

Green Chemistry

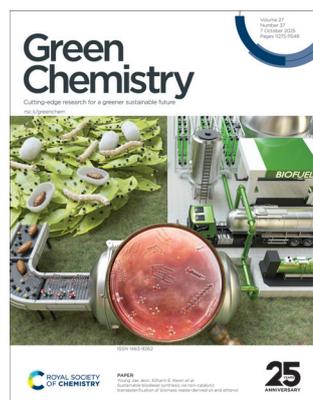
Cutting-edge research for a greener sustainable future

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ISSN 1463-9262 CODEN GRCHFJ 27(37) 11275–11548 (2025)



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See Magno Aparecido Gonçalves Trindade *et al.*, pp. 11354–11364.

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EDITORIAL

11284

Chemistry finds green pastures in Spain

Pedro Lozano,* Arjan W. Kleij* and Eduardo Garcia-Verdugo*

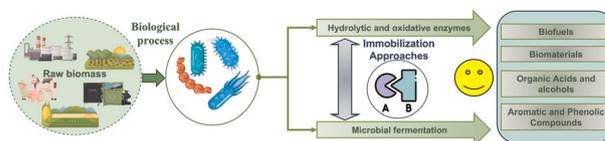


CRITICAL REVIEW

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Enzyme immobilization advances: a key to unlocking renewable bioenergy potential

Mohamed E. Hassan, Xuhai Zhu, Evanildo F. de Souza, Jr., Magdy M. Elnashar and Fang Lu*



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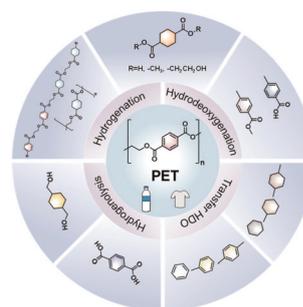
Fundamental questions
Elemental answers

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Catalytic reductive conversion of polyethylene terephthalate (PET) plastic waste into fuels, valuable chemicals and degradable polymers

Jingyu Liu, Shuyan Yi, Jingwen Cheng and Sibao Liu*

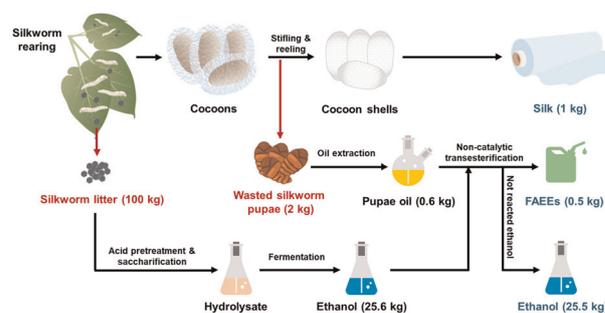


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Sustainable biodiesel synthesis via non-catalytic transesterification of biomass waste-derived oil and ethanol

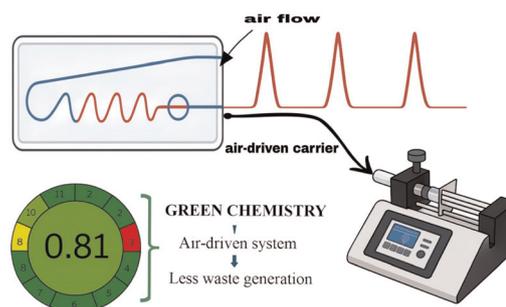
Jee Young Kim, Dohee Kwon, Jun Ho Yim, Youngju Kim, Young Jae Jeon* and Eilhann E. Kwon*



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Beyond bubbles: greener flow-based electroanalysis by an air-driven carrier

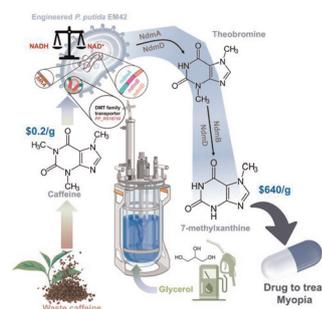
Tayná Silva Bernardino Barros, Eloise de Lima Osorio, Cláudio Teodoro de Carvalho, Raphael Rodrigues, Lucio Angnes and Magno Aparecido Gonçalves Trindade*



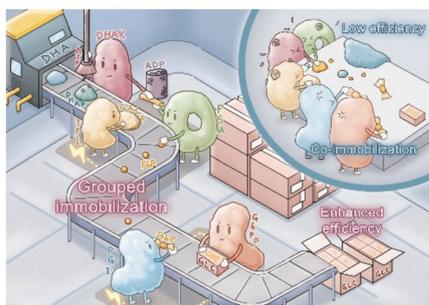
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Engineered *Pseudomonas putida* monoculture system for green synthesis of 7-methylxanthine

Bhagya Jayantha, Shuyuan Zhang, Ryan M. Summers, Gamini P. Mendis and Lahiru N. Jayakody*



