

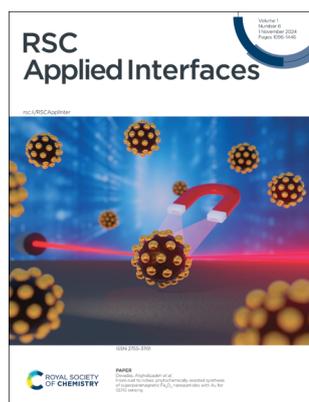
RSC Applied Interfaces

rsc.li/RSCApplInter

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

N/A CODEN RAISCD 1(6) 1096–1446 (2024)



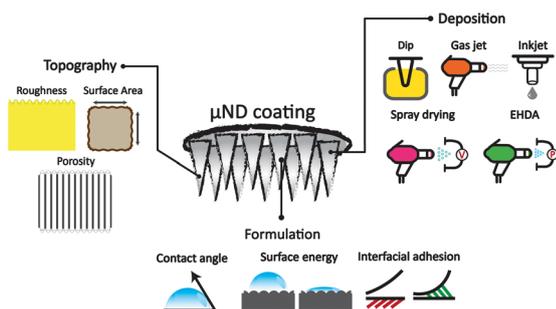
Cover

See Devadas, Aligholizadeh *et al.* pp. 1129–1141.

Image reproduced by permission of Mary Sajini Devadas from *RSC Appl. Interfaces*, 2024, 1, 1129. Image taken from vecteezy.com

REVIEW

1108

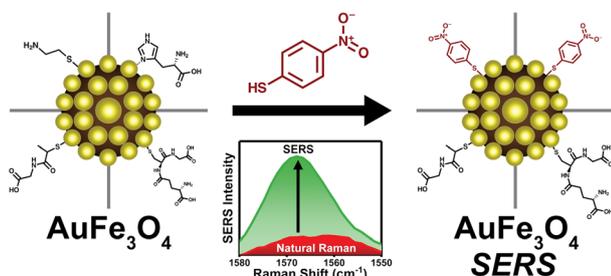


Topographical characteristics of 3D printed polymeric microneedle surface and its impact on coating formulation attributes

Masood Ali, Yanling Yang, Ayyah Abdoh and Yousuf Mohammed*

PAPERS

1129



From rust to riches: phytochemically assisted synthesis of superparamagnetic Fe₃O₄ nanoparticles with Au for SERS sensing

Dariush Aligholizadeh, Landon Bechdel, Mansoor Johnson, Vera Smolyaninova and Mary Sajini Devadas*



EES Catalysis

GOLD
OPEN
ACCESS

Exceptional research on energy
and environmental catalysis

Open to everyone. Impactful for all

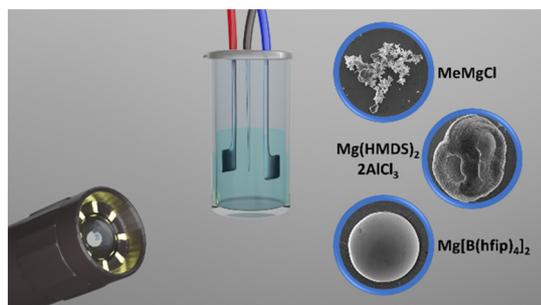
rsc.li/EESCatalysis

Fundamental questions
Elemental answers

Registered charity number: 207890



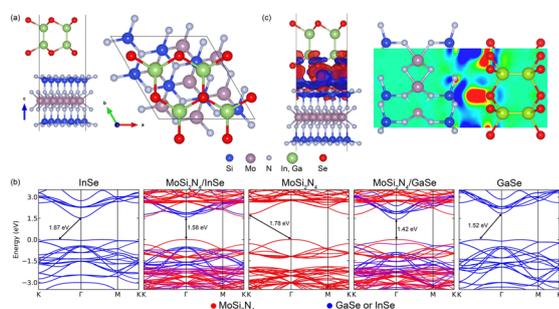
1142



Electrolyte-dependent deposition morphology on magnesium metal utilizing MeMgCl, Mg[B(hfip)₄]₂ and Mg(HMDS)₂·2AlCl₃ electrolytes

Leon Leuppert, Adam Reupert,* Thomas Diemant, Tom Philipp, Christine Kranz, Zhenyou Li and Maximilian Fichtner*

