Journal of Materials Chemistry A

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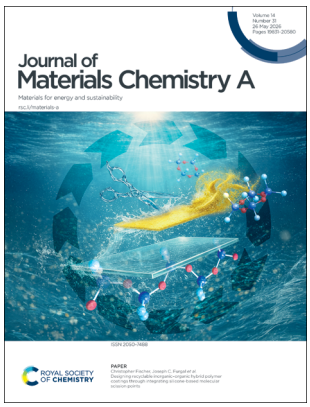

Cover
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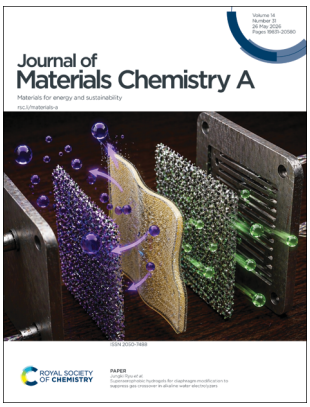
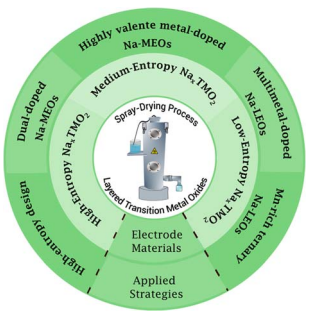
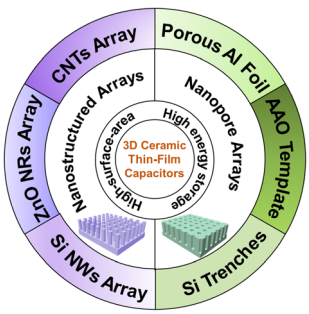
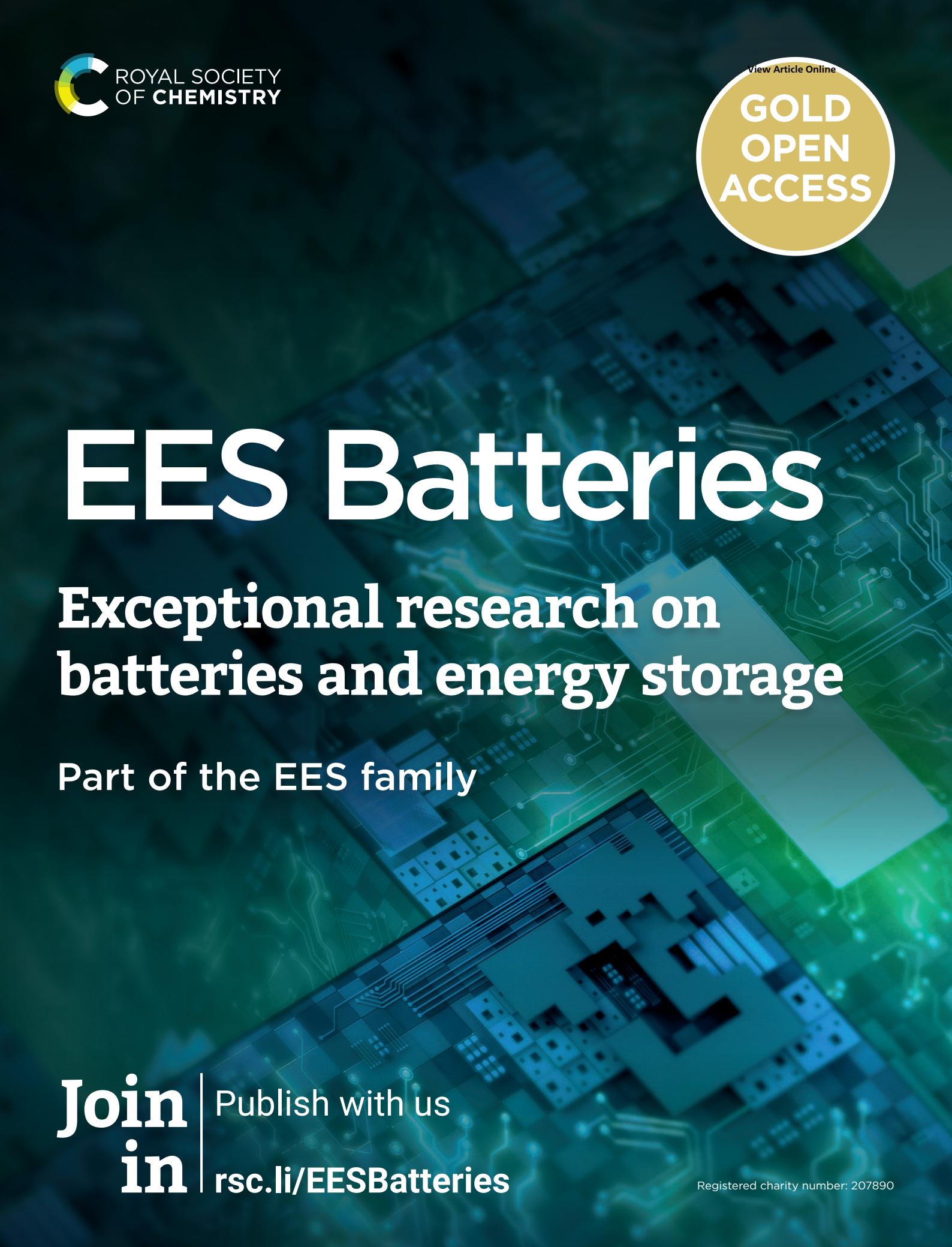


