

Materials Advances

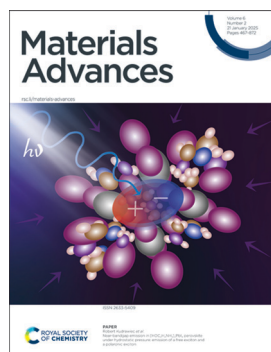
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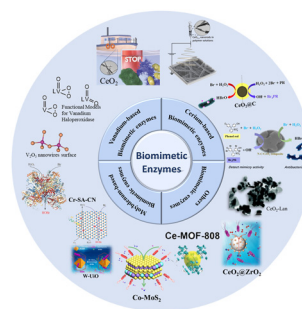
See Robert Kudrawiec *et al.*, pp. 569–578. Image reproduced by permission of Robert Kudrawiec from *Mater. Adv.*, 2025, 6, 569. Image created by Malgorzata Kudrawiec.

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Biomimetic haloperoxidases for antifouling on the surface of marine materials: a review

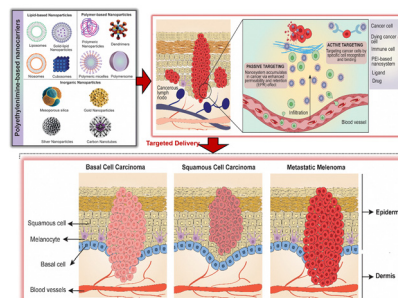
Meinan Yang, Nan Wang,* Ruiyong Zhang,* Sikandar Khan, Baorong Hou and Wolfgang Sand



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Ajeet Kumar, Sabya Sachi Das,* Srushti Tambe, Babita Kaundal, Sunny Kumar Sarraf and Kavindra Kumar Kesari*



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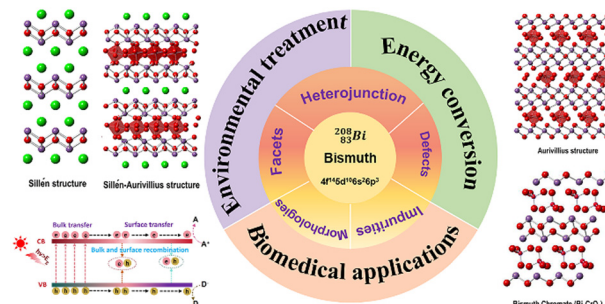


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Zeba Tabassum, Madhuri Girdhar,* Abhinav Anand, Neelam Kumari, Bhawana Sood, Tabarak Malik,* Anil Kumar and Anand Mohan

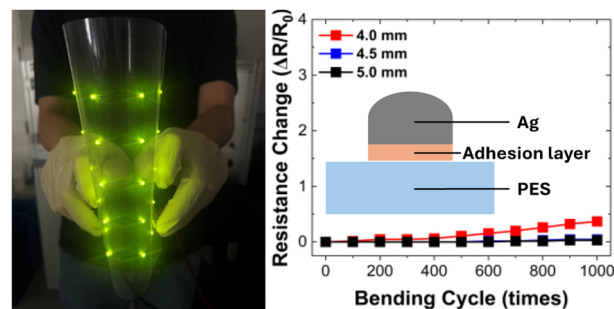


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Improved adhesion of printed Ag electrodes for flexible transparent display applications

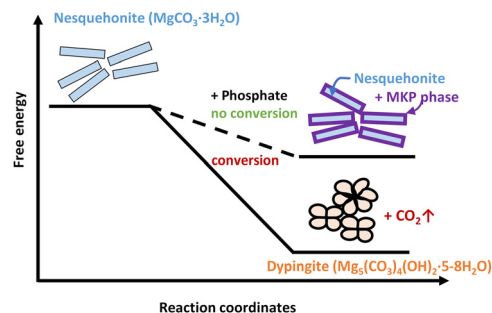
Han-Jung Kim, Se Yong Park, Jeongmin Park, Yohan Ko, Sung Eun Park, Yoonkap Kim and Junhee Kim*



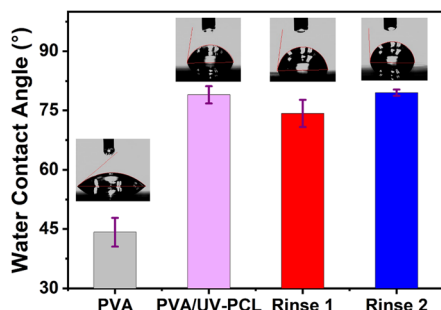
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Stabilization of nesquehonite for application in carbon capture utilization and storage

