

Green Chemistry

Cutting-edge research for a greener sustainable future

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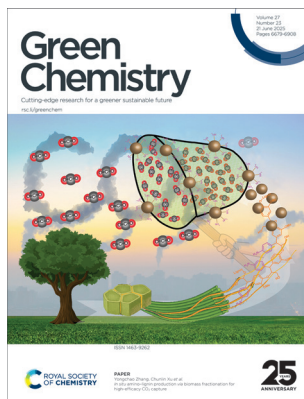
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Cover

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

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Inside cover

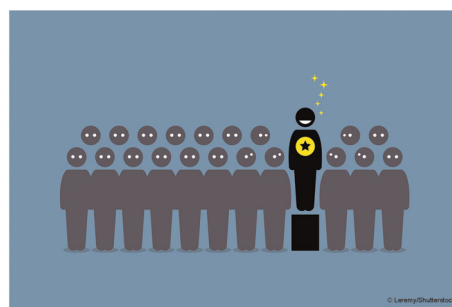
See Yongchao Zhang,
Chunlin Xu *et al.*,
pp. 6764–6775.

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EDITORIAL

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Outstanding Reviewers for *Green Chemistry* in 2024



PERSPECTIVES

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The hydrogen economy fairytale

Tycho Ehrhardt and Gadi Rothenberg*



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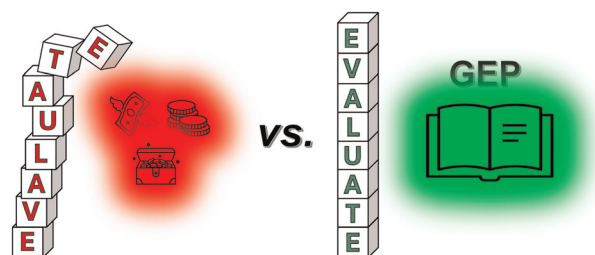
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PERSPECTIVES

6699

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

Paweł Mateusz Nowak

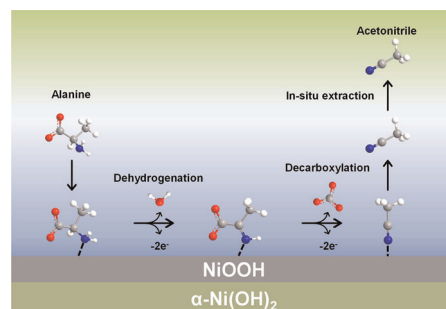


COMMUNICATIONS

6711

Direct nitrile electrosynthesis from amino acids on nickel oxyhydroxide

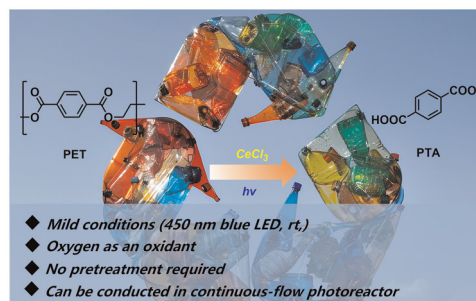
Xudong Liu, Zhe Chen, Tao Jiang, Wei Du, Can Lei, Xueting Cao, Shuangshuang Cha, Mengxin Qu, Xinchu Zhou and Ming Gong*



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

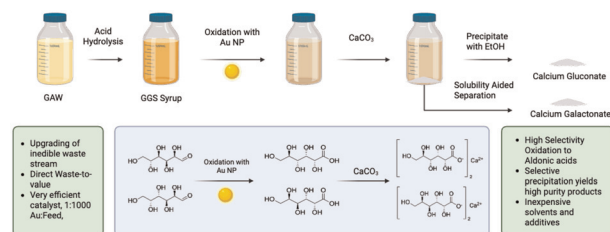
Yujian Pang, Xiqun Wu, Zhijie Li, Jie Sun, Zhenjiang Li, Jiang-Kai Qiu, Jian Wang,* Canliang Ma* and Kai Guo*



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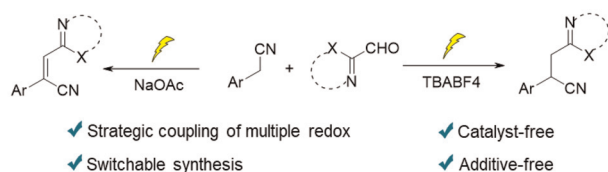
Selective oxidation of glucose–galactose syrup to gluconic and galactonic acids

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



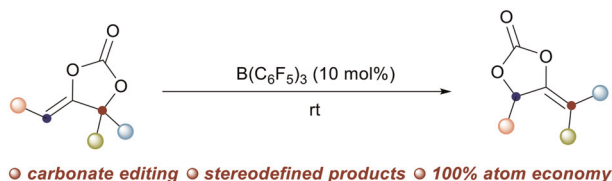
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Switching between α -alkenylation and α -alkylation of nitriles by coupling multiple electrochemical methods

