Journal of Materials Chemistry A

Materials for energy and sustainability

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IN THIS ISSUE

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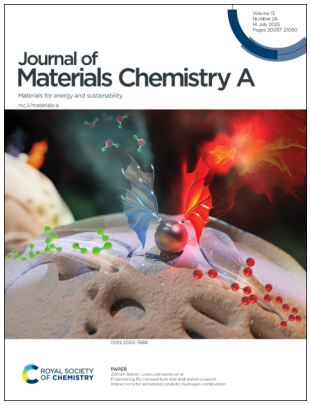

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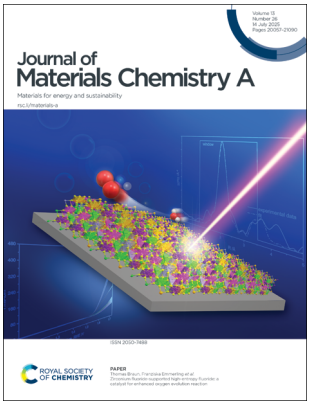
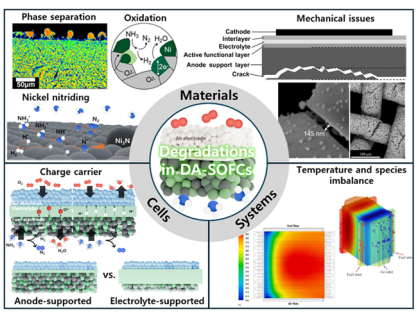
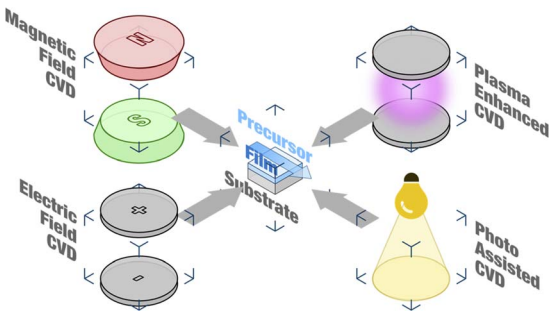
See Zohreh Akbari, Loris Lombardo *et al.*, pp. 20372–20382. Image reproduced by permission of Zohreh Akbari from *J. Mater. Chem. A*, 2025, **13**, 20372.



Inside cover
See Thomas Braun, Franziska Emmerling *et al.*, pp. 20383–20393. Image reproduced by permission of Leandro Augusto Faustino (BAM) from *J. Mater. Chem. A*, 2025, **13**, 20383.

REVIEWS





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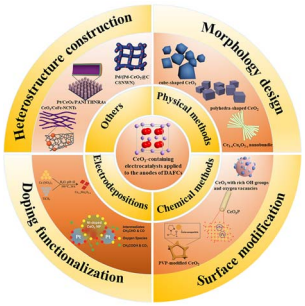

