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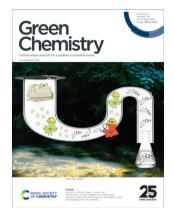
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See Luigi Vaccaro et al., pp. 12166-12175.

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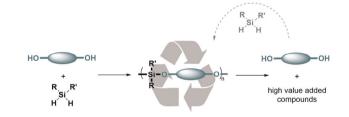
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Construction and deconstruction: recent advances in degradable silicon-based polymers

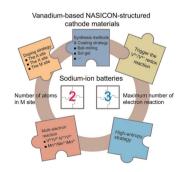
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Recent advances in vanadium-based NASICON-structured cathode materials for sodium-ion batteries

Qianchen Wang,* LiYao Lu, Zhonghao Lv, Yuhang Xin, Zimo Zhang, Yingshuai Wang and Hongcai Gao*





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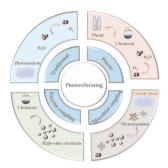
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TUTORIAL REVIEWS

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Plastic photoreforming: catalytic production of hydrogen and valuable chemicals

Heng Li, Yeqiong Huang, Yueyang Zhang, Haiyan Li, Chengcheng Shen, Dong Xia* and Yanmei Zheng*



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Recent progress in Pt-based alloy catalysts: a comprehensive review on green synthesis and sustainable biomass hydrogenation applications

Yichen Nie, Misbah Uddin, Qingtao Wang, Xingyong Li,* Na Liu, Senshen Yu, Phidsavard Keomeesay, Xuebing Zhao, Yubao Chen,* Zhifeng Zheng and Shijie Liu



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A proposal of twelve principles for LCA of chemicals

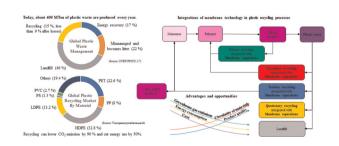
Daniele Cespi*



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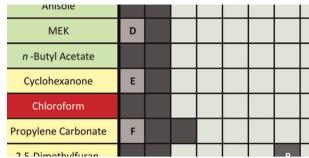
Unlocking the potential of plastic recycling processes with the integration of membrane technology: a focus on PET valorisation

Hamidreza Mahdavi,* Laila Halim, Selina Giles, Xiaoheng Jin, Leonie van 't Hag,* Zongli Xie,* Matthew R. Hill* and Benny D. Freeman*



COMMUNICATIONS

12151



The solvent miscibility table updated: miscibility and potential applications of green solvents

Olga Clavilier, Darragh Foy and Fergal Byrne*

12160

$$R^{1}$$
 OH + S_{8} + HN R^{2} $\frac{130 \text{ °C, 6 h}}{R^{3}}$ R^{1}

- No base No solvent Up to 97% yield
- Elemental sulfur as a mild oxidant and sulfur source

Synthesis of alkyl thioamides by three-component reactions of allyl alcohols, elemental sulfur and amines: elemental sulfur as a mild oxidant and a sulfur source

Jiyuan Wu, Yanyan Liao, Miaoyi Pan, Tangtang Song, Jian Zhang, Lai Li, Jianmei Lu* and Xuefeng Jiang*

PAPERS

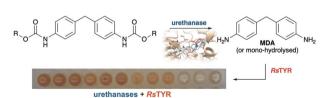
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Continuous flow tube-in-tube oxidation of HMF to FDCA using heterogeneous manganese catalyst under mild conditions

Federica Valentini, Francesco Ferlin and Luigi Vaccaro*

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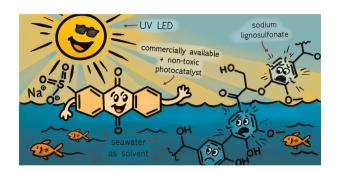
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Swimming upstream - photocatalytic depolymerization of lignosulfonate in seawater

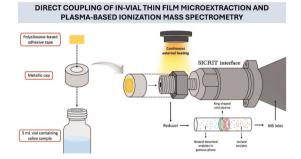
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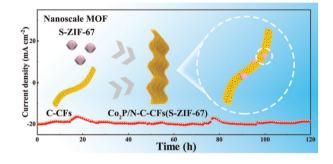
Carlos Calero-Cañuelo. Rafael Lucena* and Soledad Cárdenas



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Nanoscale MOF-derived vacancy-engineered Co₂P/N-doped coal-based carbon fibers for boosting hydrogen evolution

