

Green Chemistry

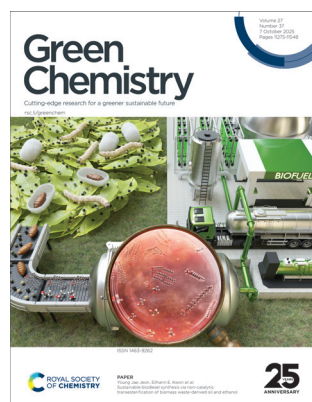
Cutting-edge research for a greener sustainable future

rsc.li/greenchem

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See Young Jae Jeon, Eilhann E. Kwon *et al.*, pp. 11343–11353.

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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*

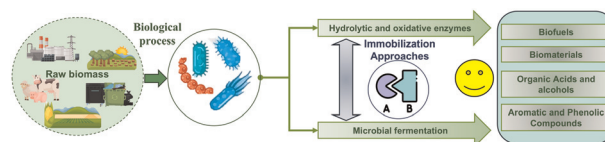


CRITICAL REVIEW

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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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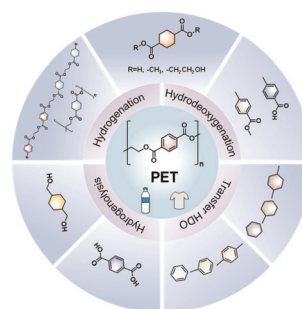
Fundamental questions
Elemental answers

TUTORIAL REVIEW

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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*

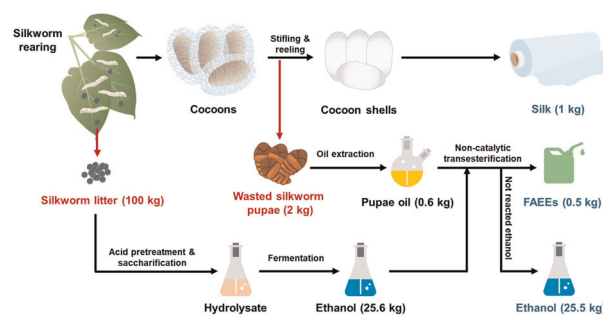


PAPERS

11343

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

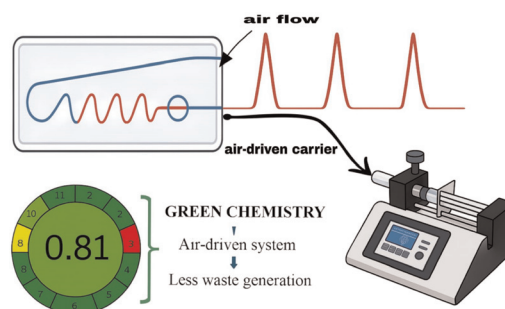
Jee Young Kim, Dohee Kwon, Jun Ho Yim, Youngju Kim, Young Jae Jeon* and Eilhann E. Kwon*



11354

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

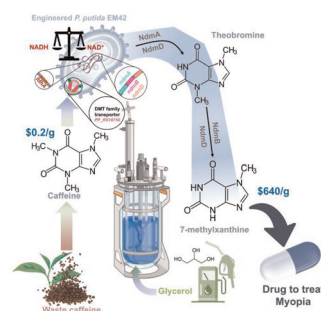
Tayná Silva Bernardino Barros, Eloise de Lima Osorio, Cláudio Teodoro de Carvalho, Raphael Rodrigues, Lucio Angnes and Magno Aparecido Gonçalves Trindade*