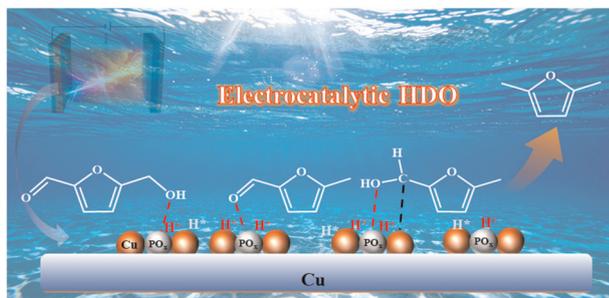
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Boosting multi-enzyme cascade activity for glucose biosynthesis by kinetics-oriented grouped immobilization

Ruobing Xin, Yuyao Wang, Qiang Chen,*
Jiangang Yang,* Yujun Wang* and Guangsheng Luo

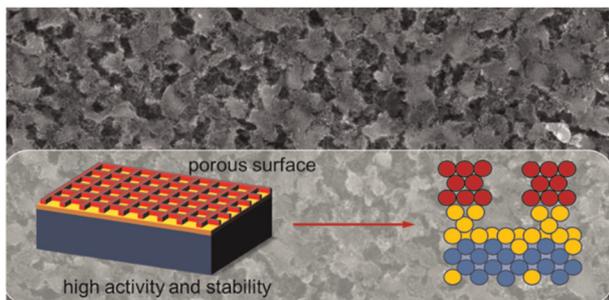
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Electrocatalytic hydrodeoxygenation of 5-hydroxymethylfurfural to 2,5-dimethylfuran over PO_x modified Cu electrocatalysts: the promoting role of PO_x

Yiwei Zhao, Chao Zhang,* Zuhang Jin, Cheng Tao and Tingting Xiao

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Nanoporous Ti layer encapsulating stainless steel for alkaline water electrolysis: superior electrocatalytic and structural stability under industrially relevant conditions

Peizong Duan, Kai Zhao, Xiaoyi Jiang, Yuchen Liu, Le Ke, Xiude Wang, Liuyuan Ran, Xian-Zong Wang and Ning Yan*

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Dynamic tailoring of the gradient porosity of biomass-derived porous carbons for highly effective CO₂ capture

Weiwei Shi, Yanzhen Guo, Qixin Lu, Haitao Li, Yachao Liang, Faxue Ma, Baocheng Yang and Binbin Chang*

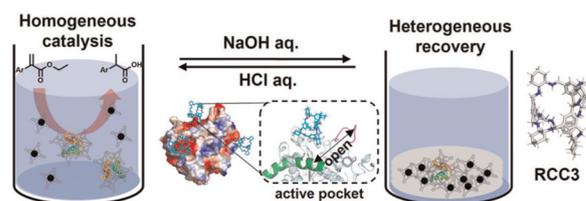


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pH-Responsive aqueous homogeneous metal/enzyme catalysis and heterogeneous recovery enabled by organic cages

Zhongxu Guo, Shiqi Gao, Pengbo Liu, Yunting Liu* and Yanjun Jiang*

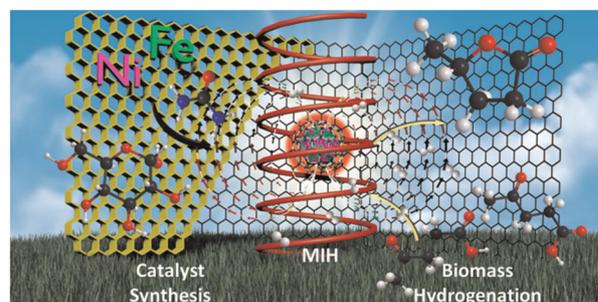


- ✓ Recyclable homogeneous catalysis
- ✓ Enhanced mass transfer
- ✓ Stabilized metal/enzyme catalysts
- ✓ Activated enzyme conformation

11438

Carbon-encapsulated FeNi nanoparticles for efficient magnetically induced levulinic acid hydrogenation

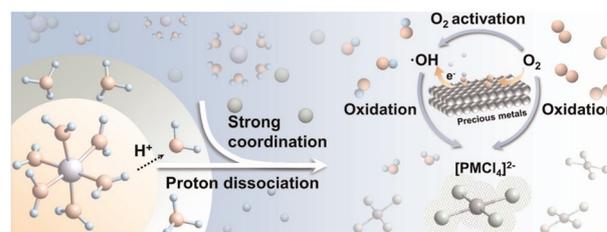
Tatiana Zanette, Adrián García-Zaragoza, Jaime Mazarío, Jordan Santiago Martinez, Bruno Chaudret, Christian Cerezo-Navarrete* and Pascual Oña-Burgos*



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Self-initiated radical leaching for green recovery of precious metals

