

Materials Advances

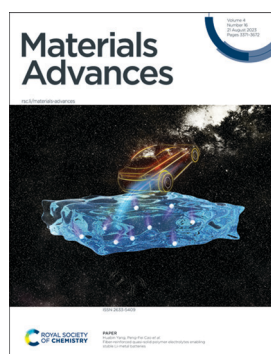
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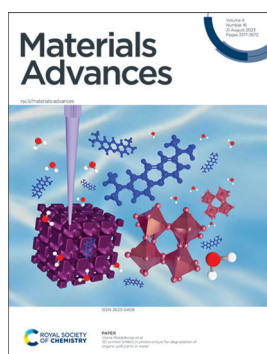
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IN THIS ISSUE

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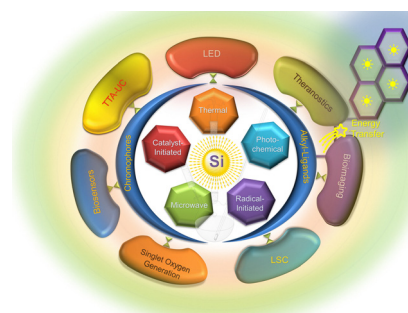
Inside cover
See Vesna Middelkoop *et al.*, pp. 3461–3472. Image reproduced by permission of Antonio Iborra-Torres & Vesna Middelkoop from *Mater. Adv.*, 2023, 4, 3461.

REVIEWS

3380

Silicon quantum dots: surface matter, what next?

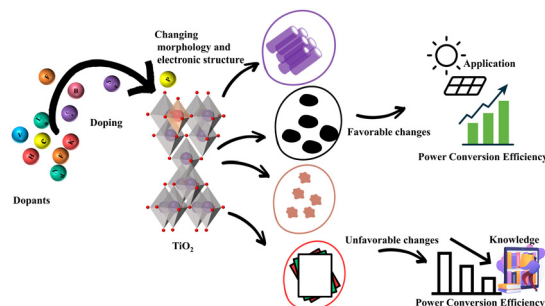
Deski Beri



3399

Quantitative framework development for understanding the relationship between doping and photoelectrochemical energy conversion of TiO₂

Aparna Markose, Debanita Das and Prasanth Ravindran*



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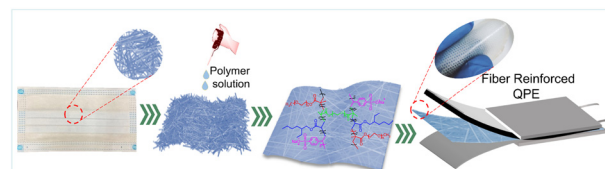
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3452

Fiber-reinforced quasi-solid polymer electrolytes enabling stable Li-metal batteries

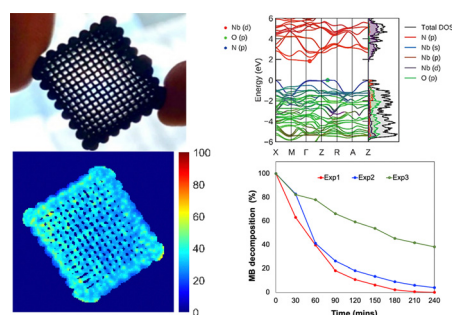
Shilun Gao, Youjia Zhang, Mengxiang Ma, Zhenxi Li, Zongxue Sun, Ming Tian, Huabin Yang* and Peng-Fei Cao*



3461

3D printed SrNbO₂N photocatalyst for degradation of organic pollutants in water

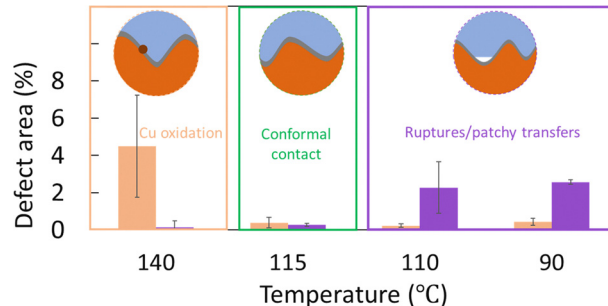
Antonio Iborra-Torres, Matej Huš, Kiem Nguyen, Antonis Vamvakeros, Muhammad Tariq Sajjad, Steven Dunn, Myrjam Mertens, Simon Jacques, Andrew M. Beale, Blaž Likozar, Geoffrey Hyett, Suela Kellici and Vesna Middelkoop*