Inside cover
See Jungki Ryu *et al.*, pp. 20077–20087. Image reproduced by permission of Jungki Ryu from *J. Mater. Chem. A*, 2026, **14**, 20077. AI used in image generation.

REVIEWS



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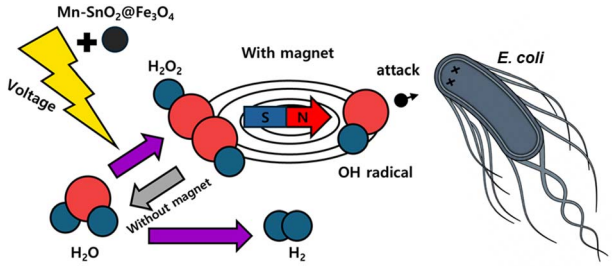

Magnetic-field-assisted cascade electrocatalysis: simultaneous H_2O_2 generation and $^{\cdot}OH$ radical production for coupled hydrogen evolution and water disinfection

Yeonsu Han, Jungsue Choi, Soyun Oh, Hyun Ko and Hyoyoung Lee*

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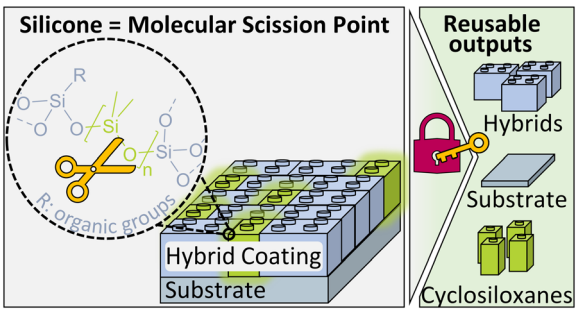
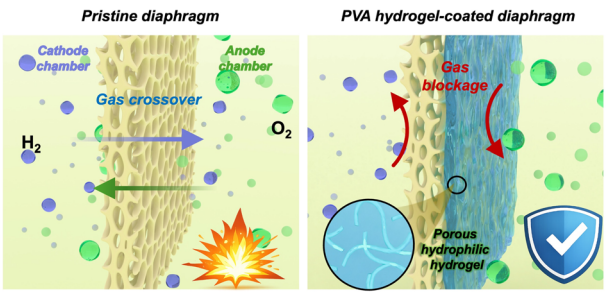


