

Green Chemistry

Cutting-edge research for a greener sustainable future

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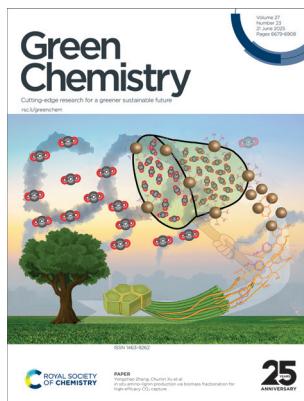
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Cover

See Xiaoli Xi *et al.*, pp. 6754–6763.

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Inside cover

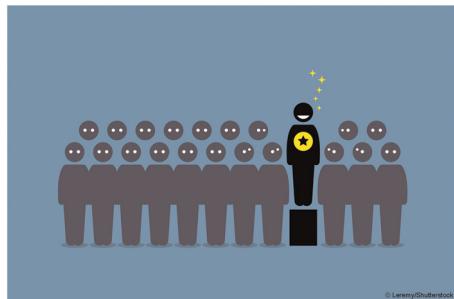
See Yongchao Zhang, Chunlin Xu *et al.*, pp. 6764–6775.

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Outstanding Reviewers for *Green Chemistry* in 2024



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The hydrogen economy fairytale

Tycho Ehrhardt and Gadi Rothenberg*



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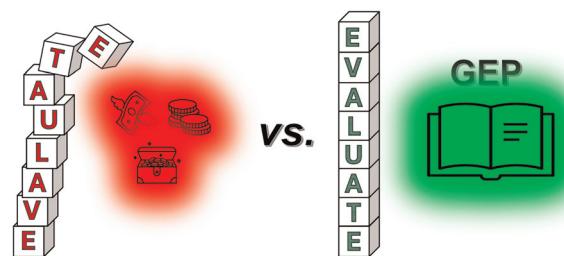
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PERSPECTIVES

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How to correctly evaluate greenness, whiteness and other "colours"? Introducing general rules of a good evaluation practice

Paweł Mateusz Nowak

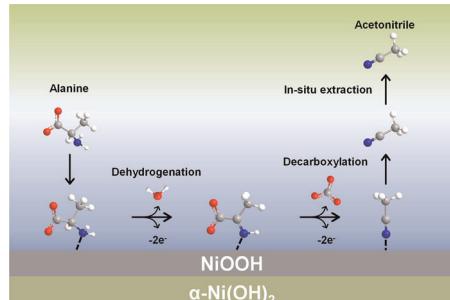


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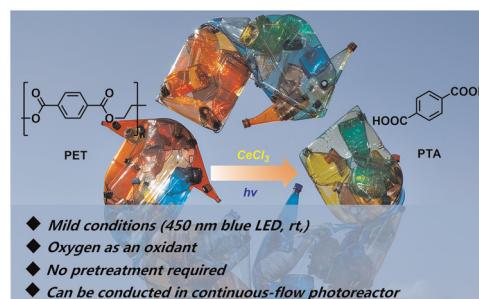
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Visible-light-driven photocatalytic depolymerization of post-consumer PET to terephthalic acid via cerium catalysis with batch-to-flow scalability

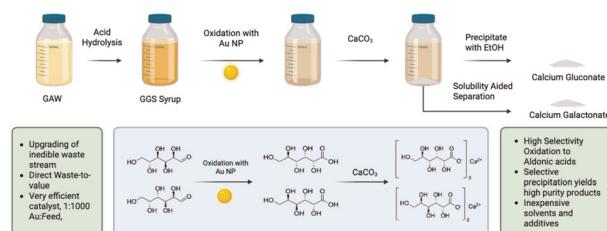
Yujian Pang, Xiqun Wu, Zhijie Li, Jie Sun, Zhenjiang Li, Jiang-Kai Qiu, Jian Wang,* Canliang Ma* and Kai Guo*



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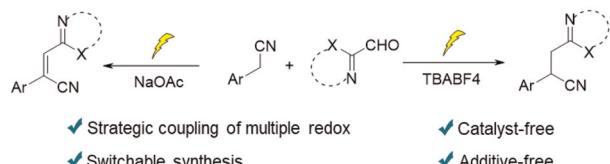
Selective oxidation of glucose–galactose syrup to gluconic and galactonic acids

Joseph Install, Anže Zupanc, Seonyeong Kim, Wenjia Wang, Marianna Kemell, George W. Huber and Timo Repo*



