

# Materials Advances

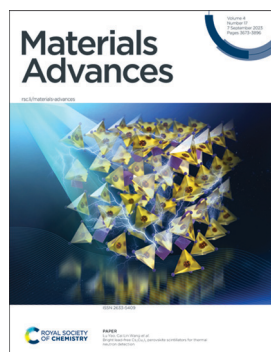
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## IN THIS ISSUE

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### Inside cover

See Frank Güell, Ateet Dutt *et al.*, pp. 3685–3707. Image reproduced by permission of Ateet Dutt from *Mater. Adv.*, 2023, 4, 3685.

## EDITORIAL

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### Advanced functional materials and manufacturing processes

Jessica O. Winter,\* Jawwad A. Darr\* and John Wang\*

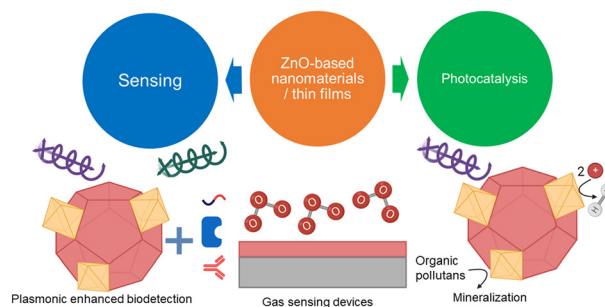


## REVIEW

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### ZnO-based nanomaterials approach for photocatalytic and sensing applications: recent progress and trends

Frank Güell,\* Andrés Galdámez-Martínez, Paulina R. Martínez-Alanis, Ariadne C. Catto, Luis F. da Silva, Valmor R. Mastelaro, Guillermo Santana and Ateet Dutt\*



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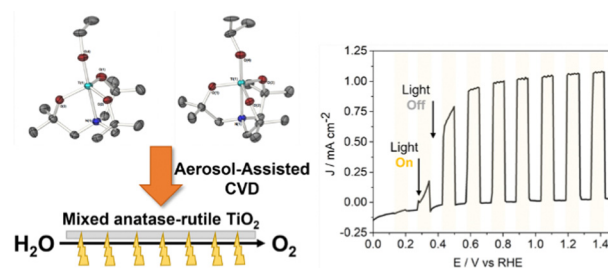


## COMMUNICATION

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### Aerosol-assisted chemical vapour deposition of highly efficient mixed anatase-rutile $\text{TiO}_2$ for photoelectrochemical water splitting

Thom R. Harris-Lee, Enrico Della Gaspera, Frank Marken, Jie Zhang, Cameron L. Bentley and Andrew L. Johnson\*

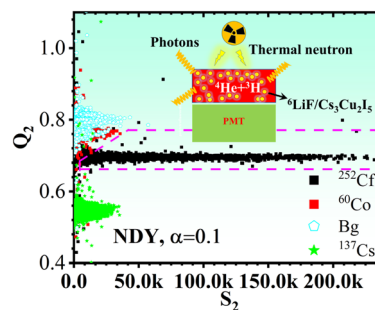


## PAPERS

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### Bright lead-free $\text{Cs}_3\text{Cu}_2\text{I}_5$ perovskite scintillators for thermal neutron detection

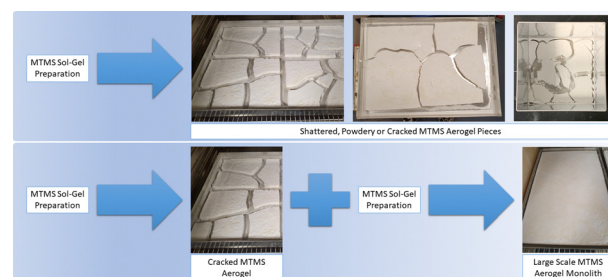
Lu Yao,\* Wanting Gui, Xunsheng Zhou, Chao Li, Shi Zhang, Jing Kui Zhao and Cai Lin Wang\*



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### Large scale recyclable monolithic methyltrimethoxysilane aerogels formed by self-reinforcement

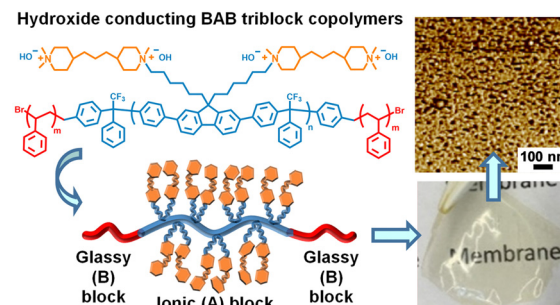
Gylen Odling,\* Hannah Logan, Aaron Chan, Andrew J. Bissel, Colin R. Pulham and David E. Oliver

