

Materials Advances

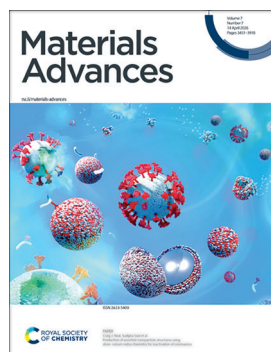
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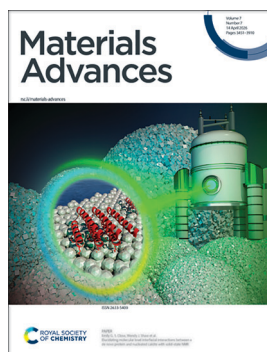
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See Craig J. Neal, Sudipta Seal *et al.*, pp. 3537–3544. Image reproduced by permission of Craig J. Neal from *Mater. Adv.*, 2026, 7, 3537.



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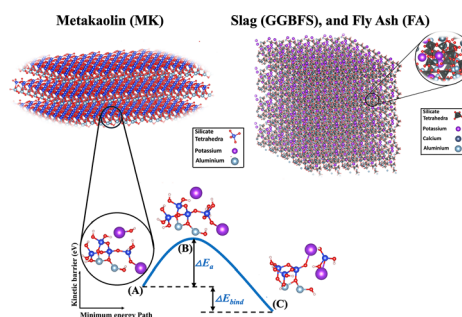
See Emily G. S. Close, Wendy J. Shaw *et al.*, pp. 3545–3558. Image reproduced by permission of Battelle Memorial Institute – Pacific Northwest National Laboratory from *Mater. Adv.*, 2026, 7, 3545.

REVIEWS

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Dissolution of pozzolanic materials: a critical review

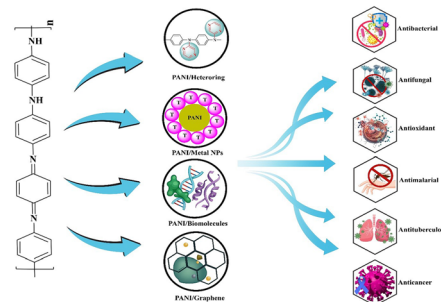
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Chetna Kumari, Sapana Jadoun and Nirmala Kumari Jangid*



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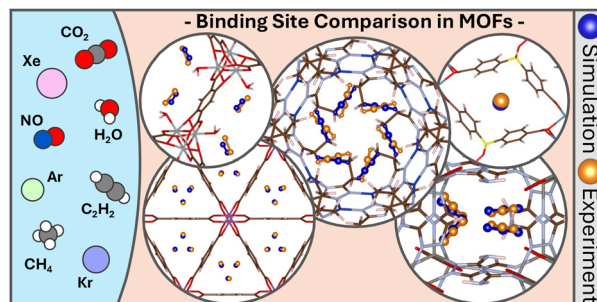


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How well do conventional atomistic simulations predict adsorption binding sites in metal–organic frameworks compared to experiment?

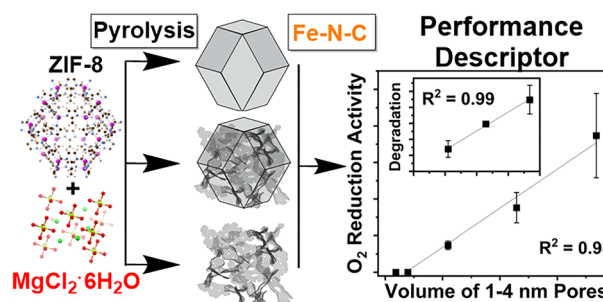
Jake Burner, Olivier Marchand, Sari Warshawsky, Marco Gibaldi and Tom K. Woo*



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Contribution of Mg-templated porosity to activity and durability in Fe–N–C O₂ reduction catalysts

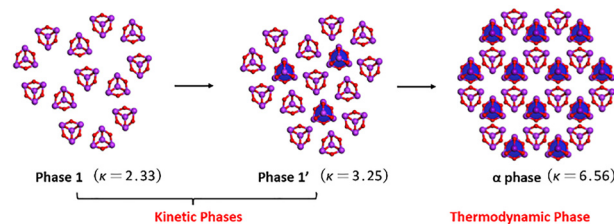
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Interface phase engineering of monolayer Sb₂O₃ on Au(111)