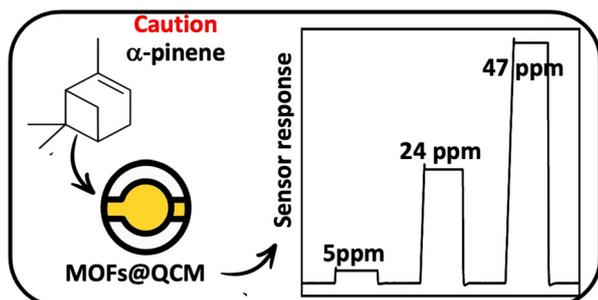
1156



Electric field and strain tunable band gap and band alignments of MoSi₂N₄/MSe (M = In, Ga) van der Waals heterostructures

Jin Quan Ng, Qingyun Wu, Yee Sin Ang* and L. K. Ang*

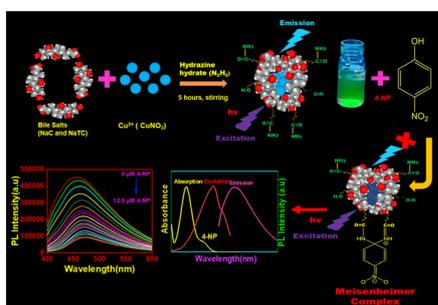
1166



MOF-based sensors for the detection of airborne α -pinene

P. Pires Conti, P. Iacomì, P. F. Brântuas, M. Nicolas, R. Anton, S. Moularat, S. Dasgupta, N. Steunou, G. Maurin and S. Devautour-Vinot*

1174



Bile-salt templated green fluorescent copper nanoclusters: detection of 4-nitrophenol in nanomolar range

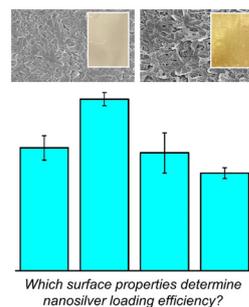
Shivangi, Mandeep Kaur, Neeraj Sohal, Mallika Phull and Banibrata Maity*



1186

Surface characteristics of thin film composite polyamide membranes dictate silver nanoparticle loading efficacy

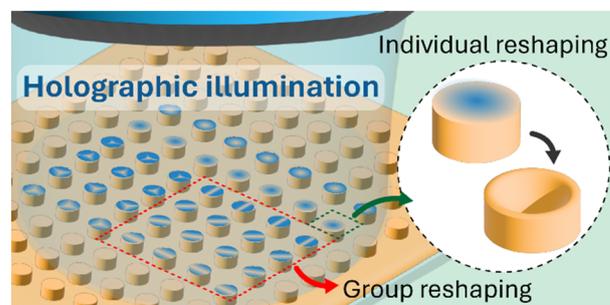
Afsana Munni, Mohammed A. Bashammakh, Marion Bellier, Ali Ansari, Mohamed E. A. Ali, H. Enis Karahan, Rafiqul Islam, Treavor H. Boyer and François Perreault*



1198

Molding three-dimensional azopolymer microstructures with holographically structured light

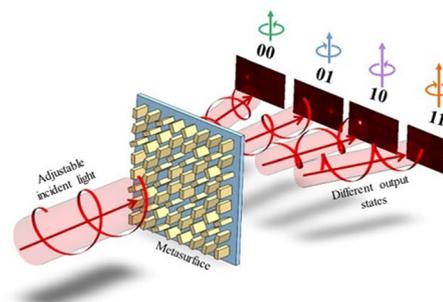
I Komang Januariyasa, Francesco Reda, Fabio Borbone, Marcella Salvatore and Stefano L. Oscurato*



1208

A spin and intensity multiplexed encryption metasurface

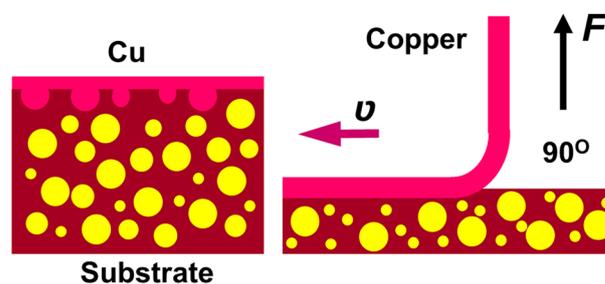
Xuefeng Wang, Pengfei Li, Xiaoyu Zhao, Dieter Weller, Sufeng Quan, Mengxuan Wu, Ruibin Liu and Shuai Guo*



