

Green Chemistry

Cutting-edge research for a greener sustainable future

rsc.li/greenchem

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 1463-9262 CODEN GRCHFJ 27(15) 3807-4004 (2025)



Cover
See Luigi Vaccaro *et al.*,
pp. 3869–3878.

Image reproduced by
permission of Luigi Vaccaro
from *Green Chem.*, 2025, **27**,
3869.



Inside cover
See Jingyu Wang, Changwei
Hu *et al.*, pp. 3879–3886.

Image reproduced by
permission of Changwei Hu
from *Green Chem.*, 2025, **27**,
3879.

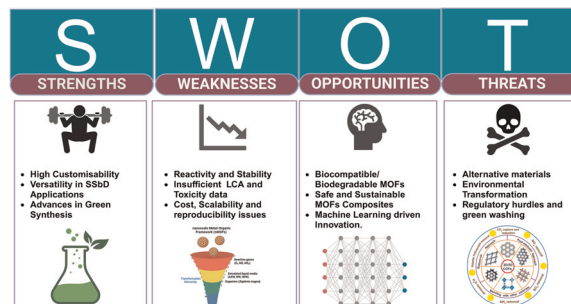
Artwork partly generated with
iStock.

TUTORIAL REVIEW

3815

Evaluating the path to sustainability: SWOT analysis of safe and sustainable by design approaches for metal–organic frameworks

Pankti Dhumal, Prathmesh Bhadane, Bashiru Ibrahim and Swaroop Chakraborty*

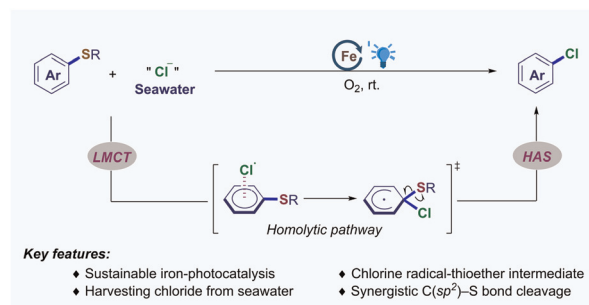


COMMUNICATIONS

3851

Iron-photocatalyzed desulfurizing chlorination with seawater

Boning Gu, Yinsong Zhao,* Chengliang Li and Xuefeng Jiang*



**GOLD
OPEN
ACCESS**

EES Solar

**Exceptional research on solar
energy and photovoltaics**

Part of the EES family

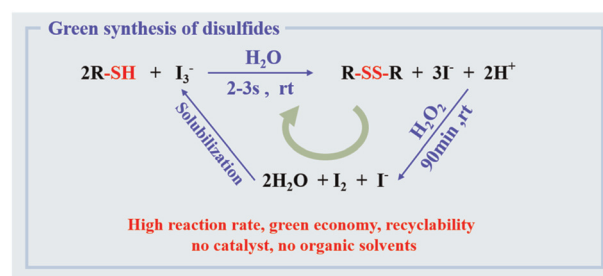
Join | Publish with us
in | rsc.li/EESolar

COMMUNICATIONS

3858

A green and recyclable approach for synthesizing disulfides

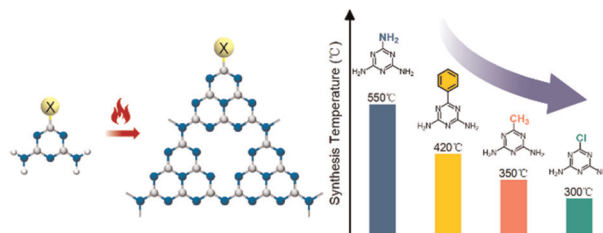
Lei Qian, Jing Xue,* Wenchao Wang, Kaiyuan Zhao, Pekhyo Vasiliy, Zipeng Zhou, Jixian Liu* and Jianguo Tang*



3863

Functional group boosting triazine ring-opening for low-temperature synthesis of heptazine-based graphitic carbon nitride

Kai Zhang, Shubing Tian, Xinyi Wang, Bingjie Li, Jingyi Pang, Jixiang Xu, Daoshan Yang, Fangxu Dai, Zhanchao Wu, Xilei Chen, Xuelu Wang, Lei Wang and Jun Xing*

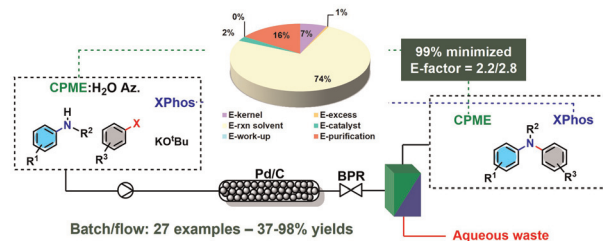


PAPERS

3869

Waste-minimized access to diarylamines and triarylamines via Csp²-N coupling under batch and flow conditions

