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Cutting-edge research for a greener sustainable future

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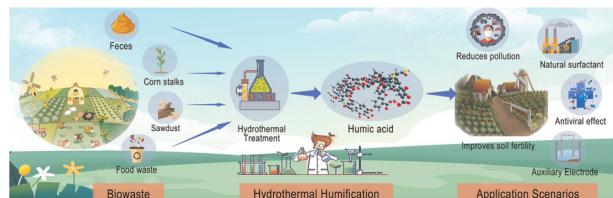
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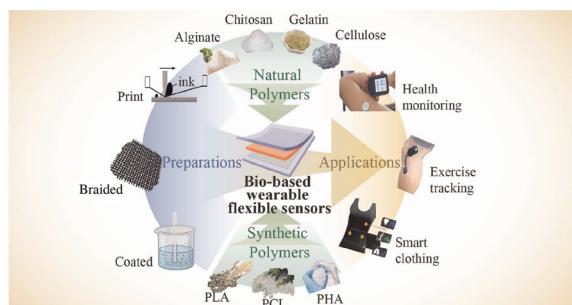
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Advances in bio-based wearable flexible sensors

Ziwen Zhang, Baofang Feng, Jipeng Yan, Weidong Zhao* and Jian Sun*



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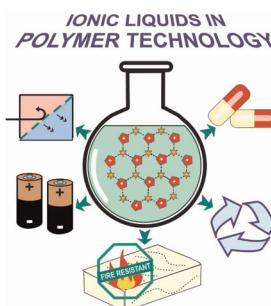
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Ionic liquids in polymer technology

Rebeca Salas, Rocío Villa,* Francisco Velasco, Francisco G. Cirujano, Susana Nieto, Nuria Martín, Eduardo García-Verdugo, Jairton Dupont and Pedro Lozano*

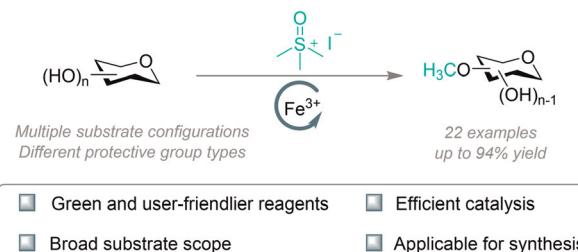


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Trimethylsulfoxonium iodide: a green methylating agent for site-selective methylation of carbohydrates

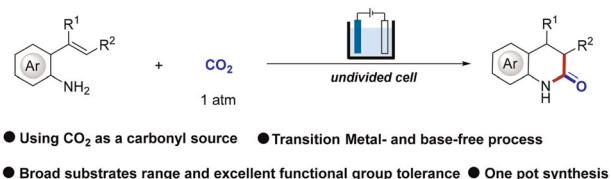
Xiaorui Zhang, Jie Zhao, Qichang Yang, Zhangxuan Chen, Haifeng Wang, Shuang-Xi Gu and Jian Lv*



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Electrochemical lactamization with CO₂

Ranran Zhang, Min Liu, Zhiwei Zhao and Youai Qiu*

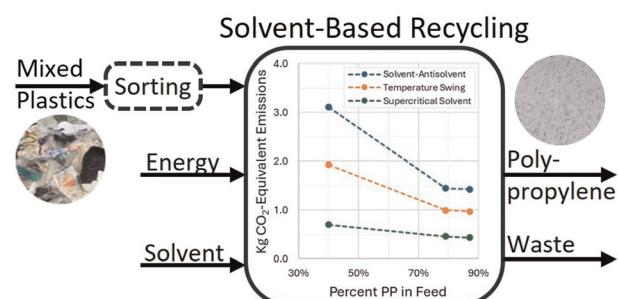
Electrochemical lactamization with CO₂

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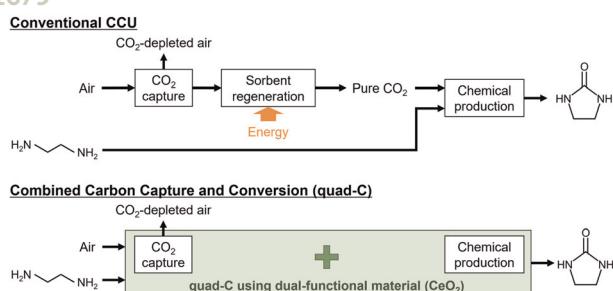
Evaluation of three solvent-based recycling pathways for circular polypropylene

