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.

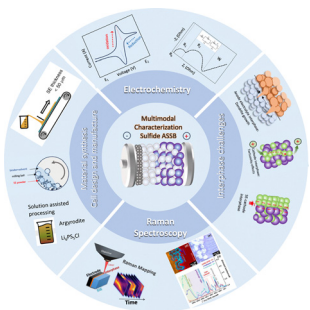
IN THIS ISSUE

ISSN 2633–5409 CODEN MAADC9 5(23) 9127–9504 (2024)

Cover
See Guang Yang *et al.*, pp. 9138–9159. Image reproduced by permission of Guang Yang from *Mater. Adv.*, 2024, **5**, 9138.

Inside cover
See G. N. Manjunatha Reddy *et al.*, pp. 9210–9219. Image reproduced by permission of G. N. Manjunatha Reddy from *Mater. Adv.*, 2024, **5**, 9210.

REVIEWS



ROYAL SOCIETY OF CHEMISTRY

Advance your career in science

with professional recognition that showcases your **experience, expertise and dedication**

Stand out from the crowd

Prove your commitment to attaining excellence in your field

Gain the recognition you deserve

Achieve a professional qualification that inspires confidence and trust

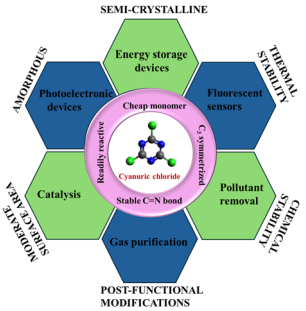
Unlock your career potential

Apply for our professional registers (RSci, RSciTech) or chartered status (CChem, CSci, CEnv)

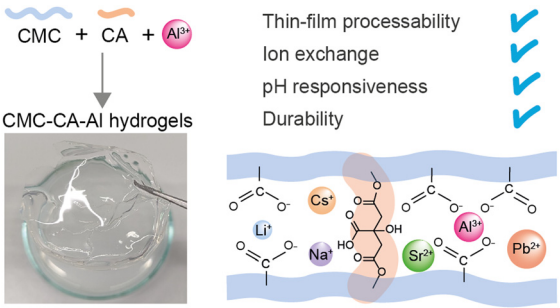
Apply now

rsc.li/professional-development

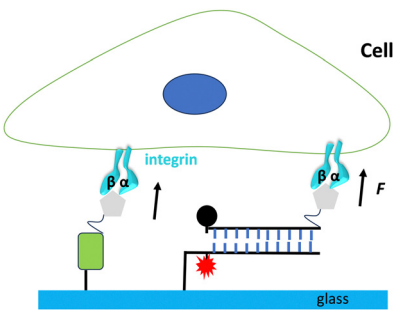
REVIEWS

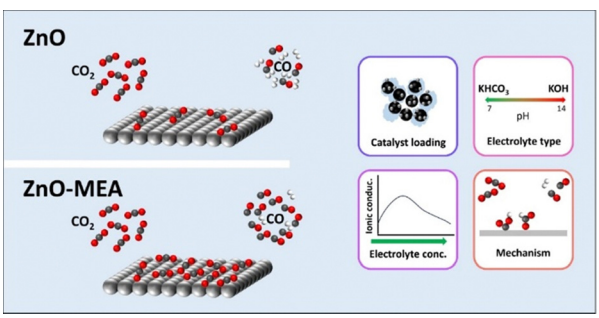


COMMUNICATION



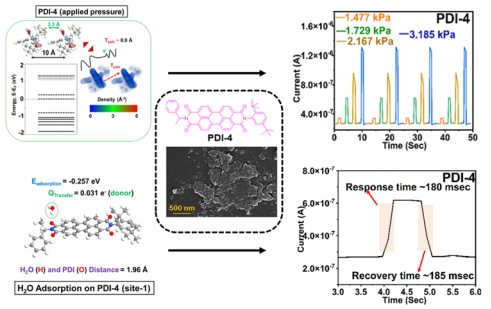
PAPERS





PAPERS

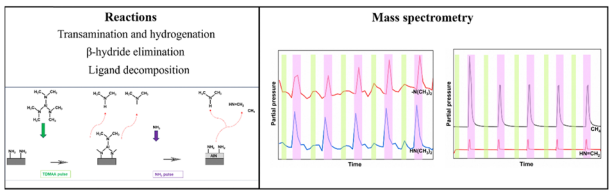
9243



Perylene diimide architecture-based electromechanical sensors: a systematic experimental and theoretical framework for the comparative analysis and study of the transduction mechanism

Aditya Tiwari, Vivek Adepu, Rikitha S. Fernandes, Nilanjan Dey,* Parikshit Sahatiya* and Sayan Kanungo*

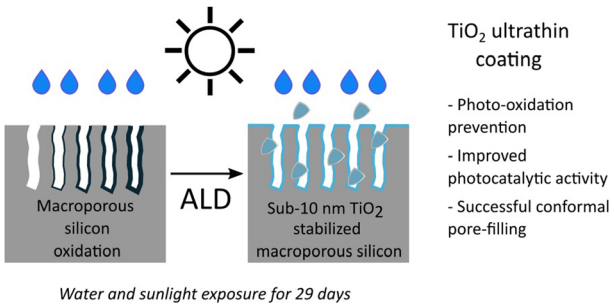
9259



A mass spectrometrical surface chemistry study of aluminum nitride ALD from tris-dimethylamido aluminum and ammonia

