

Green Chemistry

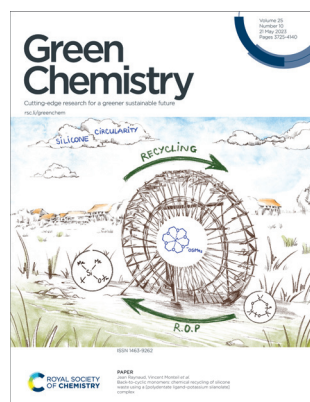
Cutting-edge research for a greener sustainable future

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See Jean Raynaud, Vincent Monteil *et al.*, pp. 3869–3877.

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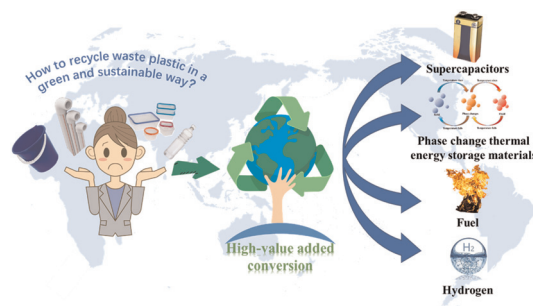
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CRITICAL REVIEW

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Waste plastic to energy storage materials: a state-of-the-art review

Guoqiang Tang, Wenyuan Qiao, Zheng Wang, Fang Liu, Liang He, Minghao Liu, Wenbo Huang,* Hongqu Wu* and Changhui Liu*

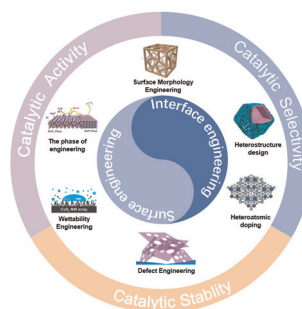


TUTORIAL REVIEWS

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Designing electrocatalysts for seawater splitting: surface/interface engineering toward enhanced electrocatalytic performance

Bo Xu, Jie Liang, Xuping Sun* and Xiaoli Xiong*



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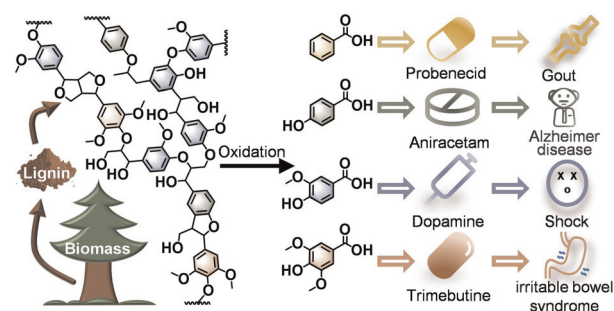


TUTORIAL REVIEWS

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Sustainable production of active pharmaceutical ingredients from lignin-based benzoic acid derivatives via "demand orientation"

Yuguo Dong, Lin Dong,* Xiaoli Gu,* Yanqin Wang, Yuhe Liao, Rafael Luque and Zupeng Chen*



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Waste to wealth: direct utilization of spent materials for electrocatalysis and energy storage

Chengcheng Yan, Xun Jiang, Jiaxin Yu, Zhaolong Ding, Ling Ma, Tingyu Su, Yilu Wang, Chunxia Wang,* Guoyong Huang* and Shengming Xu

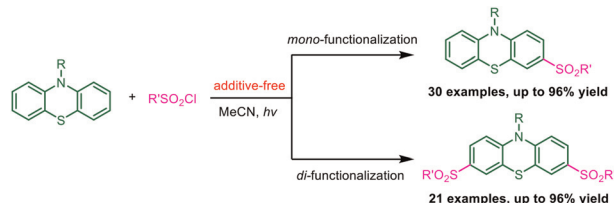


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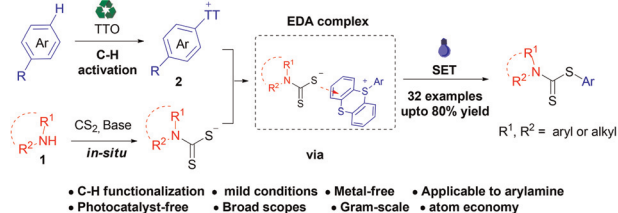
Jige Liu, Huiying Liu, Xing Guo, Ziqiang Wang, Xinxin Wu, Jie Li and Chen Zhu*



