

Green Chemistry

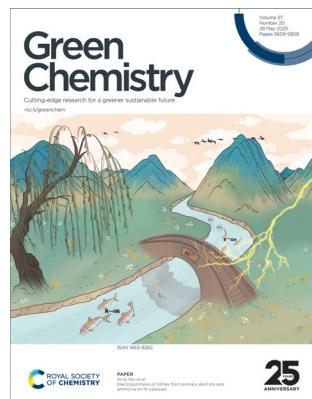
Cutting-edge research for a greener sustainable future

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ISSN 1463-9262 CODEN GRCHFJ 27(20) 5659–5908 (2025)



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See Ning Yan *et al.*,
pp. 5715–5727.

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Sustainable Polymer
Technologies (SPOT) Team,
pp. 5709–5714.

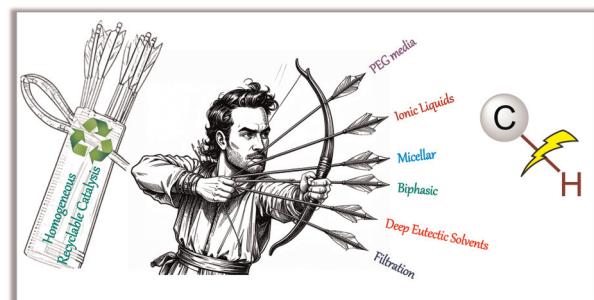
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TUTORIAL REVIEW

5667

Green innovations in C–H bond functionalisation: exploring homogeneous recyclable catalytic systems

Dewal S. Deshmukh, Sanjay Singh,
Kirtikumar C. Badgugar, Vivek T. Humne,
Gajanan V. Korpe* and Bhalchandra M. Bhanage*

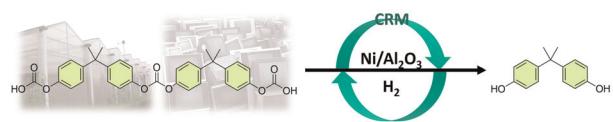


COMMUNICATION

5709

Monomer recycling of virgin polycarbonate (PC), end-of-life PC and PC-ABS blends by Ni-catalyzed reductive depolymerization

Carlos Marquez,* Annelore Aerts, Dambarudhar Parida,
Illian Glassee, Harisekhar Mitta, Lingfeng Li,
Kevin M. Van Geem, Karolien Vanbroekhoven,
Elias Feghali* and Kathy Elst



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Fundamental questions
Elemental answers

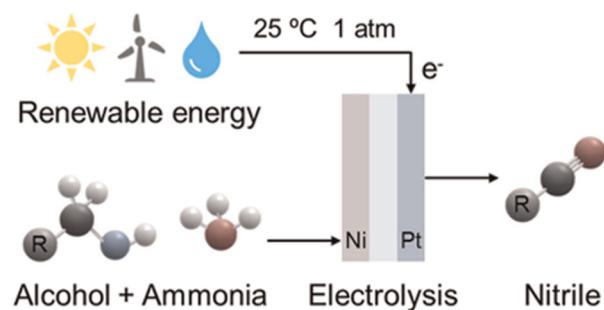
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PAPERS

5715

Electrosynthesis of nitriles from primary alcohols and ammonia on Ni catalysts

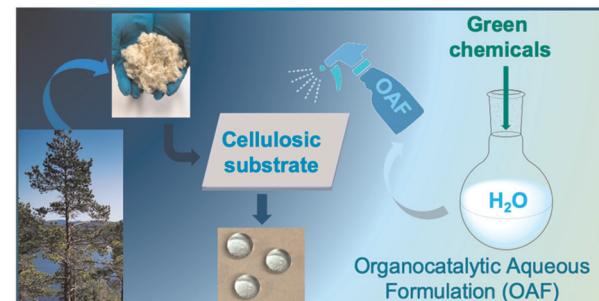
Yiying Xiao, Chia Wei Lim, Linfeng Gao and Ning Yan*



5728

Organocatalytic aqueous formulations: green organocatalytic hydrophobization of heterogeneous polysaccharide-based materials in water through "on-water" mechanisms

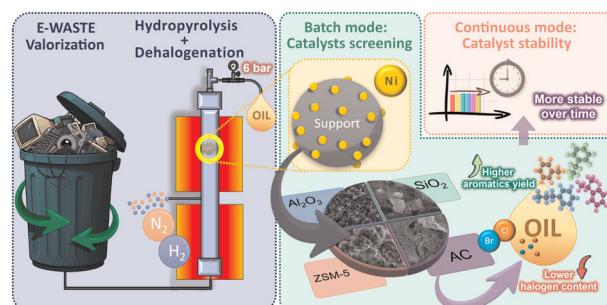
Rana Alimohammadzadeh,* Dylan Ferreira, Zine Eddine Hamdouche, Tanel Möistlik and Armando Córdova*