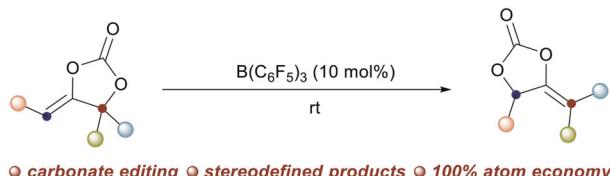
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Switching between α -alkenylation and α -alkylation of nitriles by coupling multiple electrochemical methods

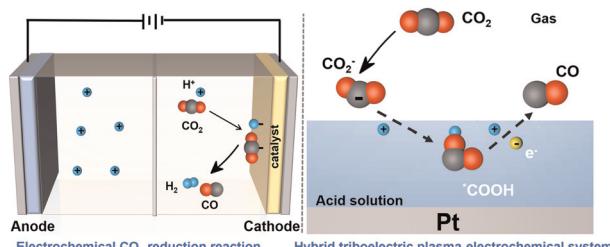
Kai Li, Tong Li, Yupu Zhang, Hao Yang, Qi Sun* and Zhiyong Wang*

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Yicheng He, Krishnapriya Anattil Unnikrishnan, Wenhao Yin, Rositha Kuniyil,* Haifeng Du* and Wusheng Guo*

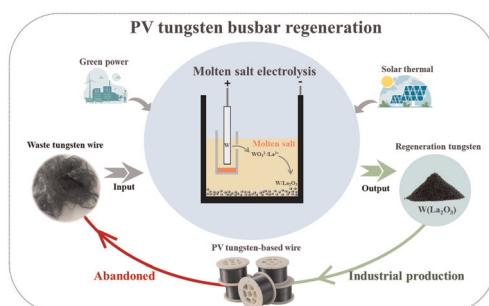
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Highly selective, catalyst-free \mathbf{CO}_2 reduction in strong acid without alkali cations by a mechanical energy-induced triboelectric plasma-electrochemical system

Hui Hu, Nannan Liu, Qinglong Ru, Wei Jiang, Yongcui Yang, Kailan Ma, Lixiang Meng, Zuliang Du, Bao Zhang* and Gang Cheng*

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Co-recovery of tungsten and lanthanum from photovoltaic tungsten-based busbars scrap by molten salt electrolysis

Xiang Xue, Liwen Zhang, Qi Fang, Chunjia Liu, Shuijie Su, Xiaoli Xi* and Zuoren Nie

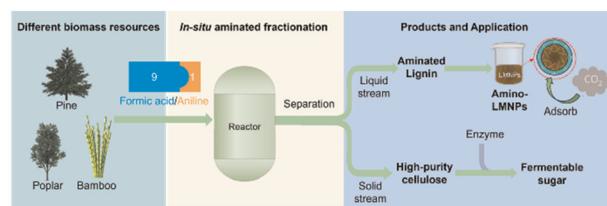


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***In situ* amino-lignin production via biomass fractionation for high-efficacy CO₂ capture**

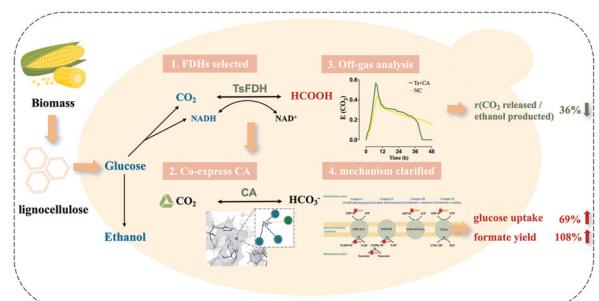
Ruijie Wu, Caiyun Liu, Yongchao Zhang,* Jiayun Xu, Andrey Pranovich, Jarl Hemming, Teija Tirri, Xiaoju Wang and Chunlin Xu*



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The synergistic effect of formate dehydrogenase and carbonic anhydrase accelerates the ethanol fermentation process and improves carbon recovery

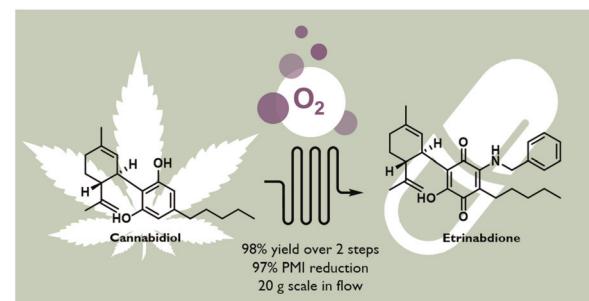
Ying He, Yimin Li, Jiaxin Liu, Liming Su, Cong Du* and Wenjie Yuan*