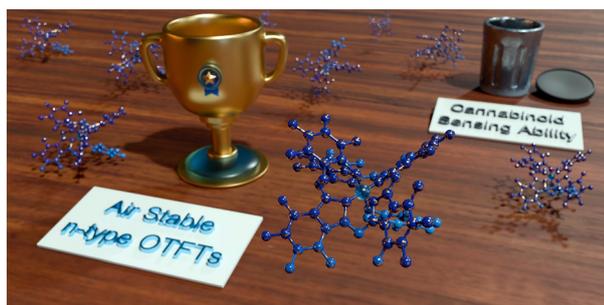
1214

Heterointerfacial adhesion failure mechanism of ultrahigh filler loading containing epoxy composite films for chip substrates

Shanjun Ding,* Xiaomeng Wu, Xu Zhang, Mengqi Gui, Zhidan Fang* and Qidong Wang*



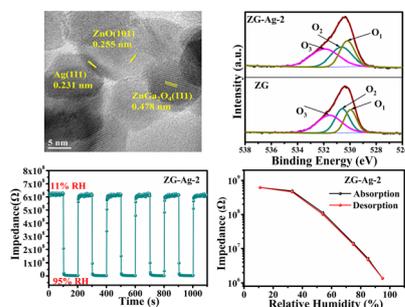
1222



$(F_5PhO)_2-F_{16}-SiPc$ as an air-stable, high-performance n-type semiconductor with poor cannabinoid sensing capabilities

Halynne R. Lamontagne, Mélanie Cyr, Mário C. Vebber, Sufal Swaraj, Cory S. Harris, Jaclyn L. Brusso, Adam J. Shuhendler and Benoît H. Lessard*

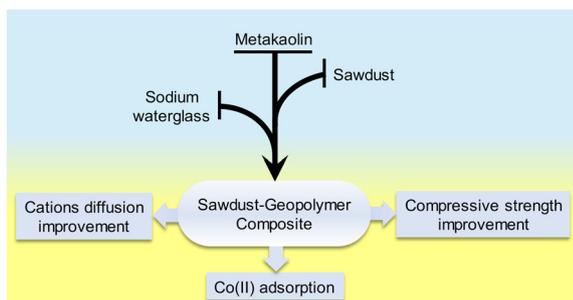
1233



High-performance humidity sensor based on Ag-doped $ZnGa_2O_4/ZnO$ composite nanofibers

Chunhua Sun, Wenjing Li, Ze Lv* and Ying Guo*

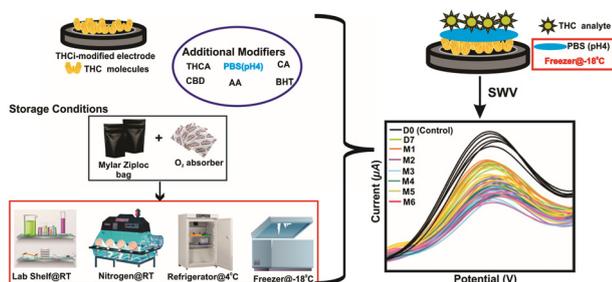
1241



Effect of NaOH-treated sawdust incorporated in geopolymer matrix on compressive strength and adsorption property

Gaëlle Ngnie, Rock Ambela Atangana, Grace Ingrid Tomou-Mbahim, Lionel Magellan Sambang, Gustave Kenne Dedzo,* Hervé Kouamo Tchakoute,* Claus Henning Rüscher and Emmanuel Ngameni

1252



Tetrahydrocannabinol (THC)-modified screen-printed carbon electrodes (SPCEs): insights into stability

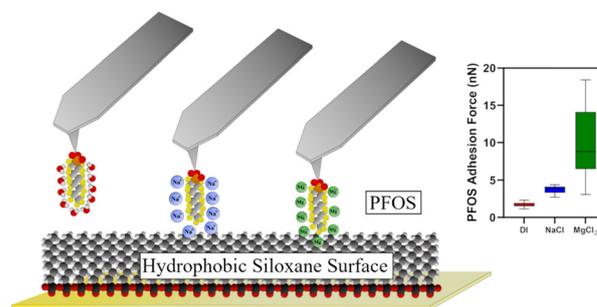
Rehmat Grewal, Greter A. Ortega, Herlys Viltres, Seshasai Srinivasan* and Amin Reza Rajabzadeh*