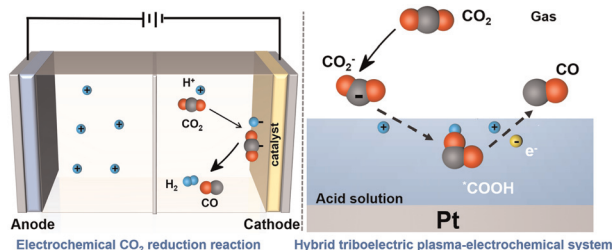
Kai Li, Tong Li, Yupu Zhang, Hao Yang, Qi Sun* and Zhiyong Wang*

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

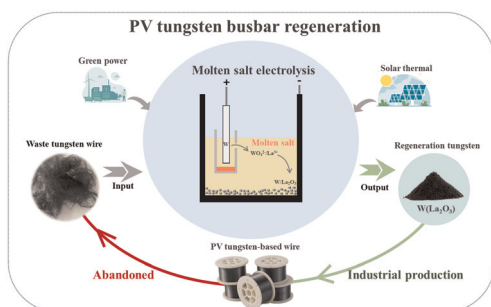
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Highly selective, catalyst-free CO_2 reduction in strong acid without alkali cations by a mechanical energy-induced triboelectric plasma-electrolytic system

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

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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

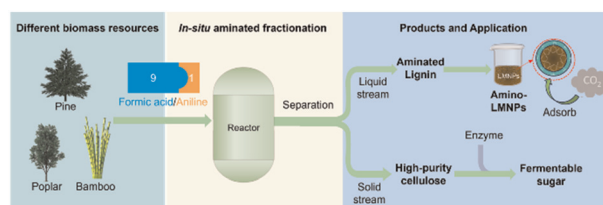


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***In situ* amino–lignin production via biomass fractionation for high-efficacy CO₂ capture**

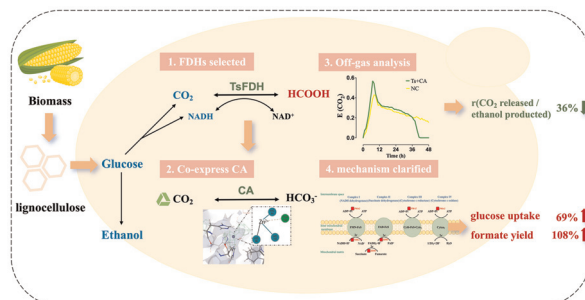
Ruijie Wu, Caiyun Liu, Yongchao Zhang,* Jiayun Xu, Andrey Pranovich, Jarl Hemming, Teija Tirri, Xiaoju Wang and Chunlin Xu*



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

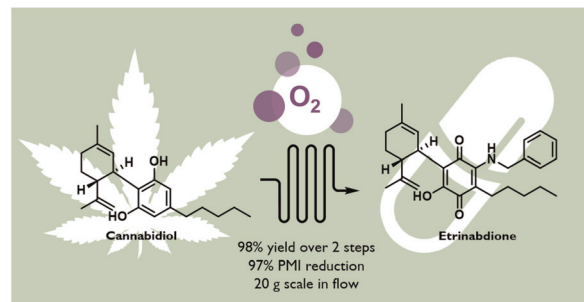
Ying He, Yimin Li, Jiaxin Liu, Liming Su, Cong Du* and Wenjie Yuan*



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

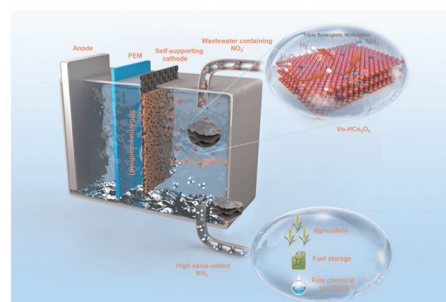
Manuel Zielke, Christof Aellig, Dominique M. Roberge,* Christopher A. Hone* and C. Oliver Kappe*



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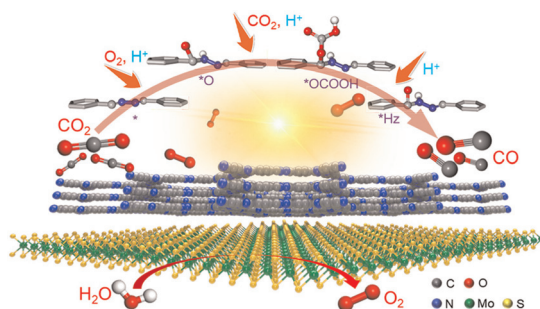
Asymmetric defective site-triggered triple synergistic modulation in nanoconfined aerogel for superior electrochemical conversion of low-concentration nitrate into ammonia

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



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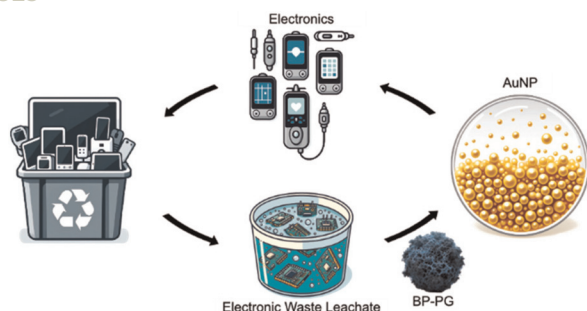
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Aerobic oxidation of a covalent organic framework facilitating photocatalytic CO₂ reduction with water

