

# Green Chemistry

Cutting-edge research for a greener sustainable future

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### Cover

See Daipayan Roy,  
Imad A. Haidar Ahmad *et al.*,  
pp. 109–119.

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109.

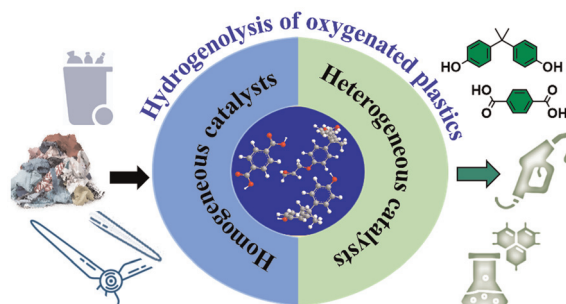
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Elias Feghali, Kathy Elst, Annelore Aerts,  
Karolien Vanbroekhoven and Kevin M. Van Geem\*

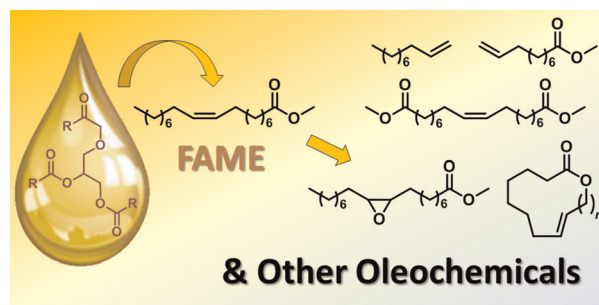


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### The chemistry of oleates and related compounds in the 2020s

Pavel V. Ivchenko\* and Ilya E. Nifant'ev



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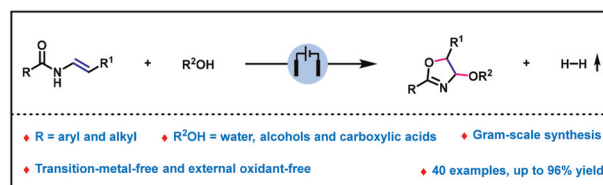


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**Electrochemical dehydrogenative annulation for the synthesis of 4-oxo-oxazolines**

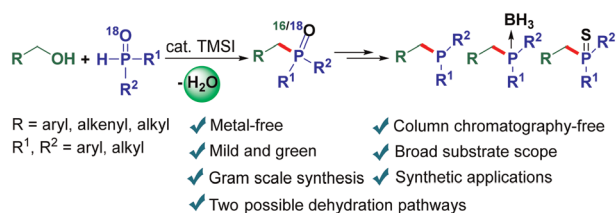
Yong Yuan,\* Xincong Liu, Feng Zhang, Chunyan Bai, Yuyan Tao, Xiazhen Bao, Dongsheng Ji and Congde Huo



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**Metal-free catalytic nucleophilic substitution of primary alcohols with secondary phosphine oxides**

Xiantao Ma,\* Xiaoyu Yan, Jing Yu, Jiarui Guo, Jiakun Bian, Ran Yan, Qing Xu\* and Li-Biao Han\*

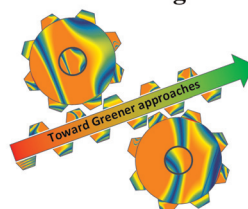


## PAPERS

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***In silico* modeling enables greener analytical and preparative chromatographic methods**

Troy T. Handlovic, Daipayan Roy,\* Muhammad Qamar Farooq, Gabriel Mazzi Leme, Kevin Crossley and Imad A. Haidar Ahmad\*

