# Journal of Materials Chemistry A

Materials for energy and sustainability

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## IN THIS ISSUE

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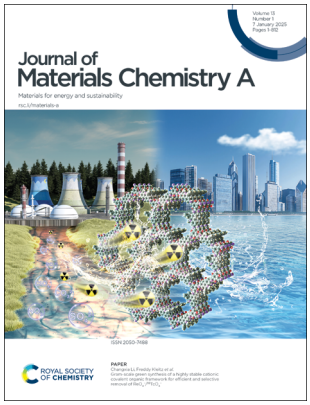
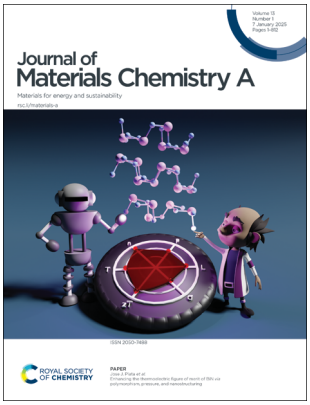



**Cover**
See Changxia Li, Freddy Kleitz *et al.*, pp. 214–219. Image reproduced by permission of Freddy Kleitz and Changxia Li from *J. Mater. Chem. A*, 2025, **13**, 214.




**Inside cover**
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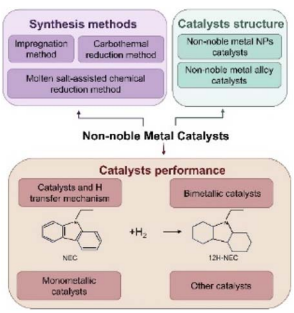
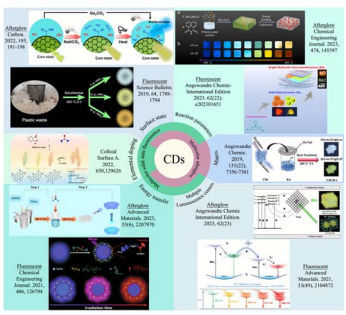
## REVIEWS







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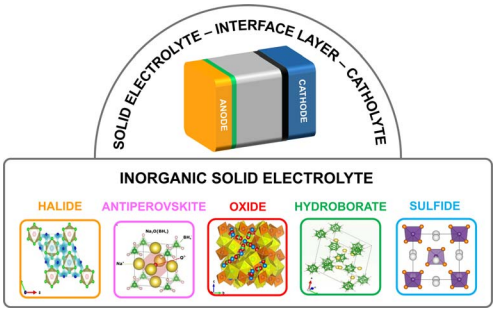
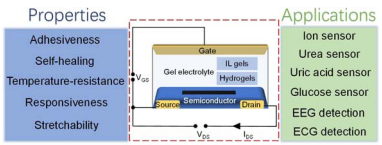
## REVIEWS