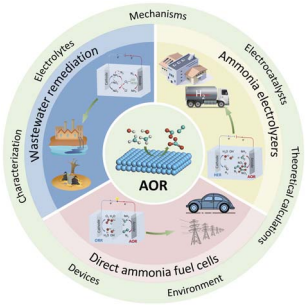

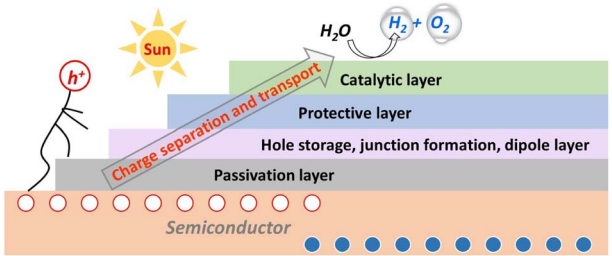

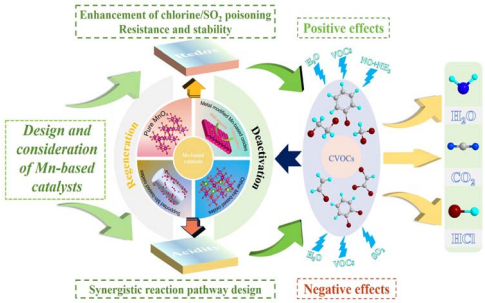

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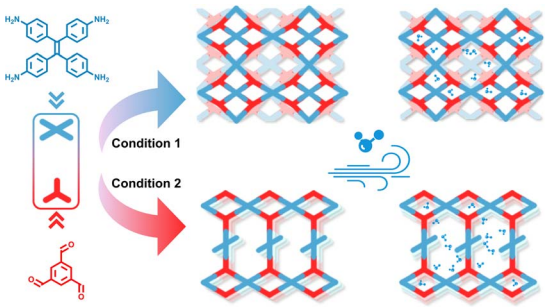

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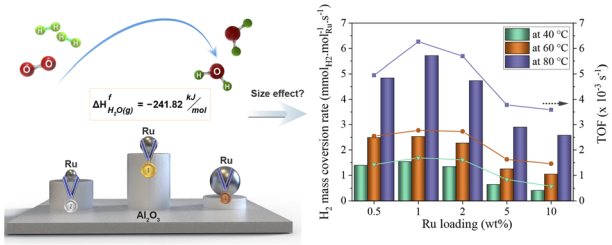

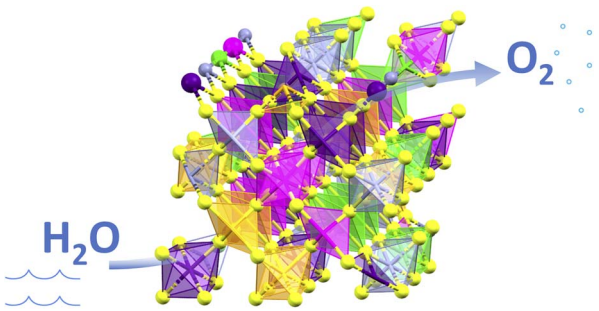

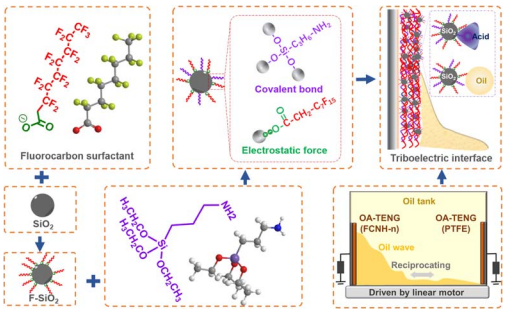

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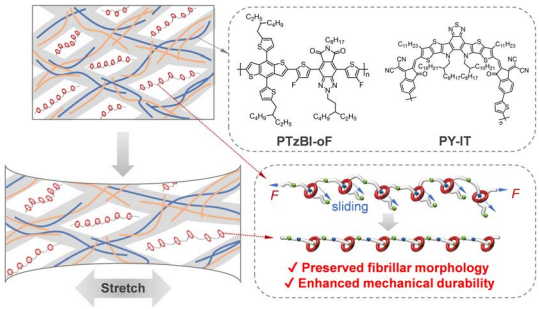

