

# Journal of Materials Chemistry A

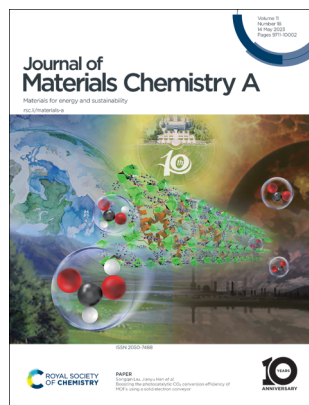
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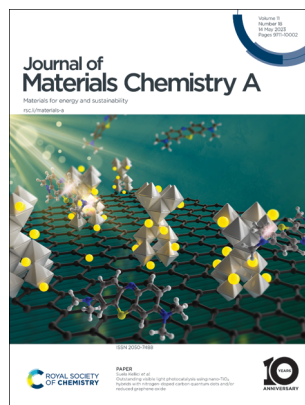
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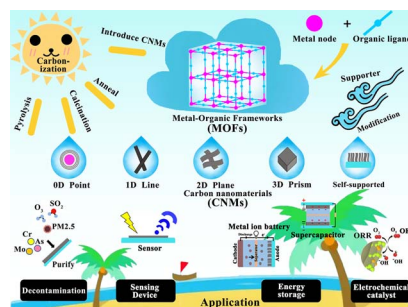
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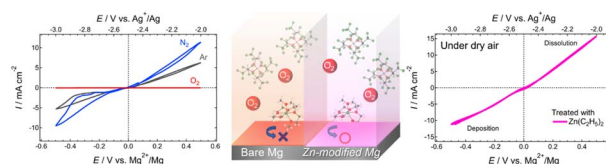


## COMMUNICATIONS

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**Oxygen – a fatal impurity for reversible magnesium deposition/dissolution**

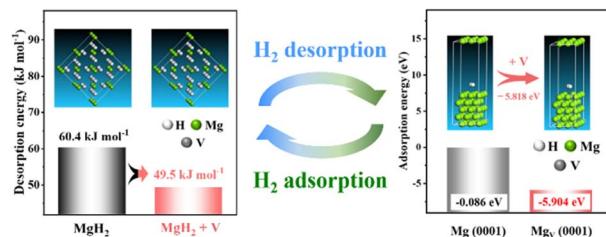
Toshihiko Mandai\* and Mariko Watanabe



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**Understanding and unlocking the role of V in boosting the reversible hydrogen storage performance of  $\text{MgH}_2$** 

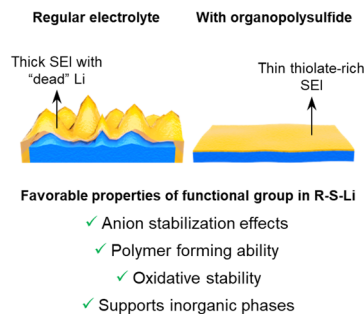
Yang Meng, Jian Zhang, Shunlong Ju, Yaxiong Yang, Zhenglong Li, Fang Fang, Dalin Sun, Guanglin Xia,\* Hongge Pan and Xuebin Yu\*



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**Mechanistic understanding of lithium-anode protection by organosulfide-based solid-electrolyte interphases and its implications**

Amruth Bhargav, Hooman Yaghoobnejad Asl and Arumugam Manthiram\*

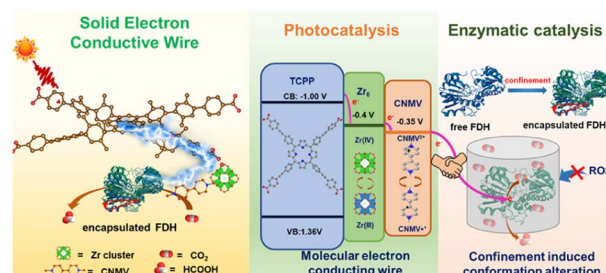


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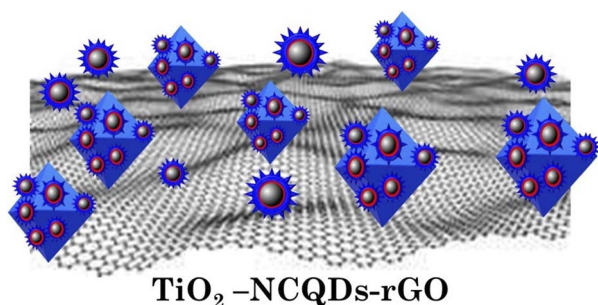
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**Boosting the photocatalytic  $\text{CO}_2$  conversion efficiency of MOFs using a solid electron conveyor**

