

# Materials Advances

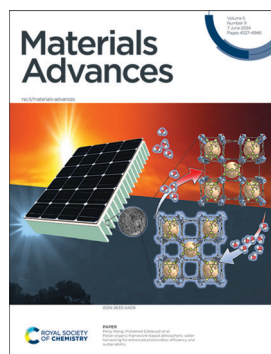
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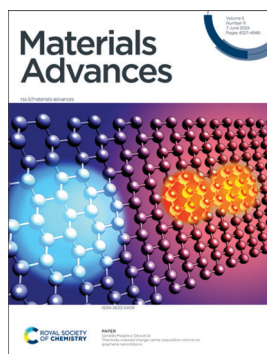
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See Peng Wang, Mohamed Eddaoudi *et al.*, pp. 4660–4667. Image reproduced by permission of Osama Shekhah from *Mater. Adv.*, 2024, 5, 4660.



### Inside cover

See Geraldo Magela e Silva *et al.*, pp. 4668–4678. Image reproduced by permission of Geraldo Magela e Silva from *Mater. Adv.*, 2024, 5, 4668. The authors would like to thank Gabriela Hirata e Silva for the cover image.

## EDITORIAL

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### Introduction to Biomaterials in Innate Immunity

Erika Moore\* and Shreya A. Raghavan\*

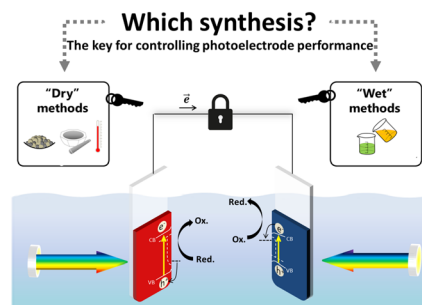


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Fundamental questions  
Elemental answers

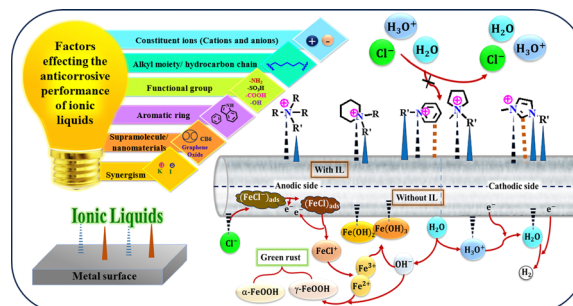


## REVIEWS

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### Unveiling the future of steel corrosion inhibition: a revolutionary sustainable odyssey with a special emphasis on N<sup>+</sup>-containing ionic liquids through cutting-edge innovations

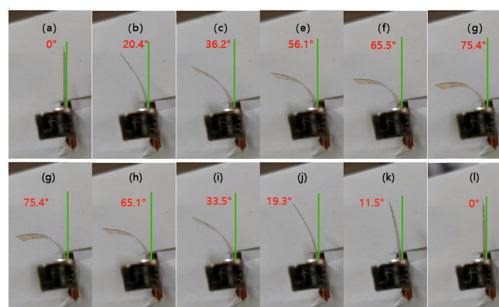
Sanjukta Zamindar, Sukdeb Mandal, Manilal Murmu and Priyabrata Banerjee\*



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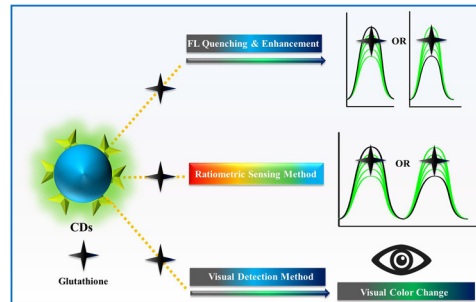
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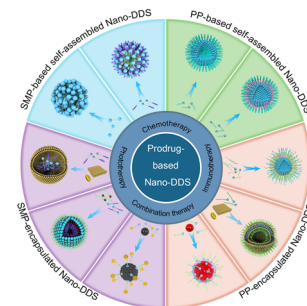
Kawan F. Kayani,\* Sewara J. Mohammed, Dlzar Ghafoor, Mohammed K. Rahim and Harez Rashid Ahmed