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Two-step continuous flow aerobic oxidation of cannabidiol to cannabinoquinone derivatives

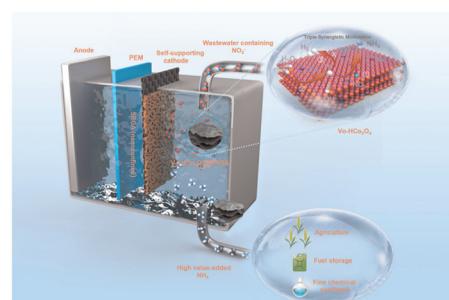
Manuel Zielke, Christof Aellig, Dominique M. Roberge,* Christopher A. Hone* and C. Oliver Kappe*



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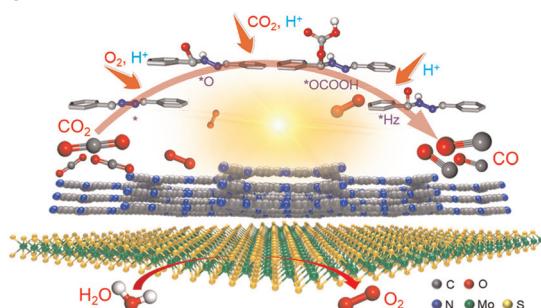
Asymmetric defective site-triggered triple synergistic modulation in nanoconfined aerogel for superior electrochemical conversion of low-concentration nitrate into ammonia

Ke Wang, Tong Zhao, Shiyu Zhang, Rupeng Wang, Meng Wang, Zixiang He and Shih-Hsin Ho*



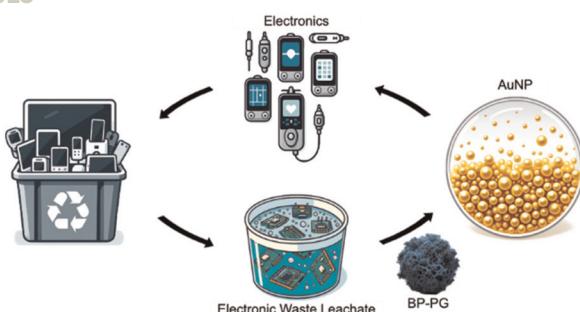
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Aerobic oxidation of a covalent organic framework facilitating photocatalytic CO_2 reduction with water

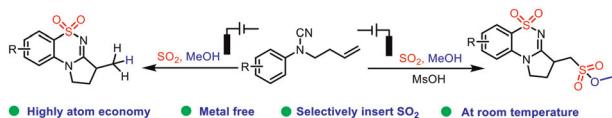
Jiangqi Ning, Qing Niu, Zheyuan Liu and Liuyi Li*

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Mechanochemical approach to polymer-functionalized black phosphorus nanomaterials for precious metal recovery

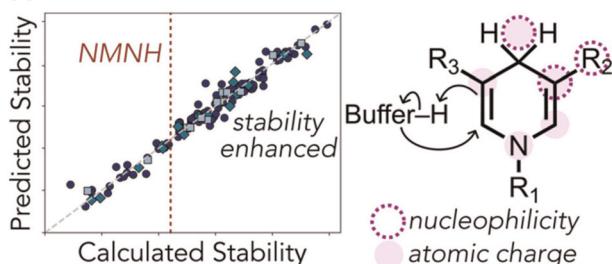
Obida Bawadki, Peng Tang, Christian Müller* and Rainer Haag*

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Electrochemical selective incorporation of SO_2 to synthesize fused-ring framework compounds

Zhi-Long Lei, Dan Tan, Jin-Tao Qin, Xiu-Jin Meng,* Fei-Hu Cui,* Hai-Tao Tang and Ying-Ming Pan*

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Computer-aided design of stability enhanced nicotinamide cofactor biomimetics for cell-free biocatalysis

Alexandra P. Platt, Heidi Klem, Sam J. B. Mallinson, Yannick J. Bomble* and Robert S. Paton*

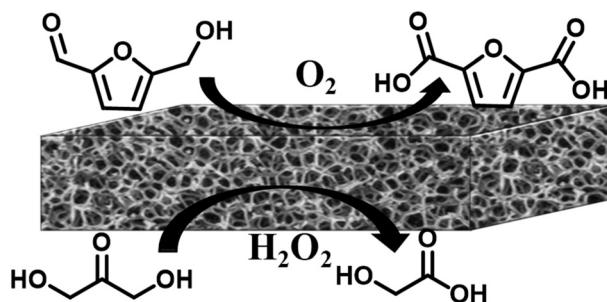


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Polymer monomers fabricated from biomass platform molecules over metal-free catalysts