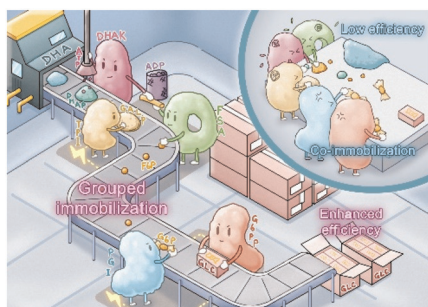
11365

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*



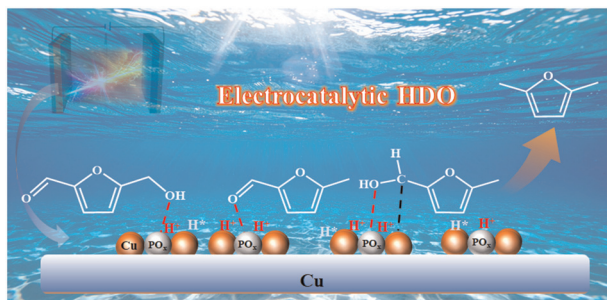
11380



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

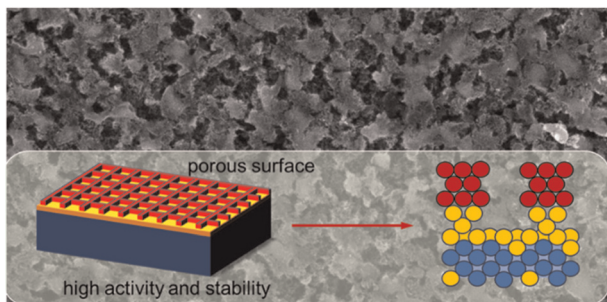
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Electrocatalytic hydrodeoxygenation of 5-hydroxymethylfurfural to 2,5-dimethylfuran over PO_x modified Cu electrocatalysts: the promoting role of PO_x

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

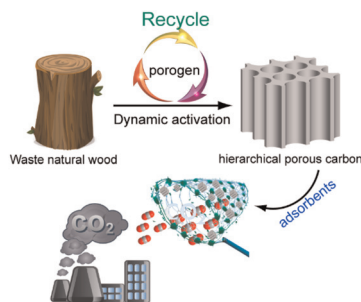
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Nanoporous Ti layer encapsulating stainless steel for alkaline water electrolysis: superior electrocatalytic and structural stability under industrially relevant conditions

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

11416



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*

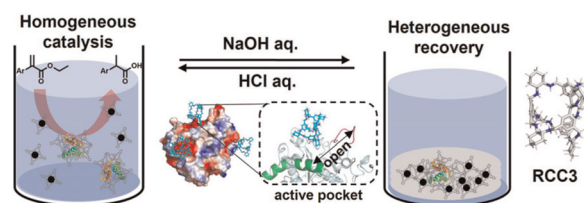


PAPERS

11429

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*

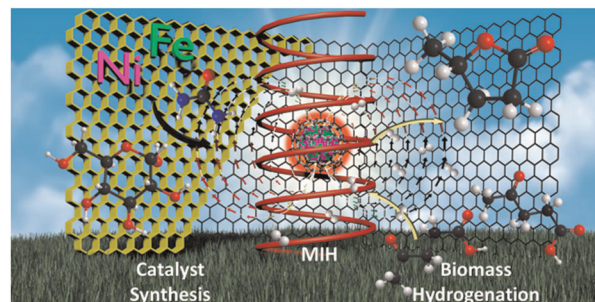


- ✓ Recyclable homogeneous catalysis
- ✓ Enhanced mass transfer
- ✓ Stabilized metal/enzyme catalysts
- ✓ Activated enzyme conformation

11438

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

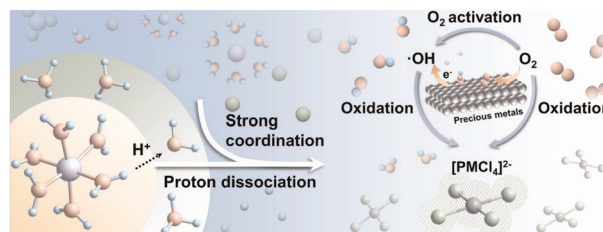
Tatiana Zanette, Adrián García-Zaragoza, Jaime Mazarío, Jordan Santiago Martinez, Bruno Chaudret, Christian Cerezo-Navarrete* and Pascual Oña-Burgos*



