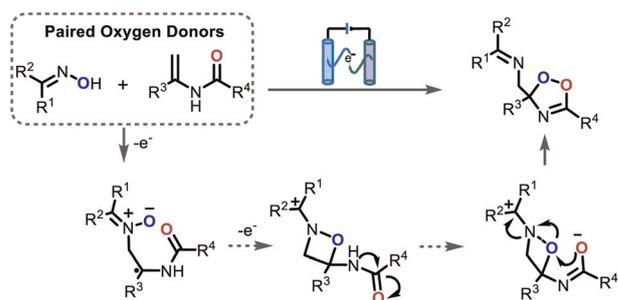


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Direct electrocatalytic O–O coupling for modular synthesis of aza-cyclic peroxides from paired oxygen donors

Cong Yu, Liwei Wang, Xiaotong Bu, Hui Liao and Meng Gao*

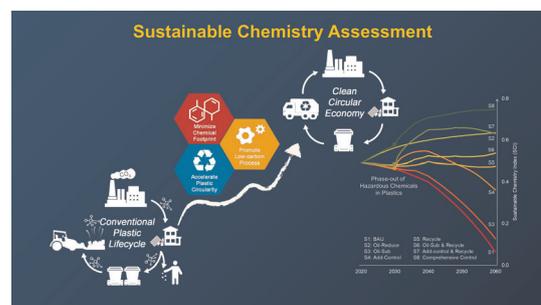


PAPERS

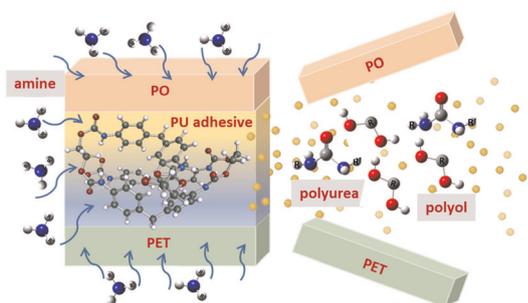
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Towards sustainable plastics: a sustainable chemistry assessment

Jiazhe Chen, Zhichun Zhang, Qiaonan Jing, Shaoxuan Zhang, Rongjing Lu and Jianguo Liu*



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Delamination and deinking of colored multilayer flexible plastic packaging via selective aminolysis of polyurethane and acrylate based adhesives

Sibel Ügdüler, Tobias De Somer, Noa Collier, Martijn Roosen and Steven De Meester*

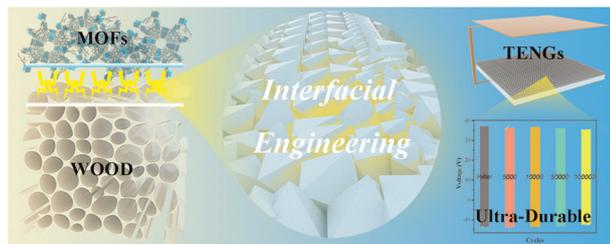
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Metal free visible light mediated cycloaddition reaction using recyclable graphitic nitride under water

Basavarajagouda E. Patil, Rahul Tarkase, Rajdeep Paul, Gopalan Rajaraman and Deepti Kalsi*

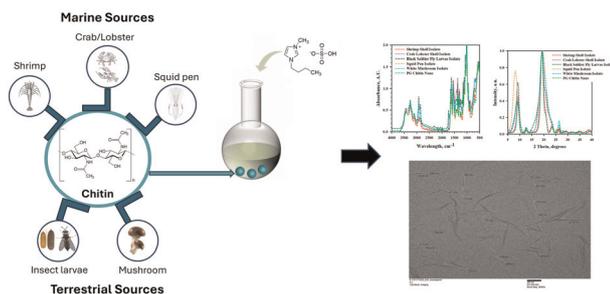
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Interface-engineered, multifunctional wood composites via recyclable solvent processing for ultra-durable triboelectric energy harvesting

Jiaqi Liao, Wenwen Zhu, Shitao Shi, Zewei Ye, Chencong Liu, Haomeng Yu, Qingfeng Sun,* Julia L. Shamshina* and Xiaoping Shen*

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Chitin nanowhiskers from diverse biomasses: the role of feedstock in material properties

