Materials Advances

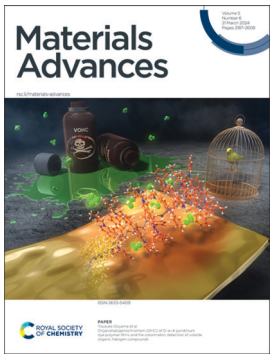
An open access journal publishing across the breadth of materials science

rsc.li/materials-advances

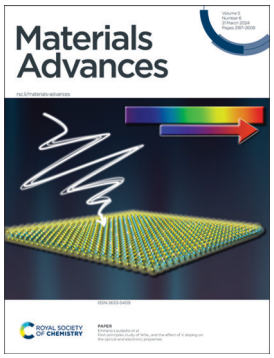
The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 2633–5409 CODEN MAADC9 5(6) 2187–2608 (2024)

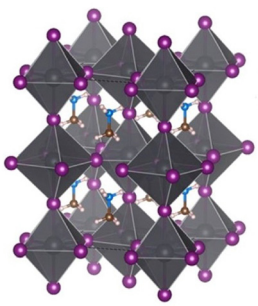


Cover
See Yousuke Ooyama *et al.*, pp. 2218–2229. Image reproduced by permission of Yousuke Ooyama from *Mater. Adv.*, 2024, **5**, 2218.

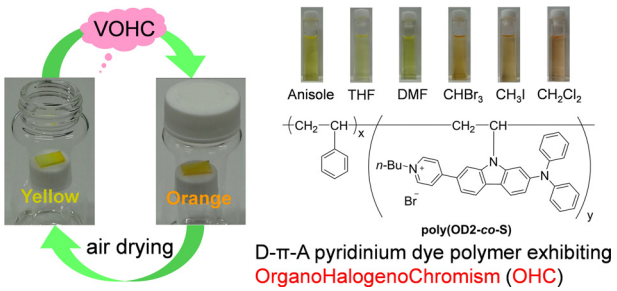


Inside cover
See Emiliano Laudadio *et al.*, pp. 2230–2237. Image reproduced by permission of Emiliano Laudadio from *Mater. Adv.*, 2024, **5**, 2230.