Benjamin Caudle,* Thuy T. H. Nguyen and Sho Kataoka



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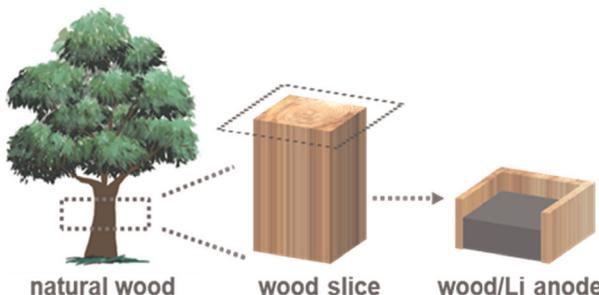
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Energy and cost-saving potential of combined carbon capture and conversion: a pioneering design of a process intensification concept harnessing CeO₂ as a dual-functional material

Koki Yagihara, Jialing Ni, Anqing Wang, Hajime Ohno and Yasuhiro Fukushima*

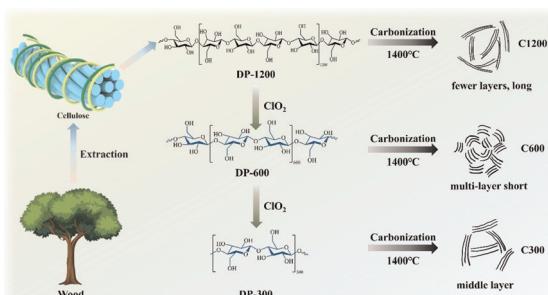
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Natural wood as a lithium metal host

Wei-Jing Chen,* Shang-Jie Yu, Qian Sun, Xin Shen, Peng Shi, Tong-Qi Yuan* and Zhaoqing Lu*

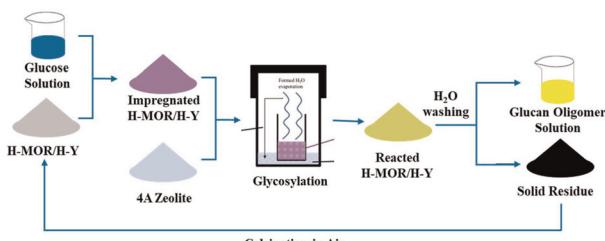
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Facile fabrication of cellulose-derived hard carbon for high-rate performance sodium-ion batteries by regulating degrees of polymerization

Fengyi Luo, Conghua Yi,* Dongjie Yang,* Dezhe Fan, Weifeng Liu, Xueqing Qiu and Wenli Zhang

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Confined synthesis of glucan oligomers from glucose in zeolites

Haotong Liang, Sheng Ye, Qiyu Liu,* Wei Fan and Qiaozhi Ma*

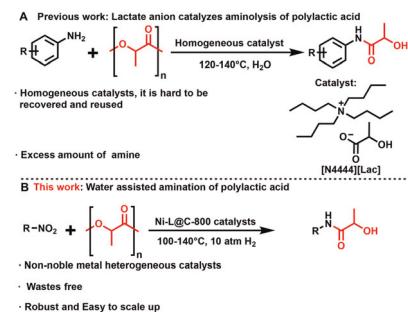


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Jie Gao,* Lan Zhang, Long Luo* and Ning Wang*



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Design of halogen-free hyper-crosslinked porous ionic polymers for efficient CO_2 capture and conversion

Xiaoqing Yang, Jinshan Zhao, Junfeng Zeng,
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Active learning assists chemical intuition identify a scalable conversion of chitin to 3-acetamido-5-acetylfruran

Juliana G. Pereira, João M. J. M. Ravasco,
Latimah Bustillo, Inês S. Marques, Po-Yu Kao, Po-Yi Li,
Yen-Chu Lin, Tiago Rodrigues,* Vasco D. B. Bonifácio,
Andreia F. Peixoto, Carlos A. M. Afonso* and Rafael
F. A. Gomes*

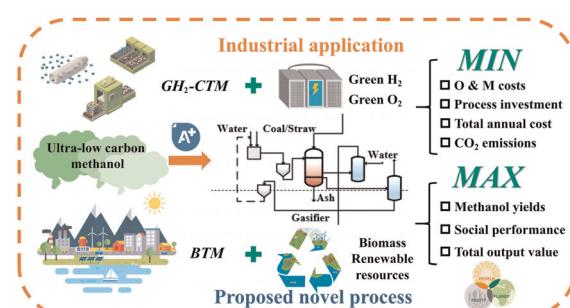


- important N-containing synthon obtained from waste biomass • commercial ionic liquid solvent can be reused
- interesting scaffold for further chemical exploitation • up to 72 % yield from NAG or 10 mg/g of shrimp shell

1747

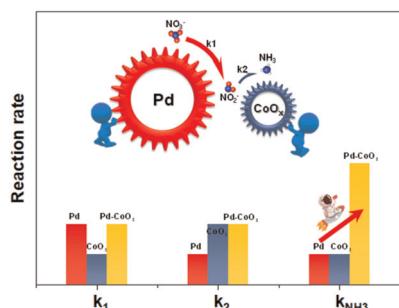
Industrial ultra-low-carbon methanol synthesis routes: techno-economic analysis, life cycle environment assessment and multi-dimensional sustainability evaluation