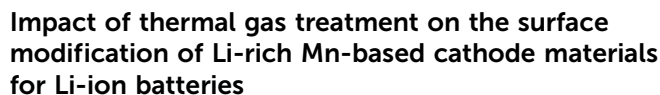


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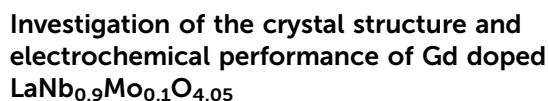
### Hydroxide conducting BAB triblock copolymers tailored for durable high-performance anion exchange membranes

Andrit Allushi, Pegah Mansouri Bakvand, Haiyue Gong and Patric Jannasch\*

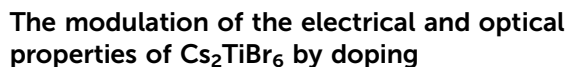




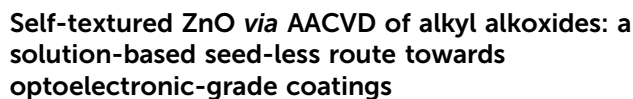
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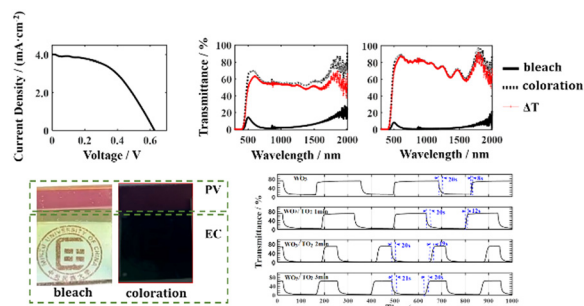


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## The effect of the TiO<sub>2</sub> interface layer on the electrochromic properties of WO<sub>3</sub>-based devices

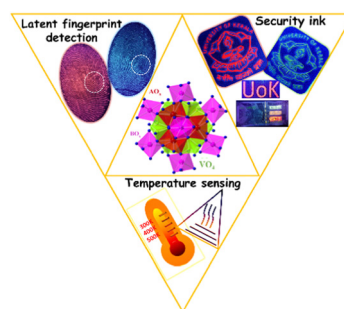
Panshu Gui, Ziyi Jin, Yufeng Bai, Zhengqiao Lv, Jianwei Mo, Shuai Chang and Di Yang\*



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## Delving into the multifunctionality of Sr<sub>2</sub>NaMg<sub>2</sub>V<sub>3</sub>O<sub>12</sub> via RE<sup>3+</sup> substitution for dual-mode temperature sensing, latent fingerprint detection and security inks

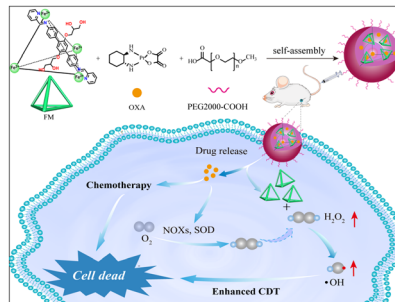
Amrithakrishnan Bindhu, Jawahar Isuhak Naseemabeevi and Subodh Ganesanpotti\*



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## Water-soluble ferrous metallacage combined with oxaliplatin for a synergistic chemo/chemodynamic therapy

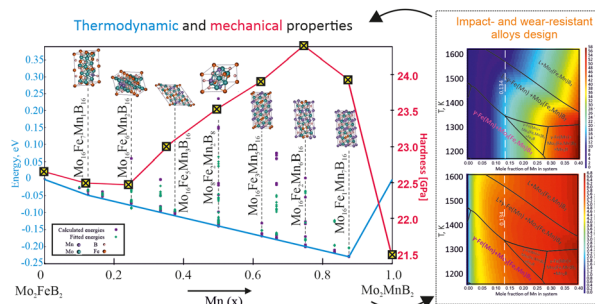
Jing He, Wei He, Run Wang, Jingjing Jiao\* and Shiping Yang\*



