Journal of Materials Chemistry A

Materials for energy and sustainability

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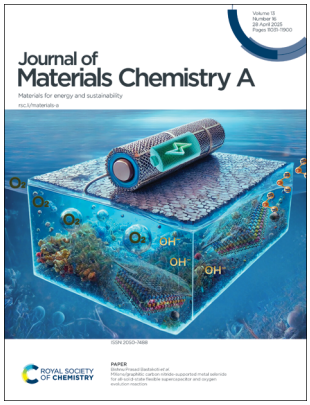

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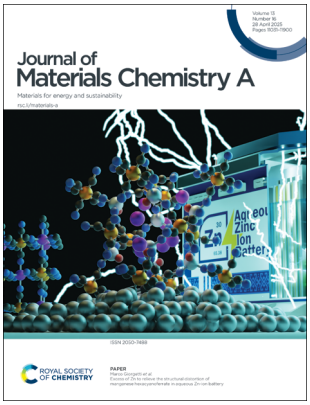

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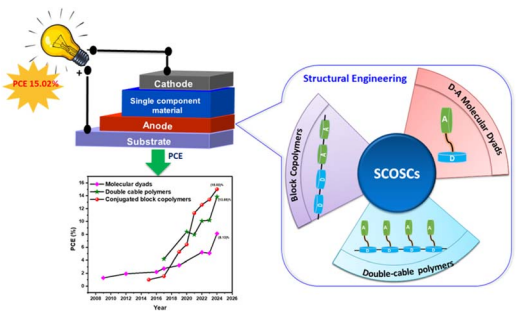
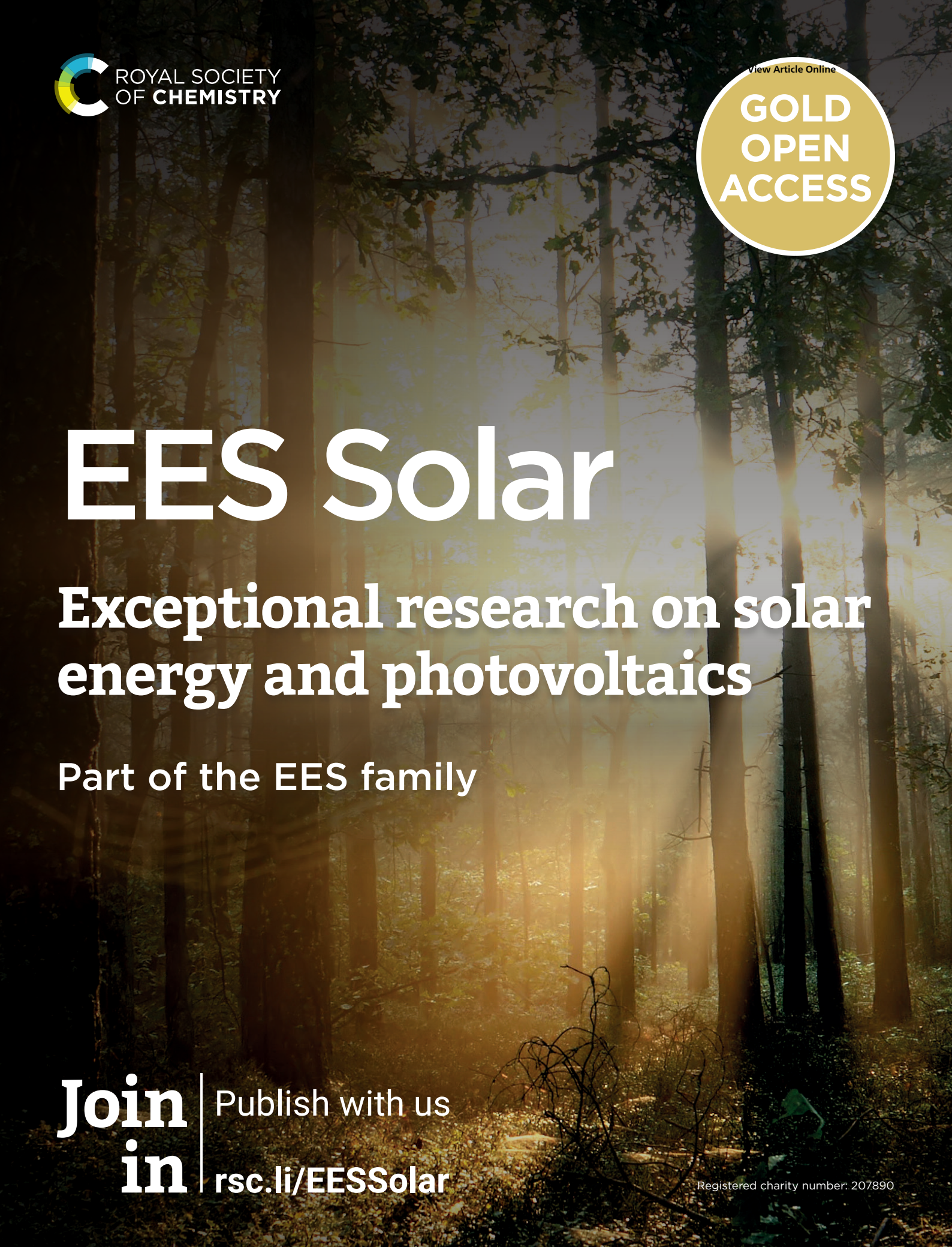
See Marco Giorgetti *et al.*, pp. 11314–11322. Image reproduced by permission of Marco Giorgetti from *J. Mater. Chem. A*, 2025, **13**, 11314.