Dongrui Zhang, Ruqiang Wang, Zhibo Zhang, Hao Yan, Xin Zhou*, Hui Zhao* and Chaohe Yang



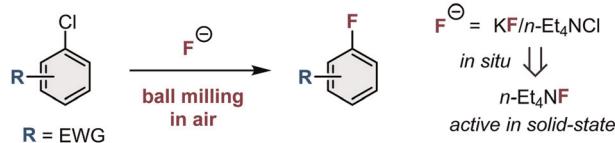
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Electrochemically co-deposited Pd-CoO_x coating for efficient synergistic electrocatalytic reduction of nitrate to ammonia

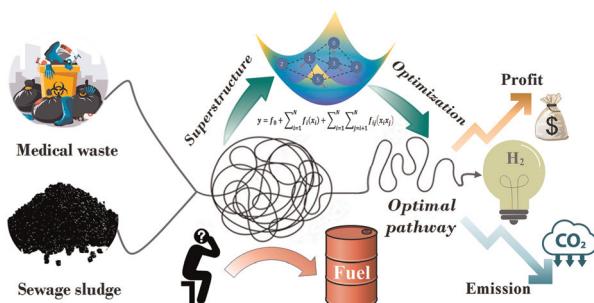
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Solid-state S_NAr fluorination using mechanochemistry

Solid-state aromatic nucleophilic fluorination: a rapid, practical, and environmentally friendly route to N-heteroaryl fluorides

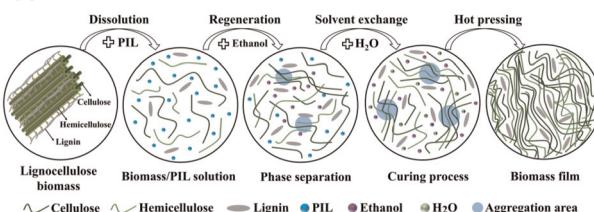
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Turning sewage sludge and medical waste into energy: sustainable process synthesis via surrogate-based superstructure optimization

Jianzhao Zhou, Jingzheng Ren* and Chang He

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Direct dissolution of lignocellulosic biomass by malonic acid-DBU protic ionic liquid and preparation of high-performance all-biomass films

Long Zhang, Boxiang Zhan, Shangzhong Zhang, Haiyuan Ji, Shen Peng, Minghui Fan and Lifeng Yan*

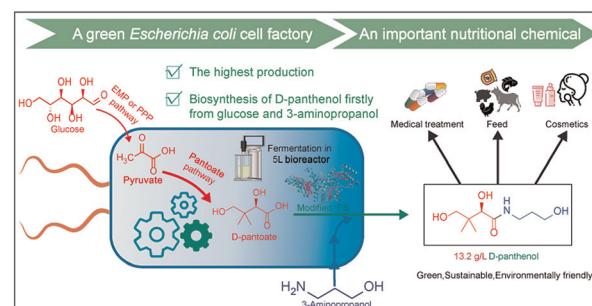


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Metabolic engineering of *Escherichia coli* for the production of D-panthenol from 3-aminopropanol and glucose

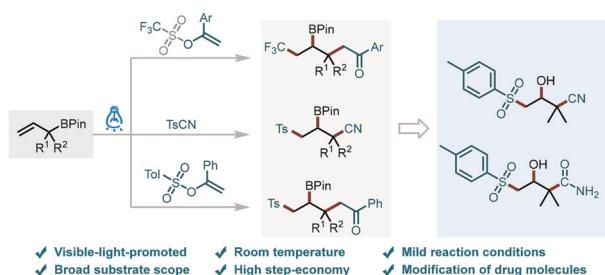
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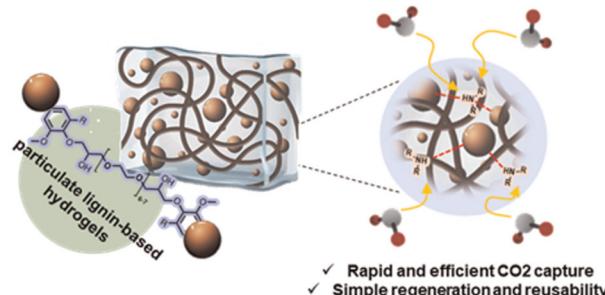
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Monolithic, hybrid and particulate lignin-based hydrogels for sustainable CO₂ capture

Adrian Moreno,* Javier Delgado-Lijarcio, Juan C. Ronda, Marina Galà and Gerard Lligadas*



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Microwave-assisted ethanol dehydration to ethylene over biochar-based catalyst at low temperature

Li Yang, Bonan Liu,* Yingying Zhao, Zijian Zhang, Hanyu Wu, Minyi He, Chao Tang, Jun Zhao,* Yu Fan and Wangjing Ma*