Nirrupama Kamala Ilango, Hoang Nguyen, Mohammad Alzeer, Frank Winnefeld and Paivo Kinnunen*



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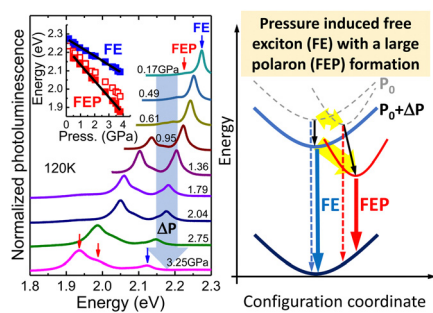


Cytocompatible, disintegrable, low-voltage operation n-type organic thin film transistors

Mohsin Ali, Bahar Ronnasi, May Ourabi, Joon Hyung Park, Jean-Philippe St-Pierre, Chang-Hyun Kim and Benoît H. Lessard*

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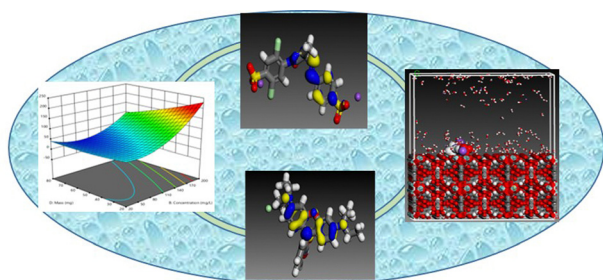
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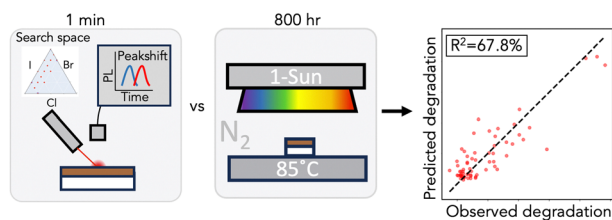
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Unraveling the sorption mechanism of industrial dyes onto Zr-based MOFs: computational and experimental modelling for highly efficient removal

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Bayesian optimization and prediction of the durability of triple-halide perovskite thin films under light and heat stressors

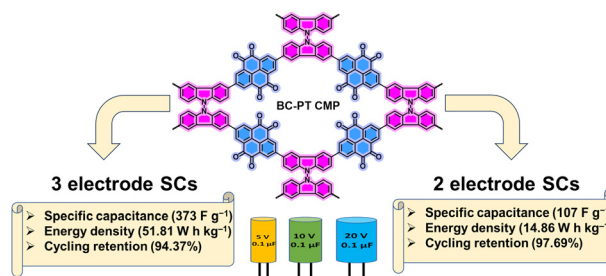
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Engineering carbonyl-rich conjugated microporous polymers with a pyrene-4,5,9,10-tetraone building block as highly efficient and stable electrodes for energy storage

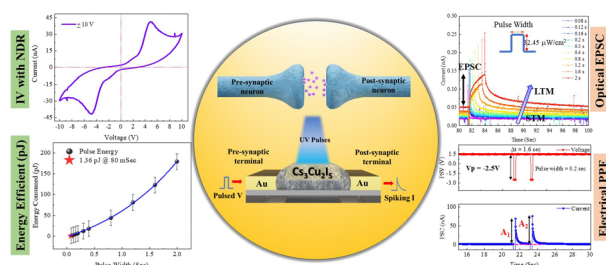
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A low-energy consuming, optically and electrically stimulated artificial synapse based on lead-free metal halide perovskite (Cs₃Cu₂I₅) for neuromorphic applications

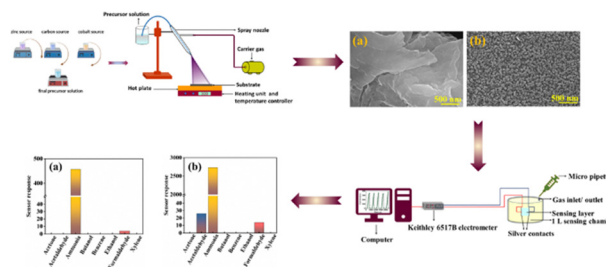
Amrita Bharati Mishra, Mrunal Shete and R. Thamankar*