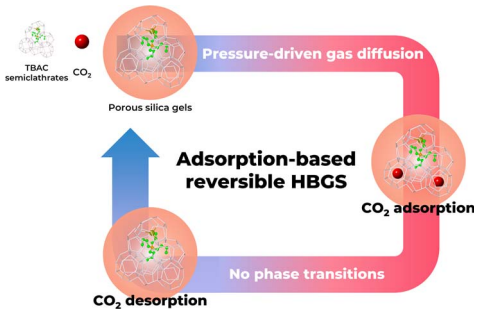

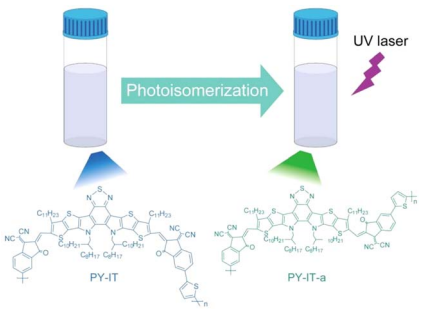

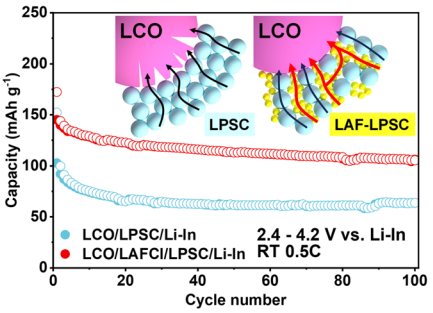

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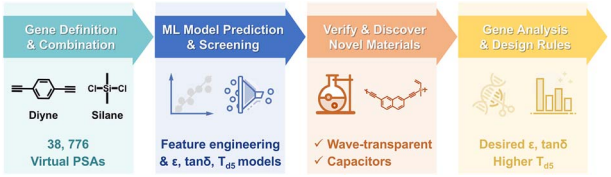

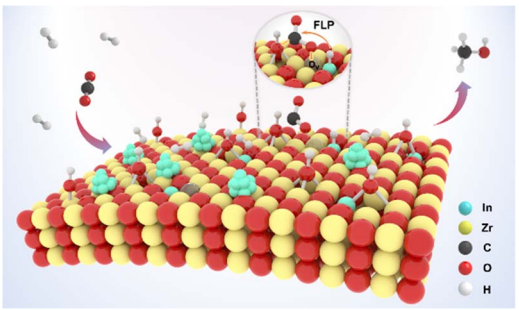

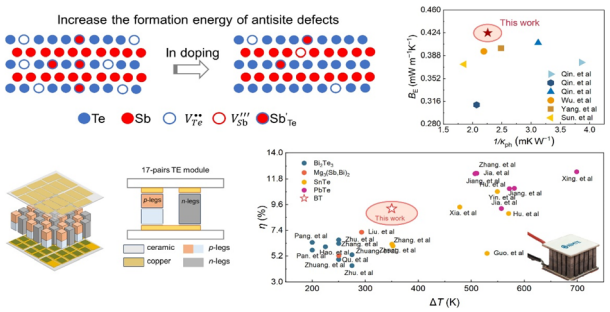

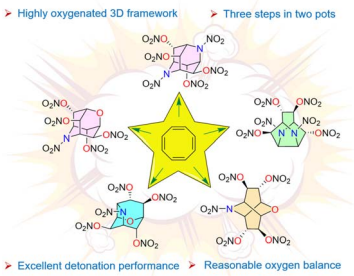

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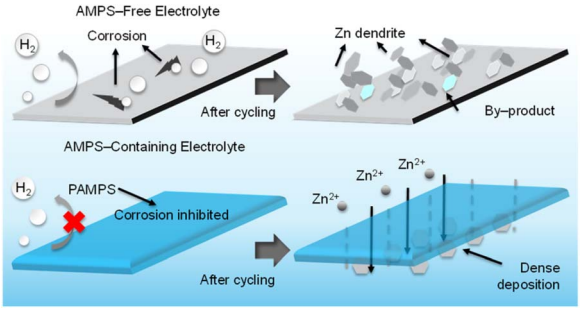