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

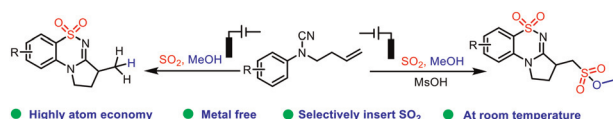
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Mechanochemical approach to polymer-functionalized black phosphorus nanomaterials for precious metal recovery

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

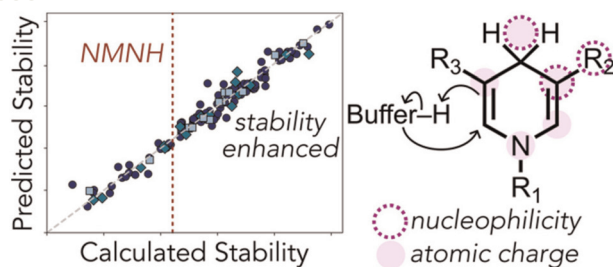
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Electrochemical selective incorporation of SO₂ to synthesize fused-ring framework compounds

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*

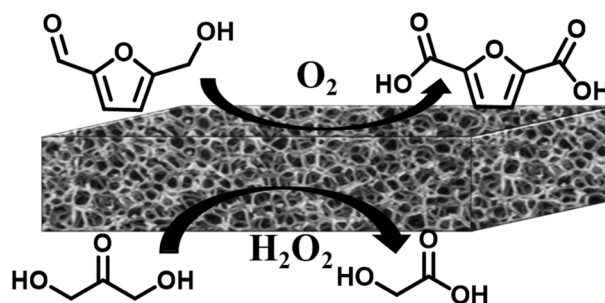


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Polymer monomers fabricated from biomass platform molecules over metal-free catalysts

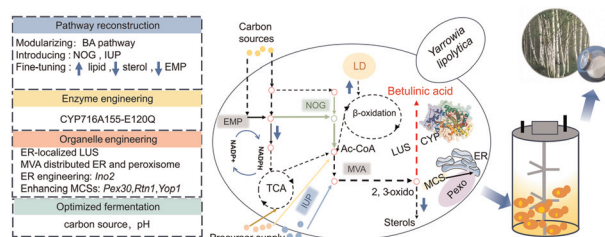
Siwei Xu, Nian Xiang, Jie He,* Yang Li, Huankun Nie, Liang Huang, Chongbei Wu and Zehui Zhang*



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

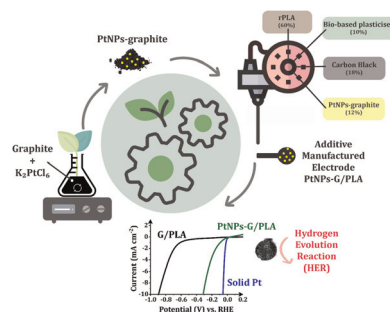
Xiaoyan Li, Liangcheng Jiao, Guowei Zhao, Yunchong Li, Yunjun Yan* and Jinyong Yan*



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

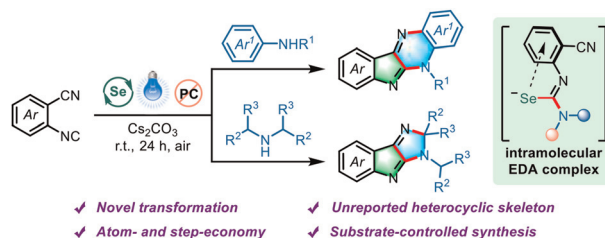
Karen K. L. Augusto, Robert D. Crapnell, Elena Bernalte, Hayley G. Andrews, Orlando Fatibello-Filho and Craig E. Banks*



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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*

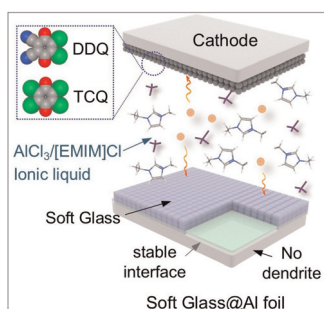


- ✓ Novel transformation
- ✓ Atom- and step-economy
- ✓ Unreported heterocyclic skeleton
- ✓ Substrate-controlled synthesis



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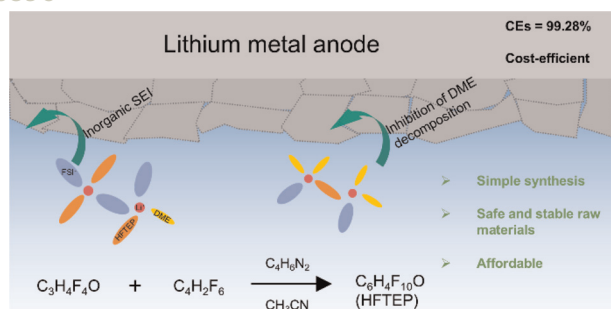
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Soft glass interphase engineering for ultra-stable aluminum metal batteries

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

6906

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*