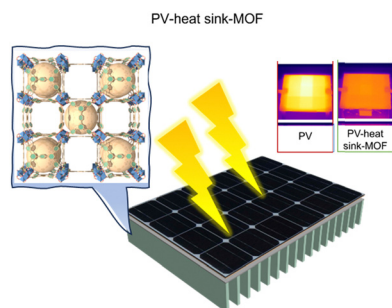
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Linlin Shi,\* Shanshan Lin, Fengping Zhou, Hao Jiang and Jin Zhang\*



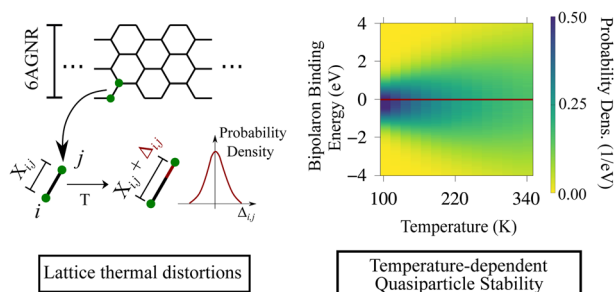
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### Metal–organic framework-based atmospheric water harvesting for enhanced photovoltaic efficiency and sustainability

Dalal Alezi, Renyuan Li, Norah Alsadun, Arijit Malik, Osama Shekhah, Peng Wang\* and Mohamed Eddaoudi\*

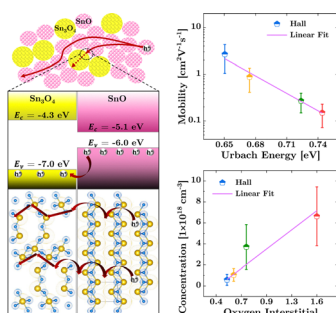
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### Thermally-induced charge carrier population control on graphene nanoribbons

Tiago de Sousa Araújo Cassiano, Geraldo Magela e Silva\* and Pedro Henrique de Oliveira Neto

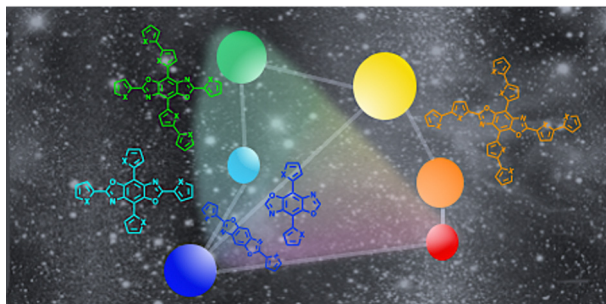
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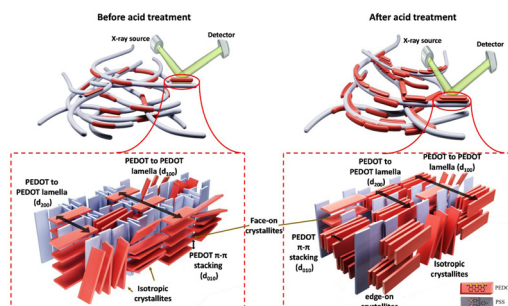
David L. Wheeler, Shambhavi Tannir, Hadar R. Yakir, Or Dishi, Ori Gidron and Malika Jeffries-EL\*