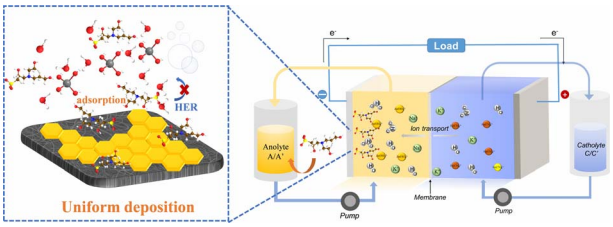

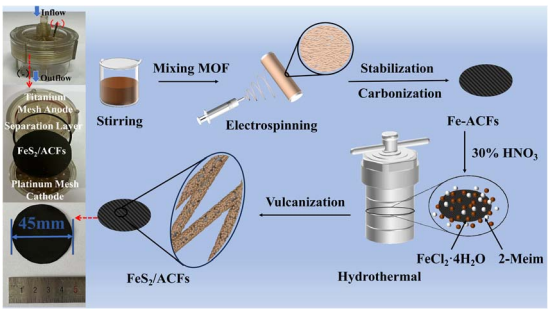

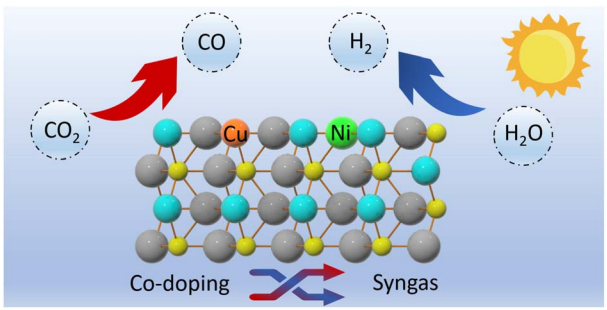

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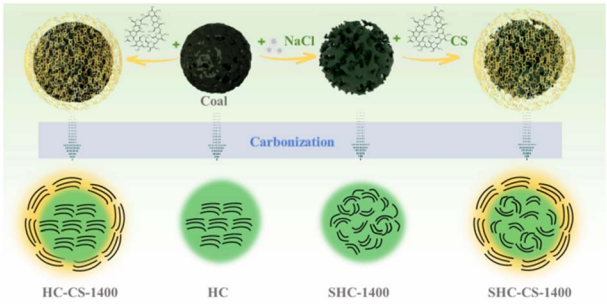

Achieving high-capacity sodium insertion of coal-based hard carbon anodes *via* closed-pore modification

Xinyue Chen, Penggao Liu,* Ting Wang, Chunrong He, Wei Song, Jinjin Ban, Shasha Gao and Kaiyu Liu

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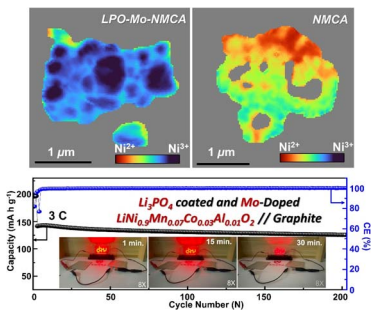

Dual-phase modulation *via* Mo doping and Li_3PO_4 coating for stabilized $LiNi_{0.9}Mn_{0.07}Co_{0.02}Al_{0.01}O_2$ cathodes in high-energy lithium-ion batteries

Srinivasan Alagar, Jun Kim, Eun-Jung Shin, Alex Ditter, David A. Shapiro, Namdong Kim, Won Gi Hong, Hyungsub Kim,* Young-Sang Yu,* Gi Dae Park* and Sang Mun Jeong*

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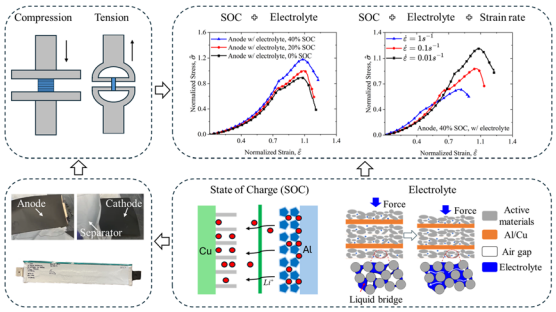

Effects of electrolyte, state of charge, and strain rate on the mechanical properties of lithium-ion battery electrodes and separators

Shuguo Sun, Bo Rui, Xijun Tan, Saurabh Bahuguna, Jun Zhou and Jun Xu*

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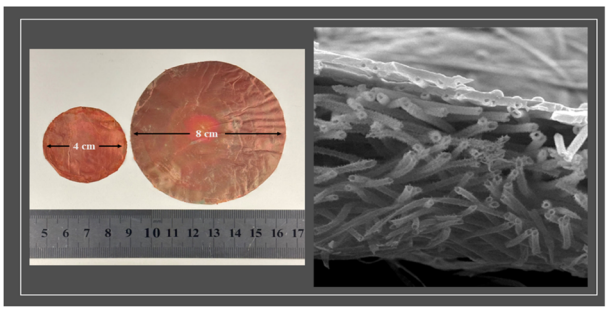

