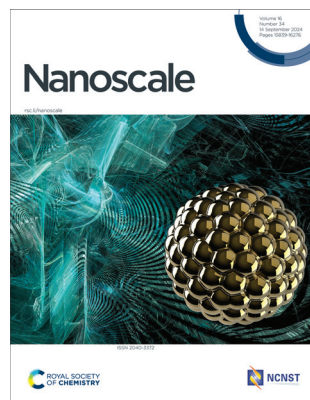


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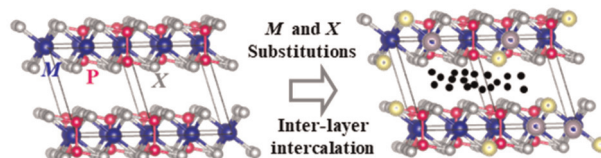
Cover  
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### Understanding and tuning magnetism in van der Waals-type metal thiophosphates

Rabindra Basnet\* and Jin Hu\*



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### Translational applications of magnetic nanocellulose composites

Shikha Awasthi,\* Komal\* and Sarvesh Kumar Pandey\*



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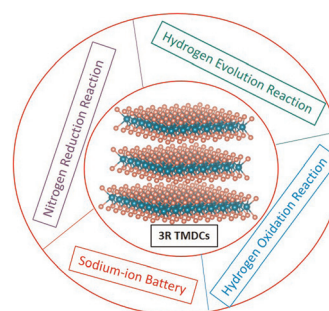
Fundamental questions  
Elemental answers

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## Rhombohedrally stacked layered transition metal dichalcogenides and their electrocatalytic applications

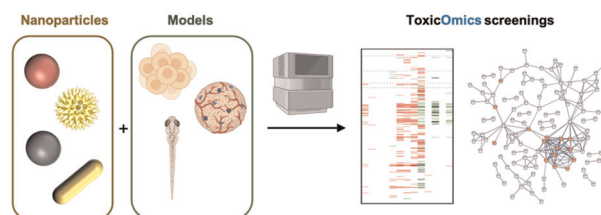
K. Pramoda,\* Pallelappa Chithaiah and C. N. R. Rao\*



15928

## Assessing inorganic nanoparticle toxicity through omics approaches

Yanchen Li, Christopher Vulpe, Twan Lammers and Roger M. Pallares\*

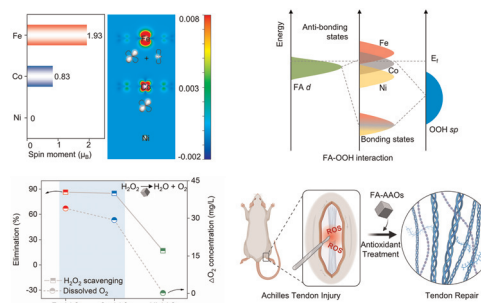


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15946

## Highly spontaneous spin polarization engineering of single-atom artificial antioxidant enzymes towards efficient ROS elimination and tissue regeneration

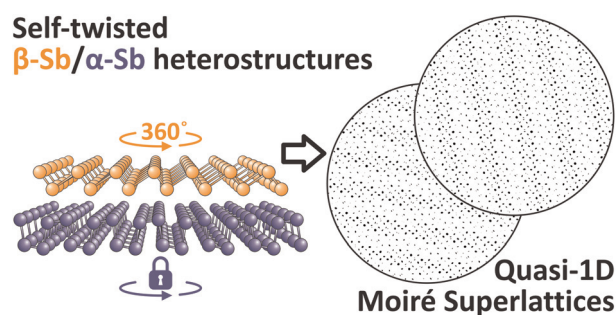
Bihui Zhu, Zhenyang Zhao, Sujiao Cao,\* Yimin Sun, Liyun Wang, Songya Huang, Chong Cheng, Lang Ma\* and Li Qiu\*