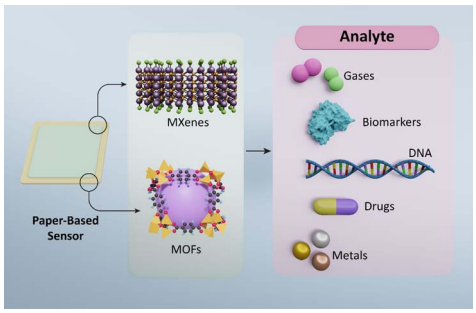






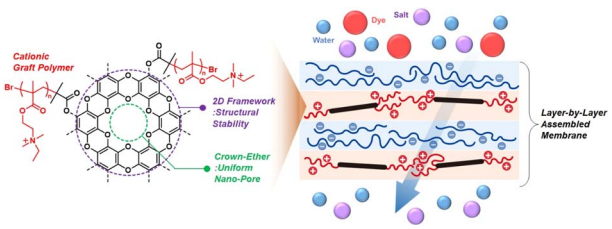






## COMMUNICATIONS





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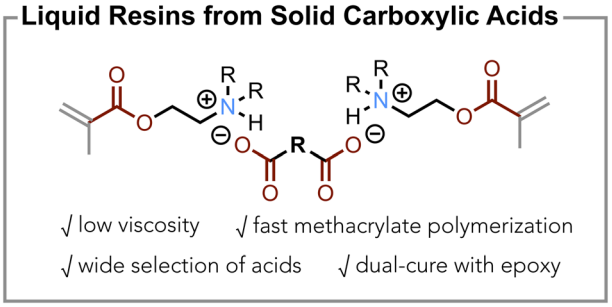
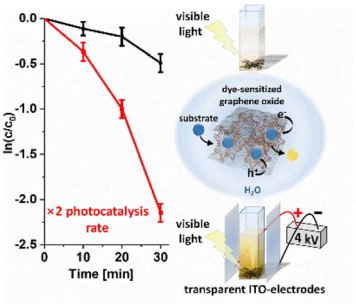



### Solventless, rapid-polymerizable liquid resins from solid carboxylic acids through low-viscosity acid/base complexes

Grant M. Musgrave, Eden Y. Yau, Sijia Huang, Caleb J. Reese and Chen Wang*

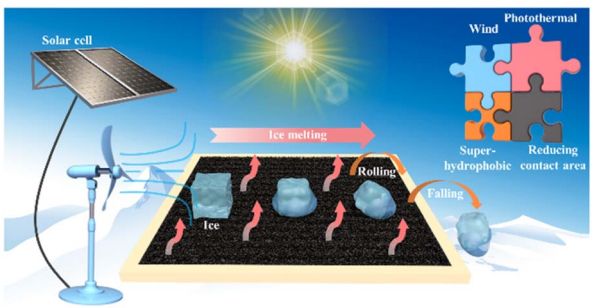





### Electric field-induced amplification of graphene oxide's visible light photocatalytic activity

Alsu G. Nugmanova, Maxim R. Sokolov, Alexey E. Alexandrov, Maria A. Kniazeva, Ivan Yu. Eremchev, Andrey V. Naumov, Danil W. Boukhvalov, Burkhard König and Maria A. Kalinina*






### Efficient anti-icing/deicing *via* photothermal-wind synergistic effects on femtosecond laser-induced superhydrophobic graphene

Xinghao Song, Kai Yin,* Xun Li, Lingxiao Wang, Pengyu Yang, Jiaqing Pei, Yin Huang, Christopher J. Arnusch and Guoqiang Li*

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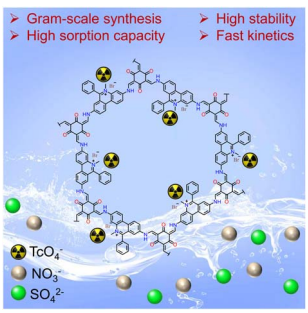


### Gram-scale green synthesis of a highly stable cationic covalent organic framework for efficient and selective removal of $ReO_4^-$/$^{99}TcO_4^-$

Changxia Li,* Justyna Florek, Patrick Guggenberger and Freddy Kleitz*

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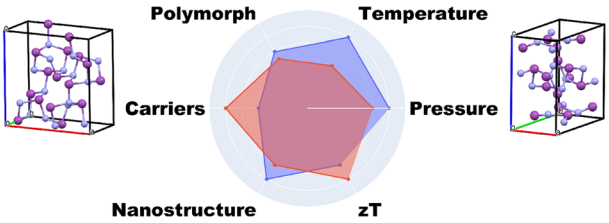