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Carbon and cobalt co-doped ZnO thin films for highly sensitive and selective ammonia detection at room temperature

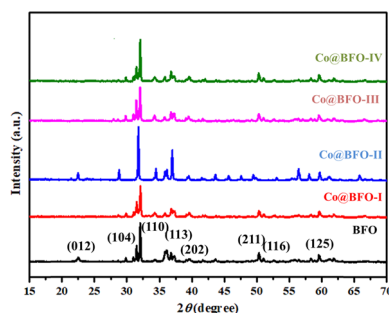
Anju Thomas and Kalainathan Sivaperuman*



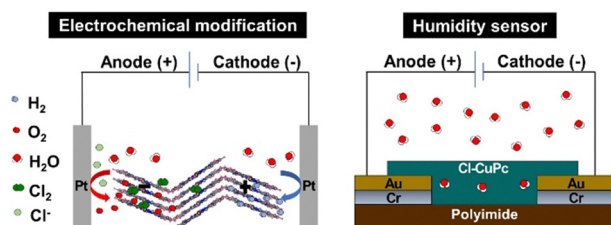
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A multifunctional Co-doped BiFeO₃ nanocomposite: a promising candidate for photocatalytic degradation, antibacterial activity, and antioxidant applications

Devender Jalandhara, Sanjeev Kumar,* Jasvir Dalal, Supreet, Gautam Singh, Sandeep Kumar, Rahul Badru, Yadvinder Singh, Satya Vir Sharma* and Sandeep Kaushal*



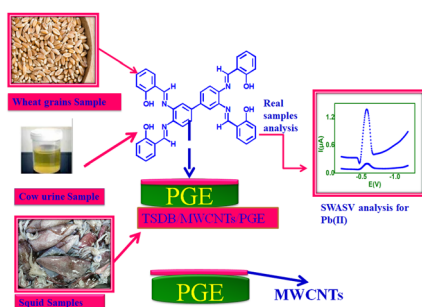
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Halide-mediated electrochemical modification of copper phthalocyanine for humidity sensing applications

Busarakham Ngokpho, Pattanaphong Janphuang, Supinya Nijpanich, Narong Chanlek, Suttipong Wannapaiboon, Theeranun Siritanon and Kamonwad Ngamchuea*

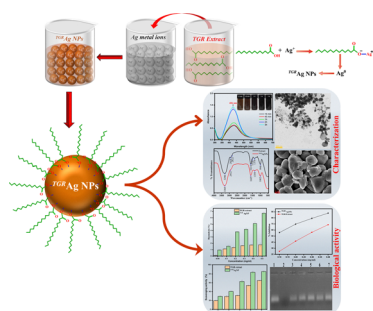
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Analysis of Pb(II) in wheat grain, cow urine and squid samples using modified novel TSDB incorporated MWCNTs

Jayagopi Gayathri,* Sivakumar Sivalingam and Kumar Sangeetha Selvan*

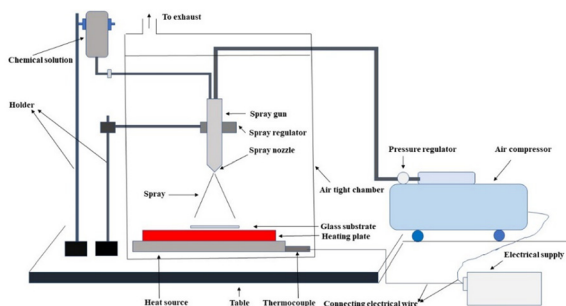
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Green synthesis of biocompatible silver nanoparticles using *Trillium govanianum* rhizome extract: comprehensive biological evaluation and *in silico* analysis

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Effect of silver and cobalt on transparent conducting CdO thin films: tuning the optoelectronic properties