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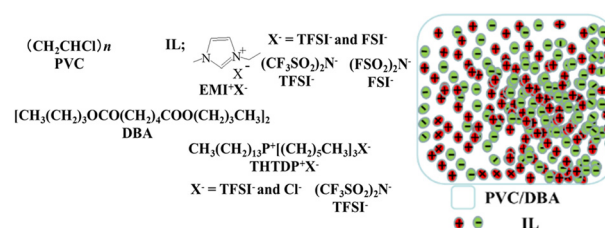
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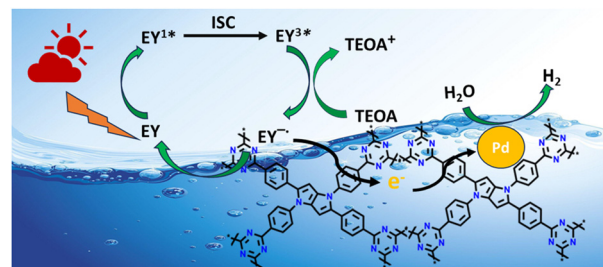
Naohiro Terasawa\* and Hirosato Monobe



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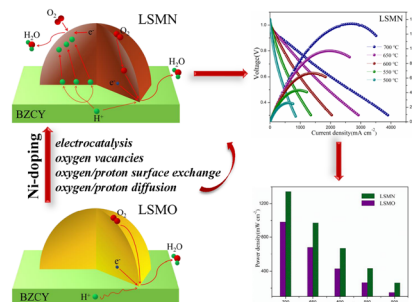
Osman Ali, Anupam Jana, Aruntima Das, Sandeep Kumar Dey and Asamanjoy Bhunia\*



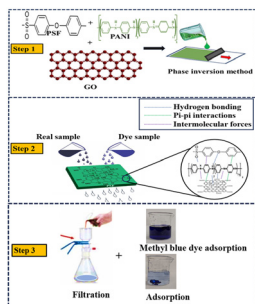
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Jiapeng Xu, Junyi Gong, Kunpeng Du, Wei Liu and Jie Hou\*



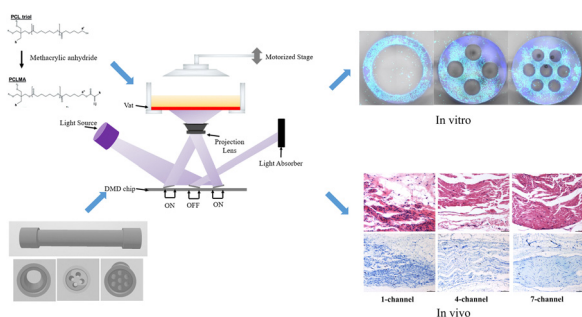
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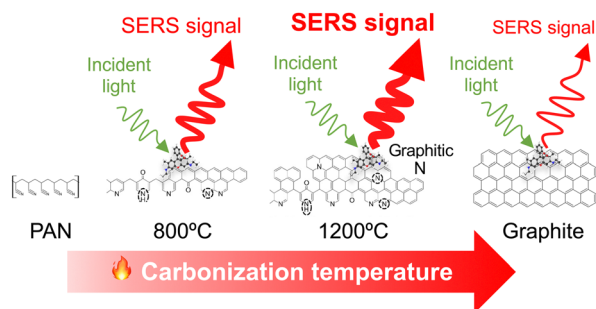
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### Projection-based 3D printing of multichannel poly(caprolactone) methacrylate nerve guidance conduit for peripheral nerve regeneration

Haibing Li, Ke Yao, Yuewei Chen, Wensong Ye and  
Qiang Shu\*

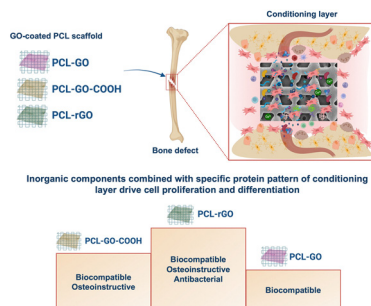
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Ting-Hui Xiao and Keisuke Goda\*

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### The osteoconductive properties of graphene-based material surfaces are finely tuned by the conditioning layer and surface chemistry

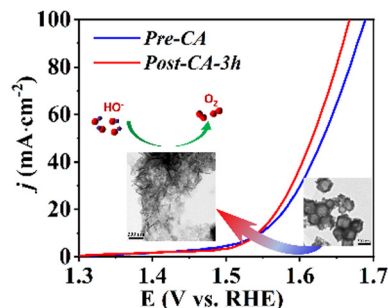
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Valentina Palmieri