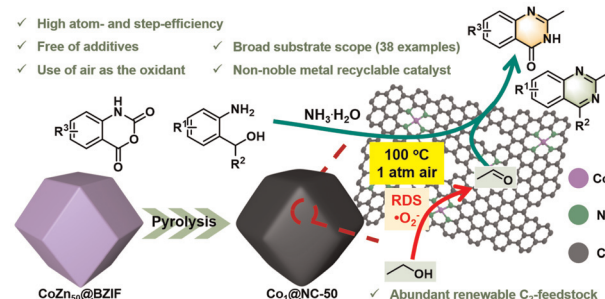
***In Silico* Modeling Enables “Greener” Methodology**

- ☐ Applied to chromatographic methods at
  - ✓ Analytical scale
  - ✓ Preparative scale
- ☐ Less waste generated
- ☐ Switch to greener solvents & additives
- ☐ Scientific and Robust

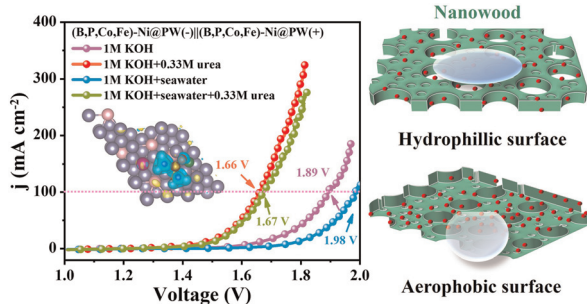
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**Single cobalt atom catalysis for the construction of quinazolines and quinazolinones via the aerobic dehydrocyclization of ethanol**

Xueping Zhang, Kai Xu, Yi Zhuang, Shihao Yuan, Yamei Lin and Guo-Ping Lu\*



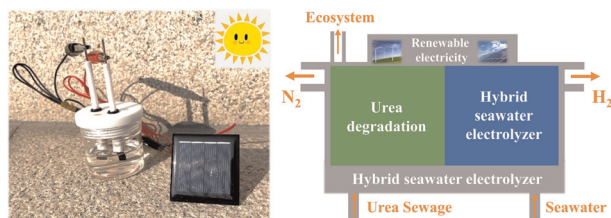
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Hongjiao Chen, Kewei Zhang, Yanzhi Xia, Jian Li and Bin Hui\*

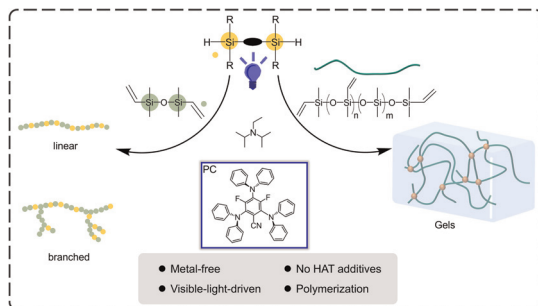
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Dongxue Guo,\* Yi Ping, Chuanjiao Wang, Changan Hou and Danhong Wang\*

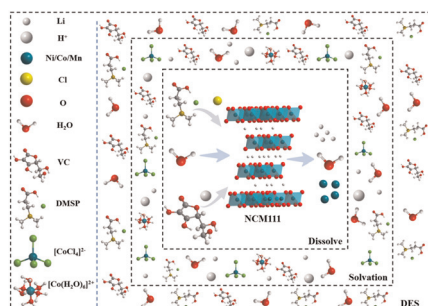
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Hangcen Xie, Rui Xu, Bin Huang, Pingping Lou, Hua-Feng Fei\* and Zhijie Zhang\*

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### High-efficiency leaching of valuable metals from waste lithium-ion ternary batteries under mild conditions using green deep eutectic solvents

Bo Li, Chengping Li, Jinsong Wang, Rundong Wan, Jiangzhao Chen, Ying Liu, Zhengfu Zhang,\* Yuejing Bin,\* Xiaoping Yang,\* Chongjun Bao and Shaohua Ju