Jiyuan Zhang, Haoyu Zhao,* Shuning Cai, Xueqing Yang, Yabin Zhang, Bingkai Yuan, Junyong Wang, Jingzhe Chen, Pengru Huang* and Gaolei Zhan*

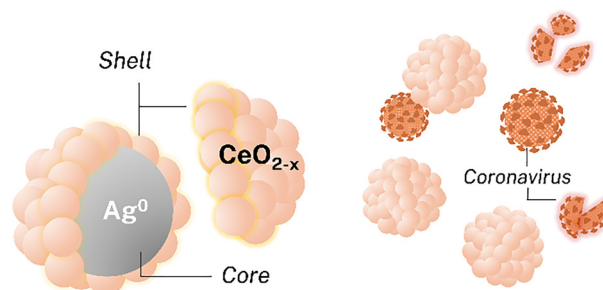


PAPERS

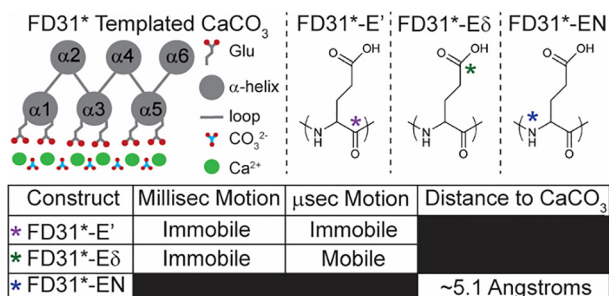
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Production of assorted nanoparticle structures using silver–cerium redox chemistry for inactivation of coronavirus

Craig J. Neal,* Muhammad Hassan Mehmood Kalyar, Elayaraja Kolanthai, Maria V. Bolen, Griffith D. Parks and Sudipta Seal*



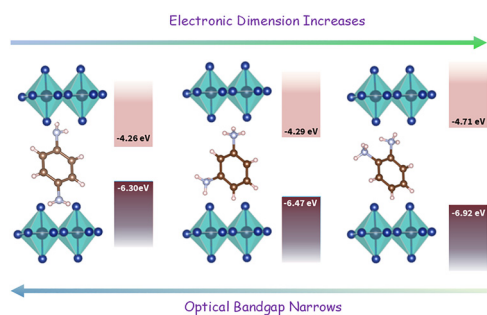
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Elucidating molecular level interfacial interactions between a *de novo* protein and nucleated calcite with solid-state NMR

Emily G. S. Close,* Andrew S. Lipton, Marlo Zorman, Harley Pyles, Thi Kim Hoang Trinh, Garry W. Buchko, Ying Chen, Chun-Long Chen, Christopher J. Mundy, David Baker and Wendy J. Shaw*

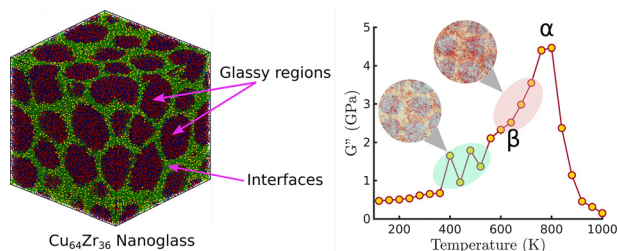
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Optoelectronic modulation *via* isomerism-induced structural effects in low-dimensional bismuth halide perovskites

Bharath Bhaskarbhat, S. K. Mukaddar, Altaf Pasha, Jan Grzegorz Matecki, Suman Kalyan Sahoo, Srinivas Budagumpi and R Geetha Balakrishna*

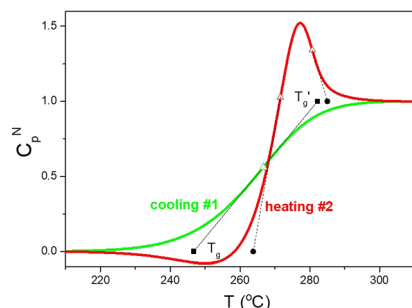
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Atomistic origins of viscoelasticity and β -relaxation in Cu₆₄Zr₃₆ metallic glass and nanoglass