REVIEWS

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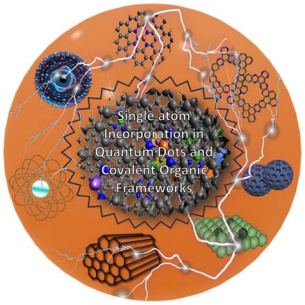

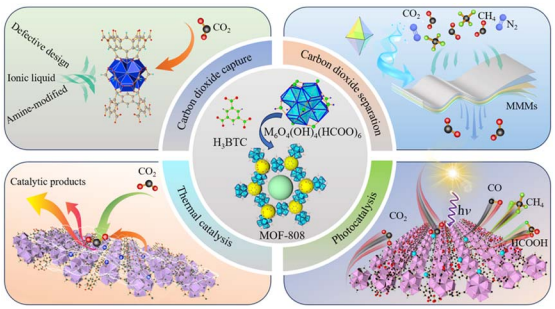

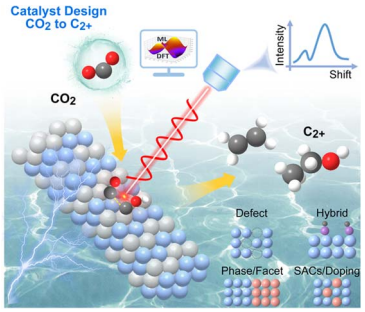

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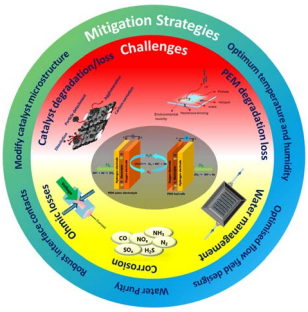
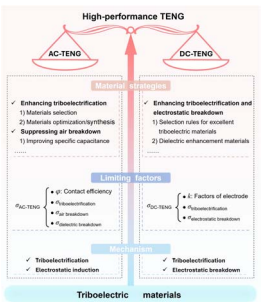


Challenges and mitigation strategies for general failure and degradation in polymer electrolyte membrane-based fuel cells and electrolysers

Malavika Arun, Sarbjit Giddey, Paul Joseph* and Dattatray S. Dhawale*



Empowering high-performance triboelectric nanogenerators: advanced materials strategies

Xiaoru Liu, Zhihao Zhao* and Jie Wang*

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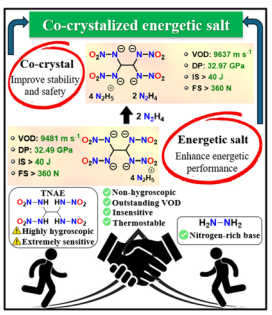
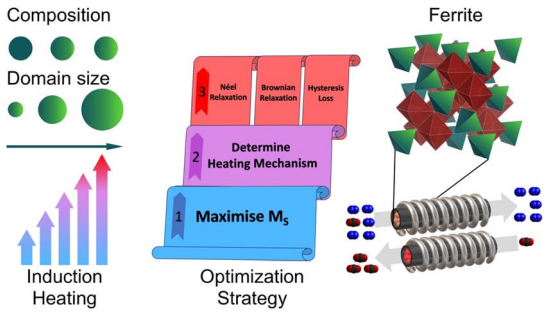