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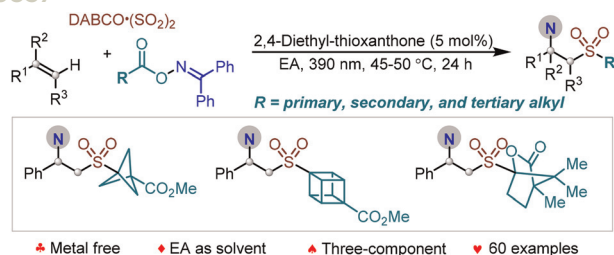
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Min Liu, Yong Qian, Yanqi Wu* and Fengzhi Zhang*



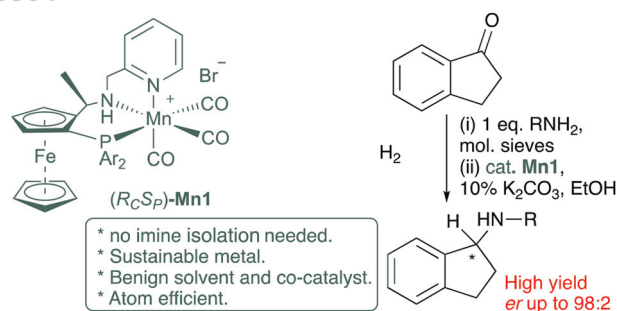
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Meiling Chen, Wenyan Sun, Jingjing Yang, LuLu Yuan, Jian-Qiang Chen* and Jie Wu*

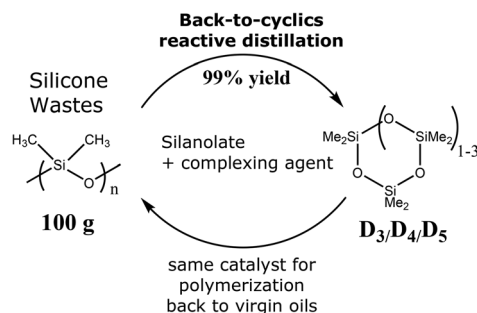
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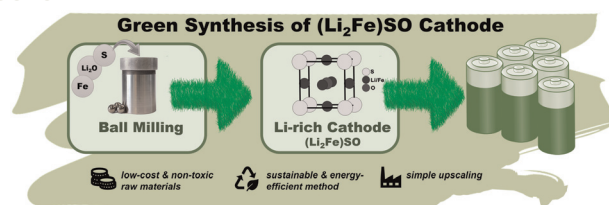
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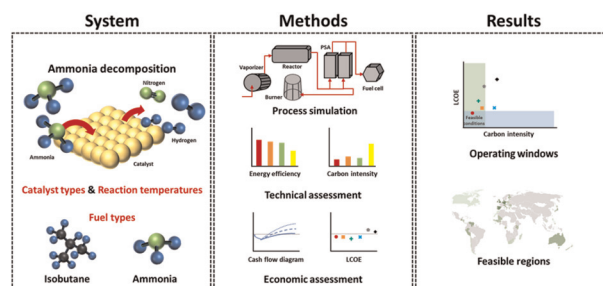


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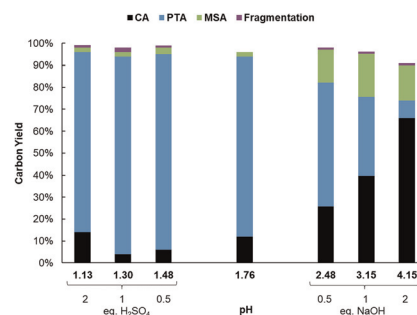
Dongjun Lim, Jong Ah Moon, Chang Won Yoon* and Hankwon Lim*



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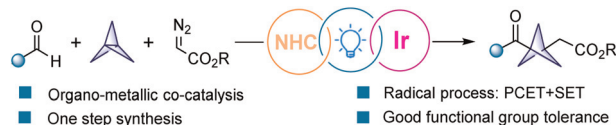
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Visible light-induced synthesis of 1,3-disubstituted bicyclo[1.1.1]pentane ketones via cooperative photoredox and N-heterocyclic carbene catalysis