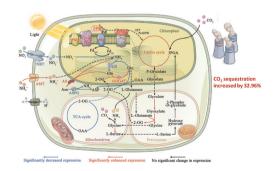
Mengran Lou, Ruiying Wang,* Luxiang Wang, Yang Wang, Mei Wu, Shengjiao Wen, Xia Kong, Taotao Lv and Bo Ma



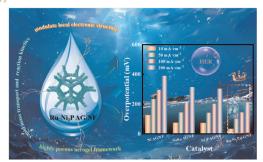
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Ammonium sulfate (a coking byproduct) downregulates the assimilatory nitrate pathway to save energy for carbon sequestration in Nannochloropsis oceanica at a stable pH using **HEPES-NaOH**

Ying Liu, Xiangjin Liang, Jun Lu, Yapeng Chen, Jun Liu, Baoying Wang, Ruixue Ma, Junchen Xu and Jun Cheng*



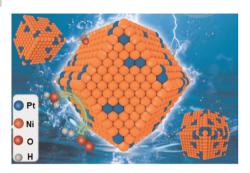
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Tailoring the electronic structure of an Ni₂P aerogel via ruthenium doping for energy-efficient hydrogen generation in anion-exchange membrane-based seawater electrolysis

Meitong Zhao, Junwei Yuan, Fan Yang,* Hongchen Liu, Xinyang Sun, Yang Sun, Siyuan Sun, Jiahui Liu and Yongfeng Li*

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Phase-segregated PtNi₅ rhombic dodecahedra enable excellent electrocatalytic hydrogen evolution in the full pH range

Siyuan Lai, Wendan Jiang, Jingzhe Zhao, Jun Yang* and Xiongwu Kang*

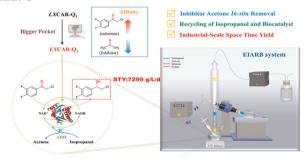
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A donor- π - σ -acceptor strategy in porous polymers for suppression of carrier recombination: boosting photoredox in a Csp²-N radical cross-coupling reaction

Jinyang Lu, Lingjuan Zhang,* Nan Zhang, Xueying Song, Qi Gao, Jincong Yuan and Xian-Ming Zhang*

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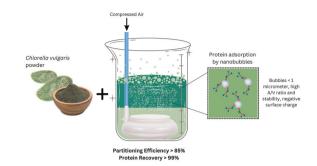
Breaking through acetone inhibition: integrated protein engineering and bioreactor design for sustainable chiral aryl alcohol synthesis

Feng Qian, Yaowu Wang, Zhe Wang, Hanyu Liu, Ying Zhang, Haimin Zhang and Pu Wang*

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Enhanced protein recovery from Chlorella vulgaris using micro-nanobubble-assisted liquid biphasic flotation

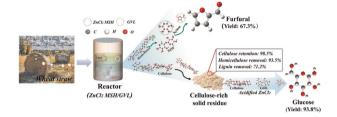
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Valorization of wheat straw to furfural and glucose via ZnCl₂/gamma-valerolactone system

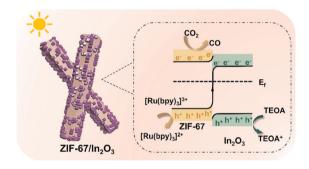
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Rational design of a Z-scheme ZIF-67/In₂O₃ heterojunction with a built-in electric field and defects for photocatalytic CO₂ conversion

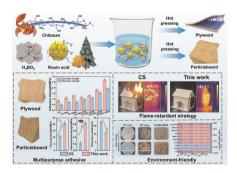
Chunxia Wang, Ling Ma, Yifeng Zeng, Yubo Zhang, Yanxin Sun, Xinchen Kang* and Guoyong Huang*



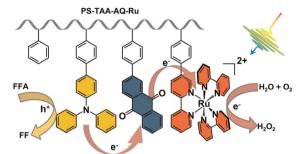
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Nature-derived adhesives based on chitosan and rosin acid with high strength, flame retardancy, and environmental friendliness

Qi Huang, Zhaoshuang Li,* Zhenyang Bao, Xu Xu, He Liu, Min Zhang, Yan Qing, Xingong Li and Yiqiang Wu*



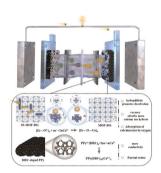
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Ternary engineered linear polymers with a controllable cascade electron transfer pathway for efficient H₂O₂ photosynthesis coupled with biomass conversion