Synergizing hydrazine co-crystals with hydrazine salt of TNAE: a novel strategy for developing highly insensitive explosives

Shreyasi Banik, Vikas D. Ghule and Srinivas Dharavath*



Tuning ferrite nanoparticles for optimal inductive heating in thermal swing adsorption processes

Maxim De Belder, Alysson F. Morais, Julie Heyens, Rikkie Joris, Sergey Basov, Margriet J. Van Bael, Dmitry Chernyshov, Vadim Diadkin, Joeri F. M. Denayer, Johan A. Martens and Eric Breynaert*

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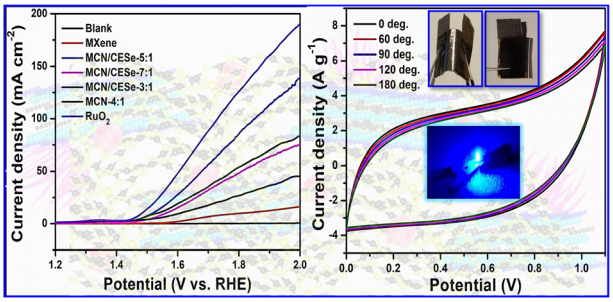
MXene/graphitic carbon nitride-supported metal selenide for all-solid-state flexible supercapacitor and oxygen evolution reaction

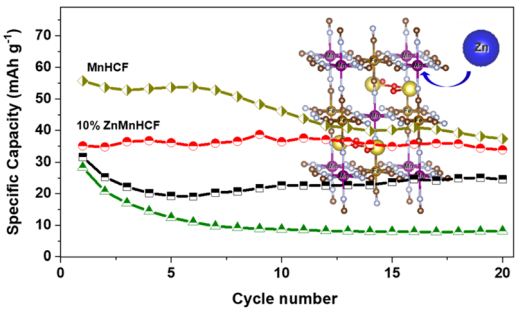
Shrabani De, Jose Florentino, Gayani Pathiraja, Bhoj Raj Gautam and Bishnu Prasad Bastakoti*



11314

Excess of Zn to relieve the structural distortion of manganese hexacyanoferrate in aqueous Zn-ion battery

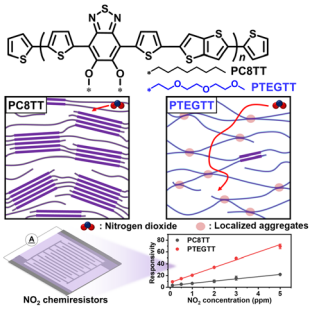
Min Li, Mariam Maisuradze, Zulkarnaen Paputungan, Reinhard Denecke, Jasper Rikkert Plaisier, Giuliana Aquilanti, Giovanni Agostini and Marco Giorgetti*



11323

Enhancing NO_2 sensing performance and stability: low-crystallinity conjugated polymers with localized aggregates *via* ethylene glycol pendants

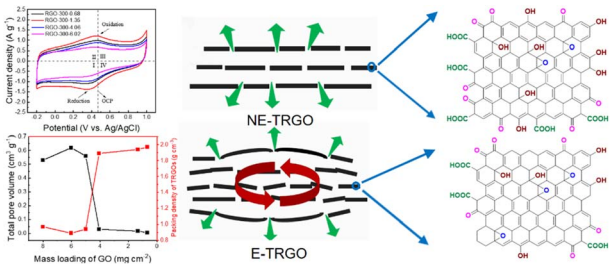
Jung-Won An, Ho Won Jang, Ji-Soo Jang* and Junwoo Lee*



11330

Reduced graphene oxides prepared *via* mass loading-controlled non-explosive thermal reduction for high volumetric capacitance supercapacitors

Jianing Tan, Zhaoyuan Liu,* Wei Wu, Gang Li and Wei Guo*



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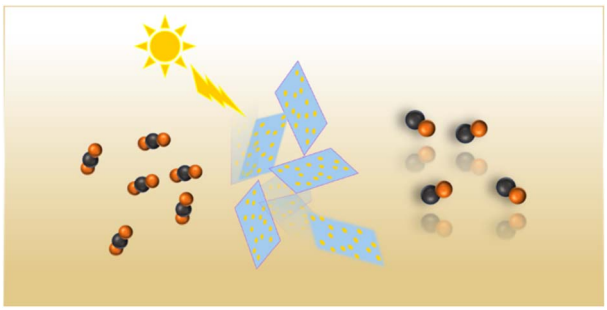