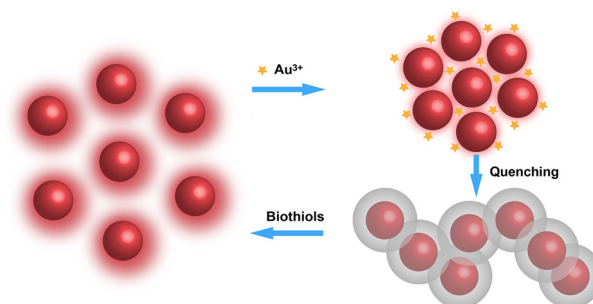
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Carbon dot based fluorescent “on–off–on” assays for the determination of Au(III) ions and biothiols

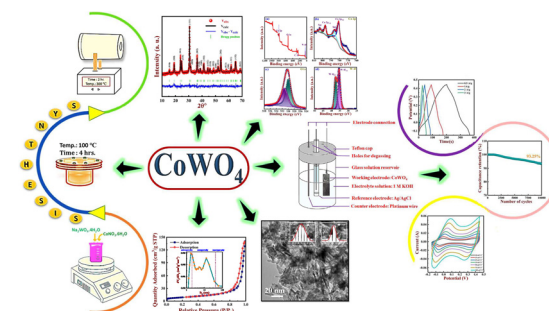
Zhenzhen Guo, Jinwen Zhu, Yue Huang, Jibin Liu* and Peng Miao*



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Low-temperature synthesis of oval-shaped CoWO₄ nanomaterials for enhanced asymmetric supercapacitor performance

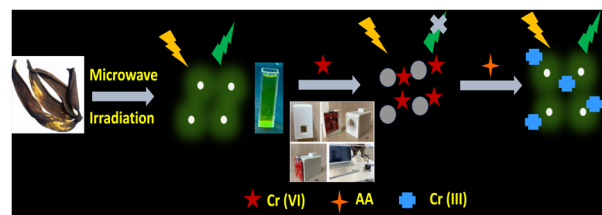
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A portable microcontroller-enabled spectroscopy sensor module for the fluorometric detection of Cr(VI) and ascorbic acid, utilizing banana peel-derived carbon quantum dots as versatile nanoprobes

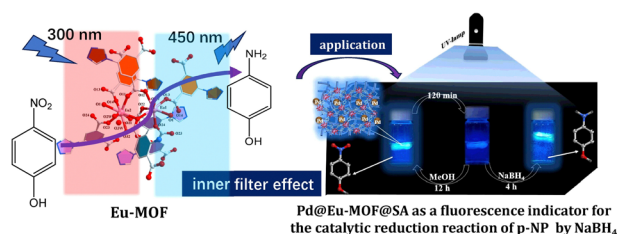
Aayushi Kundu,* Jobanpreet Brar, Amit Mishra, Banibrata Maity* and Soumen Basu*



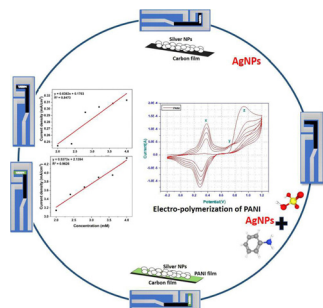
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Eu-MOF and its composites as turn-off fluorescence sensors for *p*-nitrophenol with applications in monitoring catalytic reduction reactions

Bing-Bing Xing, Yue-Shu Wang, Tao Zhang, Jing-Yi Liu, Huan Jiao and Ling Xu*



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Development of a silver–polyaniline functionalized biosensor for non-enzymatic lactic acid detection

Vinay Kishnani, Rahul Ashvinbhai Makadia, Satheesh Natarajan, Jayaraj Joseph and Ankur Gupta*

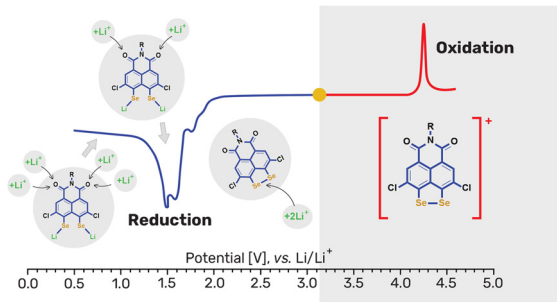
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A fast GGAG:Ce(Mg) single crystal scintillator: LDFZM growth, characterization and electronic band structure calculation

František Zajíc,* Vítězslav Jarý, Jiří Pospíšil, Pavel Boháček, Zafari Umar, Michal Piasecki, Mikhail G. Brik, Romana Kučerková, Alena Beitlerová and Martin Nikl*