REVIEW



PAPERS



ROYAL SOCIETY OF CHEMISTRY

NEW JOURNAL

RSC Sustainability

GOLD OPEN ACCESS

Dedicated to sustainable chemistry and new solutions

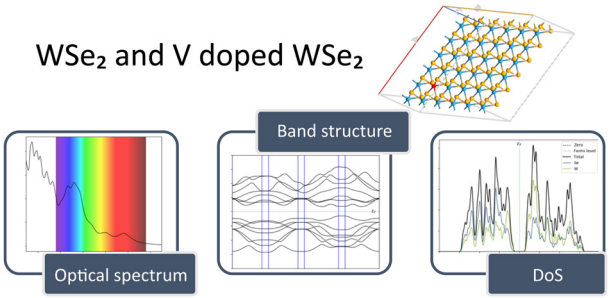
For an open, green and inclusive future

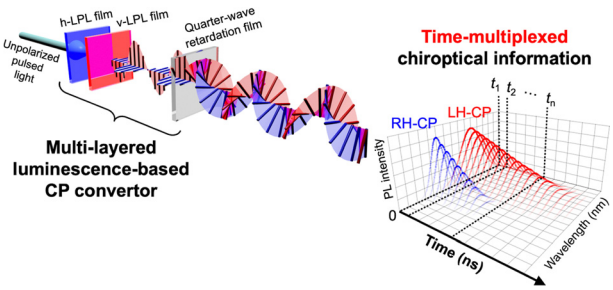
rsc.li/RSCSus

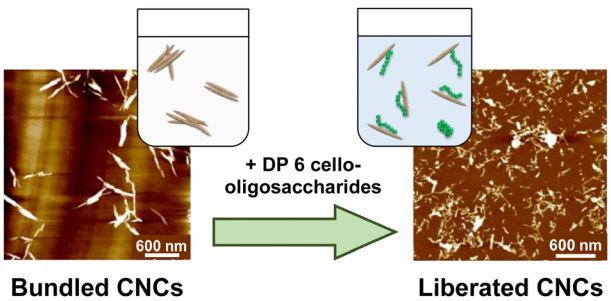
Fundamental questions
Elemental answers

Registered charity number: 207890

PAPERS

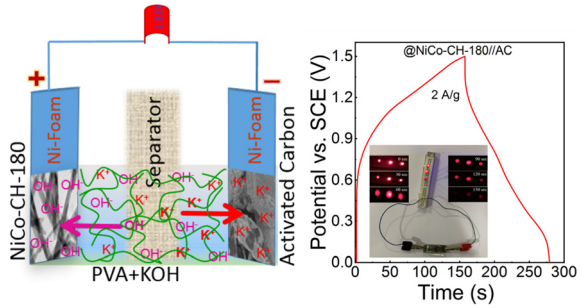






PAPERS

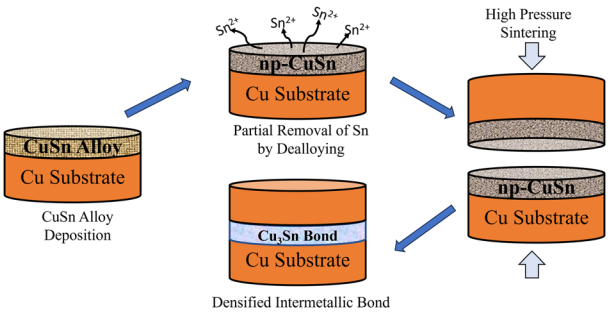
2271



Morphology-controlled synthesis of a NiCo-carbonate layered double hydroxide as an electrode material for solid-state asymmetric supercapacitors

Sudhir Kumar, Biraj Kanta Satpathy and Debabrata Pradhan*

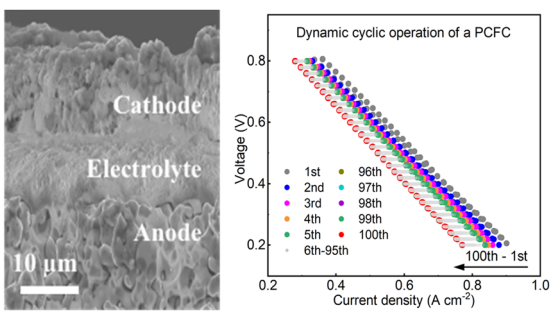
2285



New generation copper-based interconnection from nanoporous CuSn alloy film sintered at low temperatures

Ezer Castillo, Abdullah F. Pasha, Zachary I. Larson and Nikolay Dimitrov*

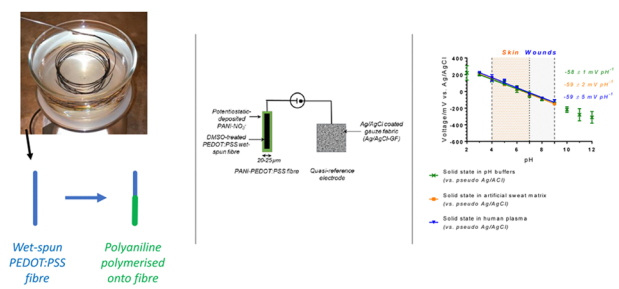
2296



A robust protonic ceramic fuel cell with a triple conducting oxygen electrode under accelerated stress tests

