Green Chemistry

Cutting-edge research for a greener sustainable future

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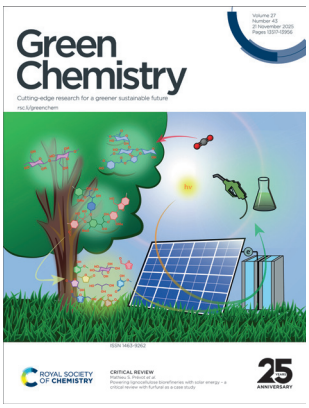
ISSN 1463-9262 CODEN GRCHFJ 27(43) 13517–13956 (2025)



Cover
See Mathieu S. Prévot *et al.*, pp. 13529–13557.

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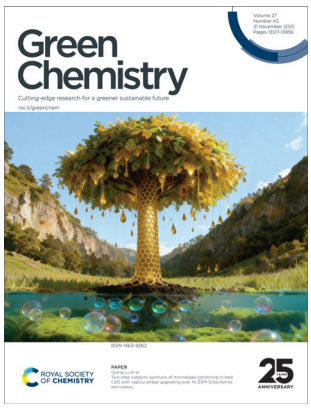

Inside cover
See Qi Niu, Xin Du, Pengyu Xing, Stef Ghysels, Kai Li, Jihong Li, Qiang Lu, Wolter Prins and Frederik Ronsse pp. 13667–13681.

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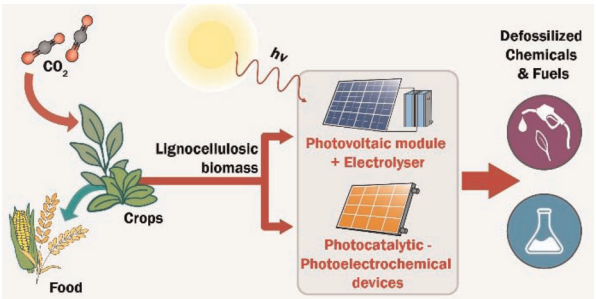
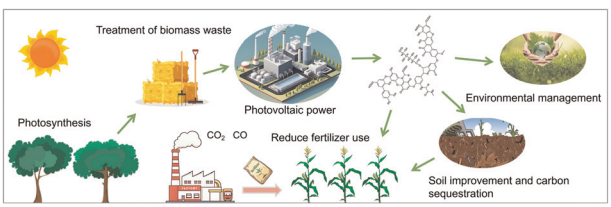
CRITICAL REVIEW



TUTORIAL REVIEWS



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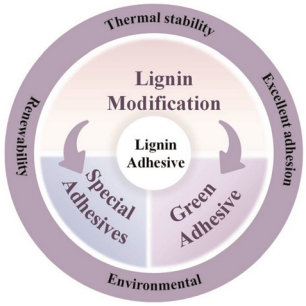
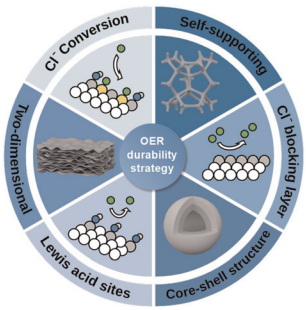
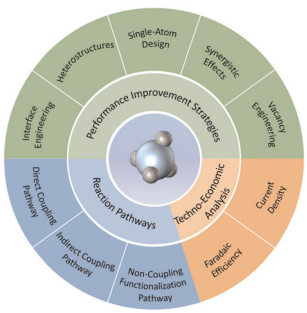
TUTORIAL REVIEWS

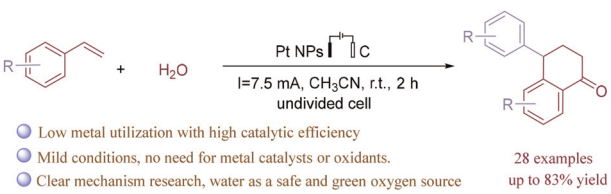


PERSPECTIVES





COMMUNICATIONS



COMMUNICATIONS

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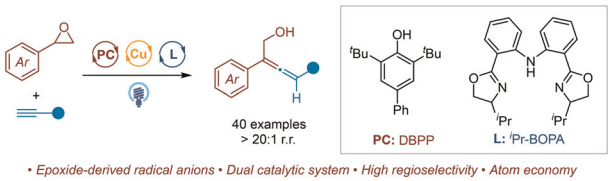
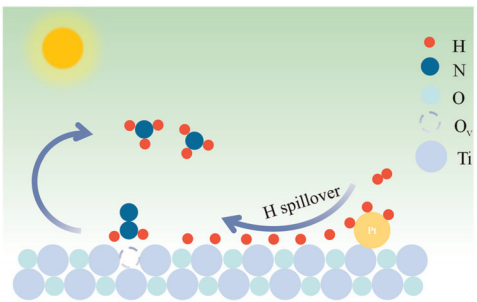


