

# Green Chemistry

Cutting-edge research for a greener sustainable future

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## IN THIS ISSUE

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**Cover**  
See Su-Rong Sun *et al.*,  
pp. 14807–14823.

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27, 14807.



**Inside cover**  
See Feng Xu *et al.*,  
pp. 14824–14837.

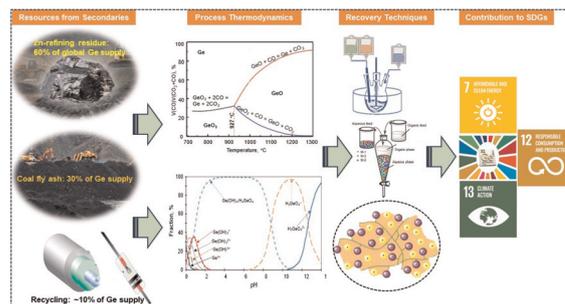
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27, 14824.

## CRITICAL REVIEW

14744

### Harnessing germanium from industrial residues and electronic waste for a sustainable energy future

Rajiv Ranjan Srivastava and Sadia Ilyas\*

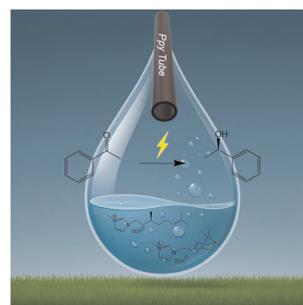


## COMMUNICATIONS

14769

### Tunable stereoselectivity in a wireless electrochemical microreactor using natural chiral ionic liquids

Sara Grecchi,\* Andrea Mezzetta, Lorenzo Guazzelli and Serena Arnaboldi\*



# RSC Applied Interfaces

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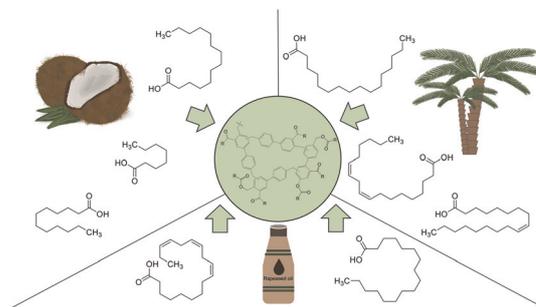
Fundamental questions  
Elemental answers

## COMMUNICATIONS

14776

**Synthesis of hypercrosslinked polymers using coconut oil as a renewable, bio-based solvent**

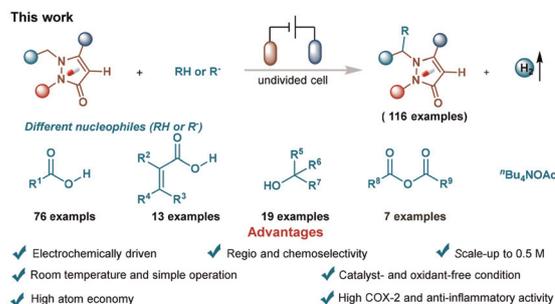
Paul Schweng, Anastasiia Naryshkina, Alexander Blocher and Robert T. Woodward\*



14783

**Site-selective electrochemical C(sp<sup>3</sup>)–H late-stage functionalization of pyrazolones**

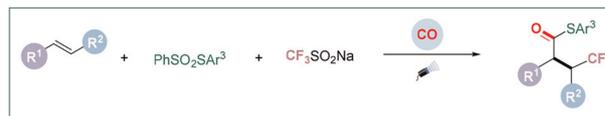
Jing-Yi Zhang, Ming-Han Li, Yu-Shun Cui, Ying Yang, Miao Lai, Zi-Xun Gao, Lin-Yu Zheng, Si-Ao Lu, Bin-Tao Liu, Fang-Ling Lu\* and Yu-Lin Feng\*



14792

**Photoinduced carbonylative synthesis of β-trifluoromethylated thioesters through 1,2-trifluoromethylation and carbonylation of alkenes**

Ren-Guan Miao, Zhi-Peng Bao, Yuanrui Wang, Chang-Sheng Kuai and Xiao-Feng Wu\*

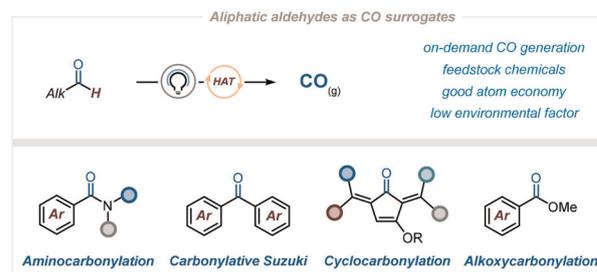


## PAPERS

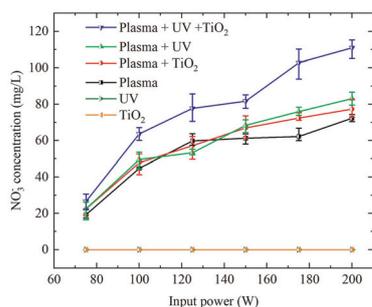
14799

**Aliphatic aldehydes as CO surrogates via photocatalyzed hydrogen atom transfer**

Luna Raineri, Valerio Morlacci, Ana Maria Constantin, Aleksandr Voronov, Giovanni Maestri, Nicola Della Ca\* and Luca Capaldo\*