3473

The parameter space for scalable integration of atomically thin graphene with Nafion for proton exchange membrane (PEM) applications

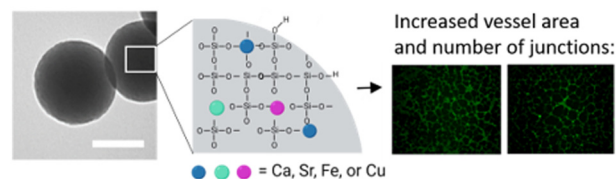
Pavan Chaturvedi, Nicole K. Moehring, Thomas Knight, Rahul Shah, Ivan Vlasiouk and Piran R. Kidambi*



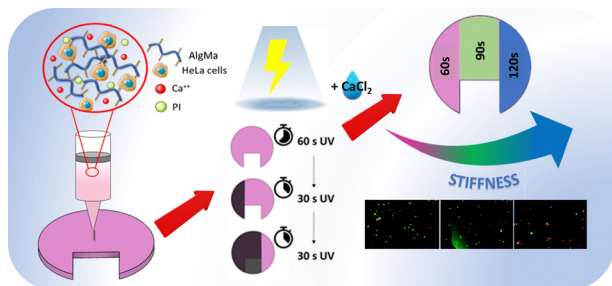
3482

Laser-based ion doping is a suitable alternative to dope biologically active ions into colloidal bioglass nanoparticles

Pichaporn Sutthavas, Matthias Schumacher, Martyna Nikody, Vijayanthi Ramesh, Jurij Jakobi, Elizabeth R. Balmayor, Pamela Habibovic, Christoph Rehbock, Stephan Barcikowski* and Sabine van Rijt*



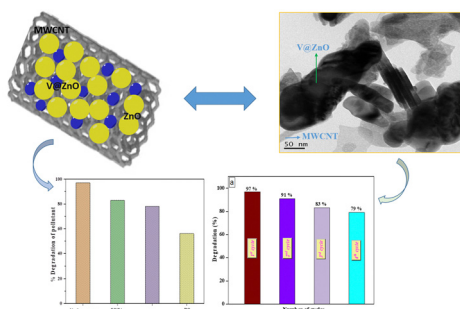
3491



Development of a tissue construct with spatially controllable stiffness via a one-step 3D bioprinting and dual-crosslinking process

Giorgia Pagnotta, Maila Becconi, Marco Malferrari, Donatella Aiello, Anna Napoli, Luana Di Lisa, Stefano Grilli, Stefania Rapino* and Maria Letizia Focarete*

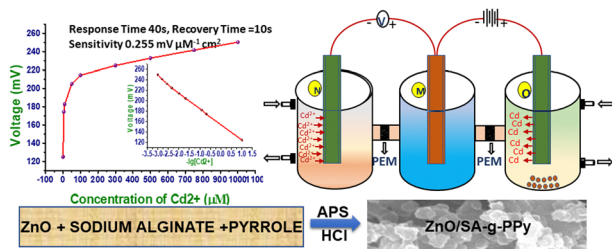
3506



A comparative study on the photo-removal of a few selected priority organic pollutants in aqueous suspension using vanadium-doped-ZnO/MWCNT

Mohtaram Danish, Ziyaur Rasool, Haider Iqbal, Reesha Fatima, Shubham Kumar and Mohammad Muneer*

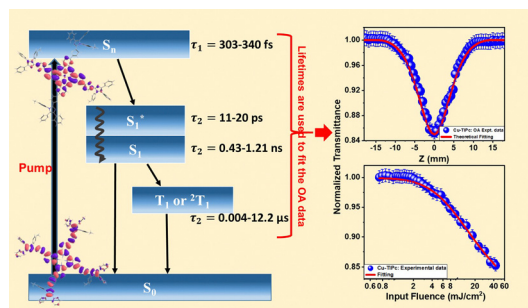
3521



Potential mediated electrochemical recycling and sensing of cadmium ions in wastewater over ZnO/SA-g-PPy biocomposite

Sandeep Verma, Ashok K. Sharma* and Saroj K. Shukla*

3532



Novel metallated imidazole phthalocyanines: synthesis, ultrafast excited-state carrier dynamics and multiphoton absorption properties