Xiaofei Gu, Tianyi Huang, Yixin Hong, Yafeng Wu, Zhi Wang, Yuanjian Zhang, Songqin Liu\* and Jianyu Han\*



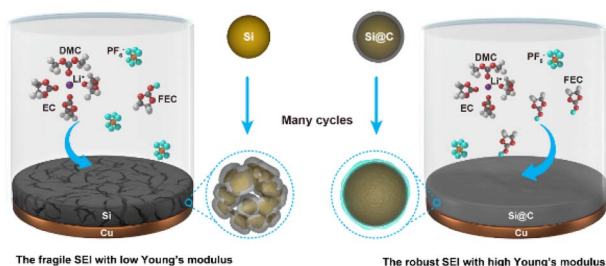
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### Outstanding visible light photocatalysis using nano-TiO<sub>2</sub> hybrids with nitrogen-doped carbon quantum dots and/or reduced graphene oxide

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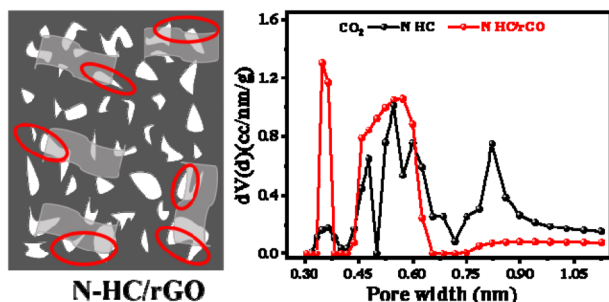
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### Carbon-coating strengthens the solid electrolyte interphase to inhibit Si pulverization

Xuyang Wang, Yingzhi Li,\* Xinyang Wang, Qingmeng Gan, Zhenyu Wang, Kemeng Liao, Sisi Wu, Hao Guo, Jiangyu Li, Boyuan Huang\* and Zhonguang Lu\*

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### Sucrose-derived hard carbon wrapped with reduced graphene oxide as a high-performance anode for sodium-ion batteries

Shengyuan Li, Hong Yuan, Chuanren Ye, Yizhe Wang, Long Wang, Kun Ni\* and Yanwu Zhu\*

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### Overall water electrolysis on a graphdiyne-iron oxyhydroxide heterostructure

Xi Chen, Danyan Zhang, Xuchen Zheng, Chao Zhang, Yang Gao, Chengyu Xing, Siao Chen, Han Wu, Yurui Xue\* and Yuliang Li\*

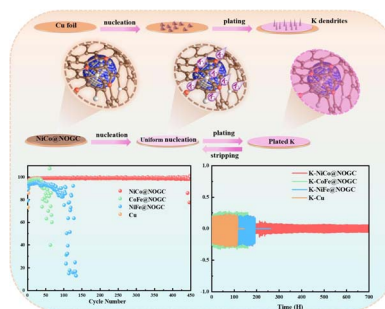




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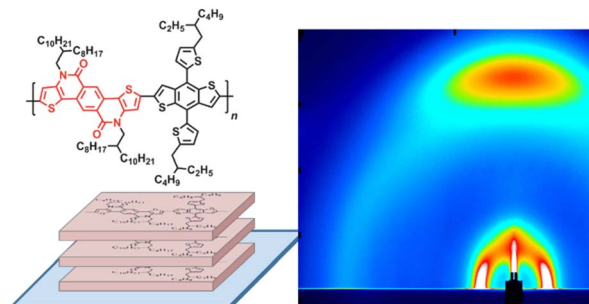
Qing Shen, Yibo He and Junjie Wang\*



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## Fused polycyclic lactam-based $\pi$ -conjugated polymers for efficient nonfullerene organic solar cells

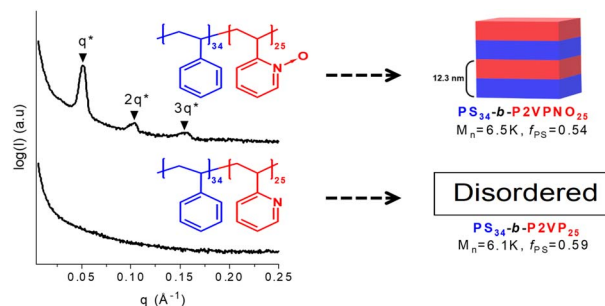
Narumi Sato, Sunbin Hwang, Yuichi Tsuchii and Takuma Yasuda\*



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## High- $\chi$ diblock copolymers containing poly(vinylpyridine-*N*-oxide) segments