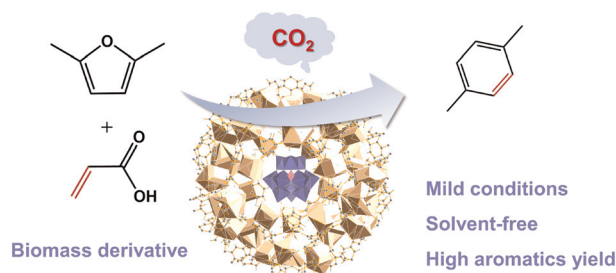
Yan Gao, Zicong Zheng, Yu Zhu, Wenhao Xu, Yu Zhou, Chuanming Yu and Xinpeng Jiang*



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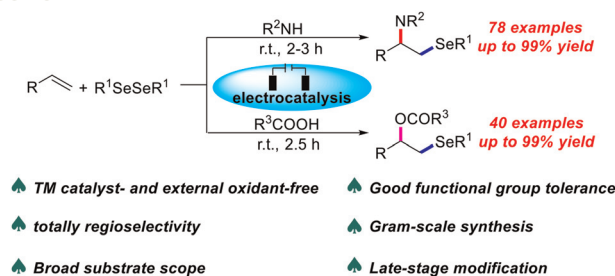
Synergistic Fe(III) and acid sites in SiW@MIL-100(Fe) catalyst prompt the synthesis of *p*-xylene from biomass derivatives

Wenjing Wang, Qing Wang, Ruofan Li, Di Zeng, Juxue Wang, Yu Zhang, Ling Zhang,* Haiming Liu* and Wenzhong Wang*



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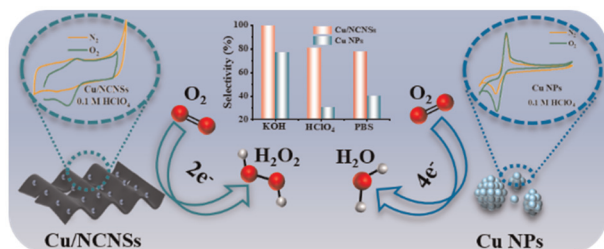
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Versatile electrooxidative amino- and oxy-selenation of alkenes

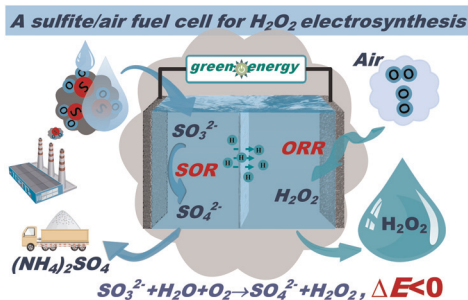
Renjie Wang, Nana Zhang, Yonghong Zhang, Bin Wang, Yu Xia, Kai Sun, Weiwei Jin,* Xinyong Li* and Chenjiang Liu*

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Single-iron, cobalt, nickel, and copper-atom catalysts for the selective reduction of oxygen to H₂O₂

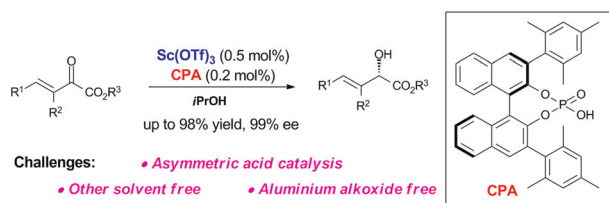
Cuizhu Ye, Yongfang Zhou, Hongying Li and Yi Shen*

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A sulfite/air fuel cell for H₂O₂ electrosynthesis

Jucai Wei, Xu Wu* and Siqi Xing

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Enantioselective Meerwein–Ponndorf–Verley reduction of β,γ-unsaturated α-keto esters by asymmetric binary-acid catalysis in the green solvent iPrOH

Huixin Qiu, Jiayi Ren, Long Zhang,* Ran Song, Wen Si, Daoshan Yang, Lirong Wen* and Jian Lv*

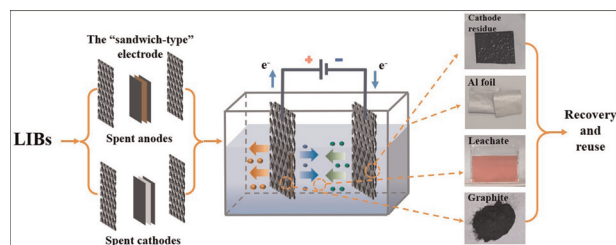


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A novel electrochemical redox method for the simultaneous recovery of spent lithium-ion battery cathodes and anodes