11455

Self-initiated radical leaching for green recovery of precious metals

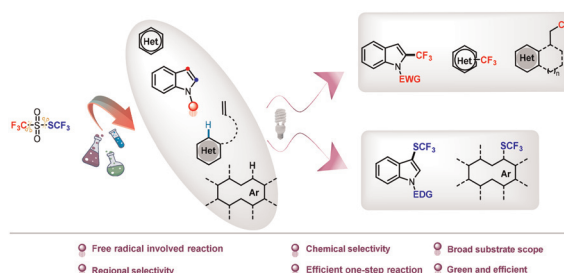
Chenchen Zhu, Anting Ding, Chuanyin Liu, Ming Li and Chengliang Xiao*



11466

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*

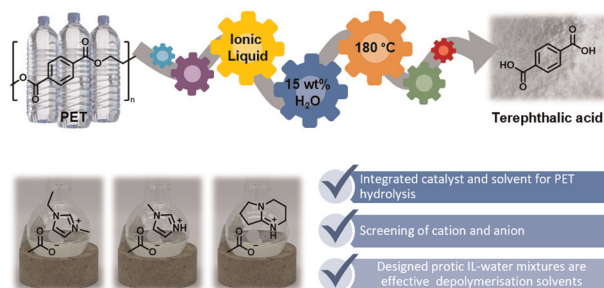


- Free radical involved reaction
- Chemical selectivity
- Broad substrate scope
- Regional selectivity
- Efficient one-step reaction
- Green and efficient



PAPERS

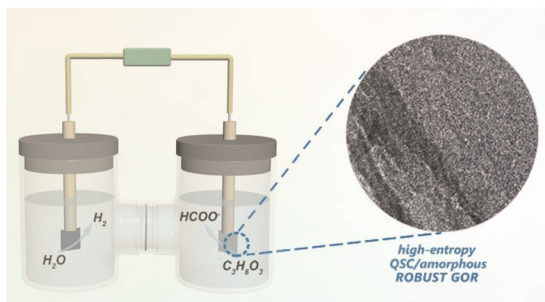
11475



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*

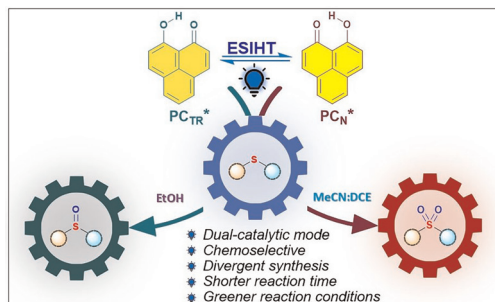
11491



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*

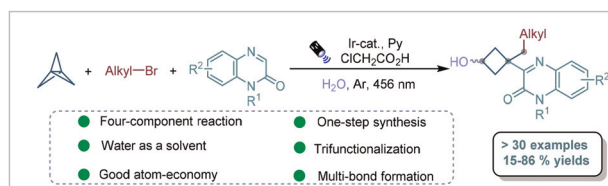
11500



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*

11510



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

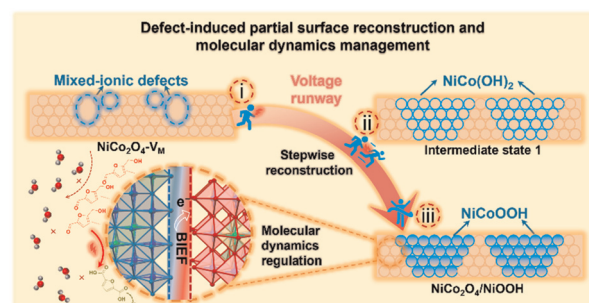
Jiacheng Li, Yue Wang, Yijun Jin, Longyi Li, Guoxiang Bao, Xingyi Zhu* and Xinpeng Jiang*



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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*



11530

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

Serang Kwon and Seong-kyun Im*