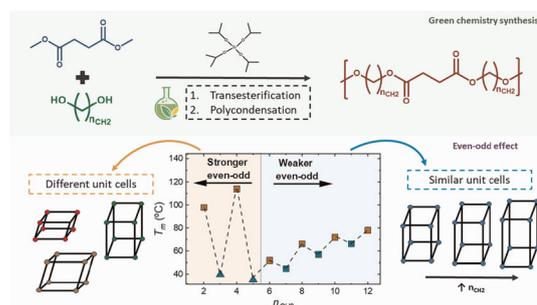
Reshma Panackal Shibu, Sophia L. Sagala, Bo Zhao, Isaac Eason, Paula Berton* and Julia L. Shamshina*



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Peculiar even-odd effect in semi-crystalline poly(alkylene succinate)s with a wide range of repeating unit chain lengths

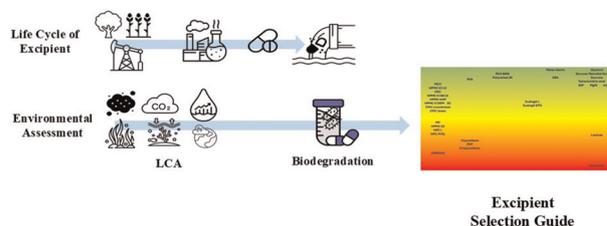
Juan Torres-Rodríguez, Antxon Martínez de Ilarduya, Haritz Sardon, Ricardo A. Pérez-Camargo* and Alejandro J. Müller*



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Assessments of life cycle and biodegradation properties uncovered distinct profiles of pharmaceutical excipients guiding selection for drug formulations

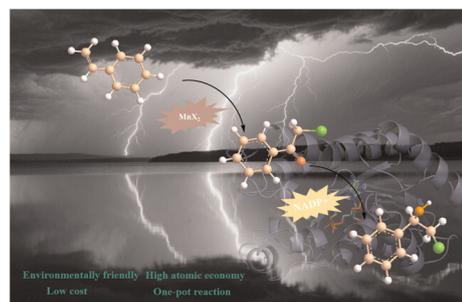
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Electroenzymatic cascade synthesis of chiral α -substituted aromatic halohydrins from alkenes: a green and stereoselective approach

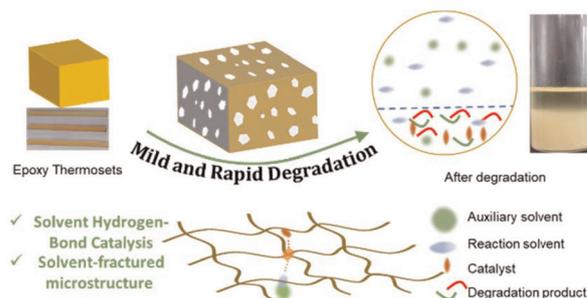
Yihang Dai, Chenyi Zhang, Xinjia Yu, Chuang Du,* Fengxi Li* and Lei Wang*



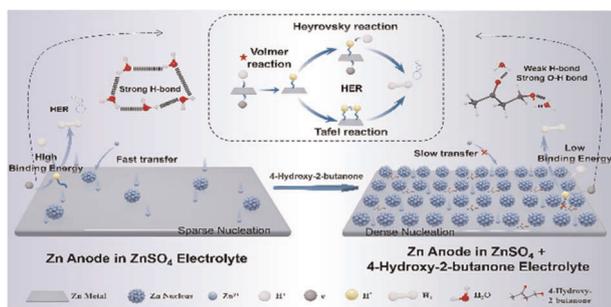
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Solvent-induced microstructure disruption and catalytic activation synergy toward mild and rapid degradation of epoxy thermosets

Ke Li, Xu Zhao,* Dongchu Liu, Weifeng Jia and Qiang Peng*



15598



An electrolyte additive enabling dual kinetic regulation for stable zinc anodes in aqueous zinc batteries

Huidi Shi, Yiqun Du,* Liu Yang, Bingying Sun, Ximing Yu, Anbin Hu, Shuhua Yang, Jinkai Li and Bingqiang Cao*