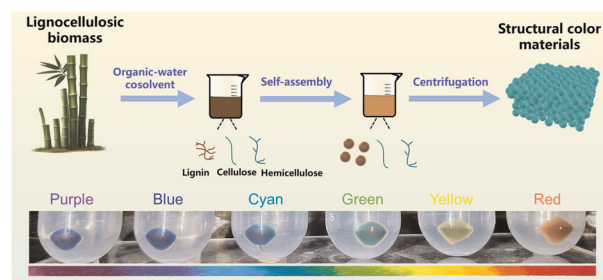
Giulia Brufani, Shaomin Chen, Maria Teresa Tiberi, Filippo Campana, Emilia Paone, Yanlong Gu, Francesco Mauriello and Luigi Vaccaro*



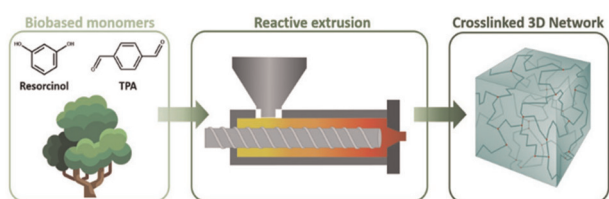
3879

A fast and low energy-consumption method for the conversion of lignocellulosic biomass to sustainable structural color materials

Chengfen Zhou, Weiyi Zhao, Jingyu Wang,* Xuemei Wei, Jiawen Lai and Changwei Hu*



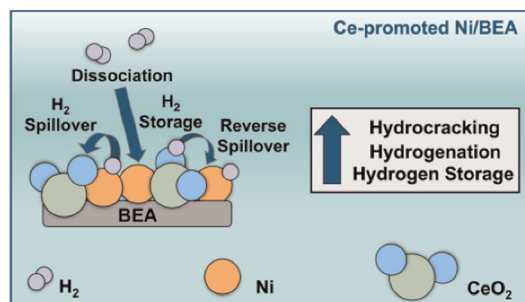
3887



Novel sustainable synthesis of a formaldehyde-free thermosetting phenolic resin through solvent-free reactive extrusion

Alex Maokhamphiou, Matthieu Zinet, William Guerin, Arnaud Soisson, Morgane Petit, Guillaume Jobard, Fernande da Cruz-Boisson, Karim Delage, Romain Tavernier and Véronique Bounor-Legaré*

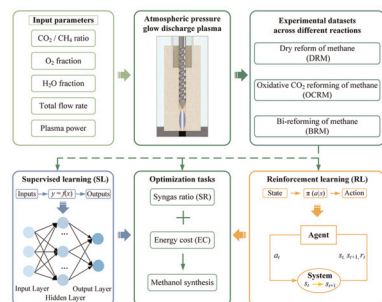
3905



Hydrocracking of polyolefins over ceria-promoted Ni/BEA catalysts

Jessie A. Sun, Esun Selvam, Alexander Bregvadze, Weiqing Zheng and Dionisios G. Vlachos*

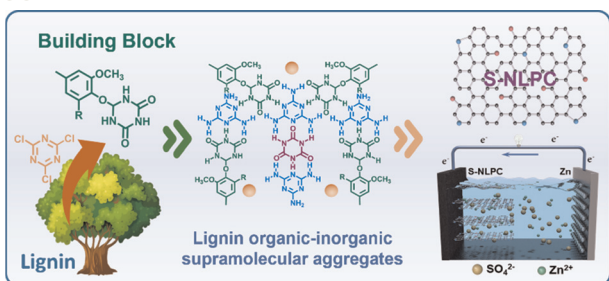
3916



Machine learning-based prediction and optimization of plasma-based conversion of CO₂ and CH₄ in an atmospheric pressure glow discharge plasma

Jiayin Li,* Jing Xu, Evgeny Rebrov, Bart Wanten and Annemie Bogaerts*

3932



Lignin organic–inorganic supramolecular aggregate derived N,O co-doped porous carbon nanosheets for high performance zinc-ion hybrid capacitors