Shuanglin Zheng, Wenjuan Bian and Hanping Ding*

2306



pH-responsive and antibacterial PANI-PEDOT:PSS fibres for wearable applications

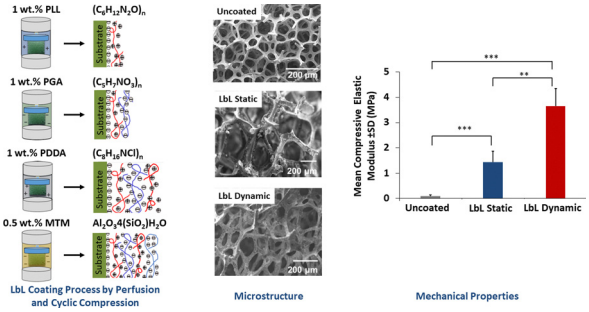
Rachel E. Smith, Stella Totti, Daniel Reid, Suzanne M. Hingley-Wilson, Eirini Velliou, Paola Campagnolo, Neil I. Ward, John R. Varcoe and Carol Crean*

PAPERS

2316

Deposition of multilayer coatings onto highly porous materials by Layer-by-Layer assembly for bone tissue engineering applications using cyclic mechanical deformation and perfusion

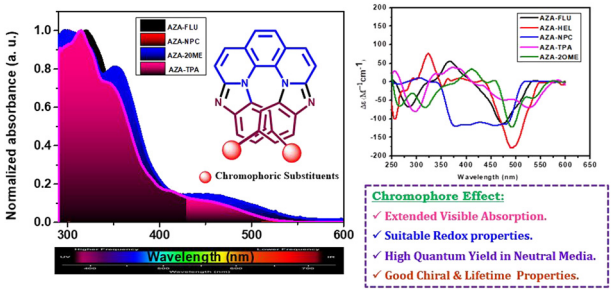
MohammadAli Sahebalzamani, Tina Sadat Hashemi, Zohreh Mousavi Nejad, Srishti Agarwal, Helen O. McCarthy, Tanya J. Levingstone and Nicholas J. Dunne*



2328

Organic fluorophore-substituted polyaza-[7]helicenes derived from 1,10-phenanthroline: Studying the chromophoric effect on fluorescence efficiency

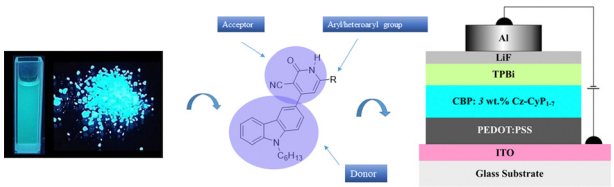
B. Yadagiri, Vinay Kumar and Surya Prakash Singh*



2335

Utilization of newly configured carbazole-cyanopyridone structural hybrids towards achieving high-performance cyan fluorescent organic light-emitting diodes

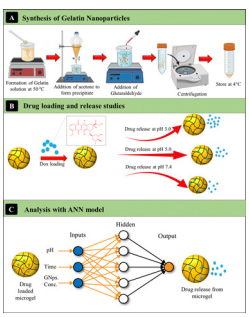
Vishrutha K S, Hidayath Ulla, Raveendra Kiran M, Badekai Ramachandra Bhat* and Airody Vasudeva Adhikari*



2347

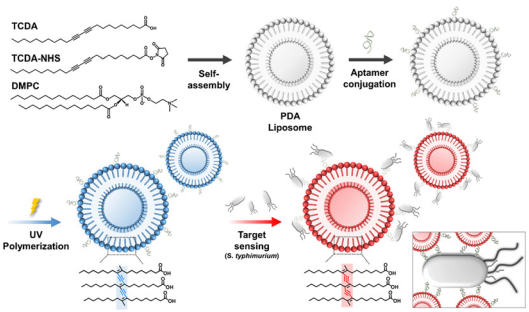
Controlled release of doxorubicin from gelatin-based nanoparticles: theoretical and experimental approach

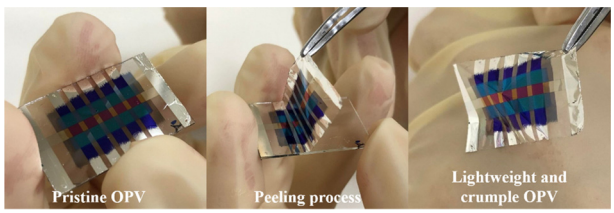
Wajiha Fatima, Syeda Rubab Batool, Farwa Mushtaq, Muhammad Aslam, Zulfiqar Ali Raza* and Muhammad Anwaar Nazeer*