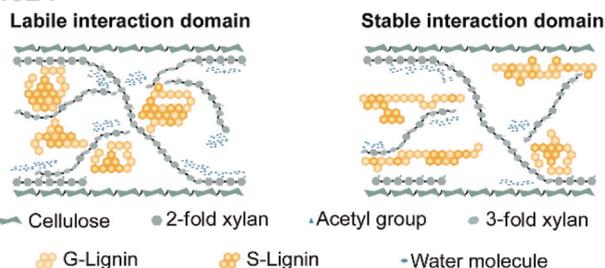
14807



### Enhanced nitrogen fixation using DBD plasma with continuous flowing water and a TiO<sub>2</sub> photocatalyst coupled system

Wen-Dong Wan, Su-Rong Sun,\* Chao Wang, Yury Gorbanev, Hai-Xing Wang and Annemie Bogaerts

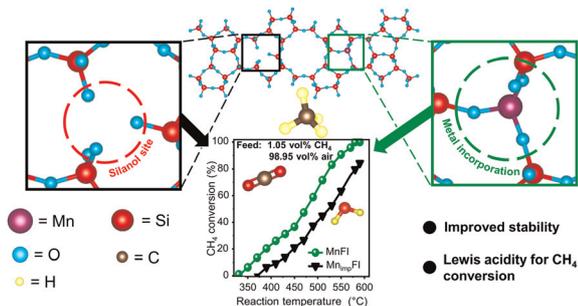
14824



### Domain-specific lignin-carbohydrate interactions govern cell wall deconstruction in wheat straw

Yucheng Hu, Shixu Yu, Guohua Miao, Yuan He, Xiaoying Shen, Haichao Li and Feng Xu\*

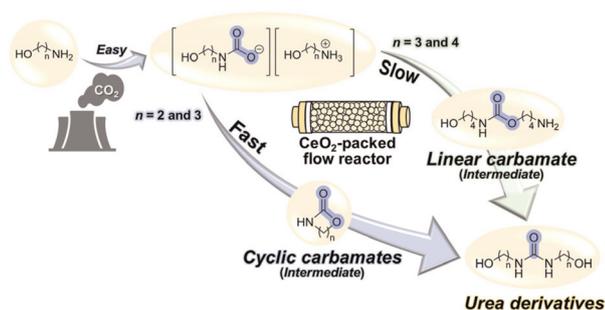
14838



### Enhanced methane combustion over monoclinic single-site Mn-containing nanosized MFI zeolite catalyst

Marco Giuseppe Geloso, Sajjad Ghojavand,\* Chunzheng Wang, Edwin B. Clatworthy, Oleg I. Lebedev, Diogenes Honorato Piva, Francesco Dalena, Glorija Medak, Aymeric Magisson, Hristijan A. Aleksandrov, Georgi N. Vayssilov and Svetlana Mintova\*

14852



### Continuous-flow synthesis of organic urea derivatives from CO<sub>2</sub>-absorbed alkanolamines over a CeO<sub>2</sub> catalyst

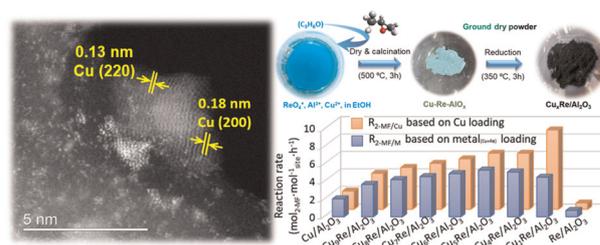
Shogen Mihara, Natsuki Mizutani, Hikari Terada, Mizuho Yabushita, Takaaki Endo, Yoshinao Nakagawa, Akira Nakayama and Keiichi Tomishige\*



14873

### Construction of Cu–Re–O<sub>x</sub> rich interfaces for the catalytic hydrogen transfer of furfural

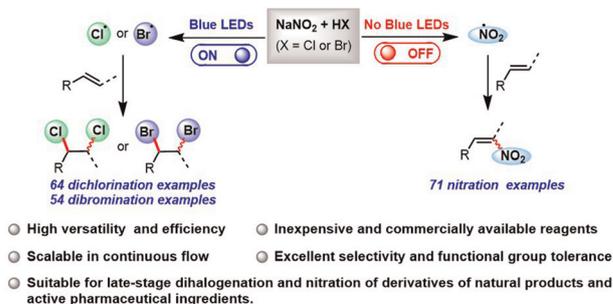
Jingjie Luo, Wenhao Yang, Tao Wang, Hao Liu, Xinyu Mao and Changhai Liang\*



14883

### A versatile, tunable method for NaNO<sub>2</sub>/HX (Cl or Br)-mediated radical dihalogenation or nitration of olefins