1265

Investigation into the adhesion properties of PFAS on model surfaces

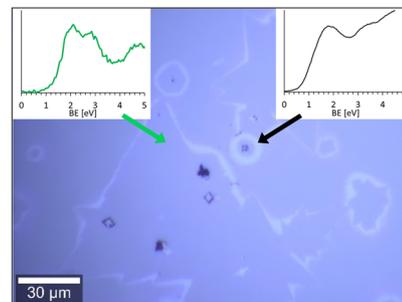
Jack Welchert, McKenna Dunmyer, Lynn Carroll, Irbis Martinez, Trisha J. Lane, Daniel A. Bellido-Aguilar, Suchol Savagatrup and Vasiliki Karanikola*



1276

Electronic structure of thin MoS₂ films

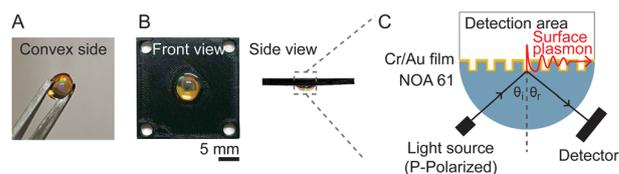
Benjamin A. Chambers, Christopher T. Gibson and Gunther G. Andersson*



1285

Polymeric grating prism-based dual-mode miniature surface plasmon resonance sensor chip

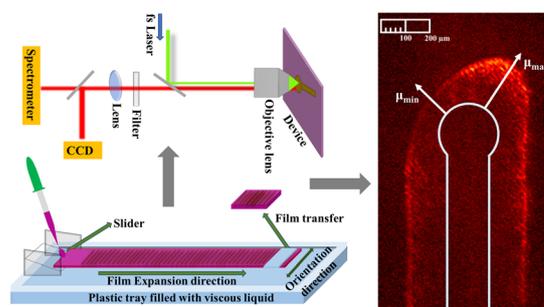
Wisansaya Jaikeandee, Supeera Nootchanat, Chutiparn Lertvachirapaiboon, Sanong Ekgasit, Kazunari Shinbo, Keizo Kato and Akira Baba*



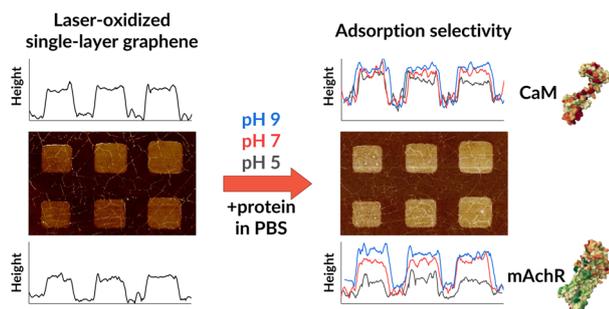
1296

Anisotropic charge transport study of highly oriented P4T2F-HD thin film fabricated at air-liquid interface through second harmonic generation (SHG) analysis

Radhe Shyam, Takaaki Manaka* and Rajiv Prakash*



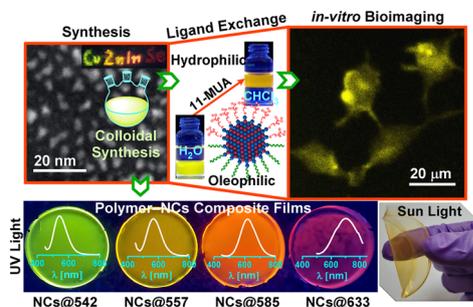
1305



Non-covalent adsorption of neurotransmission-relevant proteins on locally laser-oxidized and pristine graphene

Aku Lampinen, Johanna Schirmer, Aleksei Emelianov, Andreas Johansson and Mika Pettersson*