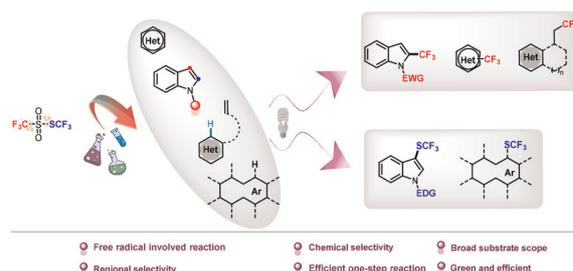
Chenchen Zhu, Anting Ding, Chuanyin Liu, Ming Li and Chengliang Xiao*



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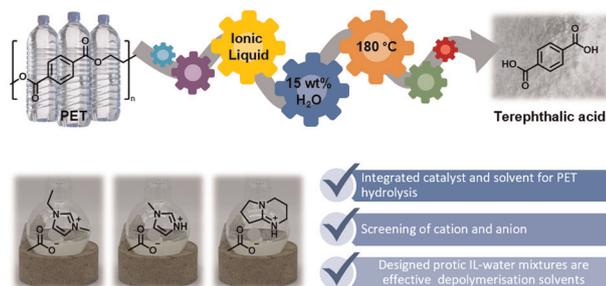
Visible-light-driven TTST enables divergent synthesis of trifluoromethylated and trifluoromethylthiolated products through chemo- and regioselectivity

Shuo Li, Hao Zheng, Yuyan Xu, Chuchu Xie, Jie Sun and Zhiwei Chen*



PAPERS

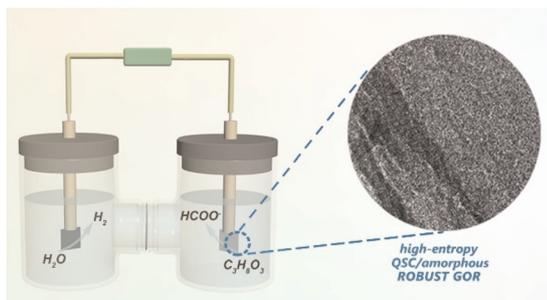
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The acetate anion promotes hydrolysis of poly(ethylene terephthalate) in ionic liquid–water mixtures

Maariyah Y. Suleman, Harriet L. Judah, Panagiotis Bexis, Paul Fennell, Jason P. Hallett and Agnieszka Brandt-Talbot*

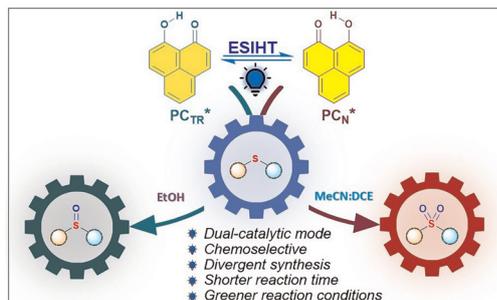
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A quasi-single-crystalline/amorphous high-entropy layered hydroxide for robust glycerol valorization to formate

Wenqian Zheng, Xianghui Pang, Changgang Dong, Liheng Sun, Jiaqi Guo, Pin Hao, Fengcai Lei, Xu Sun* and Junfeng Xie*

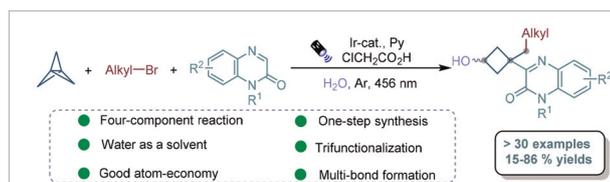
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Insights into the excited state of a phenalenyl-based photocatalyst for facile divergent synthesis of sulfoxides and sulfones

Vishali Pathania, Mall Akanksha, Shubhangi Majumdar, Prमित K. Chowdhury and Sudipta Raha Roy*

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Photocatalytic synthesis of 3,3-disubstituted cyclobutanols via trifunctionalization of [1.1.1]propellane

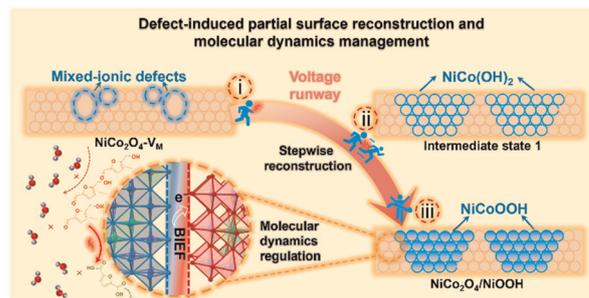
Jiacheng Li, Yue Wang, Yijun Jin, Longyi Li, Guoxiang Bao, Xingyi Zhu* and Xinpeng Jiang*



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Electrochemical upgrading of 5-hydroxymethyl-furfural via a defect-rich NiCo_2O_4 array

Xiao Zhou, Zhixian Mao, Wen Li, Zeting Gong, Wanxin Liu, Yi Li, Di Yin, Yijin Wu,* Yongsheng Yao* and Xiaolin Wei*



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Life cycle assessment and technoeconomic analysis of naphtha cracking electrification using plasma for carbon neutrality

Serang Kwon and Seong-kyun Im*