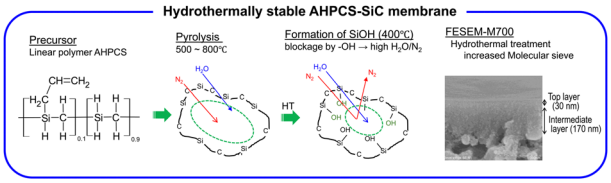


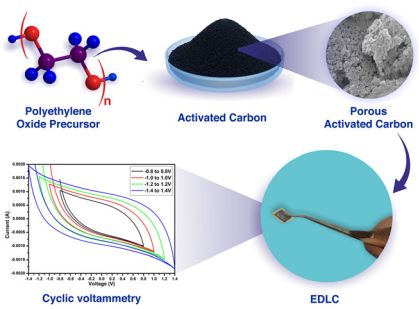
PAPERS

PAPERS



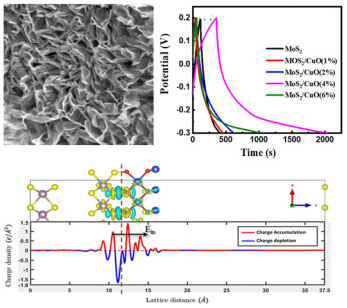


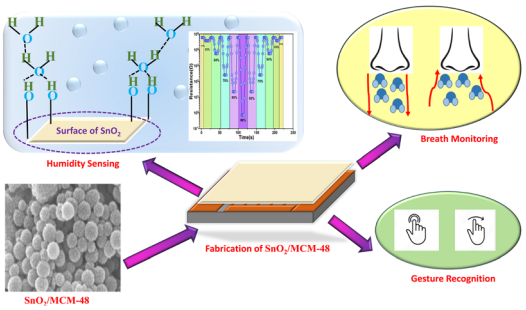


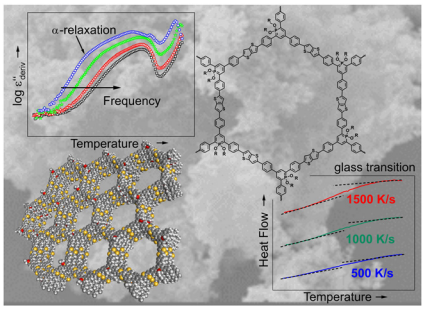


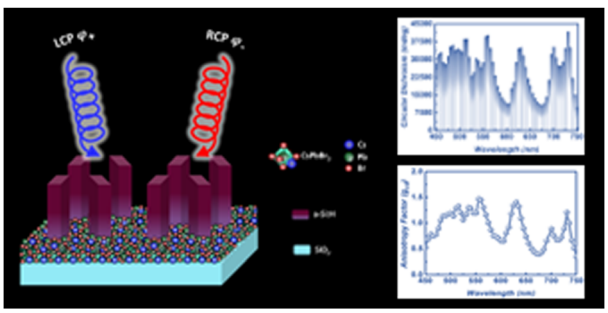
PAPERS

PAPERS



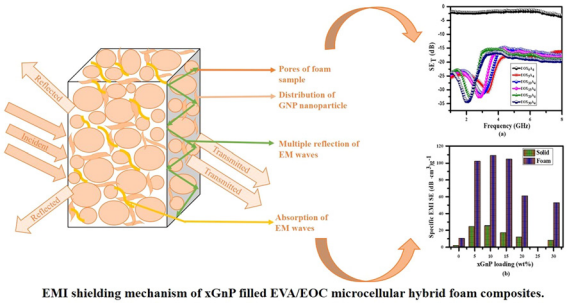






PAPERS

PAPERS



EMI shielding mechanism of xGnP filled EVA/EOC microcellular hybrid foam composites.

CORRECTION