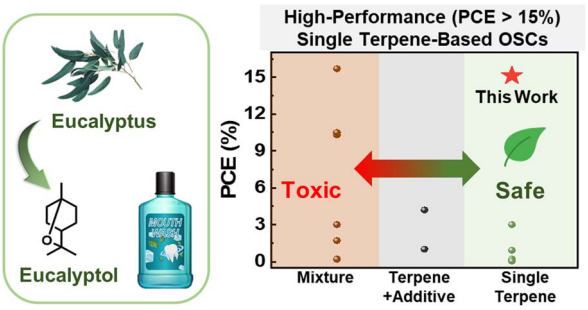




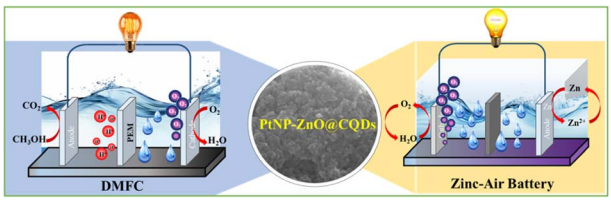




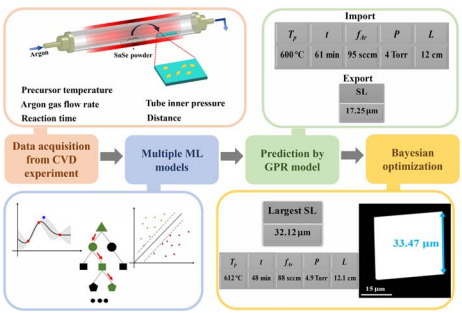

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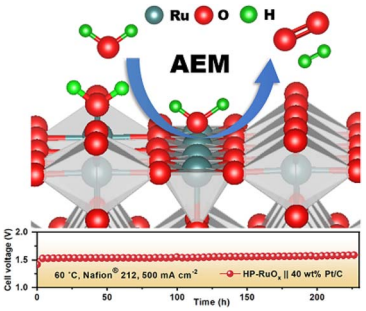




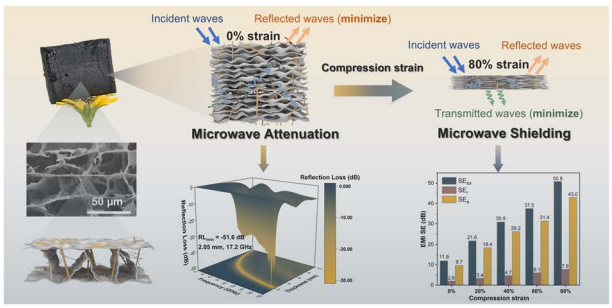




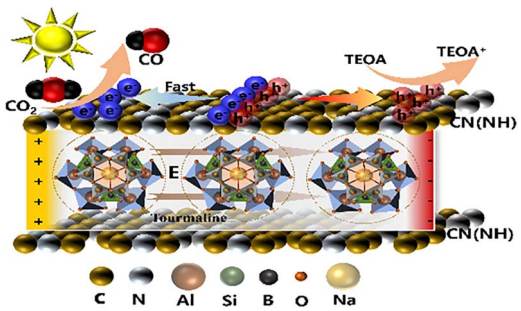




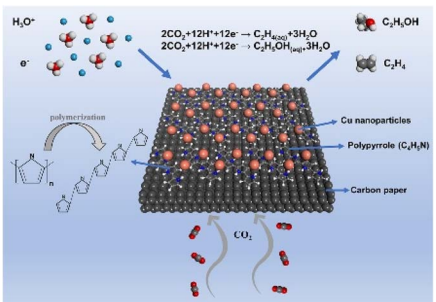

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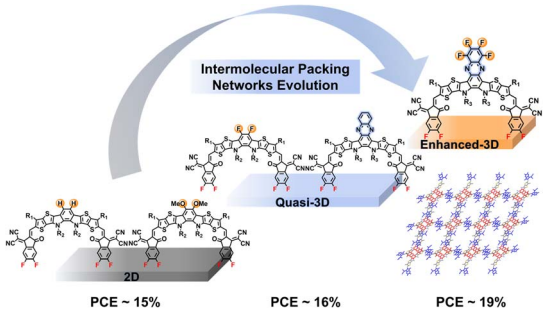