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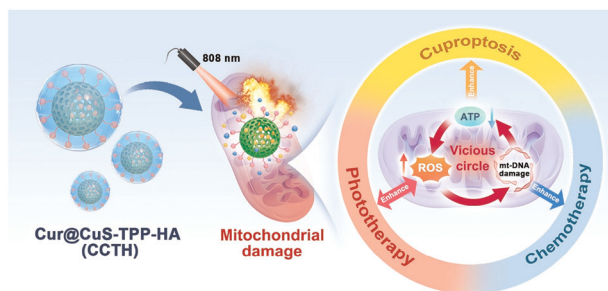
## Quasi-1D Moiré superlattices in self-twisted two-allotropic antimonene heterostructures

Piotr Drózdź,\* Mariusz Gołębowski and Ryszard Zdyb



## COMMUNICATIONS

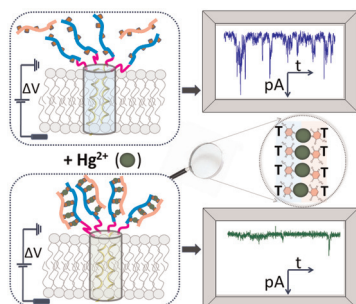
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### A copper missile-triggered power coalescence and death vortex within tumor cell mitochondria for synergistic cuproptosis/phototherapy/chemotherapy

Yicheng Jiang, Shuhan He, Niu Xiang, Linghui Duan, Yuxiang Lin, Wenyu Huang, Zhenghong Wu\* and Xiaole Qi\*

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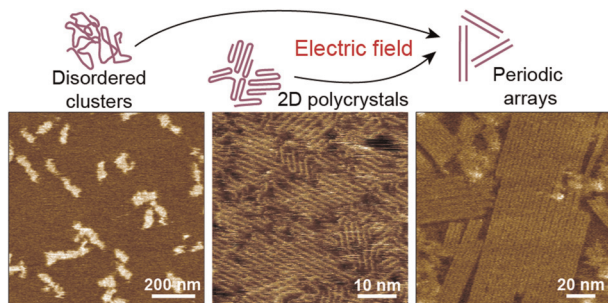


### Repurposing an antimicrobial peptide for the development of a dual ion channel/molecular receptor-like platform for metal ion detection

Loredana Mereuta, Jonggwan Park, Yoonkyung Park\* and Tudor Luchian\*

## PAPERS

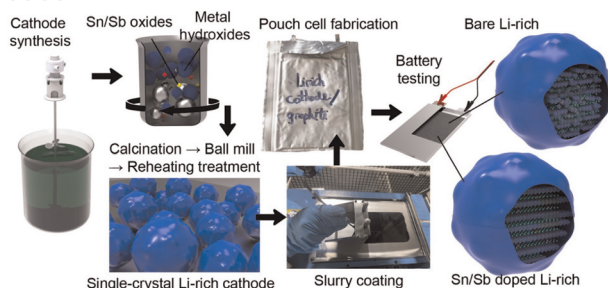
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### Molecular-level periodic arrays of long-chain poly(3-hexylthiophene-2,5-diyl) driven by an electric field

Mingze Ma, Jingyi Qian, Ke Jiang, Liyan Wang, Yu Song\* and Wenke Zhang\*

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### Rational design of dual-ion-rich doped cobalt-free Li-rich cathode materials for enhanced cycle stability of lithium-ion pouch cell batteries

Otávio Augusto Tilton Dias,\* Farnaz Azarnia, Keerti Rathi, Viktoriya Pakhareno, Vijay K. Tomer and Mohini Sain

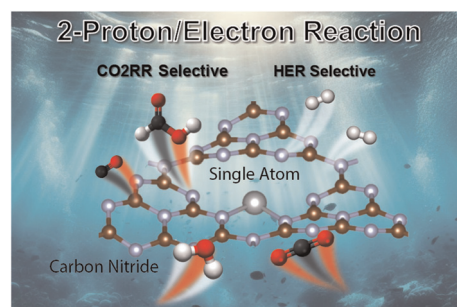


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### Mechanistic study of the competition between carbon dioxide reduction and hydrogen evolution reaction and selectivity tuning *via* loading single-atom catalysts on graphitic carbon nitride