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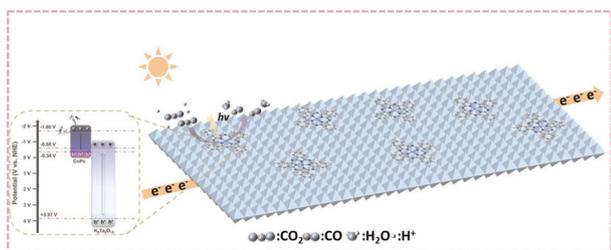
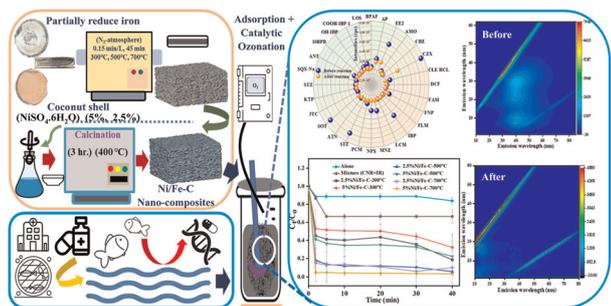


Photo-coupled electrocatalytic conversion of CO₂ to CO over cobalt phthalocyanine-modified POM-K₈Ta₆O₁₉ Z-scheme photocathodes

Chen Liu, Linjie Song, Wanwan Wu, Haiyan Li,* Dongbin Dang* and Yan Bai

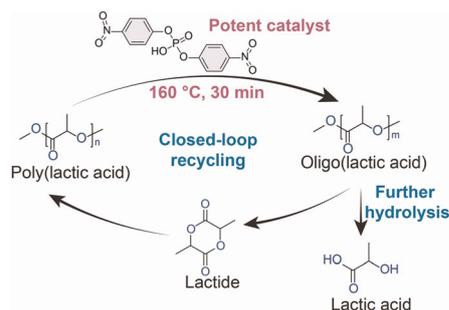
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Adsorption-supported ozonation of complex mariculture wastewater pharmaceuticals using a greener (Ni/Fe-C) nano-composite derived by co-pyrolysis of coconut shell and partially reduced iron: mechanism and implications

Muhammad Noman and Guangwei Yu*

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Phosphate ester-based organocatalyst with strong electron-withdrawing substituents for efficient chemical recycling of poly(lactic acid)

Huajuan Zhai, Yujie Fang, Sihuai Fan, Wanhua Wu, Tao Sun, Weihao Rao, Jiandong Ding and Lin Yu*

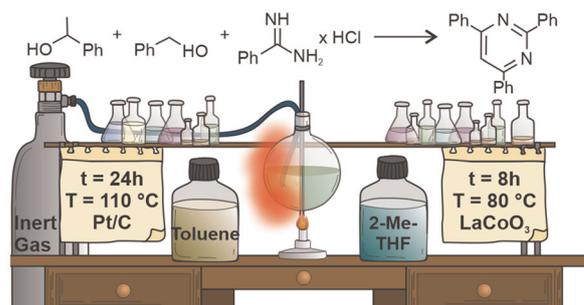


PAPERS

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La-based perovskite structures as efficient heterogeneous catalysts for acceptorless dehydrogenative coupling of alcohols and amidines toward pyrimidines

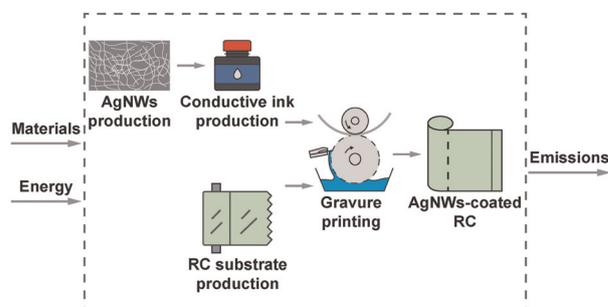
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Eco-design for the sustainable scale-up of flexible transparent conductive electrodes at the early-stage development

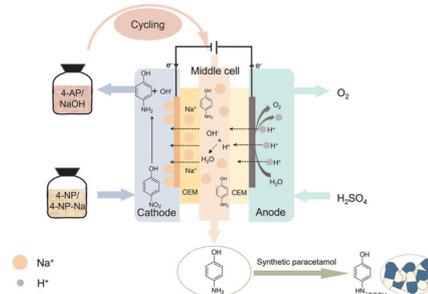
Zhengyin Piao, Luz Meza, Darpan Shukla, Richard A. Venditti, Yong Zhu and Yuan Yao*



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Electrocatalytic conversion of nitrophenol pollutants to value-added products coupled with *in situ* separation via cation shuttling