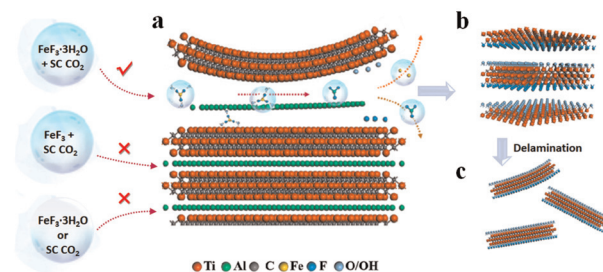
Jiao Kong, Shiyu Zhou, Ting He, Shuai Gu* and Jianguo Yu*



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Supercritical CO₂-assisted solid-phase etching preparation of MXenes for high-efficiency alkaline hydrogen evolution reaction

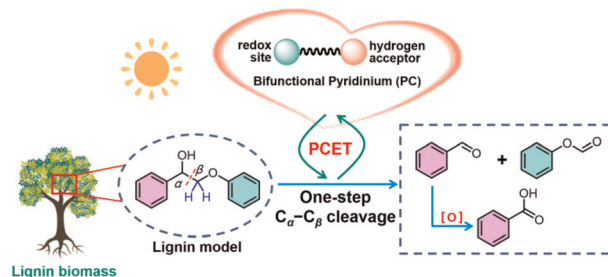
Huajian Feng, Qingyong Tian,* Junhao Huang, Xinwei Cui, Jingyun Jiang, Yapeng Tian, Li Ye and Qun Xu*



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Selective cleavage of C $_{\alpha}$ –C $_{\beta}$ bonds in lignin models using a bifunctional pyridinium photocatalyst via a PCET process

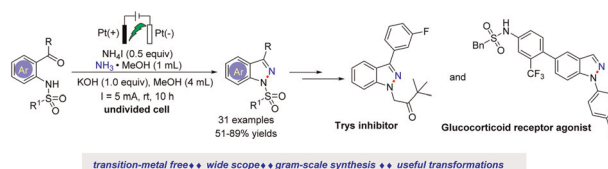
Cai-Hui Rao, Hao-Ran Wei, Xiao-Li Miao, Meng-Ze Jia, Xin-Rong Yao, Xiao-Yan Zheng* and Jie Zhang*



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Electrochemical intramolecular N(sp²)–H/N(sp³)–H coupling for the synthesis of 1*H*-indazoles

Qiang Zhong, Pei-Long Wang,* Hui Gao, Fang Ma, Youqing Yang and Hongji Li*

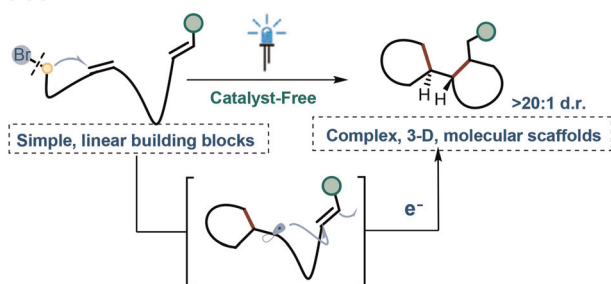


transition-metal free • wide scope • gram-scale synthesis • useful transformations



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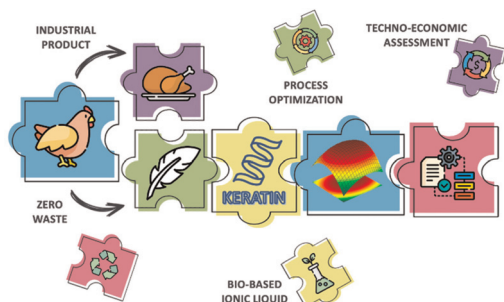
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Catalyst-free intramolecular radical cyclization cascades initiated by the direct homolysis of $C_{sp^3}-Br$ under visible light

Panyi Huang, Zhiyang Yan, Jiaxin Ling, Peixuan Li, Jiayang Wang, Jianjun Li, Bin Sun* and Can Jin*

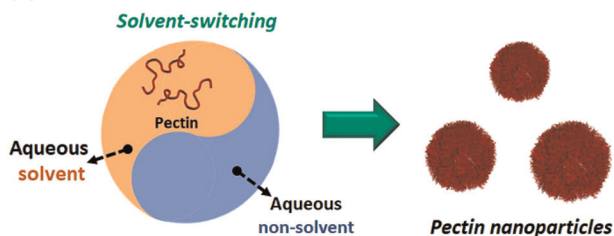
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Sustainable keratin recovery process using a bio-based ionic liquid aqueous solution and its techno-economic assessment