Photoinduced copper-catalyzed cross-coupling of epoxides and alkynes *via* radical anions

Chen Yang, Zunsheng Chen, Zhengze Wu, Qihao Zheng, Yuchao Xue, Xiaoyuan Zeng, W. M. W. W. Kandegama,* Guozhu Zhang* and Rui Guo*

13658



Coupling of oxygen vacancies and an anatase/TiO_2 (B) phase junction for promoting photocatalytic performance of platinum toward ammonia synthesis

Di Lei, Jinhan Liu, Xianwei Zhang, Guangming Wang, Yan Wang and Rong Fu*

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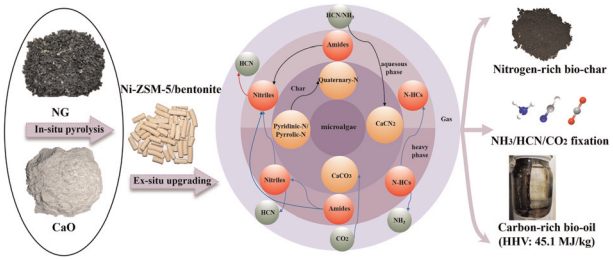
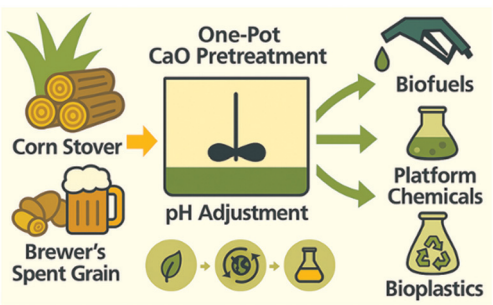
13667



Two-step catalytic pyrolysis of microalgae combining in-bed CaO with vapour phase upgrading over Ni-ZSM-5/bentonite extrudates

Qi Niu, Xin Du, Pengyu Xing, Stef Ghysels, Kai Li, Jihong Li, Qiang Lu,* Wolter Prins and Frederik Ronsse

13682



Production of ethanol, butanol, itaconic acid, 3-hydroxypropionic acid, polyhydroxyalkanoates, and lignin from lignocellulosic biomass

Haixin Peng, Mi Li, Ke Wang, Krishna Kalyani Sahoo, Deokyeol Jeong, Linjing Jia, Sumant Pandey, Eun Joong Oh, Jie Dong, Juhee Lee, Ji Qi, Nilofar Arabi, Seyedamirreza Babaei, Shubhangi Arvelli, Shang-Tian Yang, Mairui Zhang and Jikai Zhao*

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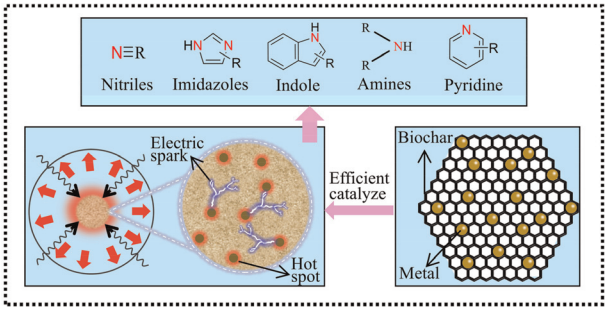