Liquid–liquid–solid interfacial polymerization approach to rapid fabrication of large-sized, self-standing structured COF membranes

Chenhui Ding, Yingying Du, Tamara Fischer, Jana Timm, Roland Marschall, Jürgen Senker and Seema Agarwal*

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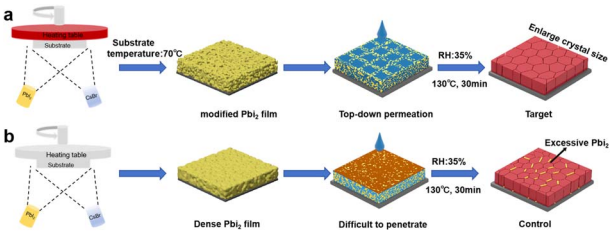

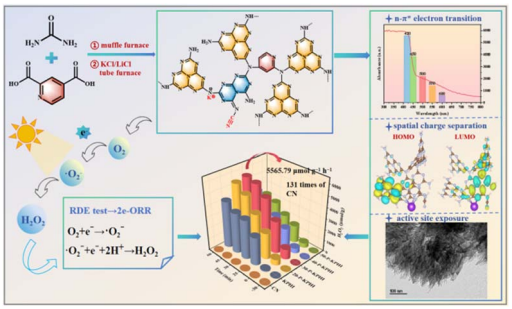

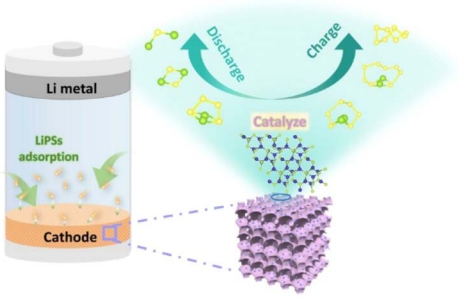

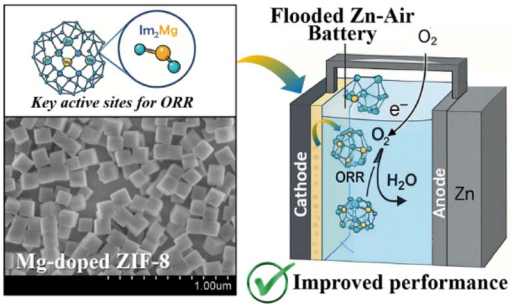

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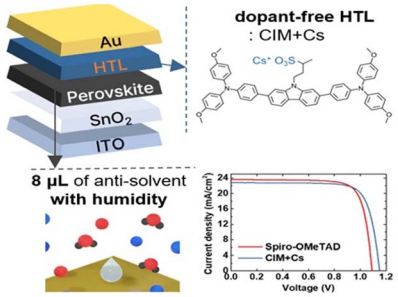