Cariny Polesca, Amir Al Ghatta, Helena Passos, João A. P. Coutinho, Jason P. Hallett* and Mara G. Freire*

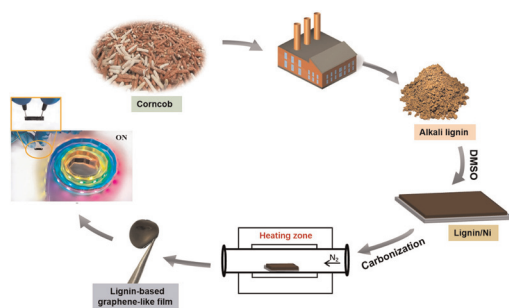
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Aqueous nanoprecipitation for programmable fabrication of versatile biopolymer nanoparticles

Dongming Ding, Li Gong, Miao Li, Xie Cheng, Huahong Peng, Zesheng Zhang, Shuai Wang* and Xibo Yan*

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In situ growth of lignin-based graphene-like films catalyzed by metal substrates

Shuangxin Wang, Ying Yuan, Tong-Qi Yuan and Xiluan Wang*

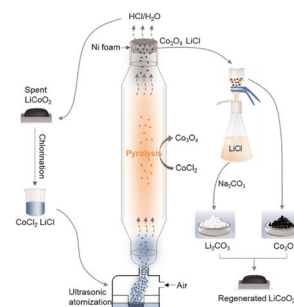


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Spray pyrolysis technology-based closed-loop for regenerating single-crystal cathodes from spent lithium-ion batteries

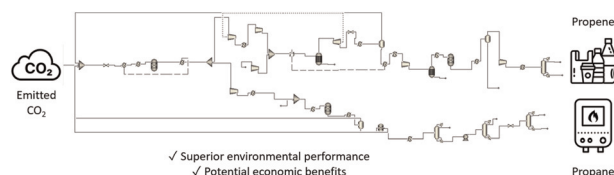
Tao Li, Yongchao Zhou, Ziyu Chen and Yan Li*



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Production of propane and propene via carbon capture utilisation: comparison of its environmental and economic performance against conventional production methods

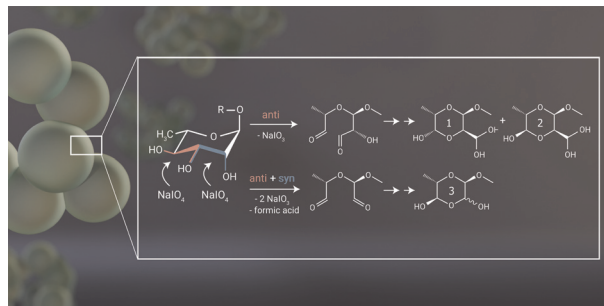
Alexander Payne, Guillermo Garcia-Garcia and Peter Styring*



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Formation of substituted dioxanes in the oxidation of gum arabic with periodate

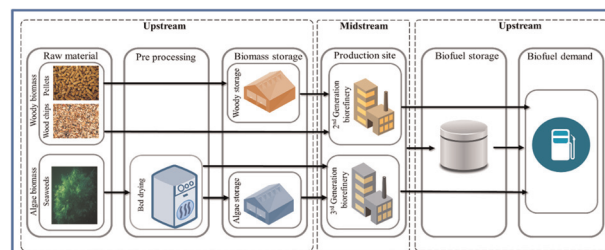
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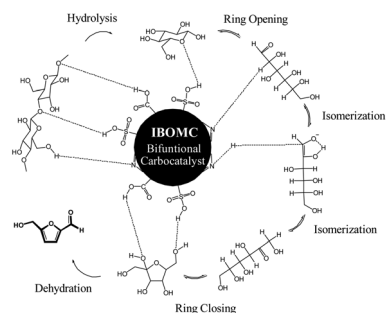
Optimal design of a biofuel supply chain using an augmented multi-objective and TOPSIS method