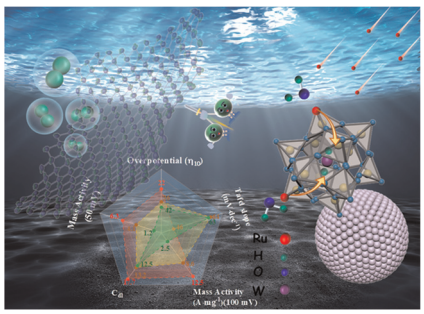

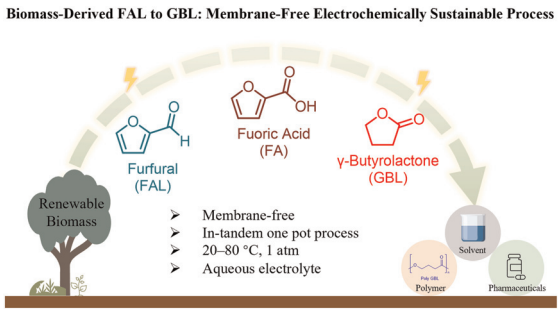

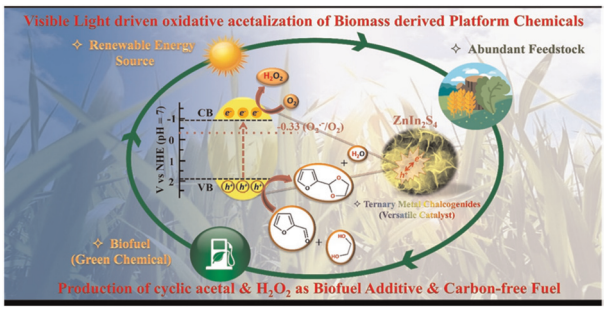

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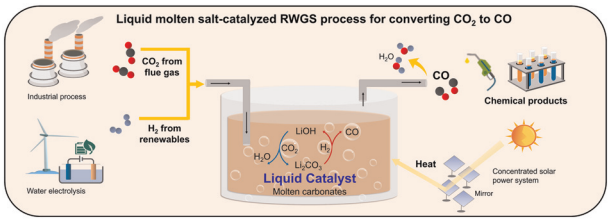
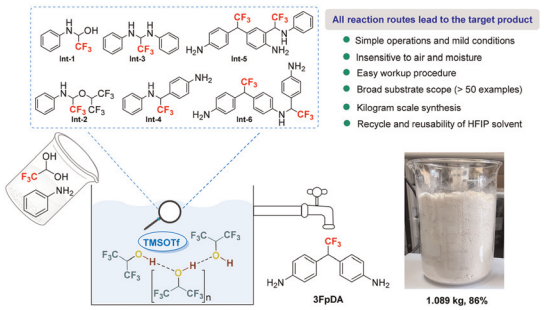


A liquid molten salt catalyst with dynamic active sites for efficient conversion of CO_2 to CO

Rui Yu,* Baoxin Gao, Xi Xiong, Kaifa Du and Kaiming Wu*

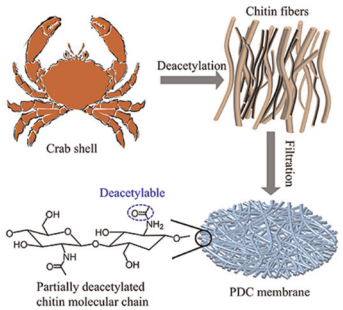
13751



Different paths lead to the same destination: a highly efficient TMSOTf/HFIP catalytic system for large-scale synthesis of fluoroalkyl-containing 4,4′-methylenedianiline (MDA) monomers

Ziyan Wu, Guodong Fang, Xindi Li, Yuhao Wu, Jinshan Li,* Yan Feng, Jialin Xie, Xueqing Zhou, Zhenchang Wen and Chunman Jia*

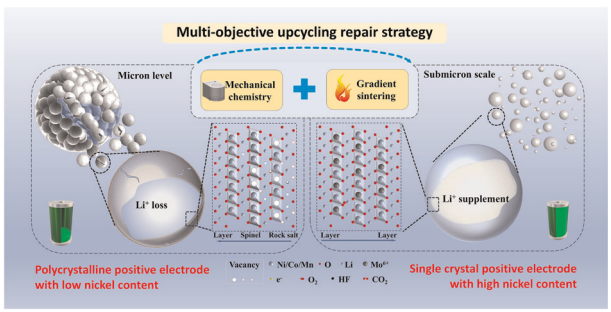
13762



Crab shell-derived chitin nanofiber separator for high-rate potassium-ion batteries

Taohong Wang,* Haoxian Shi, Junyi Wen, Donghao Yang, Boyang Zhou, Hao Xi and Zhen Zhang*

13773



Upcycling spent polycrystal $LiNi_{1/3}Co_{1/3}Mn_{1/3}O_2$ cathodes into single-crystal Ni-rich materials *via* the "four-in-one" upcycling regeneration strategy

Fu Wan,* Da Yang,* Ruiqi Liu, Yupeng Lin, Wenwei Yin, Kaida Hu, Changding Wang, Yujie Zheng* and Weigen Chen