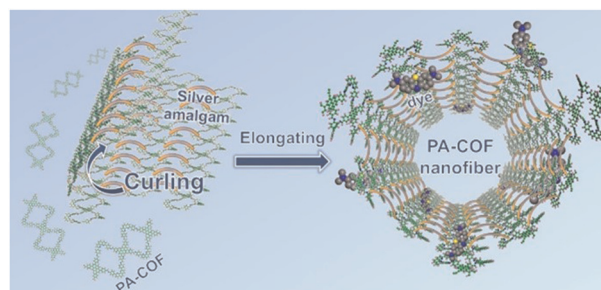
Joel Jie Foo, Sue-Faye Ng, Mo Xiong\* and Wee-Jun Ong\*



16026

### Novel three-dimensional fibrous covalent organic frameworks constructed *via* silver amalgam bridging for efficient organic dye adsorption and removal

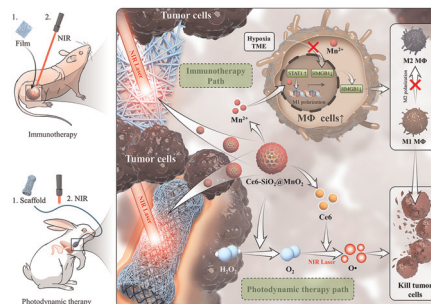
Han Leng, Yulong Xu, Yanzhi Xing, Jingqi Sun, Jiaxin Li, Yufei Guan, Yanfeng Zhang\* and Xuwei Chen\*



16035

### Macrophage reprogramming combined with enhanced photodynamic therapy increases the patency of malignant esophageal obstruction after stenting

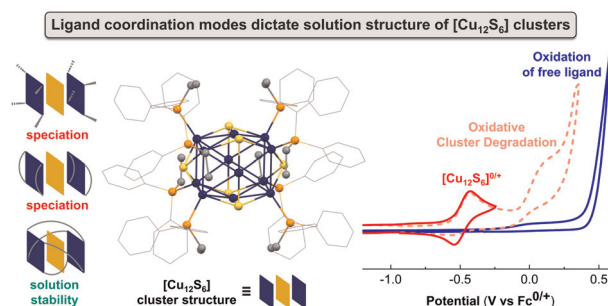
Haoyang Xu, Yiran Zhang, Sheng Guo, Hui Fang, Liming Wei, Guangchen He, Yingsheng Cheng\* and Yueqi Zhu\*



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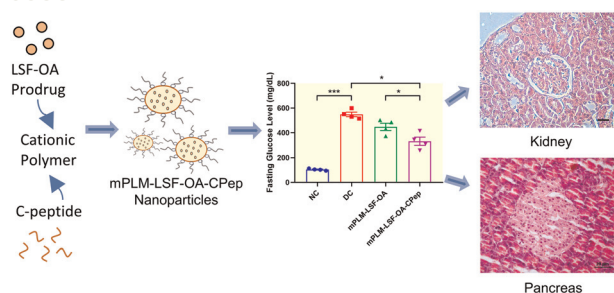
### Ditopic ligand effects on solution structure and redox chemistry in discrete [Cu<sub>12</sub>S<sub>6</sub>] clusters with labile Cu–S bonds

Michael J. Trenerry and Gwendolyn A. Bailey\*



## PAPERS

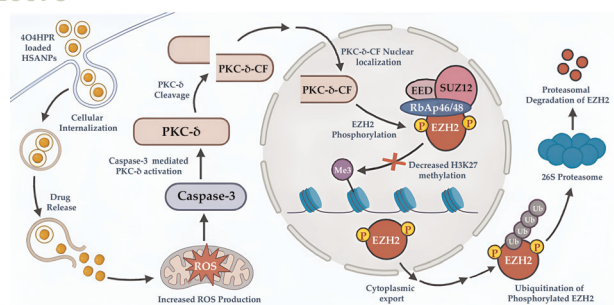
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### Restoring physiological parameters of the pancreas and kidney through treatment with a polymeric nano-formulation of C-peptide and lisofylline combination in diabetic nephropathy