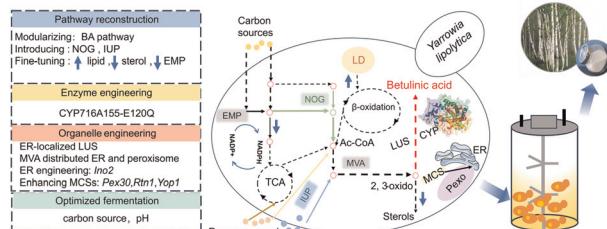
Siwei Xu, Nian Xiang, Jie He,* Yang Li, Huankun Nie, Liang Huang, Chongbei Wu and Zehui Zhang*



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Multidimensional metabolic engineering of *Yarrowia lipolytica* for highly efficient biosynthesis of betulinic acid

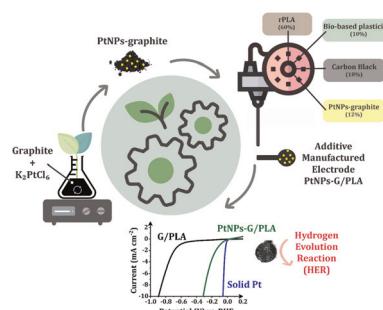
Xiaoyan Li, Liangcheng Jiao, Guowei Zhao, Yunchong Li, Yunjun Yan* and Jinyong Yan*



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Platinum nanoparticle-doped recycled PLA filament for sustainable additive manufactured electrocatalytic architectures

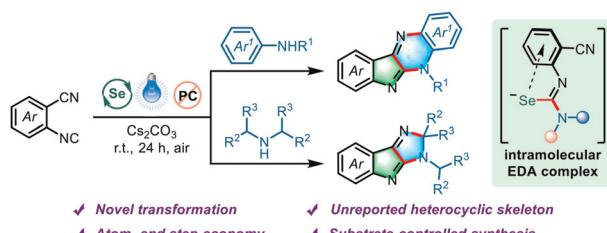
Karen K. L. Augusto, Robert D. Crapnell, Elena Bernalte, Hayley G. Andrews, Orlando Fatibello-Filho and Craig E. Banks*



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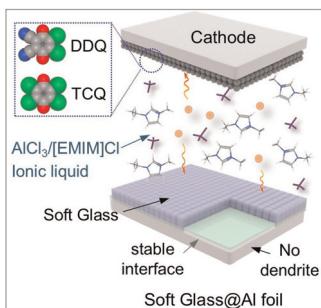
Visible-light-induced selenium-mediated cascade cyclization of 2-isocyanobenzonitriles with secondary amines to access indole-fused polycyclics

Dongping Xu, Lizhen Jin, Mengya Huang and Wu Zhang*



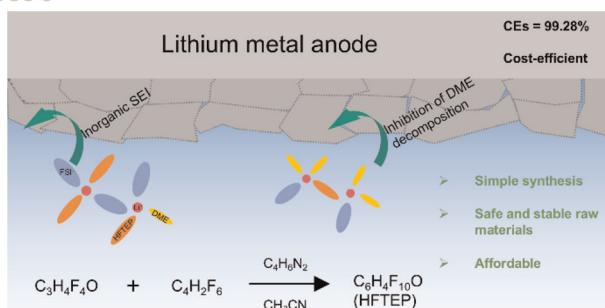
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Soft glass interphase engineering for ultra-stable aluminum metal batteries

Shibin Zhang, Yan Xu, Danni Zhang, Lishun Bai, Yue Liu, Ying He, Feiyan Yu, Chengjun Liu, Sijie Li* and Zhi Chang*

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Rational design of a cost-efficient and eco-friendly fluorinated ether for high-energy and long-lived Li-metal batteries

Nan Li, Xue Han, Xinke Cui, Longji Xu, Chenxi Liu, Qiao Han, Kai Xi, Zhenglong Xu, Xiaobing Dai, Chong Mao,* Lewen Yang* and Weijiang Xue*

CORRECTION

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Correction: Highly selective, catalyst-free CO₂ reduction in strong acid without alkali cations by a mechanical energy-induced triboelectric plasma-electrolytic system

Hui Hu, Nannan Liu, Qinglong Ru, Wei Jiang, Yongcui Yang, Kailan Ma, Lixiang Meng, Zuliang Du, Bao Zhang* and Gang Cheng*