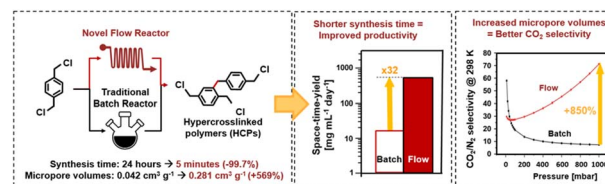
Polyxeni P. Angelopoulou, Logan T. Kearney, Jong K. Keum, Liam Collins, Rajeev Kumar, Georgios Sakellariou, Rigoberto C. Advincula, Jimmy W. Mays\* and Kunlun Hong\*



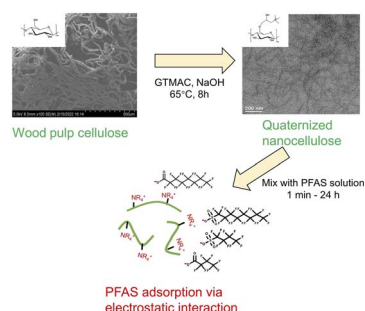
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Nadhita Chanchaona, Liang Ding, Shiliang Lin, Sulaiman Sarwar, Simone Dimartino, Ashleigh J. Fletcher, Daniel M. Dawson, Kristina Konstas, Matthew R. Hill and Cher Hon Lau\*



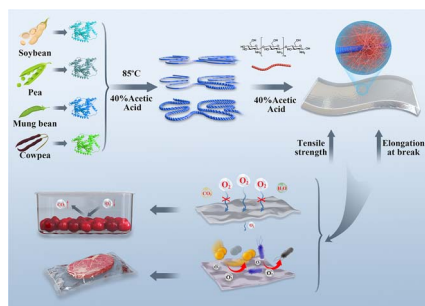
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### Efficient removal of short-chain and long-chain PFAS by cationic nanocellulose

Duning Li, Cheng-Shiuan Lee, Yi Zhang, Rasel Das, Fahmida Akter, Arjun K. Venkatesan\* and Benjamin S. Hsiao\*

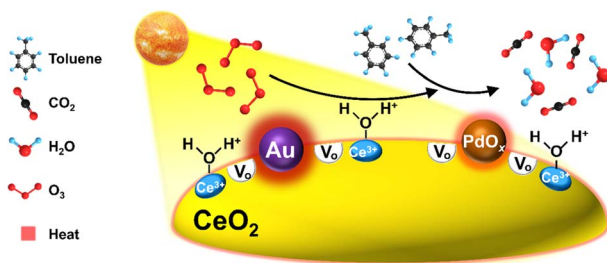
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### Protein fibrillation and hybridization with polysaccharides enhance strength, toughness, and gas selectivity of bioplastic packaging

Yeyang Zhang, Yingqun Nian, Qixin Shi and Bing Hu\*

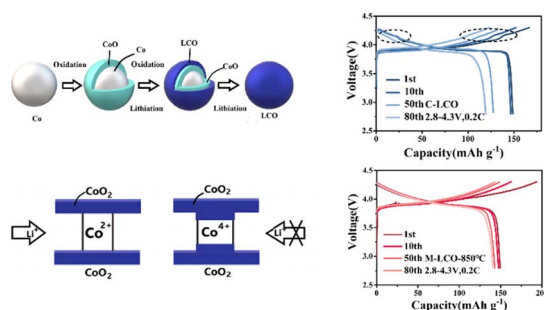
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### Synergistic effects of Au and PdO<sub>x</sub> on the solar-assisted catalytic ozonation of VOCs

Junxian Gao, Zhizhang Shen, Yuming Dong, Zhenyu Wang, Jinze Lyu,\* Ji Li\* and Han-Qing Yu\*

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### From metal to cathode material: *in situ* formation of LiCoO<sub>2</sub> with enhanced cycling performance and suppressed phase transition

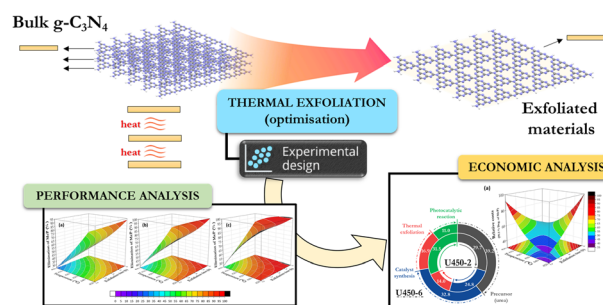
Longhao Cao, Hui Wang, Ziyin Guo, Jing Zhang, Xiaosong Zhang, Cancan Peng, Jingxiong Yu, Ya-Jun Cheng\* and Yonggao Xia\*