Arihant Kumar Singh, Kommera Sai Pradyuth, Deepak Chitkara and Anupama Mittal\*

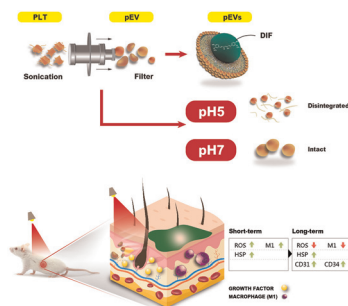
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### Encapsulation of 4-oxo-*N*-(4-hydroxyphenyl) retinamide in human serum albumin nanoparticles promotes EZH2 degradation in preclinical neuroblastoma models

Boddu Mrunalini, Atul Dev, Avinash Chandra Kushwaha, Mohammed Nadim Sardoiwala and Surajit Karmakar\*

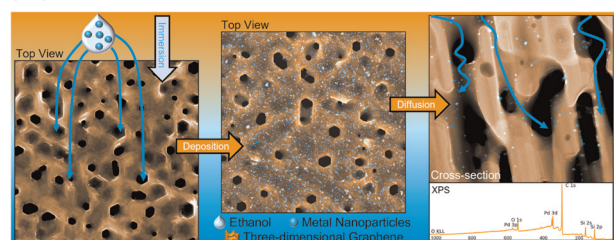
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### Sequential management of burn wound healing stages through biointelligence-inspired platelet extracellular vesicle-encapsulated photodynamic diferuloylmethane

Andrew E.-Y. Chuang, Yo-Lin Chen, Hieu Trung Nguyen, Hsien-Tsung Lu and Chia-Hung Liu\*

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### Functionalization of three-dimensional epitaxial graphene with metal nanoparticles

Emanuele Pompei,\* Ylea Vlamidis, Letizia Ferbel, Valentina Zannier, Silvia Rubini, Daniel Arenas Esteban, Sara Bals, Carmela Marinelli, Georg Pfusterschmied, Markus Leitgeb, Ulrich Schmid, Stefan Heun and Stefano Veronesi\*

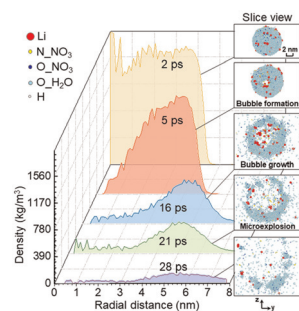


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### Mechanisms of microexplosion-accelerated pyrolysis and oxidation of lithium-containing droplets: an atomistic perspective

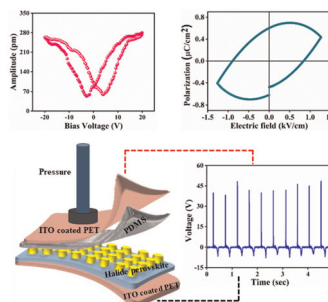
Ruitian He and Kai H. Luo\*



16127

### Observation of piezoelectricity in a lead-free Cs<sub>2</sub>AgBiBr<sub>6</sub> perovskite: a new entrant in the energy harvesting arena

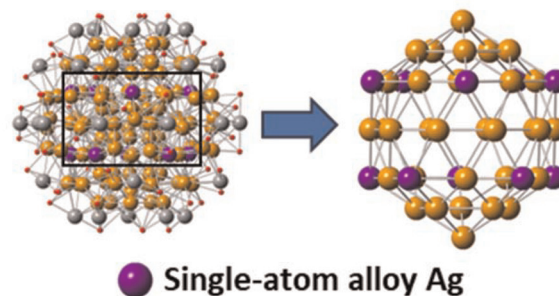
Tufan Paul, Aditi Sahoo, Soumen Maiti, Suvankar Mandal, Souvik Bhattacharjee, Avisek Maity and Kalyan Kumar Chattopadhyay\*



16140

### Single-atom alloy structure and unique bonding properties of Au<sub>104</sub>Ag<sub>40</sub>(PET)<sub>60</sub> nanoclusters

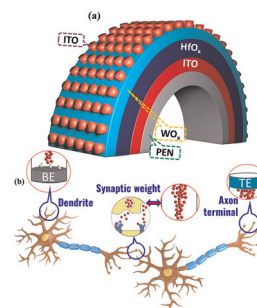
David Morris, Xiangsha Du, Rongchao Jin and Peng Zhang\*