5736

Assessing supported nickel catalysts for the upcycling of real WEEE plastics through low-pressure hydropyrolysis and dehalogenation

Lidia Amodio, Jennifer Cueto, Julio López, Héctor Hernando, Patricia Pizarro and David P. Serrano*



5753

Closed-loop chemical recycling of polyethylene furan-2,5-dicarboxylate (PEF) under microwave-assisted heating

Sean Najmi, Dylan Huang, Andrew Duncan, Daniel Slanac, Keith Hutchenson, James Hughes, Raja Poladi and Dionisios G. Vlachos*



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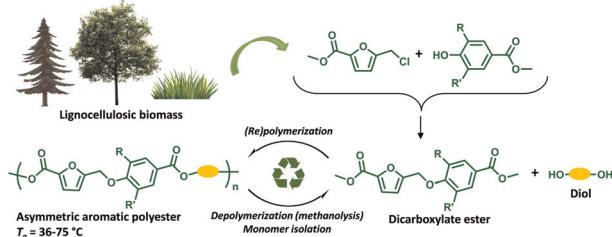
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Electrocatalytic linear coupling of alkenes via radical anion under mild conditions

Jingao Xiao, Feng Long, Sheng Yi, Haifang Luo, Changqun Cai and Hang Gong*

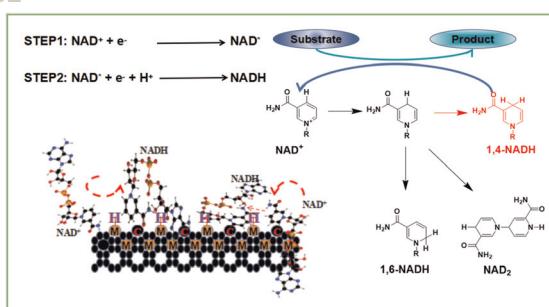
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Closed-loop chemically recyclable aromatic polyesters based on asymmetric dicarboxylates obtainable from lignocellulose

Nitin G. Valsange, Niklas Warlin, Smita V. Mankar, Nicola Rehnberg, Baozhong Zhang* and Patric Jannasch*

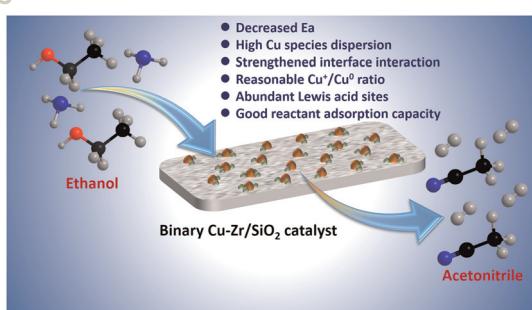
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Metal–carbon electrode optimization for efficient electrochemical regeneration of 1,4-NADH: a new approach for sustainable biochemical synthesis

Yang Zhou, LingLong Huang, Yuan Tao, ChangQing Luo, JianMiao Xu,* ZhiQiang Liu and YuGuo Zheng

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Selective production of acetonitrile via dehydroamination of ethanol over a stable Cu–Zr/meso SiO₂ catalyst

Xiaomin Zhang, Mo Zhou, Yujia Zhao, Jifeng Pang, Pengfei Wu,* Zhen Guo* and Mingyuan Zheng*

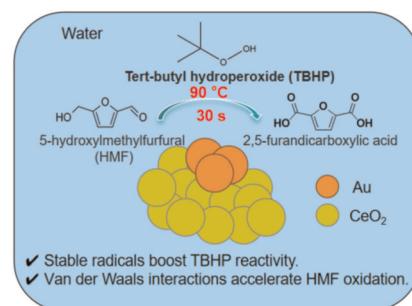


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tert-Butyl hydroperoxide-mediated rapid 30-second oxidation of 5-hydroxymethylfurfural to 2,5-furandicarboxylic acid

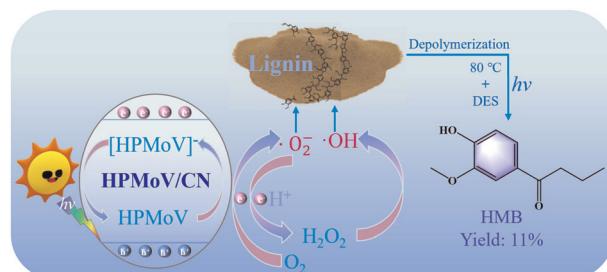
Jian Liu and Ximing Zhang*



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Photo-promoted production of a new monophenolic compound from larch lignin with polyoxometalates supported on $\text{g-C}_3\text{N}_4$ under ambient conditions