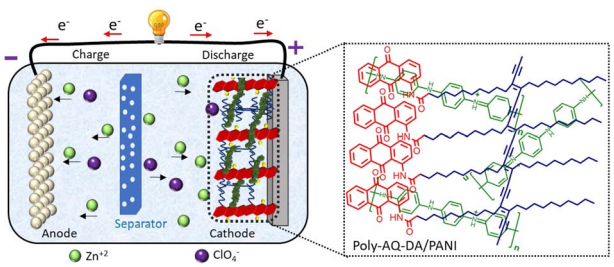
Designing recyclable inorganic–organic hybrid polymer coatings through integrating silicone-based molecular scission points

Christopher Fischer,* Anja Hart, Ferdinand Somorowsky, Claudia Stauch, Diana Lau, Gerhard Sextl and Joseph C. Furgal*



Superaerophobic hydrogels for diaphragm modification to suppress gas crossover in alkaline water electrolyzers

Soi Lee, Jinseo Lee, Seunghyun Lee, Hyeongoo Kim, Yunseok Kang, Dong Woog Lee and Jungki Ryu*



High-performance polydiacetylene organic cathode for zinc-ion batteries

Anita Samage, Elinor Slavsky and Raz Jelinek*

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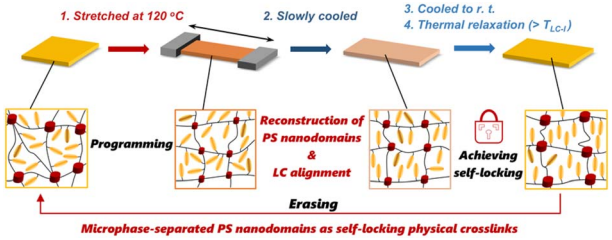
20101

Crosslinking-free preparation of thermoplastic triblock liquid crystal elastomer actuators

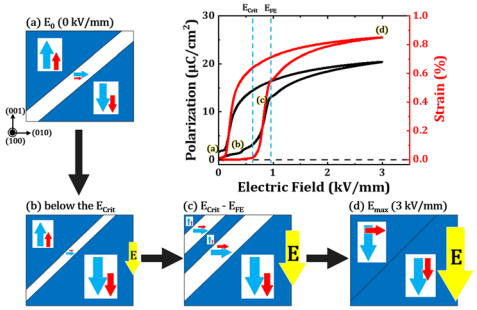
Ting Liu, Jiaxin Yang, Jie Jiang, Lu Yin, Hongwei Ma, Yue Zhao,* Yang Li and Li Han*



20113

Giant electric-field-induced strain associated with defect dipoles in Fe-doped barium titanate single crystals activated by an electric field

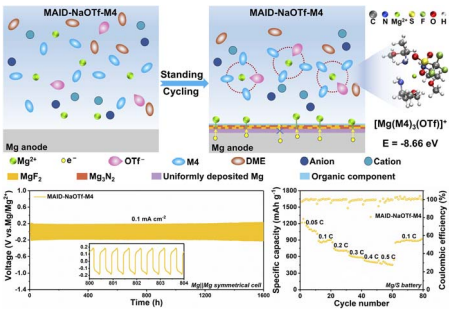
Chang Min Baek, Xiaoming Shi, Rokhyeon Kim, Ho-Yong Lee, Yunseok Kim, Jung Min Park, Houbing Huang,* Dae-Yong Jeong* and Jungho Ryu*



20122

Dual-functional $CF_3SO_3^-$/amine additives synergistically construct an MgF_2/Mg_3N_2-rich interphase toward high-performance magnesium–sulfur batteries

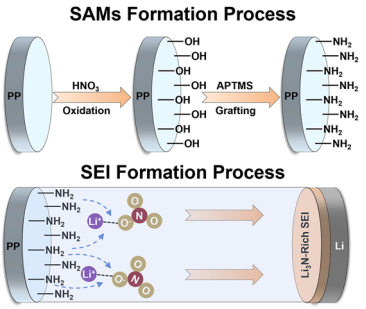
Jiaming Shi, Miao Cheng,* Qianqian Liu, Ruirui Wang, Wujun Ma, Jing Hu, Tao Wei, Bo Liu,* Muzi Chen and Wanfei Li*