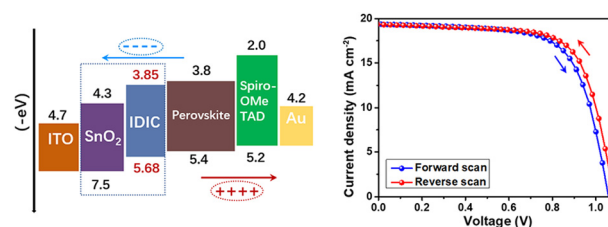
Md Soif Ahmed, Kalavala Shivaprakash Srivishnu, Chinmoy Biswas, Dipanjan Banerjee, Prabhakar Chetti, Venugopal Rao Soma, Lingamallu Giribabu* and Sai Santosh Kumar Raavi*



3551

High-performance Ruddlesden–Popper two-dimensional perovskite solar cells using integrated electron transport materials of tin oxide and indacenodithiophene

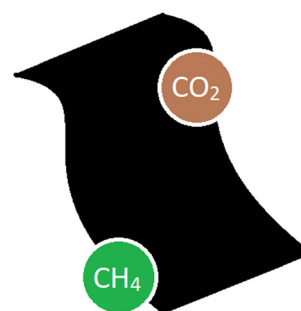
Zhihai Liu, Lei Wang, Hao Zhao, Yibin Wei, Xiaoyin Xie* and Ping Chen*



3559

A simple, sustainable route to flexible microporous carbon cloth for energy storage applications

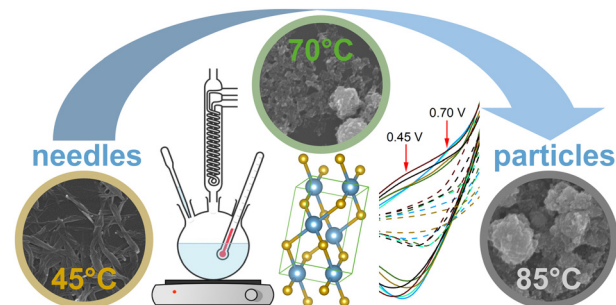
Thria Alkhalidi, L. Scott Blankenship and Robert Mokaya*



3572

Temperature-modulated solution-based synthesis of copper oxide nanostructures for glucose sensing

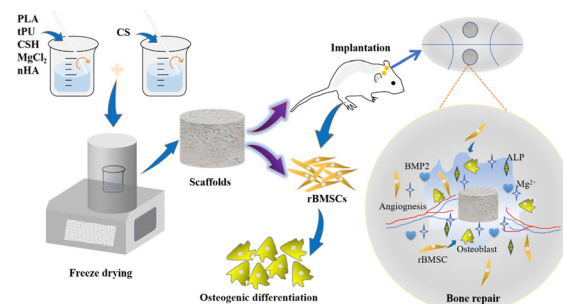
Yujiang Zhu, Carolina Vigil-Hernandez, Curran Kalha, Nathalie Kanchena Fernando, Steve Firth, Gemma-Louise Davies, Katarzyna Bialas, Despina Moschou and Anna Regoutz*



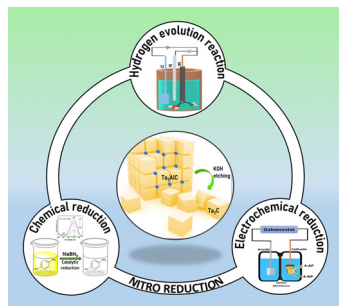
3583

A PLA-tPU based magnesium ion incorporated CSH/nHA bioactive porous composite scaffold for critical bone defect repair

Zhi Shi, Guobin Huang, Zhongming Li, Zhenkai Lou, Zhiqiang Gong, Xin Wang, Chengyong Li* and Bing Wang*



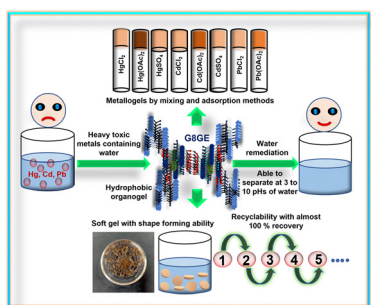
3593



Fluorine-free synthesized tantalum carbide (Ta₂C Mxene) as an efficient electrocatalyst for water reduction and nitro compound reduction

Aathilingam Vijayaprabakaran and Murugavel Kathiresan*

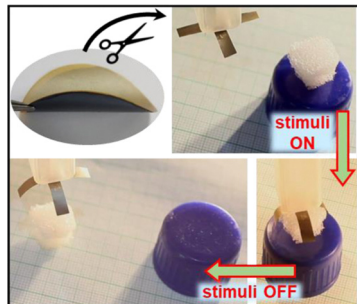
3603



Design and synthesis of hydrophobic mixed organogels with complementary hydrogen-bond donor–acceptor sites: removal of heavy metal ions Hg²⁺, Cd²⁺ and Pb²⁺ from aqueous solution