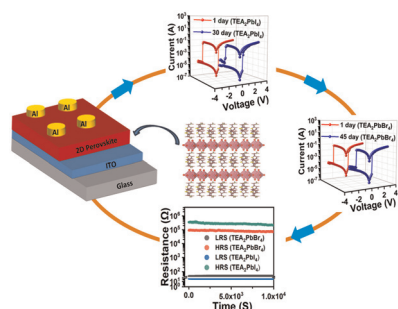
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### Harnessing a WO<sub>x</sub>-based flexible transparent memristor synapse with a hafnium oxide layer for neuromorphic computing

Debashis Panda,\* Yu-Fong Hui and Tseung-Yuen Tseng



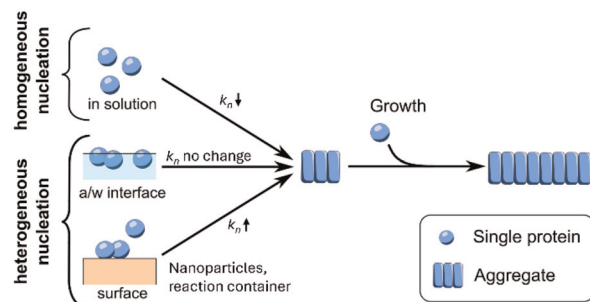
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## Highly stable two-dimensional Ruddlesden–Popper perovskite-based resistive switching memory devices

Milon Kundar, Koushik Gayen, Rajeev Ray, Dushyant Kushavah and Suman Kalyan Pal\*

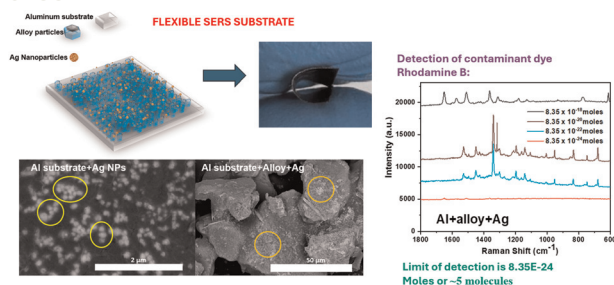
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## Surface effects on functional amyloid formation

Alexander J. Dear, Georg Meisl, Christopher G. Taylor, Umberto Capasso Palmiero, Susanne Nordby Stubbe, Qian Liu, Paolo Arosio, Sara Linse, Tuomas P. J. Knowles and Maria Andreassen\*

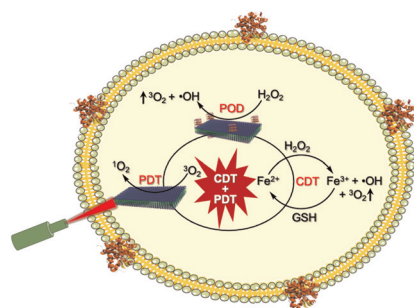
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## Effect of NiAl alloy microparticles deposited in flexible SERS substrates on the limit of detection of rhodamine B molecules

A. Molina, J. Oliva,\* M. Vazquez-Lepe, M. Lopez-Medina, L. Ojeda, D. Rios-Jara and H. Flores-Zuñiga

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## G<sub>4</sub>-Hemin-loaded 2D nanosheets for combined and targeted chemo-photodynamic cancer therapy

Gowtham Raj, Tamraparni Ghosh, Vasudev D. S., Harsha P., Devu B. Kumar, Justin Prasad, Athul V. B., Abhimanyu S. M. and Reji Varghese\*

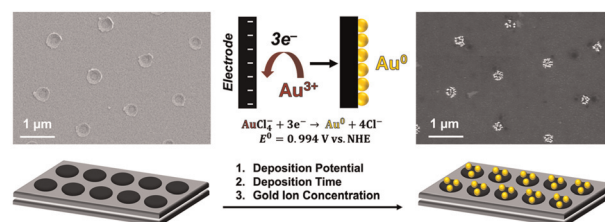


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**Electrochemical deposition of gold nanoparticles on carbon ultramicroelectrode arrays**