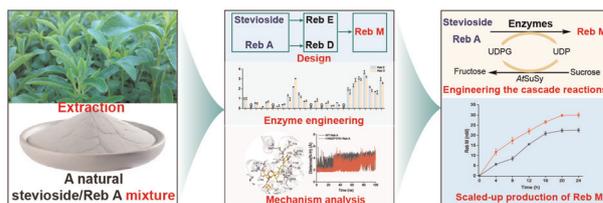
Songlin Liu, Min Hu, Wenbin Zhang, Shiqi Li, Yuchen Lei and Wei Zhao*



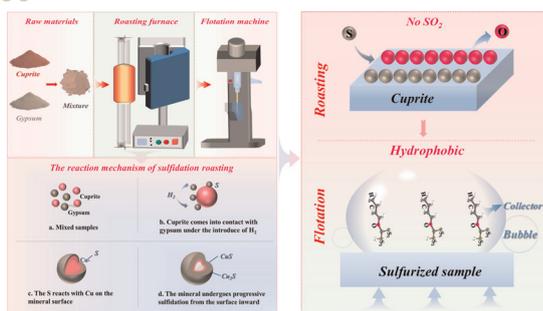
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Designing an artificially concise biocatalytic cascade for the manufacture of rebaudioside M from a naturally derived steviol glycoside mixture

Zhengshan Luo, Xupeng Guo, Zhiwei Deng, Dong Guo, Yan Zhang, Changmei Liu, Zhenbo Yuan and Yijian Rao*



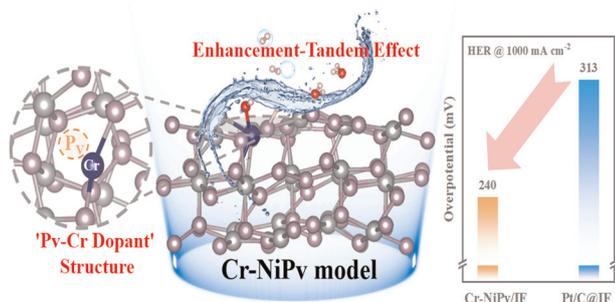
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A green sulfidation roasting–flotation process using desulfurized gypsum for sustainable copper recovery and waste valorization

Xinlei Wei, Yongsheng Sun,* Peng Gao and Xiaotong Wei

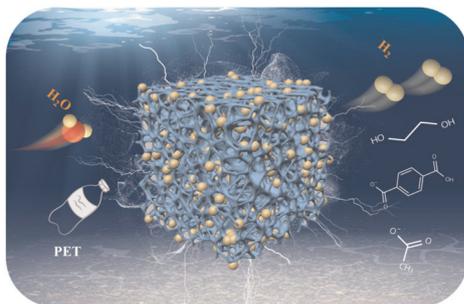
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An 'enhancement-tandem effect' induced by the 'P vacancy–Cr dopant structure' for optimizing the energy barrier and reaction pathway for alkaline HER

Yating Hou, Xiaoli Sun, Shan Lu, Ningyuan Song, Yanru Liu, Shu Yang,* Fangxu Dai, Yunmei Du* and Lei Wang

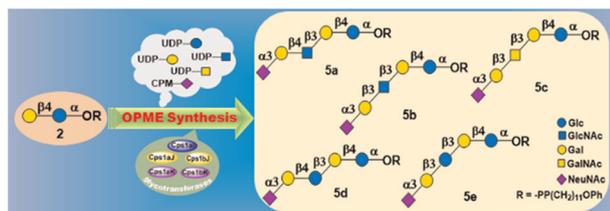
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Bimetallic defect-engineered CoMoMOF modulates CdZnS for efficient hydrogen production from water/microplastic waste

Heyu Li, Lingjiao Li, Haiyu Wang* and Zhiliang Jin*

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One-pot multienzyme-catalyzed assembly of pentasaccharide repeating units from Group B *Streptococcus* capsular polysaccharides and their related oligosaccharide derivatives

Min Liang, Wei Gong, Jielin Zhao, Hong Wang, Chongzhen Sun, Xianwei Liu* and Guofeng Gu*



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The stepwise construction of polyoxovanadate-based Zn-MOF nanoparticles with Lewis acid sites for the one-pot synthesis of N-heterocycles in air

Maochun Zhu, Xue Bai, Yanli Yang, Ange Zhang, Siyue Wang, Chengyu Sun, Ying Lu, Bin Li* and Shuxia Liu*

