Green Chemistry

Cutting-edge research for a greener sustainable future

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See Sara Iborra, Avelino Corma et al., pp. 9118-9131.

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See Xiujuan Li et al., pp. 9132-9141.

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EDITORIAL

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Outstanding Reviewers for Green Chemistry

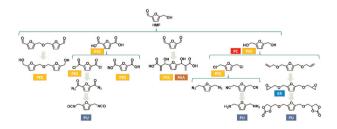


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Beyond 2,5-furandicarboxylic acid: status quo, environmental assessment, and blind spots of furanic monomers for bio-based polymers

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RSC Applied Interfaces



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Fundamental questions Elemental answers

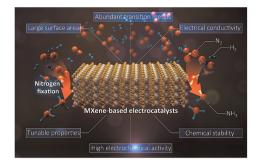
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CRITICAL REVIEWS

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Next-generation nitrogen fixation strategy: empowering electrocatalysis with MXenes

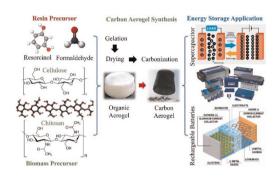
Siavash Iravani,* Atefeh Zarepour, Arezoo Khosravi, Rajender S. Varma* and Ali Zarrabi*



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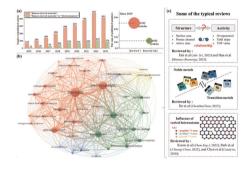
Progress in the synthesis of carbon aerogels for advanced energy storage applications

Yafei Shen* and Jinbei Yang



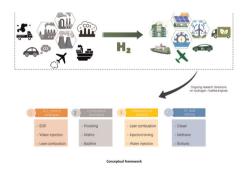
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Xiuzheng Zhuang, Huiyi Liang, Xiaohong Hu, Song Li, Xinghua Zhang, Qi Zhang and Longlong Ma*

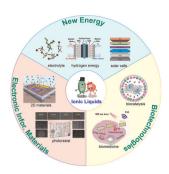


Race towards net zero emissions (NZE) by 2050: reviewing a decade of research on hydrogenfuelled internal combustion engines (ICE)

Jeffrey Dankwa Ampah, Chao Jin,* Sandylove Afrane, Abdulfatah Abdu Yusuf, Haifeng Liu* and Mingfa Yao



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The advanced applications of ionic liquids in new energy, electronic information materials, and biotechnologies

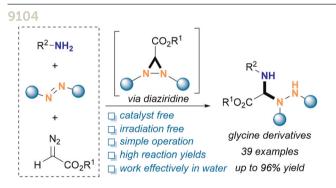
Suojiang Zhang, * Yuhong Huang, Lan Zhang, Yanrong Liu, Qingging Miao, Ruixia Liu, Weizhen Zhao, Yanyan Diao and Kun Dong



Towards the sustainable production of biomassderived materials with smart functionality: a tutorial review

Ruibin Wang, Youquang Feng, Donggi Li, Kaixin Li* and Yong Yan*

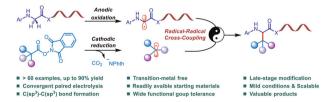
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Chang-Long Rong, Qiang-Qiang Li* and Jun Xuan*

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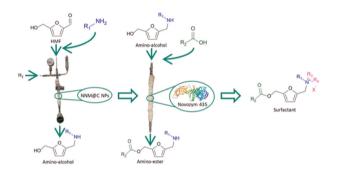
Metal-free decarboxylative C(sp³)-C(sp³) bond formation for the synthesis of unnatural amino acids and peptides via convergent paired electrolysis enabled radical-radical cross-coupling

Zenghui Ye, Na Chen, Hong Zhang, Yanqi Wu and Fengzhi Zhang*

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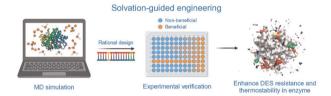
Chemoenzymatic synthesis of amino-esters as precursors of ammonium salt-based surfactants from 5-hydroxymethylfurfural (HMF)

Carlos Moriana Herraiz, Karen S. Arias, Maria J. Climent, Sara Iborra* and Avelino Corma*



Harnessing solvation-guided engineering to enhance deep eutectic solvent resistance and thermostability in enzymes

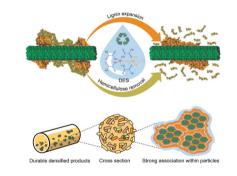
Yijie Sheng, Haiyang Cui, Xinyue Wang, Minghui Wang, Ping Song, He Huang and Xiujuan Li*



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Molecular origins of enhanced bioproduct properties by pretreatment of agricultural residues with deep eutectic solvents