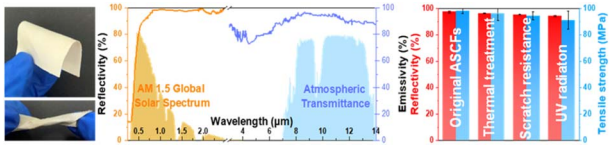

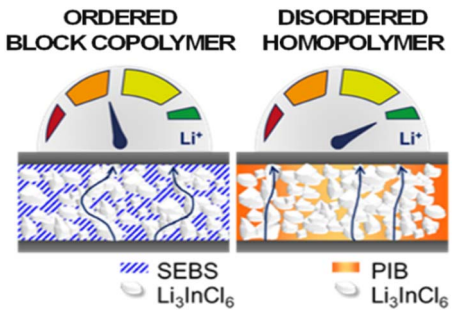

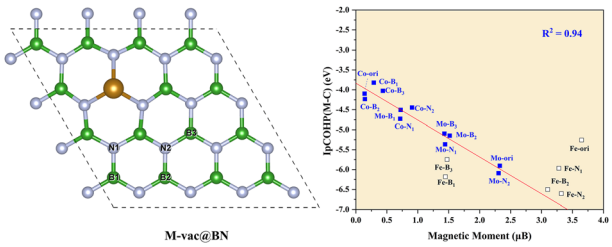

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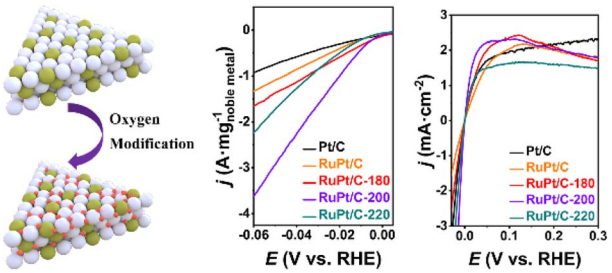
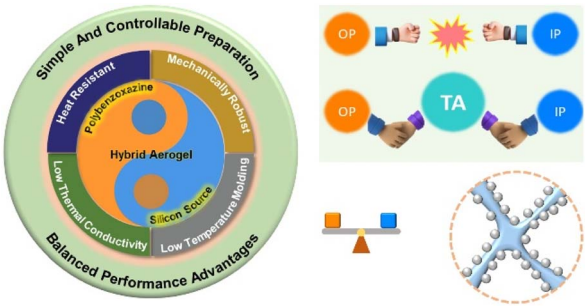


Oxygen-modified supra-nanometer-sized RuPt for robust alkaline HER/HOR

Youpeng Cao, Hongling Liu, Yuxuan Xiao, Lun Li, Jiao Yang, Chunfa Liu, Chengcheng Zhong, Wendi Zhang, Shuyang Peng, Junge Yang, Zhichao Yu, Weng Fai Ip and Hui Pan*

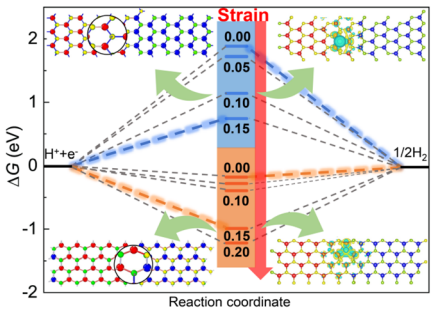
20850



A robust heat-insulating organic–inorganic hybrid aerogel with a green preparation strategy inspired by diatoms

Zibo Hua, Zhiqiang Wei, Ming Liu, Fanjun Guo, Tao You, Zidie Song, Ziqiao Wang, Yudong Huang, Li Liu* and Mingqiang Wang*

20859



Wrinkles in 2D TMD heterostructures: unlocking enhanced hydrogen evolution reaction catalysis

Kai Ren, Feifan Wang, Tianyang Liu, Huasong Qin* and Yu Jing*

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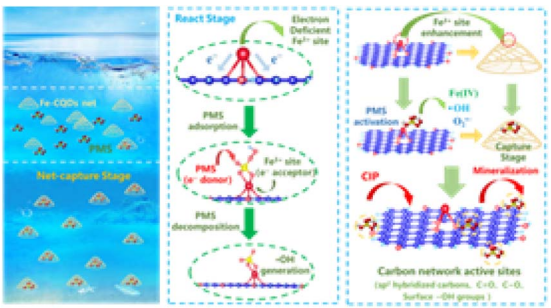

Network capture effect-driven enhanced activation of peroxymonosulfate by iron-doped carbon quantum dots derived from ferrous gluconate for efficient ciprofloxacin degradation: DFT calculations and mechanism analysis

Songru Xie, Longbo Jiang,* Wei Liu, Qiaomei Lu, Guanjun Zeng, Hou Wang, Jiajia Wang, Xingzhong Yuan, Haoyun Chen* and Haiwei Jiang*