Param Punj Singh, Dhyanesh Baskaran, Omar Adjaoud, Karsten Albe and Raghavan Ranganathan*

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The glass transition width and its dependence on fragility, nonexponentiality and nonlinearity

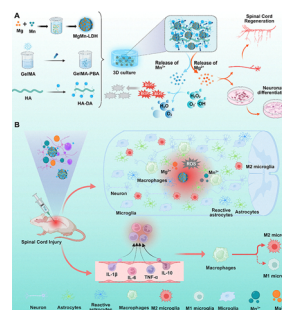
Jiří Málek



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ROS-scavenging and oxygen-generating MgMn-LDH integrated smart injectable hydrogel for microenvironment-reprogrammable spinal cord injury repair

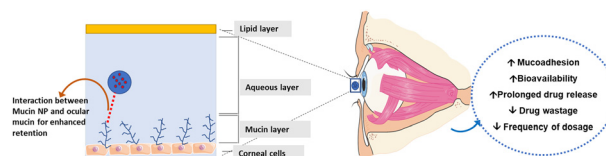
Lian Ren, Xiaobin Zhou, Longbao Feng and Guodong Sun*



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Natural gum-modified mucin nanocarriers with enhanced mucoadhesion and *trans*-cornea infiltration for controlled drug delivery in ocular uveitis therapy

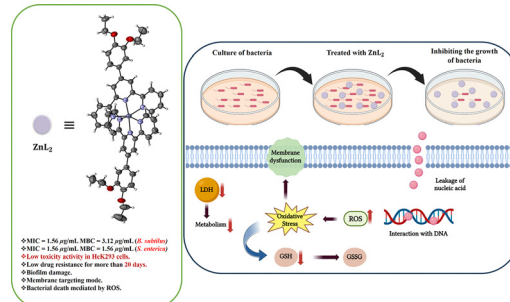
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Harnessing the zinc(II) bis-terpyridine complex to overcome drug resistance: mechanistic insights into antibacterial activity

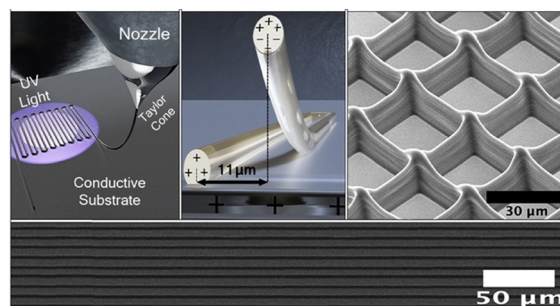
Sourav Sutradhar, Saurabh Gupta, Parnashabari Sarkar, Dipankar Das, Kamaldeep Paul* and Biswa Nath Ghosh*



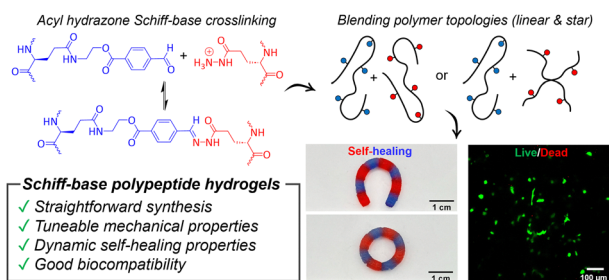
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Delayed crosslinking enables ultra-high-resolution melt electrowriting of responsive liquid crystal elastomers

Mehrzad Javadzadeh, María Fernández-Melero, Jesús del Barrio and Carlos Sánchez-Somolinos*



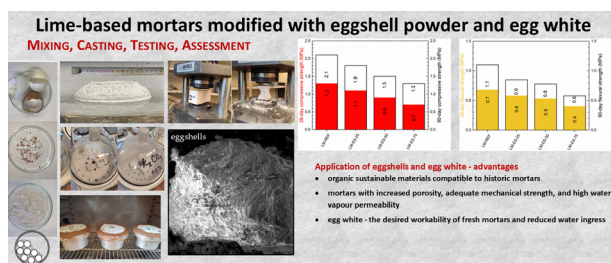
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The influence of polymer topology and side chain functionality on the Schiff-base reactivity of biocompatible polypeptide hydrogels