20136

Grafting self-assembled monolayers on polymeric substrates toward Li_3N-stabilized solid electrolyte interphases

Juxin Yue, Qibin Xie, Ze Wang, Ke Yue, XingYao Zeng, Cong Ma, Hengyu Feng, Peng Shi,* Shihui Zou, Huadong Yuan, Jianwei Nai, Yao Wang, Jianmin Luo, Shaofei Wu, Xinyong Tao* and Yujing Liu*



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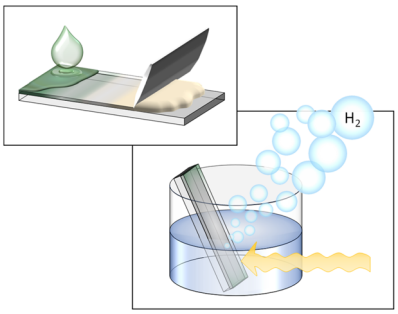

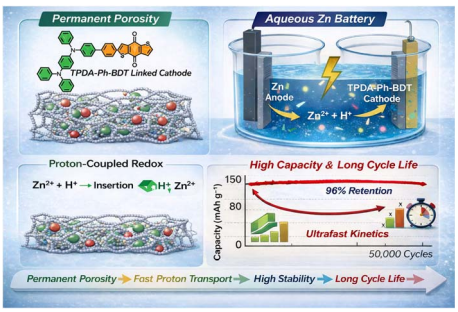

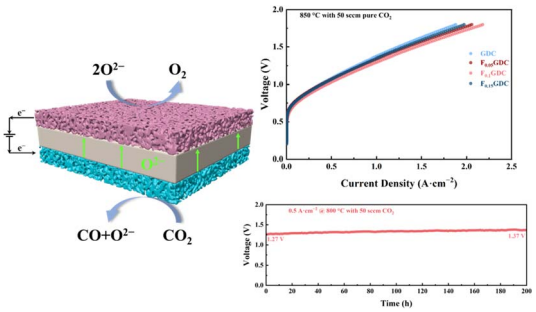

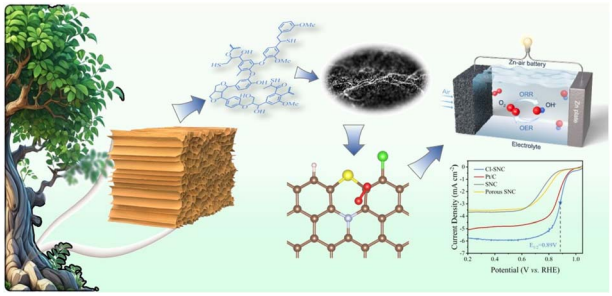

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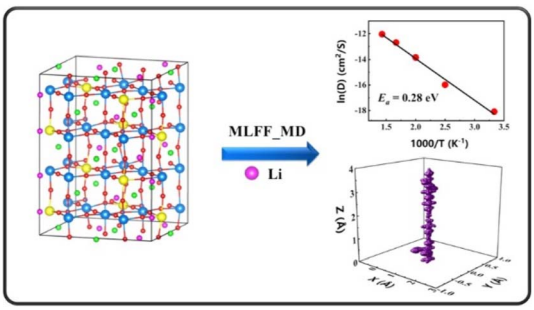

Unraveling anisotropic Li-ion transport in $Li_{3/8}Sr_{7/16}Ta_{3/4}Hf_{1/4}O_3$ *via* machine learning molecular dynamics and first-principles modeling

Qiang Ke, Xueling Lei* and Kevin Huang*

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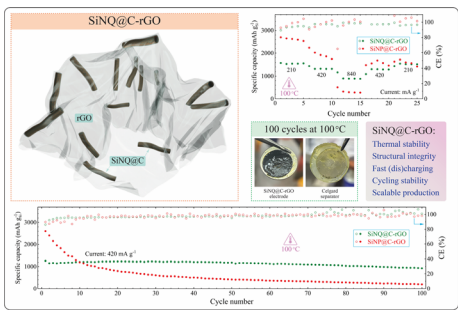