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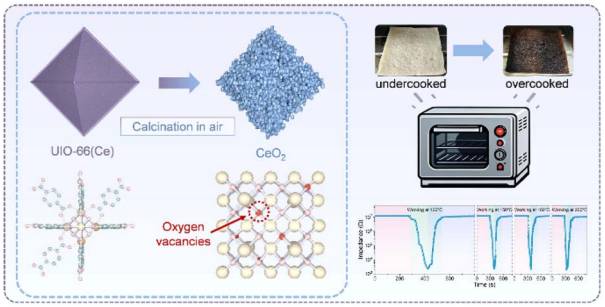

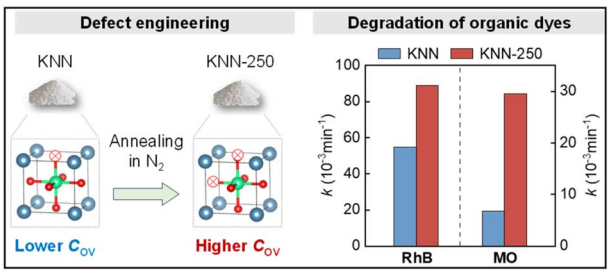

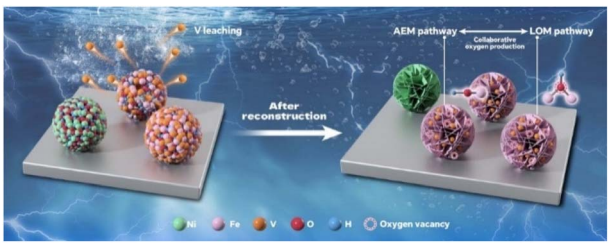

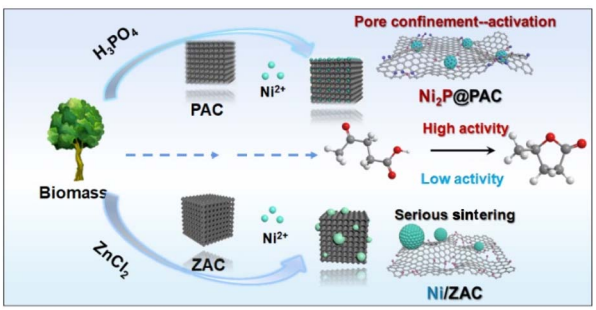

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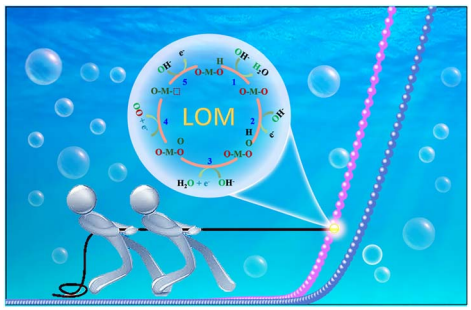