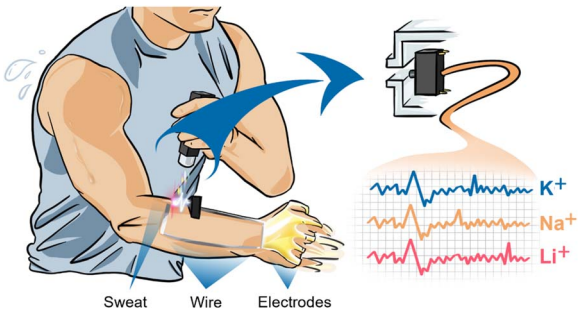

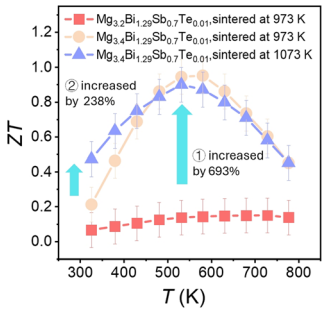

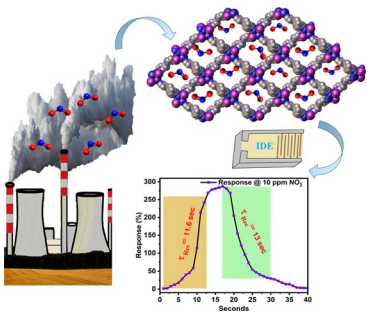

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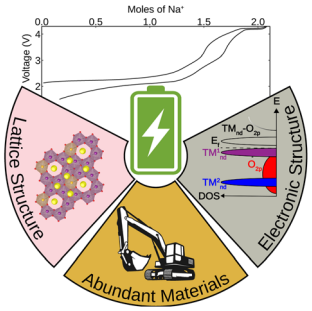

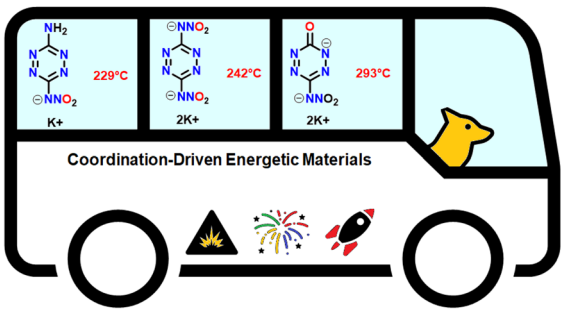

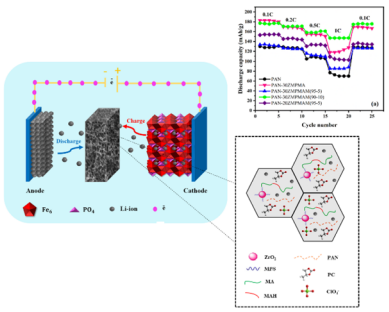

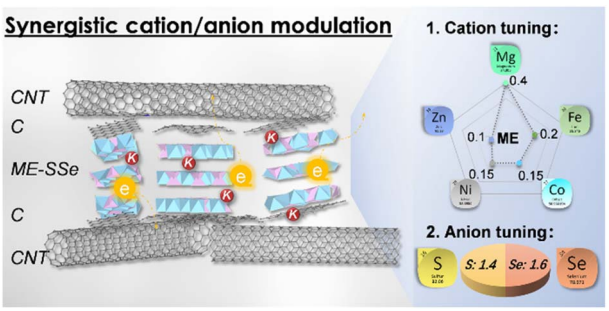

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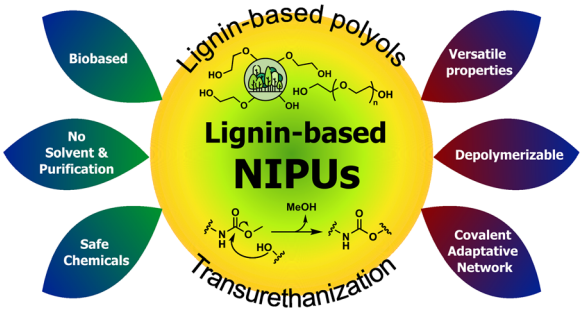