### Root-cause analyses for 3D intermolecular packing network formation in central unit extended small molecular acceptors

Jiaxin Guo, Xiangjian Cao, Zheng Xu, Tengfei He, Xingqi Bi, Zhaoyang Yao,* Yaxiao Guo, Guankui Long, Chenxi Li, Xiangjian Wan* and Yongsheng Chen*

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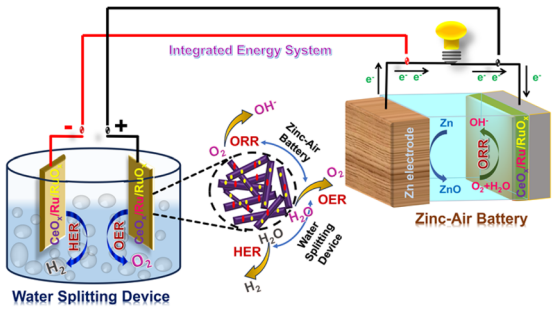


### Synergistic influence of multivalent $Ru^{\delta+}$ on a $CeO_x$ nanocatalyst for self-powered efficient electrochemical water splitting

Papri Mondal and Sujoy Baitalik*

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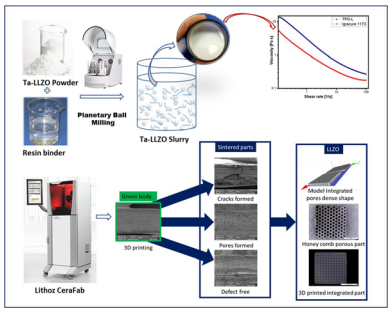


### Vat photopolymerization of tantalum-doped $Li_7La_3Zr_2O_{12}$ electrolytes: a new Frontier in solid-state battery design

Diwakar Karuppiah, Dmitrii Komissarenko, Tamanna Thakur, Nur Sena Yüzbasi, Frank Clemens, Elias Reisacher, Pinar Kaya, James Pikul and Gurdial Blugan*

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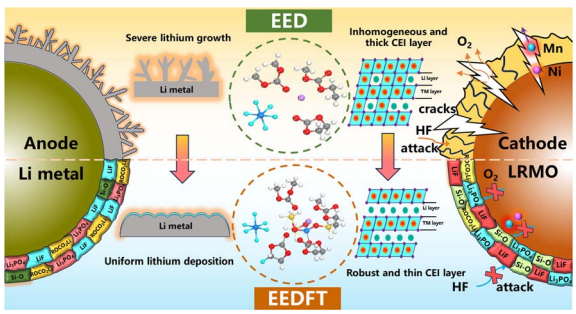


### Synchronous dual additives to boost multiphase interface stability of high-voltage Li-rich Mn-based batteries

Qiangfeng Zhang, Shijie Xu, Haipeng Zhu, Zhao Chen, Libao Chen, Chunxiao Zhang* and Weifeng Wei

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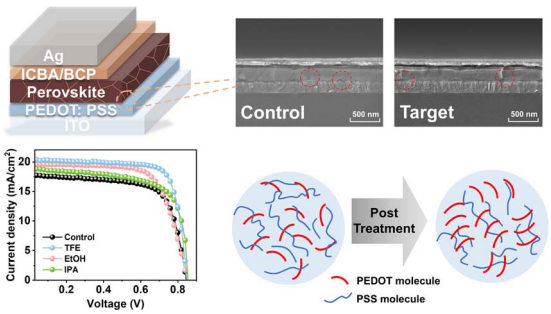