Yukang Fan, Dongjie Yang,* Fangbao Fu, Xueqing Qiu* and Wenli Zhang

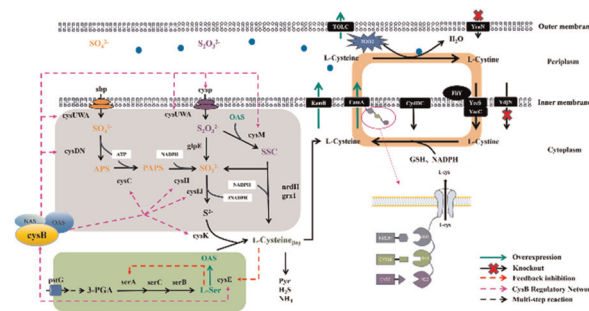


PAPERS

3944

Coupling a rebuild shuttle system with biosynthetic pathway and transcription factor engineering for enhanced L-cysteine production

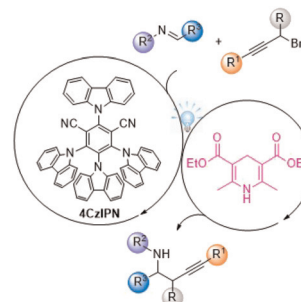
Bo Zhang, Xiaoling Xiu, Lifeng Chen, Xin Sui, Ruyi Zheng, Yuhe Guo, Xue Cai, Zhiqiang Liu* and Yuguo Zheng



3957

Photoredox-catalyzed chemo- and regioselective synthesis of homopropargyl amines via radical-radical cross-coupling

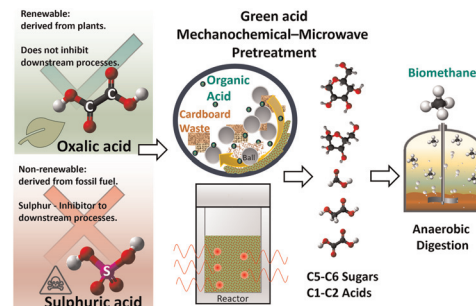
Zulin Xiao, Wenzhe Shang, Lei He, Tao Huang, Yuxin Xiao, Xiaoxia He, Xiang Li, Xueping Zong, Yidong Wan and Fusheng Li*



3964

Green catalyst-based cardboard waste conversion into biogas

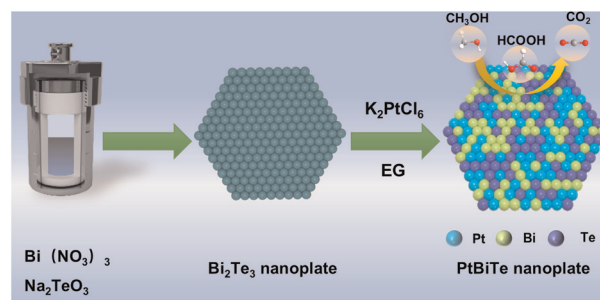
Li Quan Lee, Hui Ling Chan, Hao Zhou, Hu Zhao, Qingshuo Ao, Hao Huang, Chi Cheng Chong, Yan Zhou and Hong Li*



3980

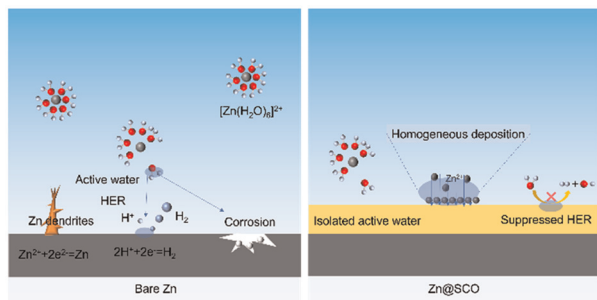
Facile template-assisted synthesis of PtBiTe nanoplates for CO-free methanol oxidation in alkaline electrolytes

Xinyu Huo, Baomin Luo,* Yezhen Zhang and Hanshuo Li



PAPERS

3990



In situ generated tin protective layers from stannous oxalate for dendrite-free zinc anodes

Qiwei Gao, Zhuo Chen, Junrun Feng,* Xiaoyan Zhou,* Ziming Wan, Lun Zhang, Hao Gu, Lin Sheng, Pengfei Yao, Feng Ryan Wang and Zhangxiang Hao*

CORRECTIONS

4000

Correction: Lignin organic–inorganic supramolecular aggregate derived N,O co-doped porous carbon nanosheets for high performance zinc-ion hybrid capacitors

Yukang Fan, Dongjie Yang,* Fangbao Fu, Xueqing Qiu* and Wenli Zhang

4001

Correction: Iron-photocatalyzed desulfurizing chlorination with seawater

Boning Gu, Yinsong Zhao,* Chengliang Li and Xuefeng Jiang*