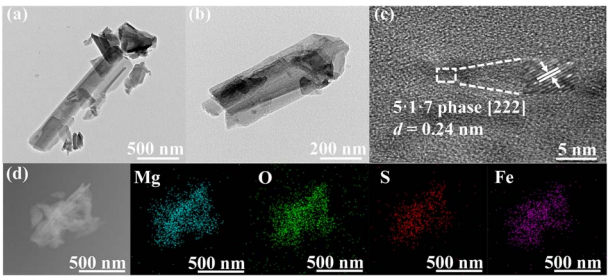

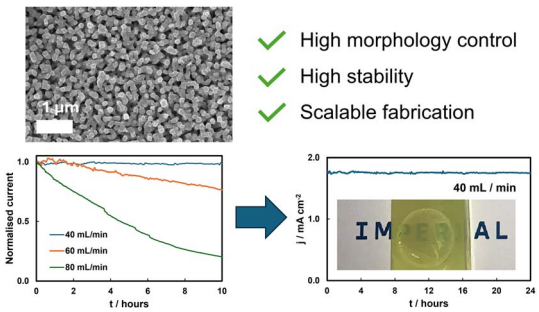

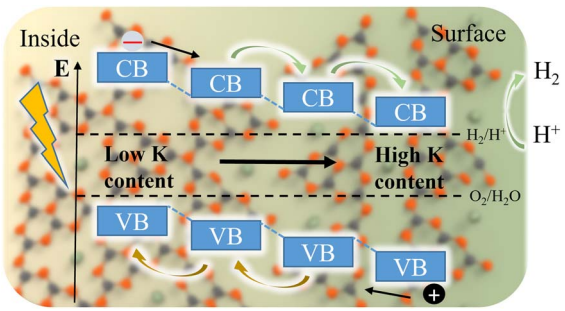

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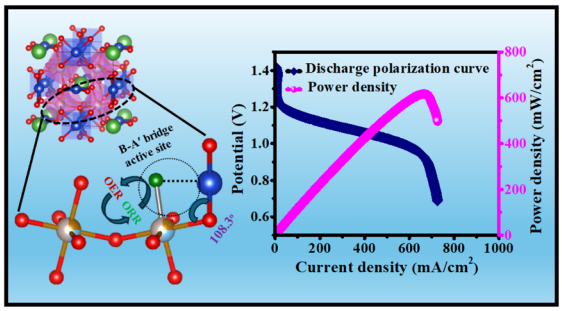

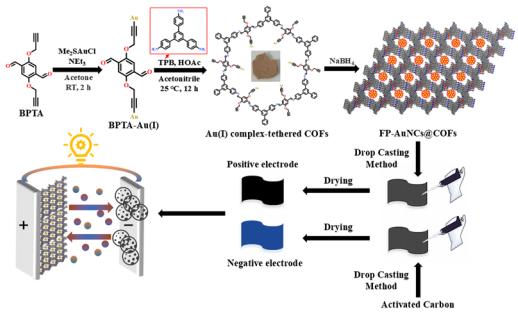

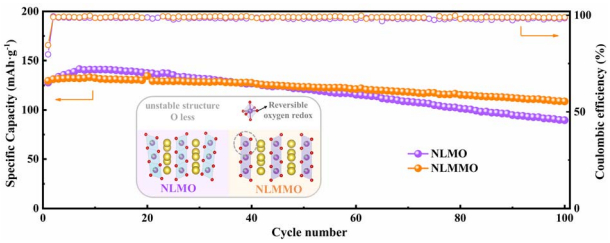

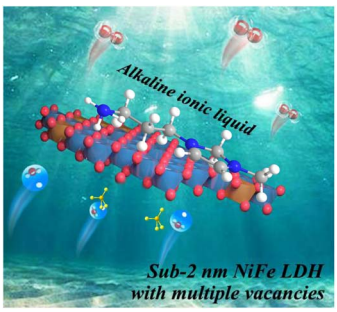

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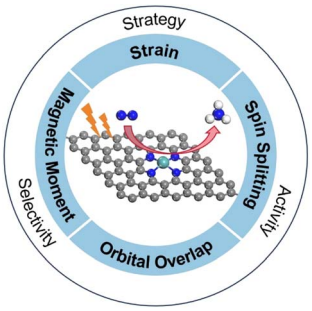