Mohammadamin Zarei, Ali Cherif, Ha-Jun Yoon, J. Jay Liu and Chul-Jin Lee*



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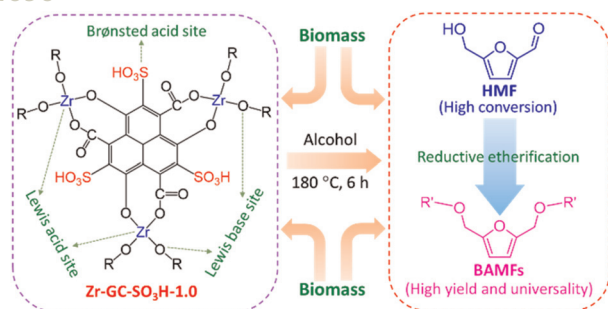
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One-pot acid–base catalysed tandem reactions using a bimodal N, S-doped cubic mesoporous carbon

Hamzeh H. Veisi, Maryam Akbari, Babak Karimi,*
Hojatollah Vali and Rafael Luque

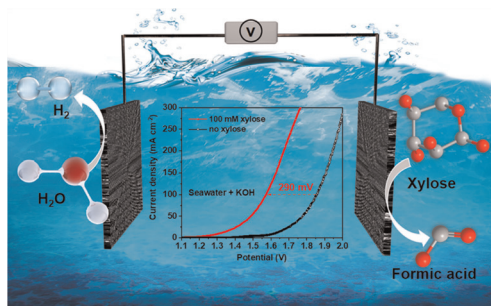
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Highly effective synthesis of biomass-derived furanic diethers over a sulfonated zirconium–carbon coordination catalyst in alcohol systems

Xinming Shen, Jingyi Zheng, Lei Hu,* Qinyin Gu,
Jiacheng Li, Keru Chen, Yetao Jiang, Xiaoyu Wang,
Zhen Wu and Jinliang Song*

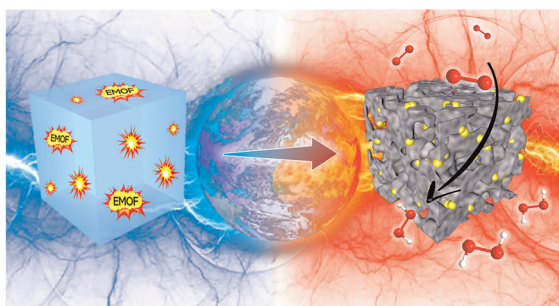
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Integrating electrocatalytic seawater splitting and biomass upgrading via bifunctional nickel cobalt phosphide nanorods

Yunyi Yang, Ren Zou, Jianyun Gan, Yujia Wei,
Zhongxin Chen, Xuehui Li, Shimelis Admassie,
Yunpeng Liu* and Xinwen Peng*

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Pre-embedding an energetic metal–organic framework to create interconnected pore structures in nitrogen-doped carbon for green and effective hydrogen peroxide electrosynthesis

Yuyu Guo, Jinxi Han, Shuting Li, Zhengqiang Xia,
Sanping Chen,* Gang Xie, Shengli Gao and Qi Yang*



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Visible light-initiated manganese-catalyzed hydrosulfonylation of alkenes

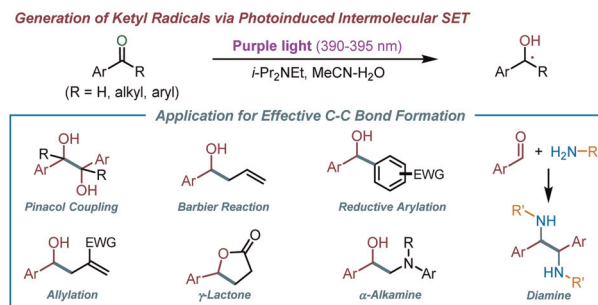
Chun-Min Li, Xin-Xin Dong, Zhe Wang* and Bo Zhang*



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Photoinduced generation of ketyl radicals and application in C–C coupling without external photocatalyst

Yonggang Yan, Gang Li, Jiani Ma, Chao Wang, Jianliang Xiao and Dong Xue*



CORRECTIONS

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Correction: Amenamevir by Ugi-4CR

Xin Li, Tryfon Zarganes-Tzitzikas, Katarzyna Kurpiewska and Alexander Dömling*

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Correction: 'Chemistry at the speed of sound': automated 1536-well nanoscale synthesis of 16 scaffolds in parallel

Li Gao, Shabnam Shaabani, Atilio Reyes Romero, Ruixue Xu, Maryam Ahmadianmoghaddam and Alexander Dömling*