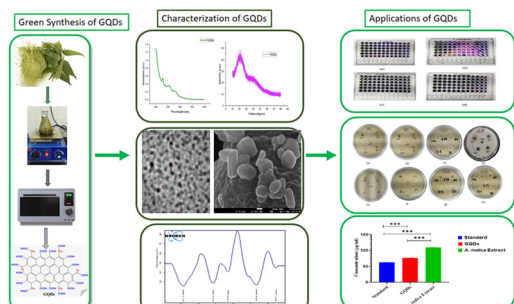
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peri-Diselenolo-substituted 1,8-naphthalimide derivatives as bipolar matrices for redox reactions in a non-aqueous electrolyte

Delyana Marinova,* Lyuben Borislavov, Silva Stanchovska, Rositsa Kukeva, Monika MUTOVSKA, Natali Simeonova, Stanimir Stoyanov, Yulian Zagranjarski,* Mihail Mondeshki, Yanislav Danchovski, Hristo Rashev, Alia Tadjer and Radostina Stoyanova

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Microwave-assisted green synthesis of fluorescent graphene quantum dots (GQDs) using *Azadirachta indica* leaves: enhanced synergistic action of antioxidant and antimicrobial effects and unveiling computational insights

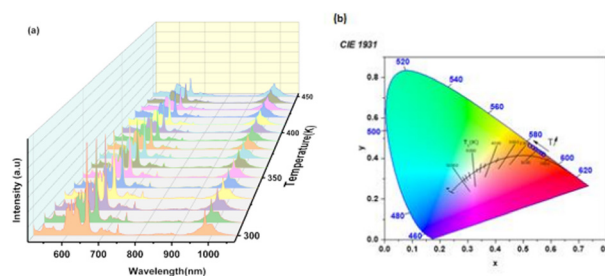
Pooja Kadyan, Manish Kumar, Aisha Tufail, Andrea Ragusa,* Sudhir Kumar Kataria* and Amit Dubey*



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Ultra-high-sensitive temperature sensing based on emission Pr^{3+} and Yb^{3+} codoped $\text{Y}_2\text{Mo}_3\text{O}_{12}$ nanostructures

Nozha Ben Amar, Kamel Saidi,*
Christian Hernández-Álvarez,
Mohamed Dammak* and
Inocencio R. Martín



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Smart early diagnosis of acute myocardial infarction: a ZIF-based nanofluorescence lateral flow immunoassay for point-of-care detection of cTnI

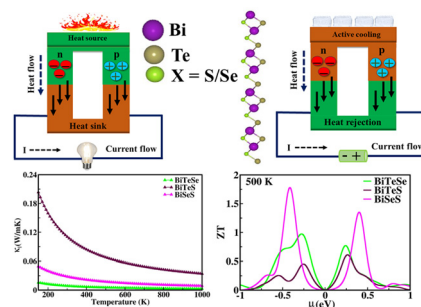
Zahra Mirzaeizadeh, Emadoddin Amin Sadrabadi,
Neda Naseri, Hamed Golmohammadi* and
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Thermoelectric performance of Bi-based novel Janus monolayer structures

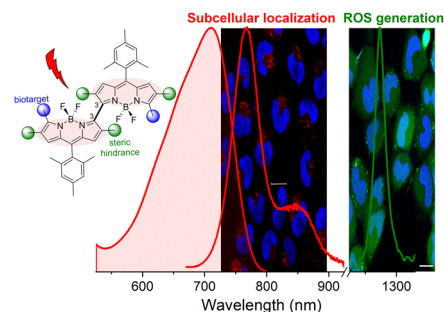
KM Sujata, Nidhi Verma, Rekha Garg Solanki* and
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Heavy-atom-free BODIPY-based photodynamic therapy agents activated at long wavelengths

Jennifer Soler-Beatty, Edurne Avellanal-Zaballa,
Gonzalo Durán-Sampedro, Alba García-Fernández,
Antonia R. Agarrabeitia, Jorge Bañuelos,*
Ramón Martínez Mañez* and María J. Ortiz*



CORRECTION

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Correction: Study of self-assembly of mixed-ligand metal–organic cages by high-resolution mass spectrometry

Kang Tong, Jia Jia,* Rongfu Huang and Jin Luo