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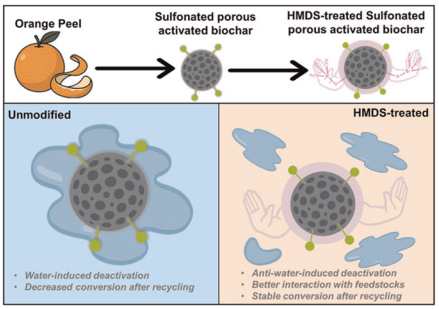
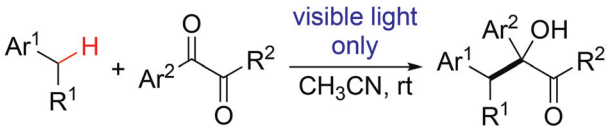
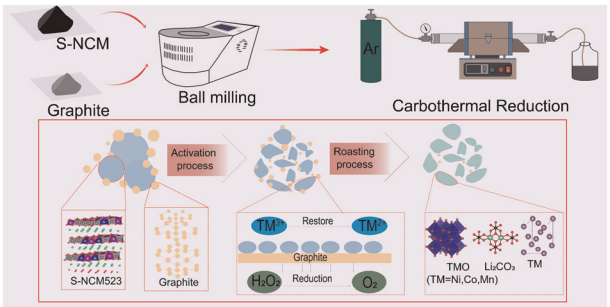
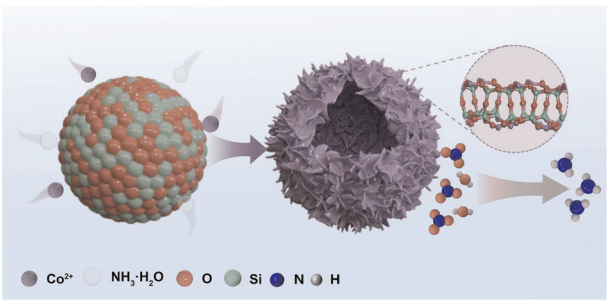




- *broad substrate scope*
- *54 examples, up to 93% yield*
- *external PC-, HAT reagent-, and additive-free*





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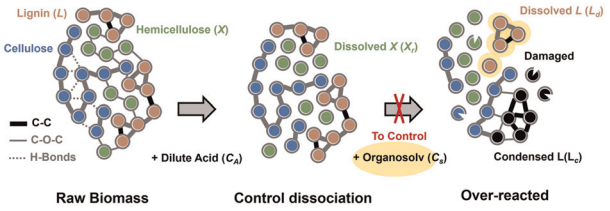
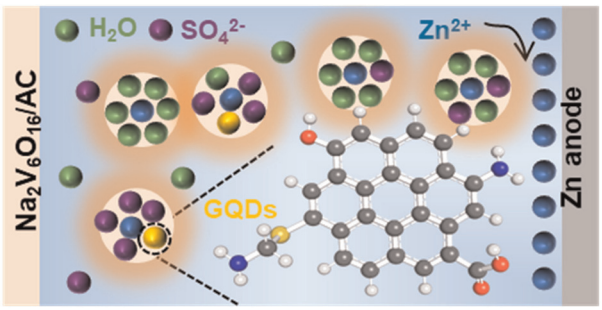


Novel control of fractionation–depolymerization for rapid dissociation of lignin-associated xylan: toward complete lignocellulosic biomass valorization in lignin-first biorefinery

Jianyu Guan, Ho-Yin Tse, Huaimin Wang, Wancheng Zhao, Raffel Dharma Patria, Molly Meng-Jung Li, Song Cheng, Tuo Wang* and Shao-Yuan Leu*

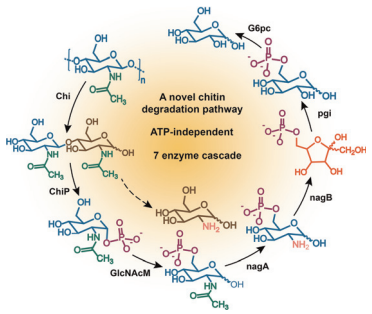
13849



Sulphur-doped graphene quantum dot electrolyte additives for enhanced cycling stability of aqueous zinc-ion batteries

Juanyun Li, Bin Wang, Zaohong Zhang, Peng Xie, Yanming Huang, Chengjie Xin and Ding Chen*

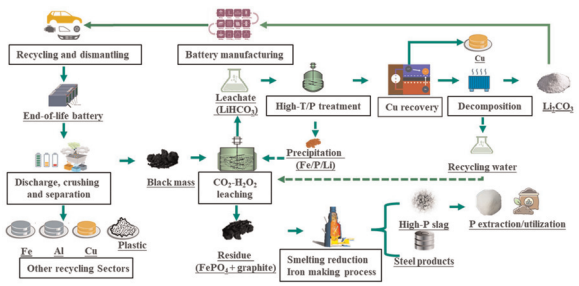
13863



ATP-independent enzymatic cascade for chitin-to-glucose bioconversion

Jin-Da Zhuang, Jin-Min Shi, Ai-Min Lu, Li Liu* and Josef Voglmeir*

13871



The proposed process for recycling end-of-life LFP

Oxidation-CO_2 leaching of spent $LiFePO_4$ for lithium extraction and impurity control