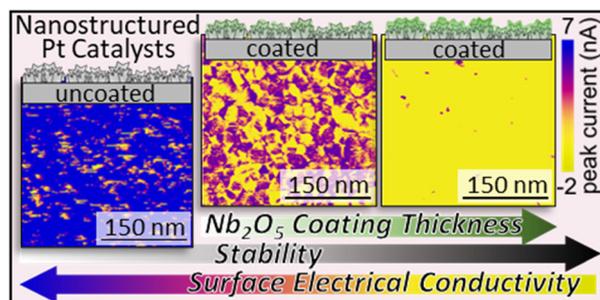
1317



Colloidal synthesis of emission-tunable Cu-doped Zn-In-Se/ZnSe core/shell nanocrystals for lighting and bioimaging applications

Joicy Selvaraj, Arun Mahesh, Arunkumar Dhayalan, Vaseeharan Baskaralingam, Saravanan Rajendran, Miguel Ángel Gracia Pinilla and Thangadurai Paramasivam*

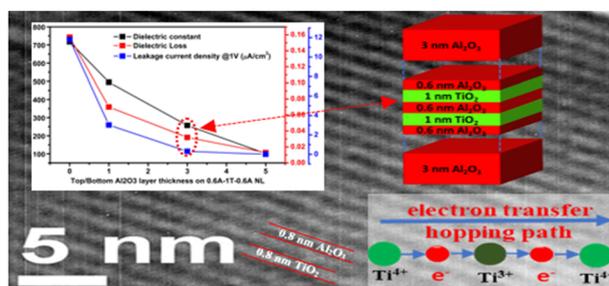
1334



Niobium oxide coatings on nanostructured platinum electrocatalysts: benefits and limitations

Annabelle M. K. Hadley, Sakshi Gautam and Byron D. Gates*

1348



Engineering Maxwell-Wagner relaxation and interface carrier confinement in Al₂O₃/TiO₂ subnanometric laminates for high-density energy storage applications

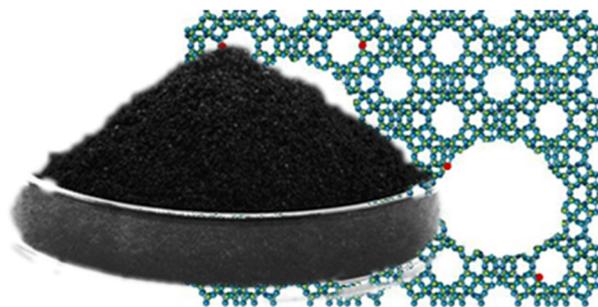
Partha Sarathi Padhi,* Sanjay K. Rai, R. S. Ajimsha and Pankaj Misra*



1360

Exploring the influence of mesoporosity in hard carbon-templated hierarchical SAPO-5 for ethanol dehydration

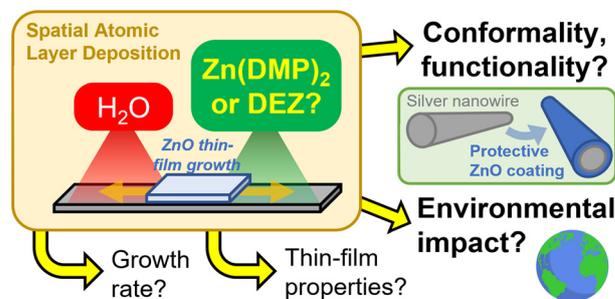
Matthew E. Potter,* Evangeline B. McShane, Nienke L. Visser, Johannes D. Meeldijk, Lisa J. Allen, Stephen M. King, Marina Carravetta, Petra E. de Jongh, Bart D. Vandegehuchte and Robert Raja



1371

Assessing the potential of non-pyrophoric Zn(DMP)₂ for the fast deposition of ZnO functional coatings by spatial atomic layer deposition

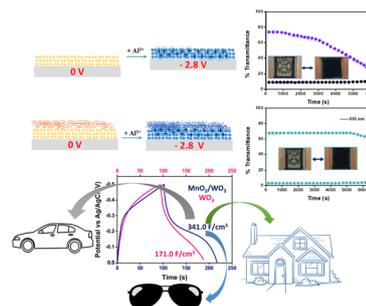
Liam Johnston, Jorit Obenluneschloß, Muhammad Farooq Khan Niazi, Matthieu Weber, Clément Lausecker, Laetitia Rapenne, Hervé Roussel, Camilo Sanchez-Velazquez, Daniel Bellet, Anjana Devi and David Muñoz-Rojas*



1382

Electrochromic properties of MnO₂/WO₃ bilayered electrodes for enhanced charge storage and superior stability