Robert D. Murphy,* Franz Lobianco, Viviane Chiaradia, Josué M. Galindo, Tom Hodgkinson and Andreas Heise

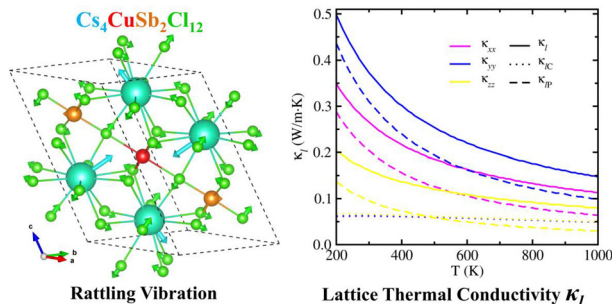
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Experimental assessment of lime-based mortars modified with eggshell powder and egg white – towards development of materials for repair of historic buildings

Zbyšek Pavlík,* Adam Pivák, Martina Záleská, Grzegorz Łagód, Milena Pavlíková and Ondřej Jankovský

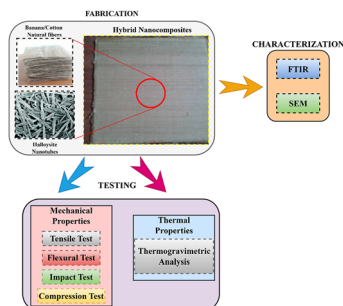
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Theoretical insights into lattice dynamics and thermal transport properties of lead-free quadruple halide perovskite $\text{Cs}_4\text{CuSb}_2\text{Cl}_{12}$

Un-Sok Pak,* Dok-Song Che Gal, Song-Myong Jang and Un-Gi Jong*

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Effect of halloysite nanotube addition on mechanical and thermal performance of banana/cotton hybrid natural fiber-reinforced polymer nanocomposites

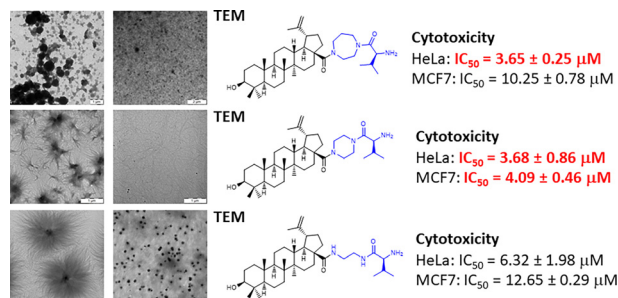
G. Umachitra, P. S. Sampath, A. Karthik, M. S. Senthilkumar, K. Ramachandran, L. Rajeshkumar* and M. Sathishkumar*



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Nano-assembly and cytotoxicity of the L-valine–polyamine conjugates of betulinic acid

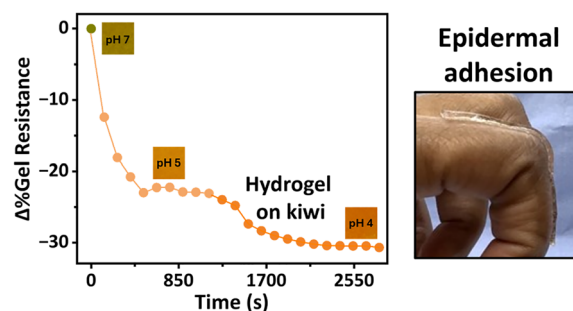
Martina Wimmerová, Miroslav Šlouf, Marie Kvasnicová, Lucie Rárová, David Šaman and Zdeněk Wimmer*



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Towards a wearable format for transducing responsive swelling in hydrogels

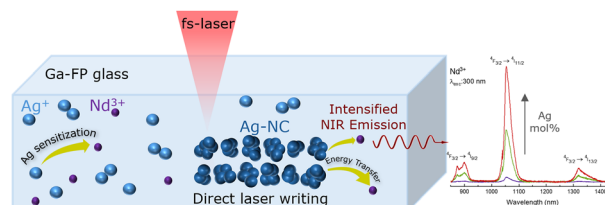
Rinki Singh,* Dinakaran Thirumalai, Tanya Levingstone and Aoife Morrin*