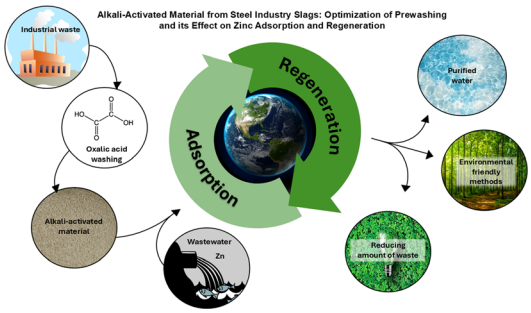

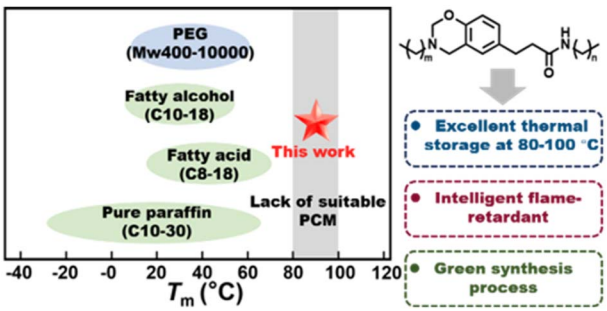

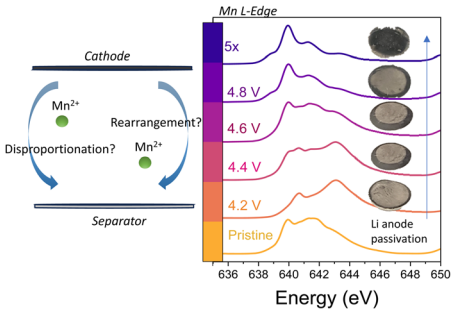

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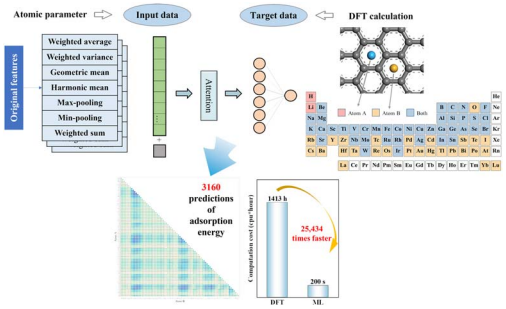
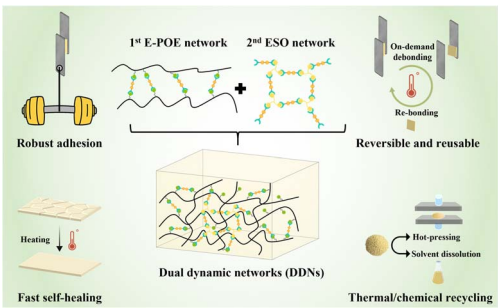


Integration of a self-attentive neural network and density functional theory for accelerated screening of graphene-based stabilized binary adsorption systems

Jiaying Chen, Yong Liu, Longlong Dong,* Longfei Guo, Jingteng Xue, Zongfan Wei and Jingchuan Zhu*

21035



Engineering tunable dual dynamic networks toward strong yet reversible adhesion, healable and recyclable polyolefin elastomer-based adhesives

Wei Liu, Xinghuo Wang, Yongdong Fang* and Yukun Chen*

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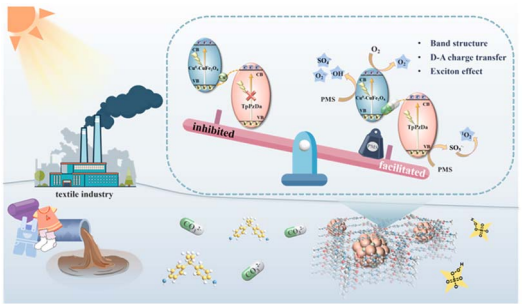

Efficient photo-degradation of BPA in textile wastewater assisted by primitive carbonate: the exceptional contribution of PMS in magnetic Cu^0–$CuFe_2O_4$@TpPzDa COF S-scheme heterojunctions

Manman Zhang, Yuanyue Wu, Huihan Cao, Juan Xu, Jingjing Deng* and Tianshu Zhou*

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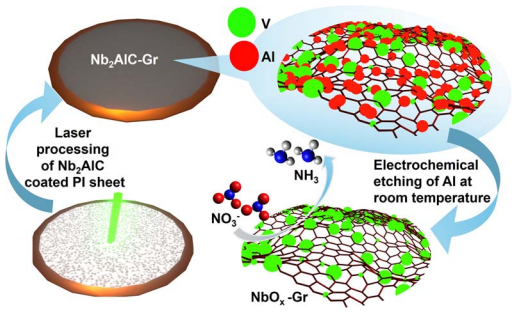
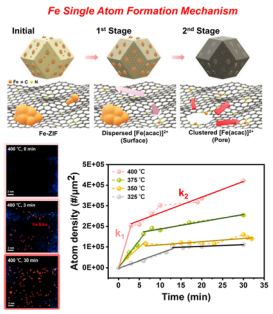


Electrochemical nitrate reduction to ammonia using laser-processed Nb_2AlC: the role of effective Al etching

Shaista Nouseen, Sujit Deshmukh, Michal Langer, Michal Otyepka and Martin Pumera*

PAPERS



CORRECTIONS