He Wan, Yang Liu, Chunhui Yu, Kuiyuan Cao, Yongwei Han, Zhong Sun, Junyou Shi and Xixin Duan*



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Towards ultra-stable aqueous zinc-ion batteries *via* electrochemical polymerization of phthalimido-anchored benzoquinone

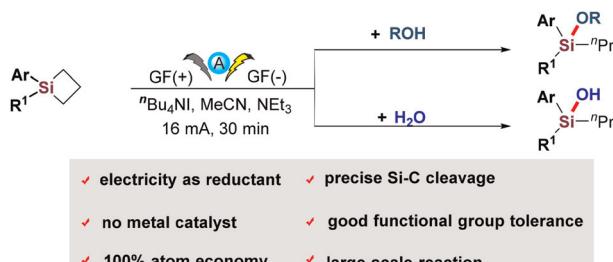
Dan Wang,* Yu-Xuan Bai, Zi-Xiang Zhou, Wei Cao, Yang-Min Ma and Chao Wang*



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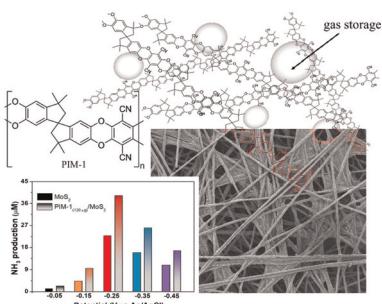
Electrochemically driven silicon–carbon bond cleavage of silacyclobutanes: a transition metal-free approach

Yuanmeng Li, Jianshu Yue, Yinghui Shao, Yanni Yue,* Hongping Deng, Xiaoli Bu, Mengtao Ma* and Fei Xue*



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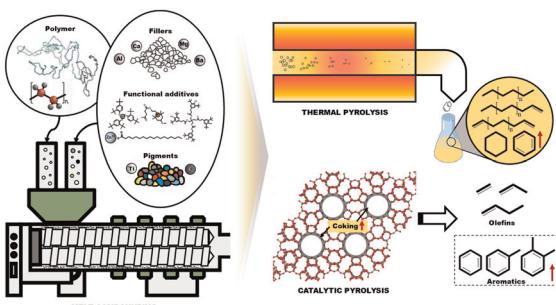
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Enhancing the electroreduction of N₂ and/or O₂ on MoS₂ using a nanoparticulate intrinsically microporous polymer (PIM-1)

Caio V. S. Almeida, Lara K. Ribeiro, Lucia H. Mascaro,* Mariolino Carta, Neil B. McKeown and Frank Marken*

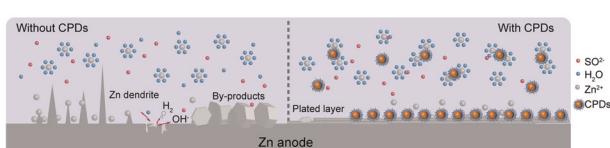
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Influence of functional additives, fillers, and pigments on thermal and catalytic pyrolysis of polyethylene for waste plastic upcycling

Harish Radhakrishnan, Abdulrahman A. B. A. Mohammed, Isabel Coffman and Xianglan Bai*

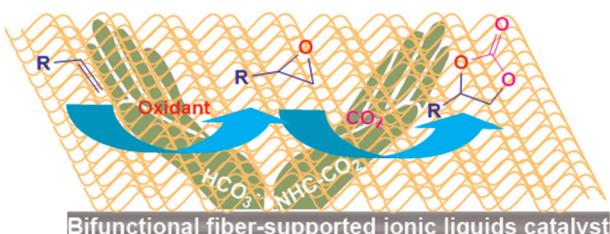
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Carbonized polymer dots as electrolyte additives for suppressing Zn dendrite growth, corrosion, and the HER in Zn-ion batteries

Xiao-Yan Shen, Guo-Duo Yang, Xin-Yao Huang, Yan-Fei Li, Zhuo Wang, Tong Wang, Ru-Yi Liu, Yi-Han Song, Ming-Xiao Deng* and Hai-Zhu Sun*

5892



Tandem reaction of olefins and CO₂ to cyclic carbonates over polyetheretherketone fiber-supported ionic liquids via relay catalysis in a spinning basket reactor

Xian-Lei Shi,* Ruifeng Jing, Qianqian Hu, Honghui Gong, Jingyi Wang, Gang Xu, Bowen Liu* and Ao Zhang