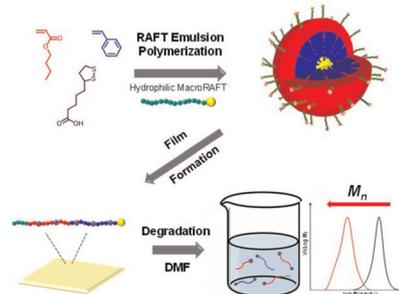
Jinglian Nong, Zehui Cao, Qin He, Yangyang Zhang, Jichao Chen\* and Yaxin Wang\*



14899

### Degradable polymer films: RAFT-mediated emulsion copolymerization of lipoic acid with vinyl monomers

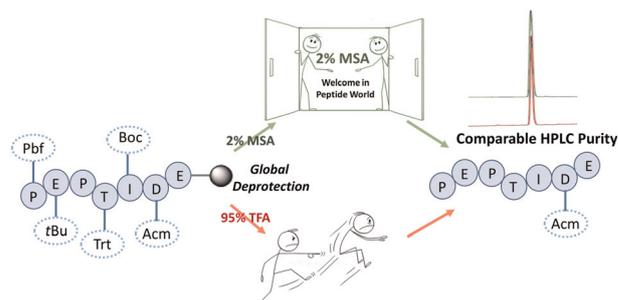
Steven W. Thompson, Yasemin Fadil, Nicholas J. Chan, Graeme Moad, Sébastien Perrier and Per B. Zetterlund\*



14911

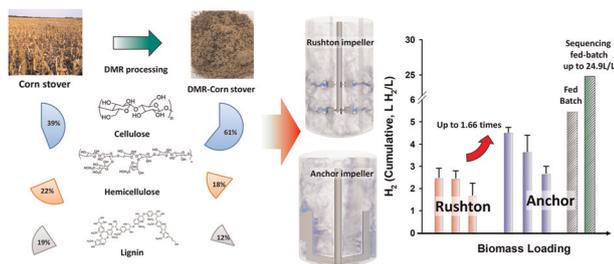
### Advancing sustainable peptide synthesis: methanesulfonic acid–formic acid as a greener substitute for TFA in final global deprotection

Fathima Fidha, Ashish Kumar,\* Maria Leko, Oleg Marder, Sergey Burov, Anamika Sharma, Beatriz G. de la Torre\* and Fernando Albericio\*



## PAPERS

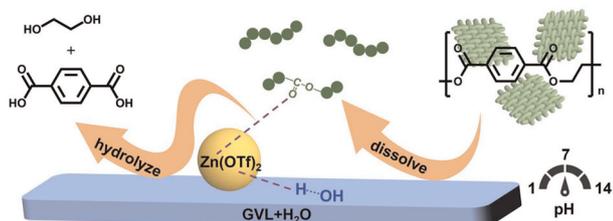
14919



### Maximizing long-term biohydrogen production with *Clostridium thermocellum* for high solids conversion of lignocellulosic biomass

Young Eun Song, Changman Kim, Lydia Rachbauer, Lauren R. Magnusson, Chang Dou, Katherine J. Chou, Steven W. Singer and Eric Sundstrom\*

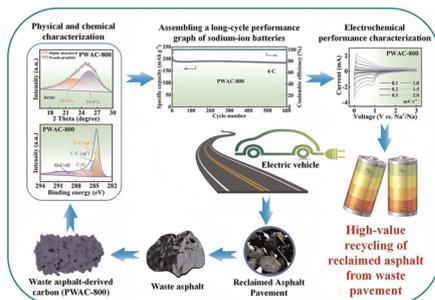
14934



### Dual activation of a zinc salt and solvent-tuned dissolution enable efficient neutral hydrolysis of PET and its blends

Xuan Zhao, Shun Zhang, Jiaying Xu, Chengfeng Shen, Yifan Liu, Xuehui Liu, Zhishan Su,\* Shimei Xu\* and Yu-Zhong Wang

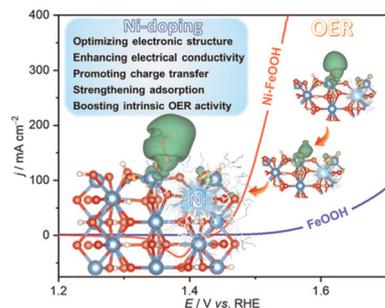
14944



### Green upcycling of retired asphalt into "vortex-crosslinked" carbon anodes for high-performance sodium-ion batteries

Danqing Li, Xin He, Linlin Wang,\* Mei Ding, Chunhui Gao and Chuankun Jia\*

14954



### Electronic modulation of Fe sites in hierarchical FeOOH for lowering the oxygen evolution energy barrier

Xiaoge Li,\* Shuyi Zang, Jun Zhao, Daidi Li, Dandan Wang, Lei Wang, Qin-Chao Wang\* and Jie Han\*



## CORRECTION

14963

**Correction: NAD(H) self-recycling whole-cell biocatalysis for the production of furoic acid and 2,5-furandicarboxylic acid from furfural *via* CO<sub>2</sub> fixation**

Mingzhe Ma and Yajie Wang\*