Zhiming Yan,* You Wu, Zepeng Lv, Shiying Qin, Mingrui Yang, Anwar Sattar and Zushu Li*

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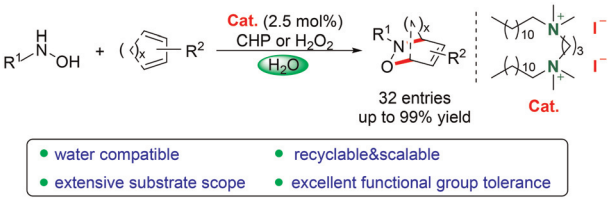

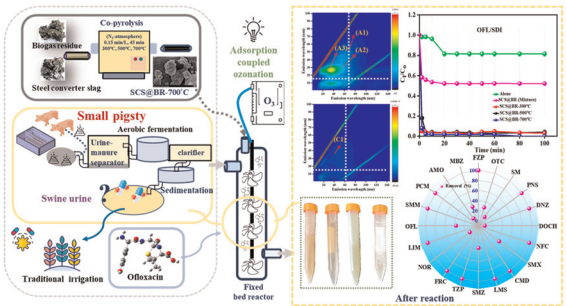

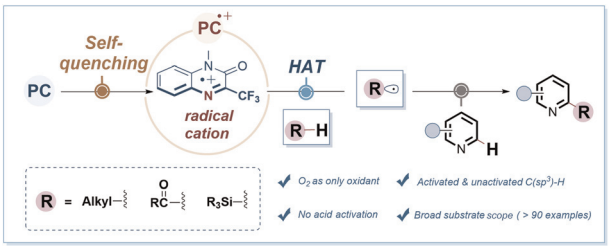

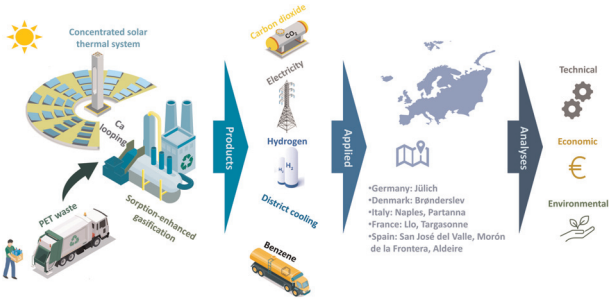

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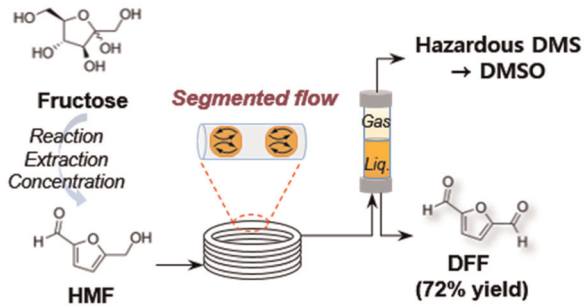
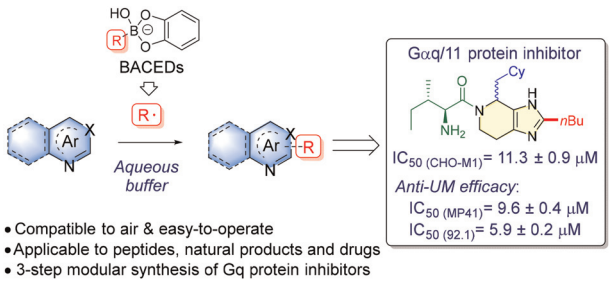


Scalable synthesis of 2,5-diformylfuran in single-phase continuous flow and segmented flow

Min Jeong Kang, Yea Seul Jang and Chan Pil Park*

13944



Chemoselective Minisci alkylation in aqueous medium: a general strategy for functionalization of complex N-heteroarenes and biomolecules

Qi-Long Hu, Jun-Jie Deng, Jia Ye, Jian Li, Albert S. C. Chan, Hang Su* and Xiao-Feng Xiong*

CORRECTION

13953

Correction: A dynamic sulfur-rich network from silicone industry waste

Zixiao Wang, Yuanyuan Qiu, Zheju Cheng, Honglu Huang, Yang Sui, Xin Liu, Yijie Yang, Yue Lu, Huie Zhu, Qingqing Ji* and Jiajun Yan*