Interface-engineered silicon nano-quill electrodes for durable extreme temperature lithium-ion batteries

Janak Basel, Morteza Sabet,* Peshal Karki, Mihir Parekh, Talia M. Sebastian, Yi Ding and Apparao M. Rao*

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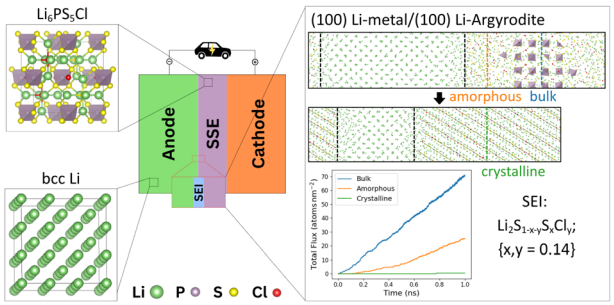

Atomistic insights into the chemical stability and ionic transport at Li-metal/Li-argyrodite interfaces

Chantal M. I. Baer,* Roman Shantsila, Łukasz Figiel and Bora Karasulu*

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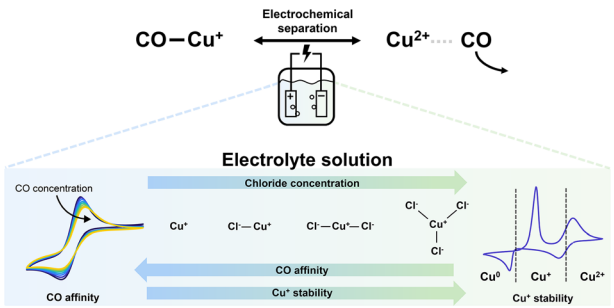

Electrolyte effects on the stability and CO binding of copper chloride complexes for electrochemical separation of CO/N_2

Christel I. Koopman, Jelco Albertsma, Zhengyao Zhu, Monique A. van der Veen and David A. Vermaas*

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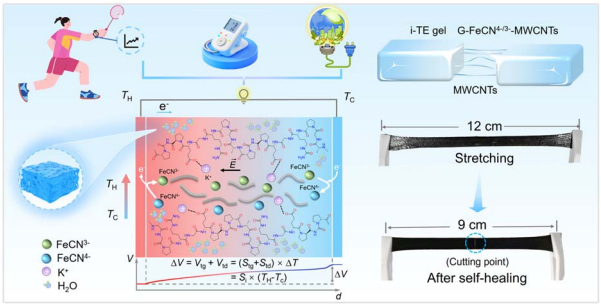
Lotus-root-fiber inspired stretchable and self-healing ionic thermoelectric gels with carbon nanotubes for enhanced high-temperature performance

Jiawei Chen, Guimei Li, Wenjun He, Chunxia Xie, Lan Yang, Luoting Wu, Manqi Chen, Kai Zhou, Cheng-Gong Han,* Wei Wang* and Li Niu*



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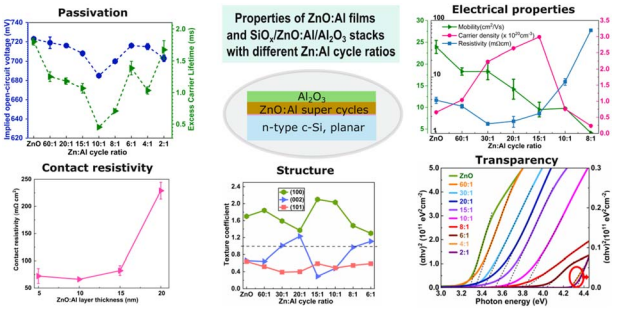
Influence of Al doping ratio on properties of ZnO:Al passivating contacts for crystalline silicon solar cells

Piyumi Kodithuwakku,* Christian Samundsett, Daniel H. Macdonald and Lachlan E. Black*