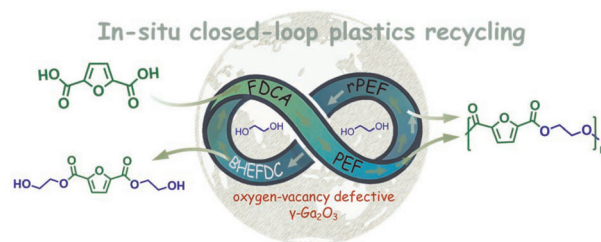


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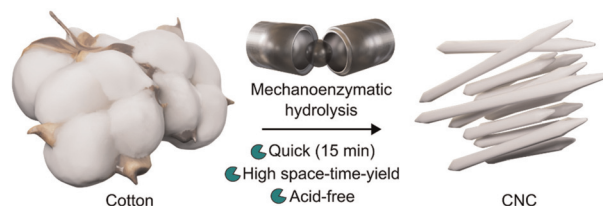
Shaowei Wu, Lu Li,\* Lei Song, Guannan Zhou, Lixin Liu, Hailan Kang,\* Guangyuan Zhou and Rui Wang



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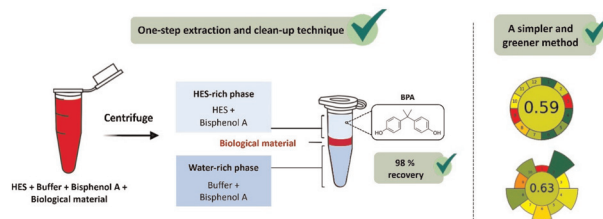
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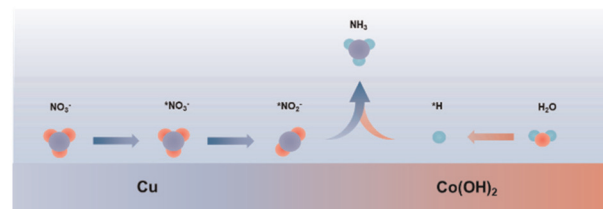
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Chunqi Yang, Chang Liu, Jingwen Zhuang, Ziyang Yang, Aiping Chen, Yuhang Li\* and Chunzhong Li\*



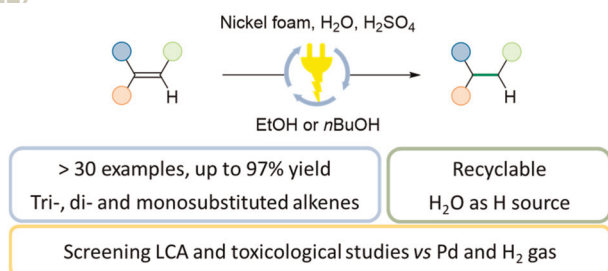
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### Electrochemical hydrogenation of alkenes over a nickel foam guided by life cycle, safety and toxicological assessments

Pedro J. Tortajada, Therese Kärnman, Pablo Martínez-Pardo, Charlotte Nilsson, Hanna Holmquist, Magnus J. Johansson and Belén Martín-Matute\*

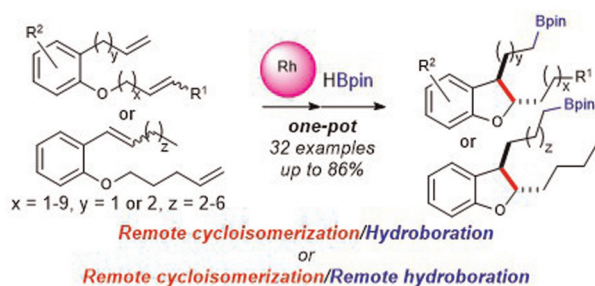
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Yuta Sato, Momoko Nagafuchi, Masaharu Takatsuki, Tsuyoshi Matsuzaki, Takeyuki Suzuki, Makoto Sako and Mitsuhiro Arisawa\*



## Halogen-bond-assisted radical remote difunctionalization of bicyclo[1.1.1]butane skeletons

Hui Liu, Zhenda Fu, Xingwei Li\* and Songjie Yu\*