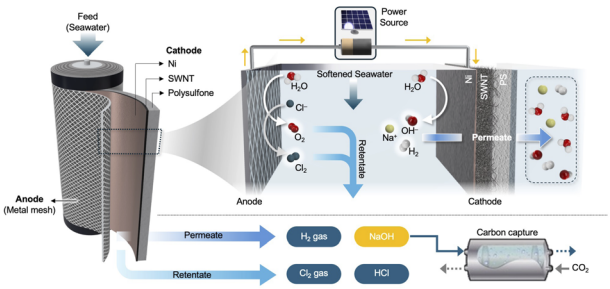




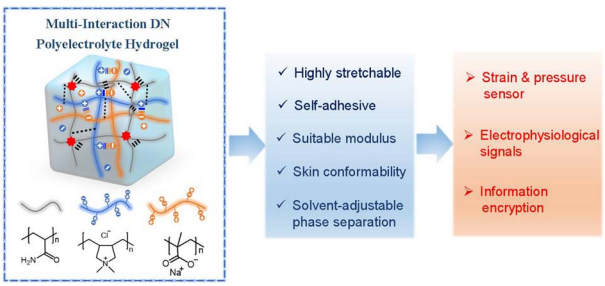




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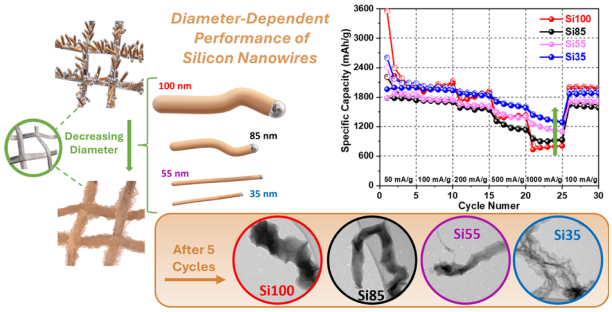




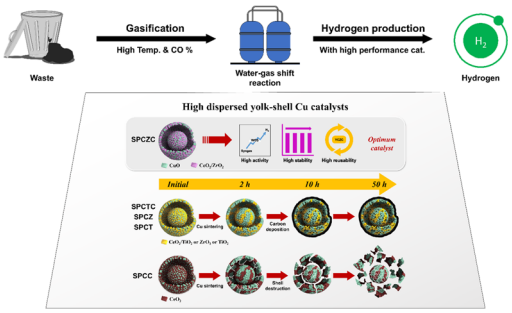




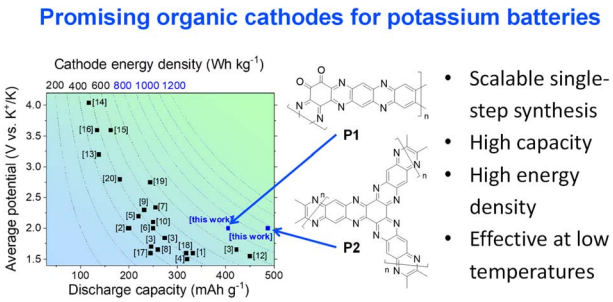




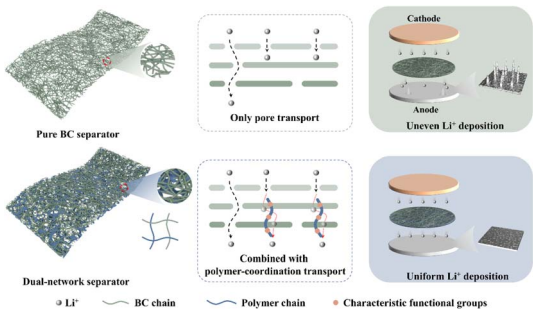

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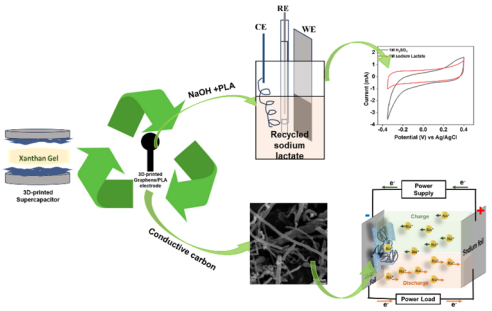


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