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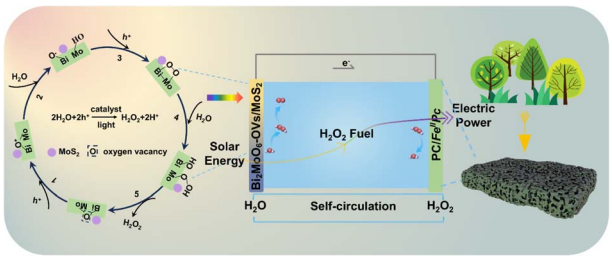
Synergistic defect engineering and cocatalyst loading in a Bi_2MoO_6-OVs/MoS_2 photoanode for efficient power generation in H_2O_2 photoelectrochemical cells

Yutong Liu, Shuohui Li, Bo Yu, Yingying Guan, Xiaosong Han, Yihui Tian, Yang Zhao* and Huan Wang*



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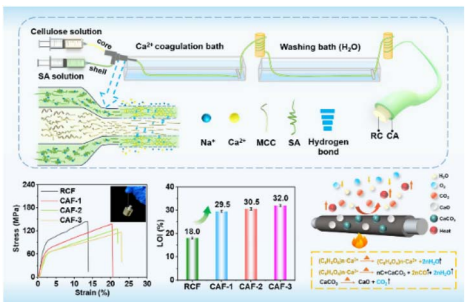
Regenerated cellulose fibers from coaxial wet spinning of alginate with excellent flame retardancy

Yueying Zhang, Jiuyong Yao, Kai Li, Shengkang Wang, Yide Liu* and Yanzhi Xia*



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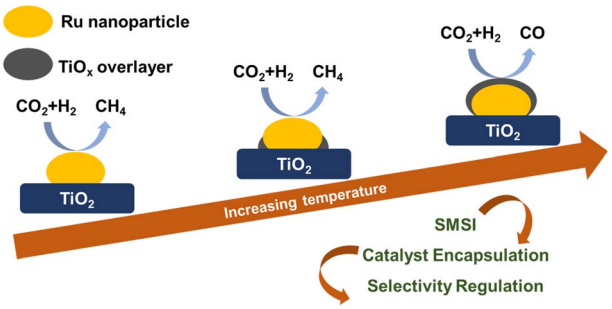

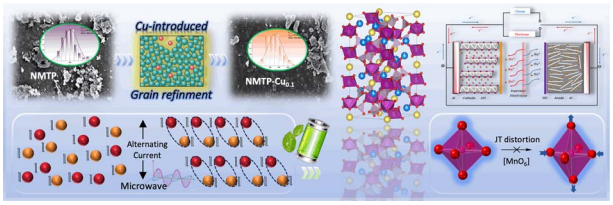

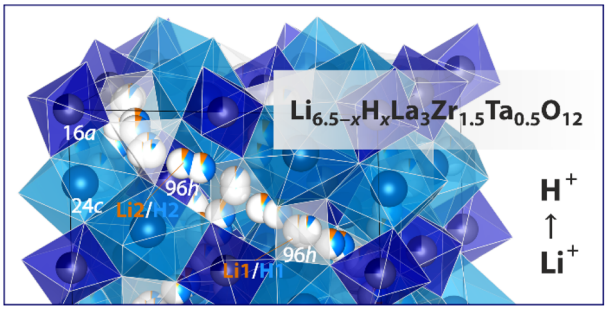

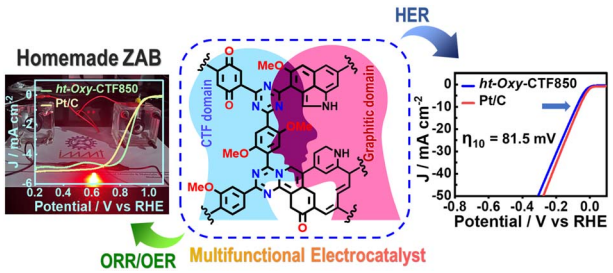

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