Pamburayi Mpofu, Houyem Hafdi, Jonas Lauridsen, Oscar Alm, Tommy Larsson and Henrik Pedersen*

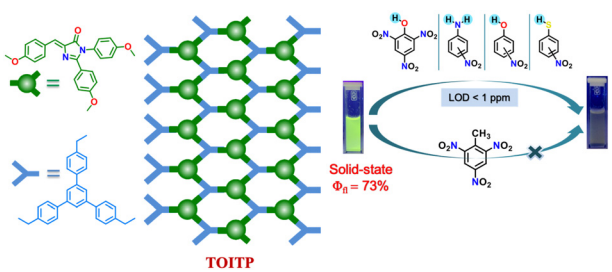
9270



A road for macroporous silicon stabilization by ultrathin ALD TiO_2 coating

Bachar Al Chimali, Irene Carrasco, Thomas Defforge, Romain Dailleau, Lisa Monnier, Kaushik Baishya, Jan M. Macak, Gael Gautier and Brice Le Borgne*

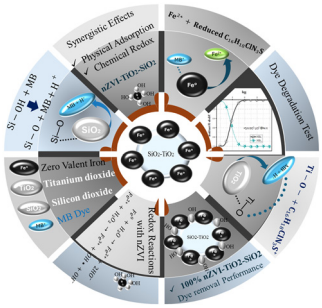
9279

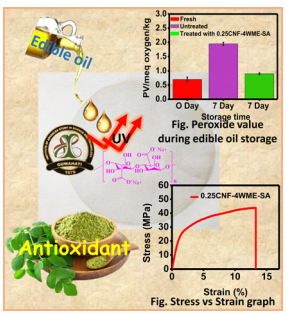


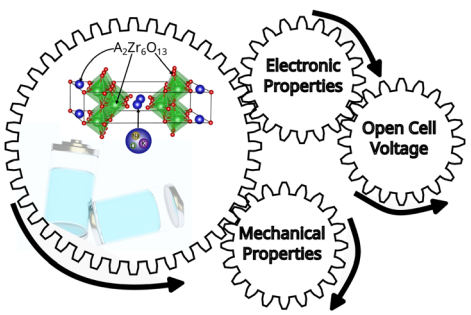
Green fluorescent protein chromophore-based covalent organic polymers (GFPC-COPs): sensing of nitroaromatic organic pollutants and explosives

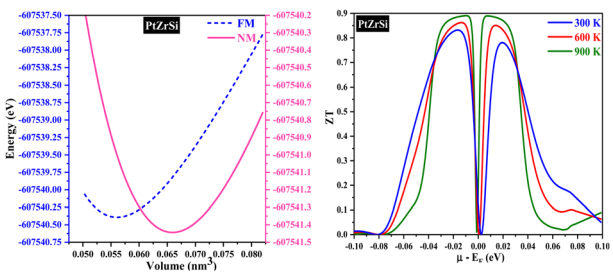
Gulshan Anjum, Ashish Kumar, Gurunath Ramanathan* and Jarugu Narasimha Moorthy*

PAPERS



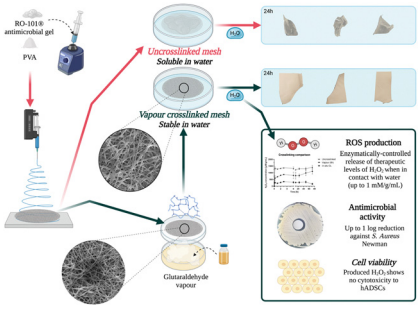


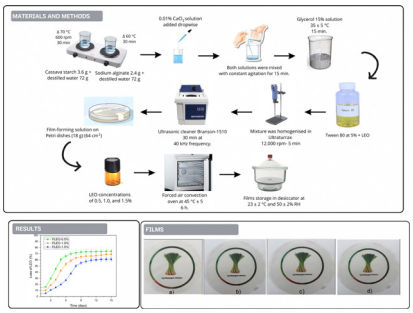


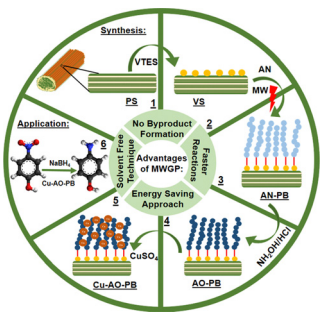


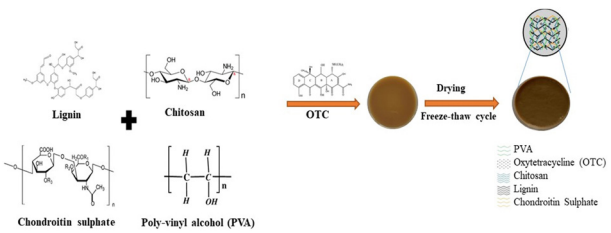
PAPERS

PAPERS









PAPERS

CORRECTIONS

CORRECTIONS

9501

Correction: Cu(I) diimine complexes as immobilised antibacterial photosensitisers operating in water under visible light

Martin V. Appleby, Peter G. Walker, Dylan Pritchard, Sandra van Meurs, Carly M. Booth, Craig Robertson, Michael D. Ward, David J. Kelly* and Julia A. Weinstein*