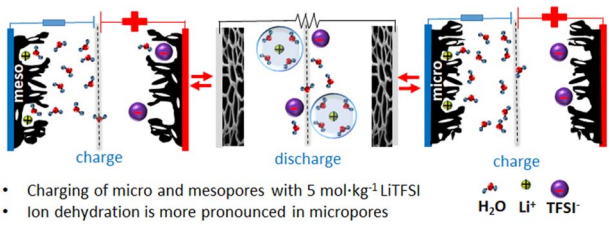

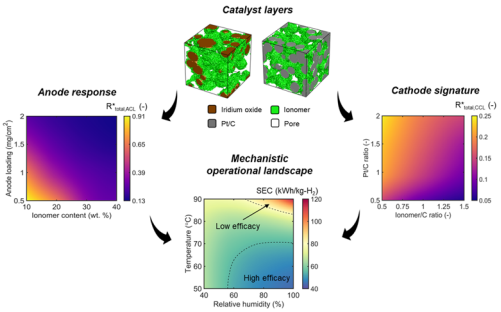

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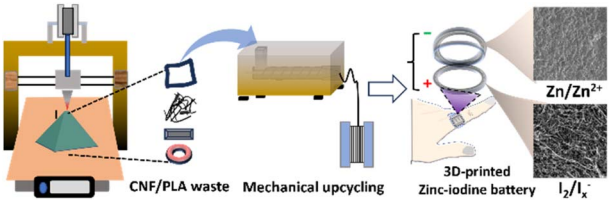

Point-of-use upcycling of 3D printing waste for developing 3D-printed Zn–I_2 batteries

Keval K. Sonigara, Jayraj V. Vaghasiya, Carmen C. Mayorga-Martinez and Martin Pumera*

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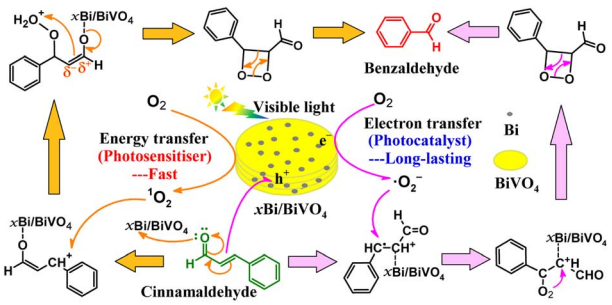

In situ synthesis of dual-functional photocatalyst $xBi^0/BiVO_4$ for the selective oxidation of cinnamaldehyde to benzaldehyde under visible light using oxygen

Jianghua Zhang, Zuzeng Qin,* Xuan Luo,* Tongming Su, Xinling Xie and Hongbing Ji

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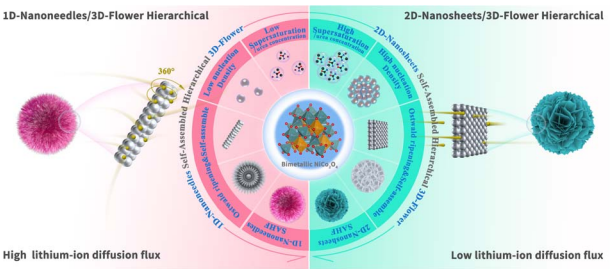

Nucleation-density-regulated dimensional evolution of growth unit from 2D nanosheets to 1D nanoneedles in self-assembled hierarchical $NiCo_2O_4$ for enhanced lithium storage

Xingyu Zhou, Jianwu Wen,* Di Shen, Hansong He, Maoling Liao, Yi Wang, Yuanyuan Li, Hubin Shi, Shuang Qiu, Cairong Jiang, Jianjun Ma* and John T. S. Irvine

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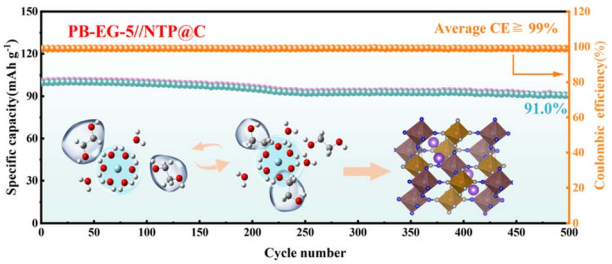

A novel strategy for the reduction of coordinated water in Prussian blue analogues for their application as cathode materials for sodium-ion batteries

Xin Xu, Shiji Zhu, Chen Yang, Yongdong Wang,* Zhennan Wu, Junzi Zheng, Jie Wu and Yunfang Gao*

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