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Energy transfer from Ag species to Nd^{3+} in Ga–fluoride–phosphate glasses: near-infrared emission enhancement via controlled heat treatment and femtosecond laser inscription

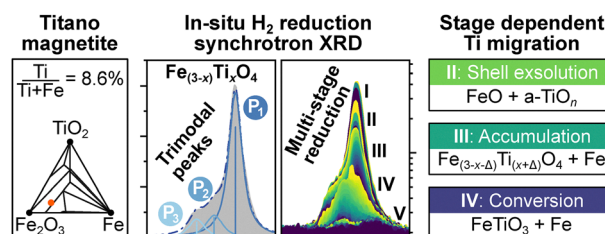
Vinicius D. Jesus,* Leonnam G. Merizio, Gustavo Galleani, Guillaume Raffy, Mathis Carpentier, Yannick Petit,* Thierry Cardinal and Andrea S. S. de Camargo*



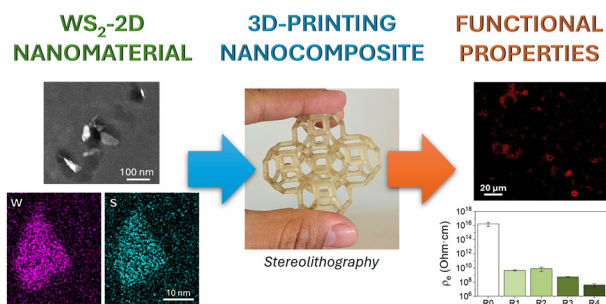
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In situ synchrotron X-ray diffraction studies of the high-temperature hydrogen reduction of New Zealand titanomagnetite ironsand

Morgan Lowther,* Bridget Ingham, Martin J. Ryan, Sigit Prabowo, Mohammad Nusheh, Raymond J. Longbottom, Bavinesh Maisuria, Sarah Spencer, Brian J. Monaghan, Mark H. Reid and Chris W. Bumby



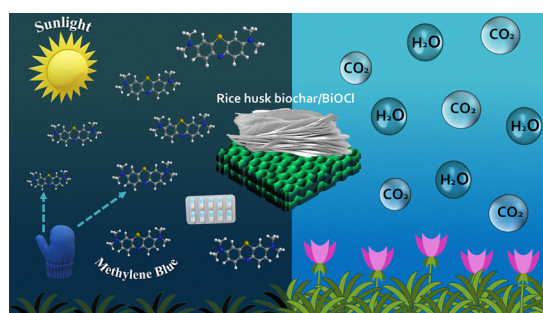
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Additive manufacturing of semiconductive polymer nanocomposites loaded with tungsten disulfide nanosheets

Luisa M. Valencia Liñán, Alberto Sanz de León,* Sergio I. Molina and Miriam Herrera

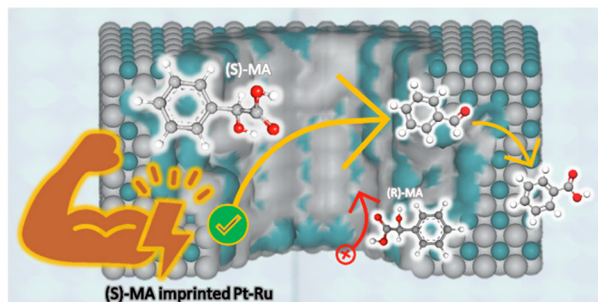
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Rice husk biochar-boosted BiOCl nanoplates: a sunlight-responsive route to wastewater detoxification and pathway insights for methylene blue degradation

Lovneet Kaur, Palkaran Sethi and Soumen Basu*

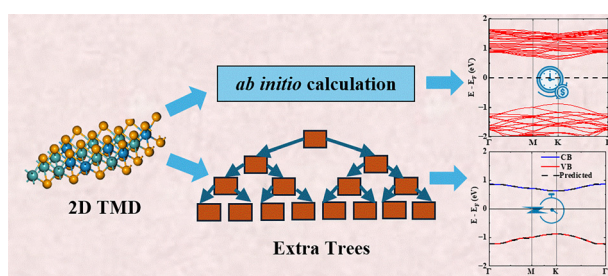
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Highly stable chiral bimetallic mesoporous platinum–ruthenium electrodes for enantioselective recognition