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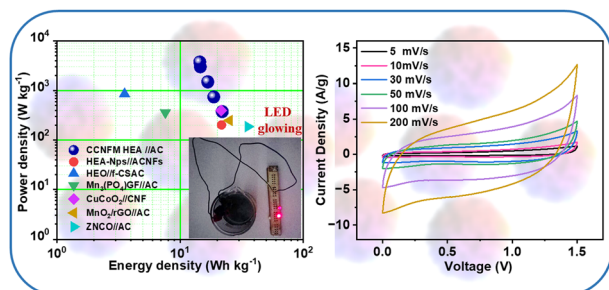
## The thermodynamic and mechanical properties of Earth-abundant metal ternary boride Mo<sub>2</sub>(Fe,Mn)B<sub>2</sub> solid solutions for impact- and wear-resistant alloys

Pavlo Prysyazhnyuk\* and Devis Di Tommaso





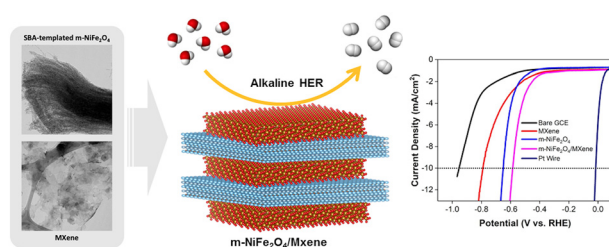
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### High energy density liquid state asymmetric supercapacitor devices using Co–Cr–Ni–Fe–Mn high entropy alloy

Gobinda C. Mohanty, Chinmayee C. Gowda, Pooja Gakhad, M. Sanjay, Suman Sarkar, Koushik Biswas,\* Abhishek Singh\* and Chandra S. Tiwari\*

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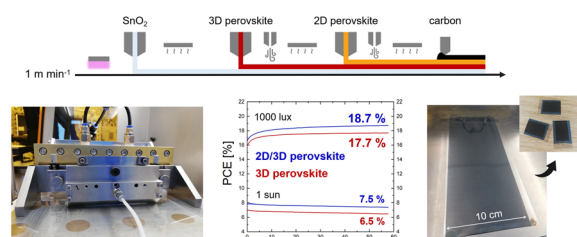
### A SBA-15-templated mesoporous NiFe<sub>2</sub>O<sub>4</sub>/MXene nanocomposite for the alkaline hydrogen evolution reaction

Munawar Khalil,\* Michael Lesa, Alexander G. Juandito, Afiten R. Sanjaya, Tribidasari A. Ivandini, Grandprix T. M. Kadja, Muhammad Haris Mahyuddin, Mehran Sookhakian and Yatimah Alias

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### MANUFACTURING PROCEDURE FOR FLEXIBLE PEROVSKITE SOLAR CELLS

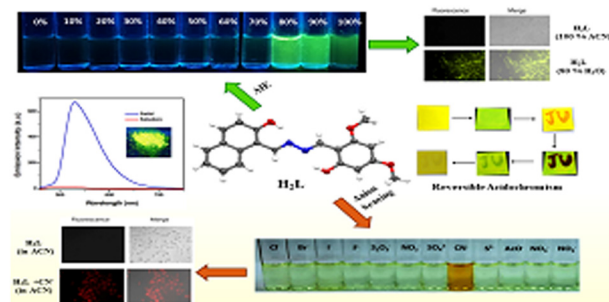
LOW-COST | LARGE SCALE DEPOSITION | AMBIENT ATMOSPHERE | LOW TEMPERATURE



### Fabrication of low-cost and flexible perovskite solar cells by slot-die coating for indoor applications

Cristina Teixeira, Rosinda Fuentes-Pineda, Luisa Andrade, Adélio Mendes and Dávid Forgács\*

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### Naphthyl-azine – aggregation induced emission, reversible acidochromism, cyanide sensing and its application in intracellular imaging

Sukanya Paul, Kingshuk Debsharma, Sunanda Dey, Satyajit Halder, Kuladip Jana and Chittaranjan Sinha\*



## CORRECTIONS

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**Correction: Solution-processed orange and white OLEDs sensitized by an electroactive pure organic room-temperature phosphorescent polymer**

Yiting Tian, Renze He, Guoyun Meng,\* Shumeng Wang,\* Lei Zhao and Junqiao Ding\*

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**Correction: Large scale recyclable monolithic methyltrimethoxysilane aerogels formed by self-reinforcement**

Gylen Odling,\* Hannah Logan, Aaron Chan, Andrew J. Bissell, Colin R. Pulham and David E. Oliver