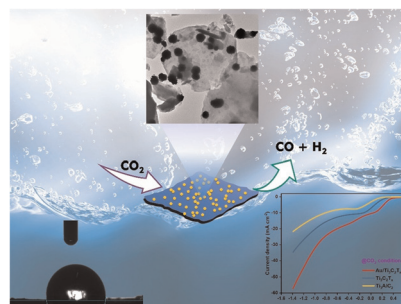
Courtney J. Weber, Natalie E. Strom and Olja Simoska\*



16218

**Improved electrochemical reduction of CO<sub>2</sub> to syngas with a highly exfoliated Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> MXene–gold composite**

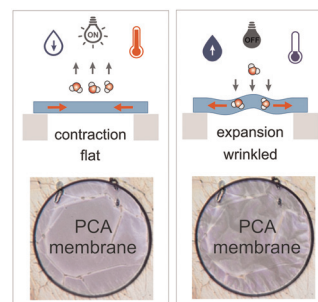
Murugan Krishnan, Aathilingam Vijayprabhakaran and Murugavel Kathiresan\*



16227

**Multi-responsive poly-catecholamine nanomembranes**

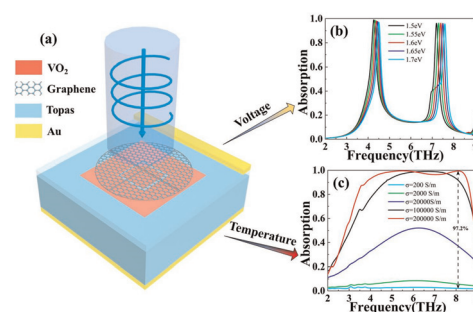
Adam Krysztofik, Marta Warzajtis, Mikołaj Pochylski, Marcel Boecker, Jiyao Yu, Tommaso Marchesi D'Alvise, Przemysław Puła, Paweł W. Majewski, Christopher V. Synatschke, Tanja Weil and Bartłomiej Graczykowski\*



16238

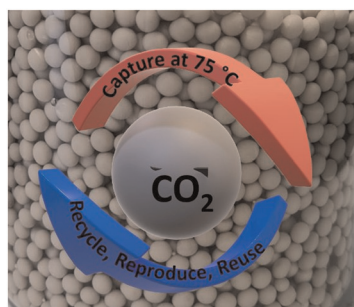
**Design of terahertz metamaterial absorbers with switchable absorption functions utilizing thermal and electrical dual-modulation strategies**

Xuefeng Qin, Sijun Fang, Guiyuan Duan, Chongyang Xu, Jieying Jiang, Han Xiong and Ben-Xin Wang\*



## PAPERS

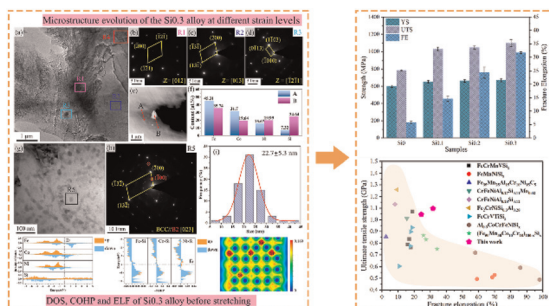
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### Mesoporous silica–amine beads from blast furnace slag for CO<sub>2</sub> capture applications

Baljeet Singh,\* Marianna Kemell, Juho Yliniemi and Timo Repo\*

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### Dual enhancement in strength and ductility of Fe-rich medium-entropy alloys via an *in situ* formed heterogeneous multi-phase structure

Jian Wu, Xinghua Zhu, Sirui Huang and Heguo Zhu\*

## CORRECTION

16274

### Correction: Hybrid 2D perovskite and red emitting carbon dot composite for improved stability and efficiency of LEDs

Amandeep Singh Pannu,\* Suvankar Sen, Xiaodong (Tony) Wang, Robert Jones, Kostya (Ken) Ostrikov and Prashant Sonar\*