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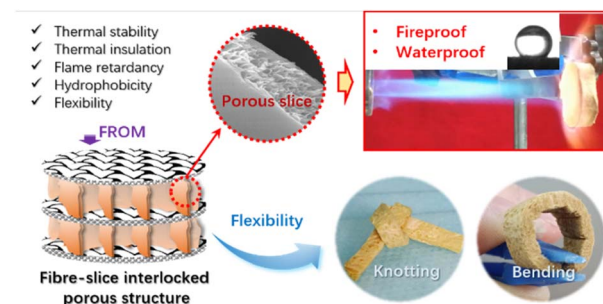
Jorge Plaza, Amaya Arencibia and María José López-Muñoz\*



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## Flexible and interlocked quartz fibre reinforced dual polyimide network for high-temperature thermal protection

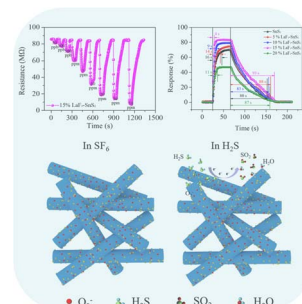
He Huang, Xiaojie Yan, Xiangyu Jin, Can Wu, Yiwu Pan, Hebing Wang, Chuncheng Zhu, Changqing Hong,\* Wenbo Han and Xinghong Zhang\*



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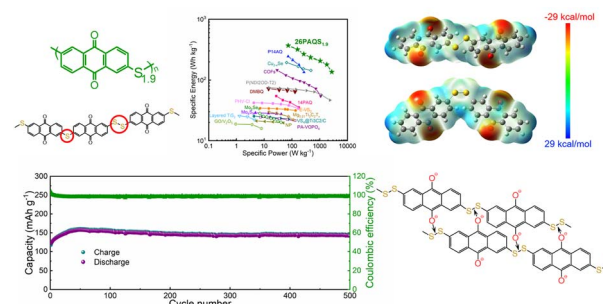
Mingcong Tang, Zijian Wang, Dongyue Wang, Ruiyuan Mao, Hao Zhang, Wei Xu, Zhe Yang\* and Dongzhi Zhang\*



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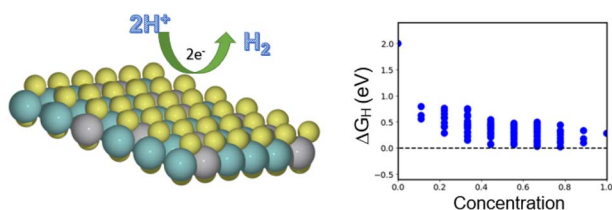
## Poly(2,6-anthraquinonyl disulfide) as a high-capacity and high-power cathode for rechargeable magnesium batteries: extra capacity provided by the disulfide group

Xin Ren, Donggang Tao, Yudi Tang, Yuliang Cao and Fei Xu\*



## PAPERS

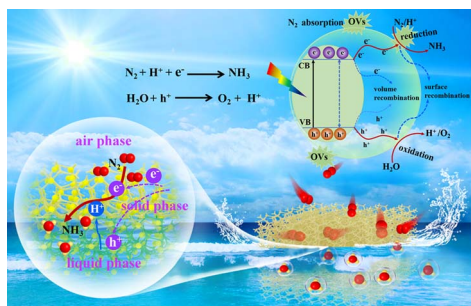
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**Basal plane activation of two-dimensional transition metal dichalcogenides via alloying for the hydrogen evolution reaction: first-principles calculations and machine learning prediction**

Yiqing Chen, Ying Zhao, Pengfei Ou\* and Jun Song\*

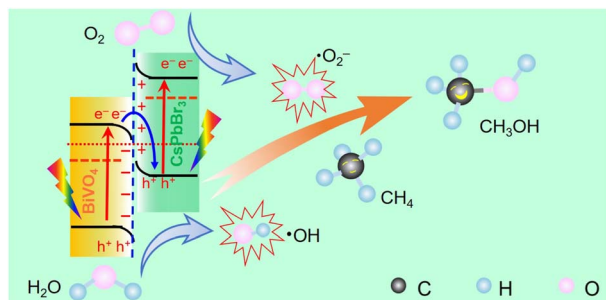
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**A bioinspired floatable system with a 3D sandwich-type triphase interface for highly efficient nitrogen fixation**

Xiuyan Wang, Xinjian Shi, Shengyan Yin, Ping She, Jiaqi Zheng, Yudong Song and Hang Sun\*

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**Visible-light-driven and selective methane conversion to oxygenates with air on a halide-perovskite-based photocatalyst under mild conditions**

Guang-Xing Dong, Meng-Ran Zhang, Ke Su, Zhao-Lei Liu, Min Zhang\* and Tong-Bu Lu\*