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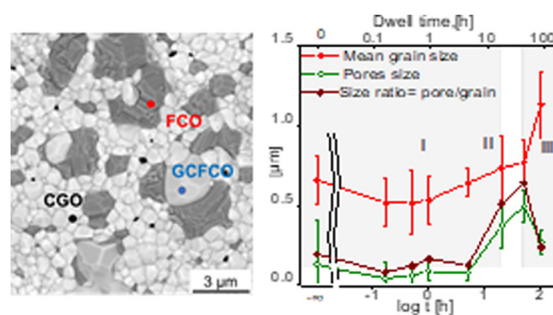
Yupeng Zhao, Dandan Gao, Johannes Biskupek, Ute Kaiser, Rongji Liu\* and Carsten Streb\*



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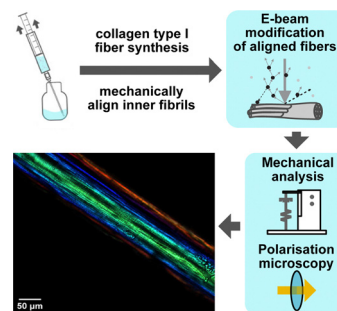
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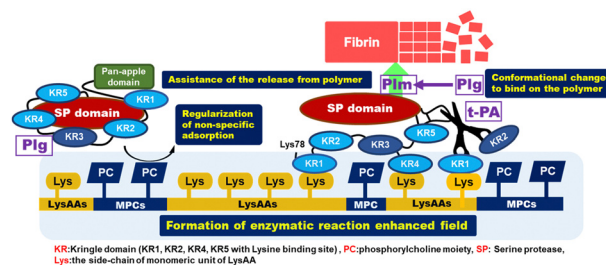
Anastassiya Bublikova, Friedrich Schütte\* and Stefan G. Mayr\*



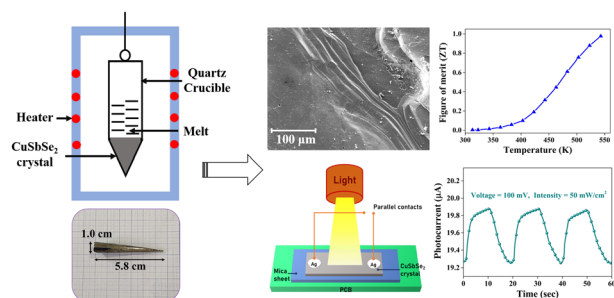
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Tomoya Nakago, Yuto Oki, Tatsuki Nousou, Tomohiro Ogawa and Kohei Shiraishi\*



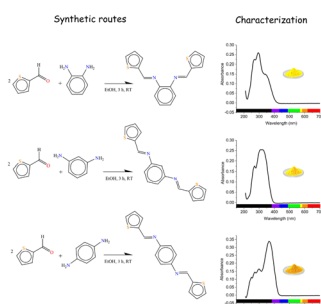
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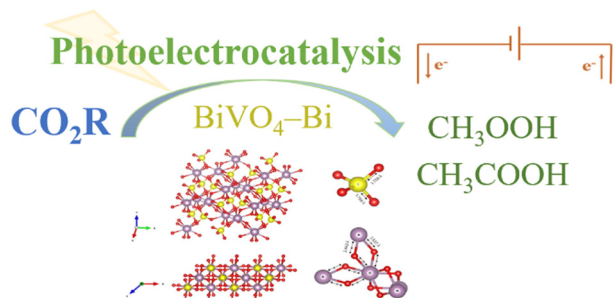
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Parastoo Vahdatiyekta, Mohammed Zniber, Kostiantyn Nikiforow and Tan-Phat Huynh\*