Sopon Butcha,* Natthaphong Kaewwan, Krissanapat Yomthong, Zikkawas Pasom, Alexander Kuhn and Chularat Wattanakit

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Machine learning-enabled prediction of the electronic band-edge shapes and properties of 2D transition metal dichalcogenide alloys

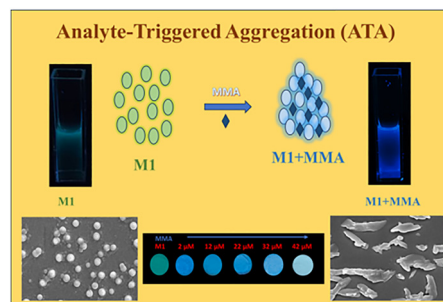
Tarvir Anjum Aditto, Vivek Chowdhury, Hafiz Imtiaz* and Ahmed Zubair*



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Smartphone-assisted urinary methylmalonic acid sensing using an imidazole-based probe via the analyte-triggered aggregation mechanism

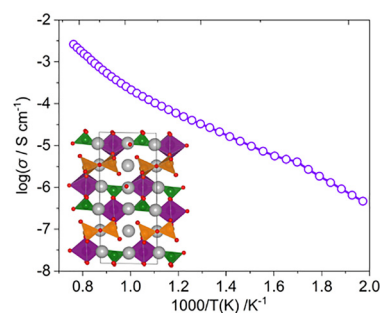
Bharat Kaushik, Ajeet Singh, Annu Agarwal, Nancy Punia and Inamur Rahaman Laskar*



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Dual ionic conductivity in $\text{Ba}_3\text{InGa}_2\text{O}_{7.5}$: correlating structure and electrochemical properties

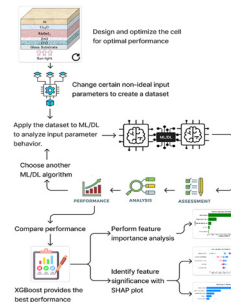
Oliver J. Wagstaff,* Archie D. Collins, John S. O. Evans and Ivana Radosavljević Evans



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Investigating the impact of non-ideal conditions on the performance of an RbGeI_3 perovskite solar cell through a combination of SCAPS-1D, machine learning and deep learning approaches

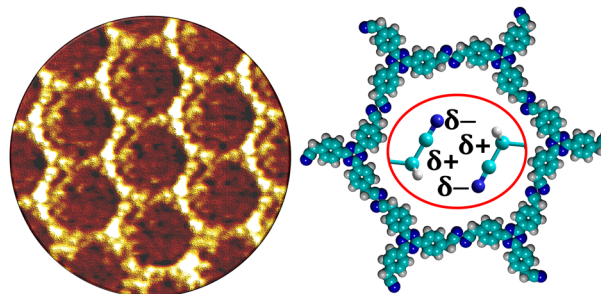
Tanvir Mahtab Khan,* Md. Atik Shams, Most. Marzia Khatun, Tahmid Ahamed, Manjuara Akter, Shajedul Hasan Arman, Mirza Md. Shakil, Hafiz Al Asad and Sheikh Rashel Al Ahmed*



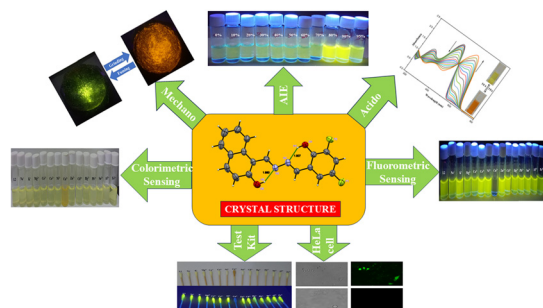
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Dipole-assisted nanoporous networks on surfaces

Huanjing Luo, Andrea Minoia, Vipin Mishra, Dariane Fadoras, Filippo Giovanni Fabozzi, Roberto Lazzaroni, Stefan Hecht, Kunal S. Mali* and Steven De Feyter*