Xueling Song, Jiani Peng, Xin Li, Pengyan Zhao, Xiaoqin Zhao and Lei Wang*

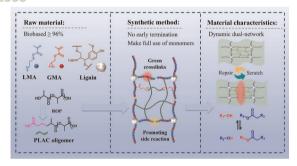
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Defect-engineered MOF-801 as a redox-active intercalation battery-type capacitive deionization cathode: mechanistic insights into selective calcium ion removal

Shu Zhou, Dong Wang, Huangzhao Wei, Hongchao Ma and Guowen Wang*

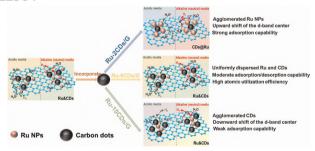
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One-pot synthesis of lignin-derived fully bio-based dynamic dual-network polymers via synergistic side reactions and star-shaped architectural design

Quan Yan, Bailiang Xue,* Xiaojie Xie, Wenliang Wang, Xinping Li, Xiaojun Shen, Xianzhi Meng and Wei Zhao

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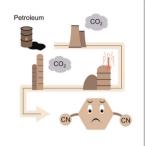
Carbon dot-driven spatial and electronic modulation of Ru on graphene for pH-universal hydrogen evolution reaction electrocatalysts

Liwu Qiang, Meng Bai, Zonghang Liu, Peipei Zhao, Shuai He, Man Zhao,* Qinyun Yan, Wei Wen, Qilin Guo, Yanxia Zhang, He Xiao* and Jianfeng Jia*

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Upcycling of poly(ethylene terephthalate) waste plastics to terephthalonitrile

Phuc T. T. Nguyen, Jiong Cheng, Junyu Mi and Ning Yan*

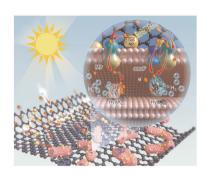




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Modular engineering a Shewanella oneidensis-CdS@rGO artificial photosynthetic biohybrid to accelerate photoelectron transfer and conversion for enhanced hydrogen production

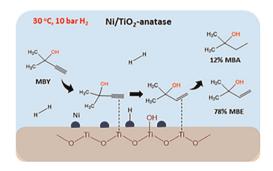
Wenliang Xu, Qijing Liu, Qinran Ding, Yan Zhang, Junqi Zhang, Chao Li, Huan Yu, Baocai Zhang, Jie Yang, Cheng Zhong, Wenyu Lu, Guosheng Xin, Hao Song* and Feng Li*



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Evaluation of Ni/TiO₂ catalysts in the semi-hydrogenation of alkynols under mild conditions in water

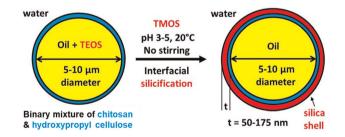
Ajay Tomer, Laurent Djakovitch and Noémie Perret*



12421

Sustainable silica microcapsules

O. Norvilaite, C. Lindsay, M. J. Rymaruk, P. Taylor and S. P. Armes*



12438

- readily available acylation reagent
- broad scope

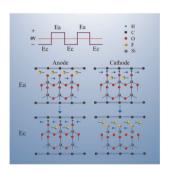
- additive-free
- base-free
- waste-free

- controllable
- mild & efficient
- atom-economic

Decatungstate-photocatalyzed hydroacylation of azobenzenes with aldehydes to access N,N'diarylhydrazides

Jingya Yang, * Bao Huang, Haifang Xu, Qi Dong, Xiaojun Liu, Kejing Huang and Hongyan Zhou*

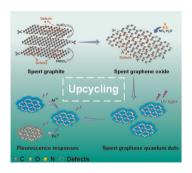
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Sustainable high-purity graphite purification via pulsed electrolysis with reduced fluoride consumption

Xianglin Liao, Yin Zhao, Yuehua Liu, Yiming Feng, Jingyao Wang,* Junhao Liu and Xuzhong Gong*

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In situ conversion of graphite into graphene quantum dots (GQDs) towards upcycling of spent lithium-ion batteries

Aoli Liu, Zelong Dai, Danlin Ouyang, Binod Mahara, Lishan Yang and Xiangping Chen*

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Visible light-driven modular synthesis of aza-β-lactams via a dual photochemical cascade

Imtiaz Ahmed, Nikita Gupta, Plaban Jyoti Sarma, Shilpa Neog and Vijay Kumar Das*

CORRECTION

12483

Correction: Hydrothermal liquefaction vs. fast/flash pyrolysis for biomass-to-biofuel conversion: new insights and comparative review of liquid biofuel yield, composition, and properties

Farid Alizad Oghyanous and Cigdem Eskicioglu*