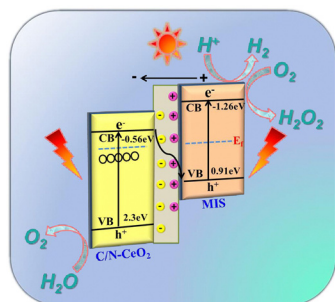
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Ricardo Marques e Silva, Eduardo Henrique Dias, Florymar Escalona-Durán, Gelson Tiago dos Santos Tavares da Silva, Wajdi Alnoush, Jessica Ariane de Oliveira, Drew Higgins and Caue Ribeiro\*

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Jayashree Panda, Pragyandeepi Behera, Satyabrata Subudhi, Suraj Prakash Tripathy, Gayatri Swain, Srabani Dash and Kulamani Parida\*

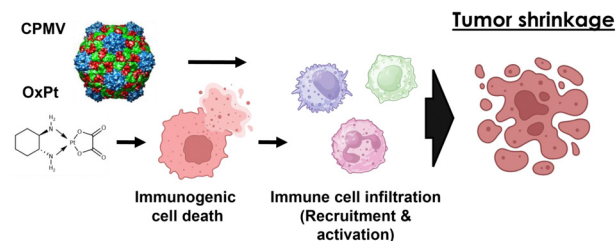




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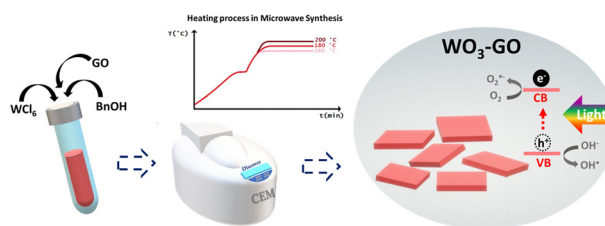
Miguel A. Moreno-Gonzalez, Zhongchao Zhao, Adam A. Caparco and Nicole F. Steinmetz\*



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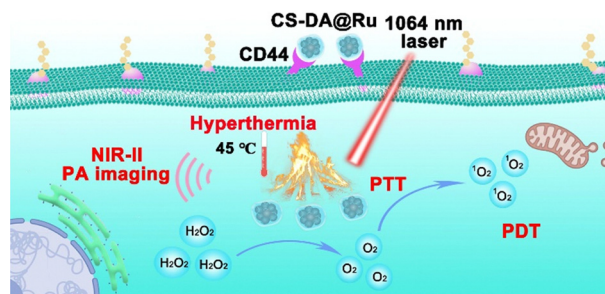
Bárbara S. Rodrigues, Markus Niederberger and Juliana S. Souza\*



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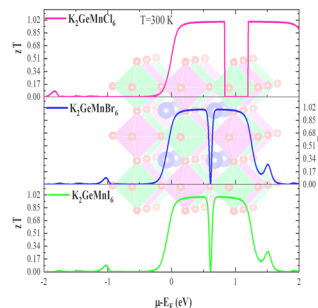
Guang Liu, Zhilang Li, Zirong Lv, Qiuping Zheng, Cunji Gao,\* Jianniao Tian and Xing-Can Shen\*

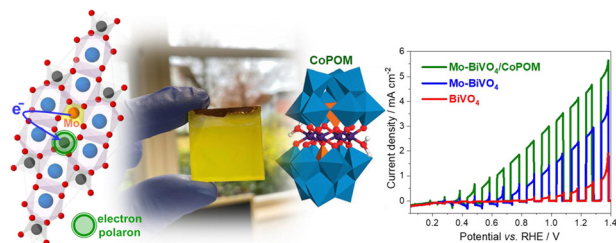


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Mudasir Younis Sofi, Mohd Shahid Khan and M. Ajmal Khan\*





## High-performance BiVO<sub>4</sub> photoanodes: elucidating the combined effects of Mo-doping and modification with cobalt polyoxometalate

Fan Feng, Dariusz Mitoraj, Ruihao Gong, Dandan Gao, Mohamed M. Elnagar, Rongji Liu, Radim Beranek\* and Carsten Streb\*