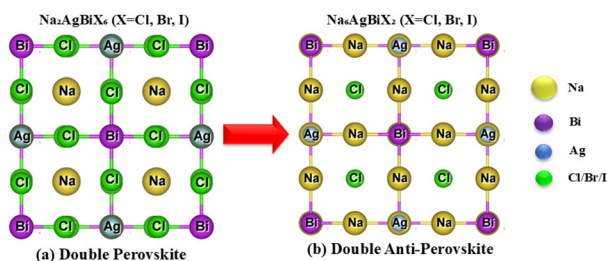
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Design and synthesis of an AIE-active naphthaldehyde hydrazone-based ligand: mechanochromic, acidochromic, and sensing studies

Ram Kumar Mandal, Pankaj Haloi, Abhinav Jain, Sourav Sutradhar, Jebiti Haribabu, Diego Quezada, Daniel Moraga and Pranjit Barman*

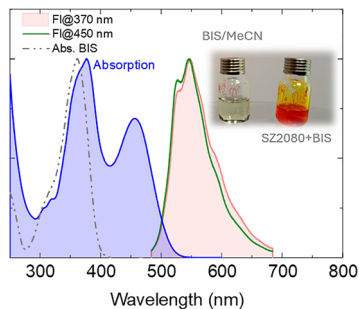
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Computational exploration of the diverse functional properties of double antiperovskite materials $\text{Na}_6\text{AgBiX}_2$ ($X = \text{Cl}, \text{Br}, \text{I}$)

Bisma Asghar, M. Usman Saeed, Zeeshan Ali, Shahan Ali, Irsan Saeed, A. H. Reshak, Hosam O. Elansary, Ihab Mohamed Moussa, Sohail Mumtaz* and Y. Saeed*

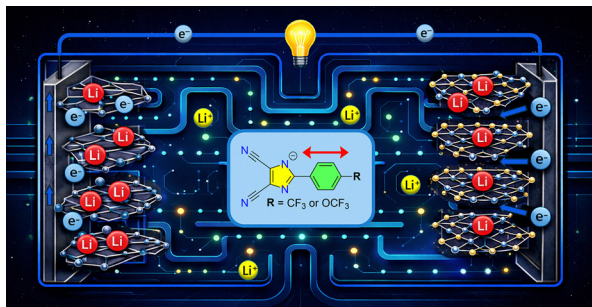
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Donor–acceptor complexes between photoinitiators and hybrid organic–inorganic SZZ2080™ photoresist

Marius Navickas,* Dimitra Ladika, Edvinas Orentas, Martynas Talaikis, Gediminas Niaura, Mantas Grigalavičius, Mantas Gaidys, Ricardo J. Fernández-Terán,* Mangirdas Malinauskas and Mikas Vengris

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Tailoring lithium dicyanoimidazolid: structure–property relationships

Daniel Pokorný, Tomáš Syrový, Milan Klikar, Patrik Pařík, Zuzana Burešová, Lenka Řeháčková and Filip Bureš*

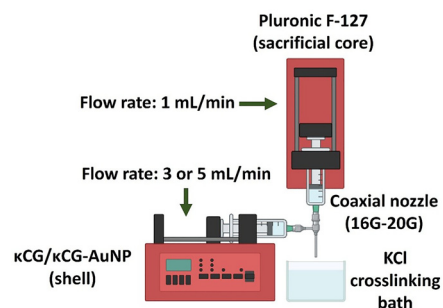


PAPERS

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Rheology and coaxial extrusion of acellular and cell-laden hollow conduits of pristine kappa carrageenan and gold–kappa carrageenan nanocomposite hydrogels

Sanchari Swarupa, Mata Subhashita, Nikita Chauhan, Jitendra Bahadur, Sharad Gupta and Prachi Thareja*



CORRECTION

3907

Correction: Bismuth selenide topological insulator materials for green energy devices: prospects and applications

Razieh Khaki, Mahmood Moradi,* Gholam Hossein Bordbar, Hana Kazemi, Saeid Davatolhagh and Meysam Pazoki*