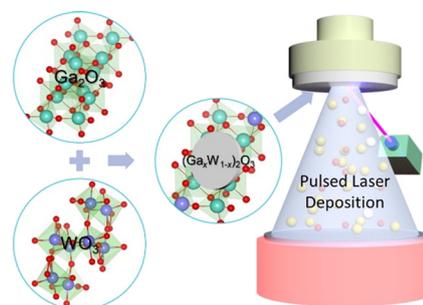
Ranjana Venugopal, Anjitha Dinakaran, Meenu C. Nair, Arathy C. Balachandran, Nayan Dev Madhavan and Biswapriya Deb*



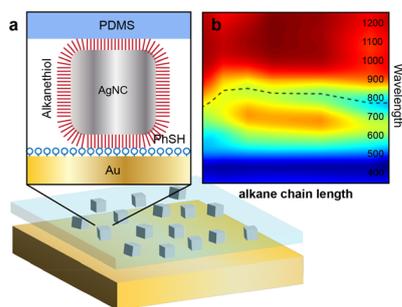
1395

Structure, surface/interface chemistry and optical properties of W-incorporated β -Ga₂O₃ films made by pulsed laser deposition

Francelia Sanchez, Debabrata Das, Nathan Episcopo, Felicia S. Manciu, Susheng Tan, Vaithiyalingam Shutthanandan and C. V. Ramana*



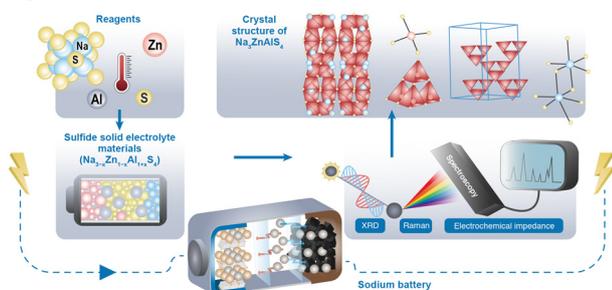
1410



Probing Raman enhancements for a colloidal metasurface with optical gap distances in the quantum regime

Yuan Zeng, Yu Xie, Andrea L. Rodarte, Tyler J. Dill and Andrea R. Tao*

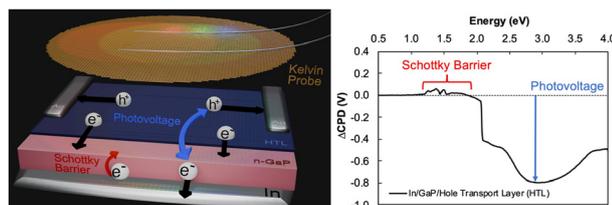
1419



Preparation and characterization of new solid electrolytes $\text{Na}_{3-x}\text{Zn}_{1-x}\text{Al}_{1+x}\text{S}_4$

Tomoya Otono, Hamdi Ben Yahia, Chie Hotehama, Kota Motohashi, Atsushi Sakuda* and Akitoshi Hayashi*

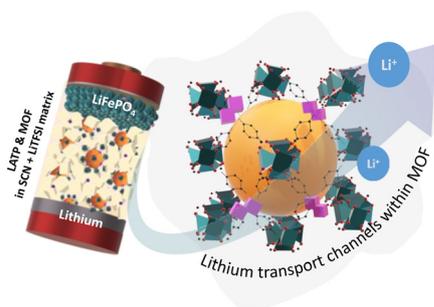
1426



Surface photovoltage predicts open circuit voltage in GaP/PEDOT:PSS and GaP/CuSCN heterojunction solar cells

Anna C. Kundmann,* Kathleen Becker and Frank E. Osterloh*

1436



Metal-organic frameworks as conductivity enhancers for all-solid-state lithium batteries

Shruti Suriyakumar, Rohit M. Manoj, Sreelakshmy K. Jayaprakash, Sreelakshmi Anil Kumar, Keerthy P. Sudhakaran, Vinesh Vijayan and Manikoth M. Shaijumon*



CORRECTION

1443

Correction: Metal–organic frameworks as conductivity enhancers for all-solid-state lithium batteries

Shruti Suriyakumar, Rohit M. Manoj, Sreelakshmy K. Jayaprakash, Sreelakshmi Anil Kumar, Keerthy P. Sudhakaran, Vinesh Vijayan and Manikoth M. Shaijumon*