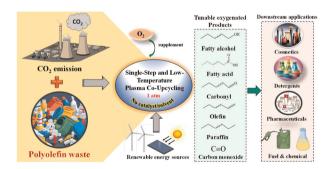
Yan Yu, Zhangmin Wan, Jerry M. Parks, Shahabaddine Sokhansanj, Orlando J. Rojas* and Jeremy C. Smith*



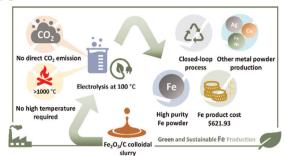
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Non-equilibrium plasma co-upcycling of waste plastics and CO₂ for carbon-negative oleochemicals

Harish Radhakrishnan, Samirah Gnangbe, Alif Duereh, Sultan Ul Iffat Uday, Lusi A, Haiyang Hu, Hui Hu, Mark Mba Wright* and Xianglan Bai*



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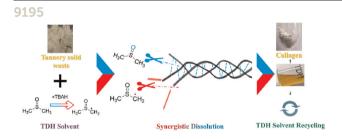
Sustainable iron production *via* highly efficient low-temperature electrolysis of 3D conductive colloidal electrodes

Panya Thanwisai, Zeyi Yao, Muntasir Shahabuddin, Jiahui Hou, Jinzhao Fu, Adam C. Powell IV and Yan Wang*

Glycosyltransferase with narrow substrate scope Glycosyltransferase with wide substrate scope Glycosyltransferase wit

A comparative molecular dynamics approach guides the tailoring of glycosyltransferases to meet synthetic applications

Peng Zhang, Shuaiqi Meng, Zhongyu Li, Dennis Hirtz, Lothar Elling, Leilei Zhu, Yu Ji* and Ulrich Schwaneberg*



Extraction of collagen from bovine tannery solid waste preserving original conformation *via* radical initiation and hydrogen bond reformation

Fang Luo, Zhuo Liu, Peng Zhou, Siqi Wang, Lingzhi He, Yi Wu, Lidan Du, Mengjie Jiao, Zhuwei Liao and Zhuqi Chen*

Biomass derived activated carbon Pretreatment Chemical activation Hydrothermal carbonization Chemical activation Electrode fabrication

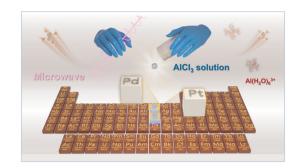
Comparative environmental impact assessment of activated carbon electrodes for supercapacitors

Santamon Luanwuthi, Thanyapak Akkharaamnuay, Arisa Phukhrongthung and Channarong Puchongkawarin*

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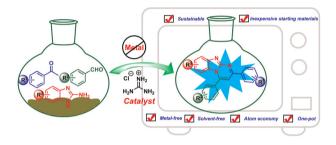
Green palladium and platinum recovery by microwave-assisted aluminum chloride solution

Anting Ding, Chuanying Liu and Chengliang Xiao*



Guanidine hydrochloride (GuHCl)-catalysed microwave-mediated solvent- and metal-free synthesis of pyrimido[1,2-a]benzimidazole from aryl aldehyde and aryl methyl ketone

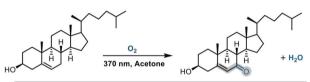
Rushikant Jagdale, Mohammad Zahid Hussain, Koushik Goswami, Ramalingam Peraman and Anupam Jana*



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Selective C(sp3)-H bond aerobic oxidation enabled by a π -conjugated small molecule-oxygen charge transfer state

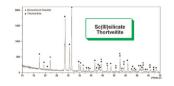
Panyi Huang, Yan Xu, Haijing Song, Jiayin Wang, Jiayang Wang, Jianjun Li, Bin Sun* and Can Jin*

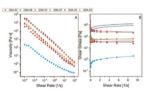


- catalyst-, additive-free
- feasible with sunlight
- 27 examples of natural products
- aerobic oxidation
- H₂O as the only waste
- Excellent atom economy

A new scandium based catalyst for the green synthesis of polyols-polyesters starting from waste raw materials

Onofrio Losito, Lorenzo Veronico, Alessia De Cataldo, Michele Casiello, Caterina Fusco, Luigi Gentile, Ernesto Mesto, Emanuela Schingaro and Lucia D'Accolti*





9264 (Li₂S + Sn + S) (H₂O) (Li₄SnS₄-H₂O) (Li₁₀SnP₂S₁₂-H₂O-THF (Li₁₀SnP₂S₁₂-H₂O-THF (C_{22C} = 5.9 × 10⁻¹ S cm⁻¹)

Aqueous solution synthesis of lithium-ion conductive tin-based sulphide electrolytes

Takuya Kimura, Hayata Tanigaki, Atsushi Sakuda, Masahiro Tatsumisago and Akitoshi Hayashi*