Reena Kyarikwal, Ritika Munjal, Probal Nag, Sivaranjana Reddy Vennapusa and Suman Mukhopadhyay*

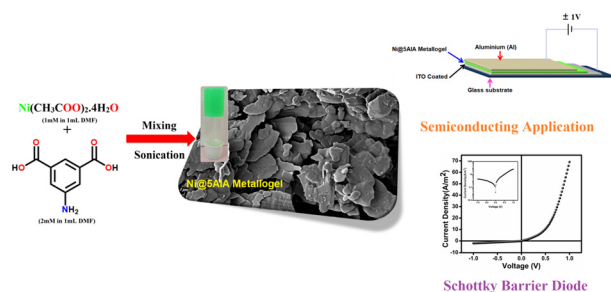
3619



Light and solvent-driven actuator of clay and vanadium pentoxide nanosheets

Partha Pratim Saikia, Priyanku Garg, Kiran Mayawad, Tumpa Paul, Arindom Bikash Neog, Bhaskar Jyoti Sarmah, Kalyan Raidongia and Raj Kumar Gogoi*

3628



A semiconducting supramolecular novel Ni(II)-metallogel derived from 5-aminoisophthalic acid low molecular weight gelator: an efficient Schottky barrier diode application

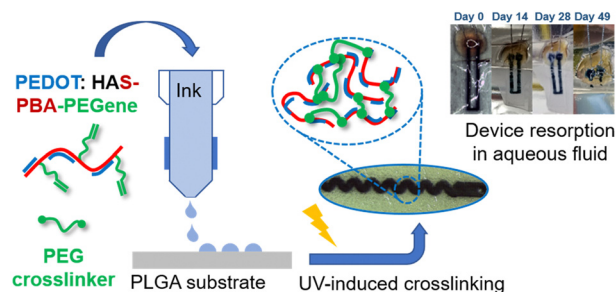
Baishakhi Pal, Subhendu Dhibar,* Ritam Mukherjee, Subham Bhattacharjee, Partha Pratim Ray* and Bidyut Saha*



3636

A cross-linkable and resorbable PEDOT-based ink using a hyaluronic acid derivative as dopant for flexible bioelectronic devices

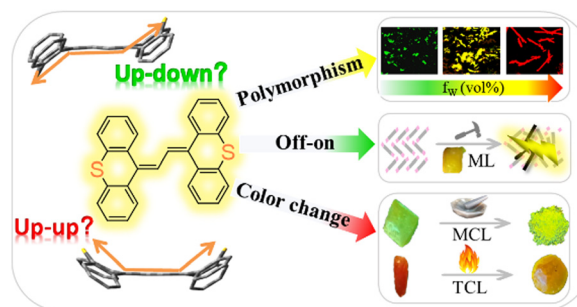
Maxime Leprince, Simon Regal, Pascal Mailley, Fabien Sauter-Starace, Isabelle Texier* and Rachel Auzély-Velty



3645

Mechanochromic, thermoresponsive and triboluminescence behaviors of one divinyl thioxanthene based AIE luminogen with variable conformations

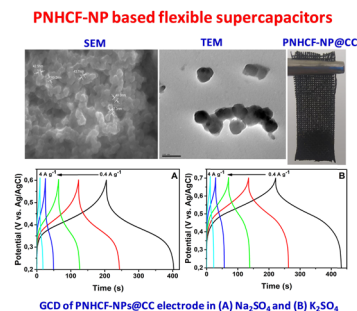
Nengni Xu, Wenhua Xu, Meng Sun, Yi Yuan, Xinjun Luan,* Ying Wang and Hui Wang*



3654

High-performance flexible supercapacitors based on potassium nickel(II) hexacyanoferrates(III) nanoparticles on carbon cloth as an electrode material

L. M. Samyn, T. S. Lessa, R. Suresh Babu,* A. Kalaivani, T. M. Barbosa and A. L. F. de Barros



3662

Electrodeposition, composition and properties of cobalt–rhenium alloys coatings

Yuliya Yapontseva, Valeriy Kublanovsky,* Tetyana Maltseva, Yuri Troshchenkov and Oleksii Vyshnevskiy

