

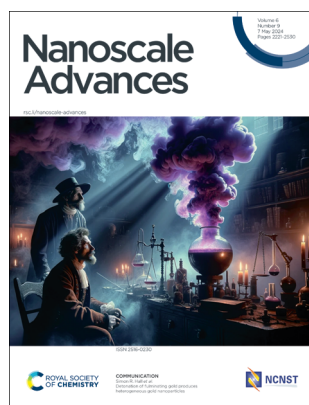
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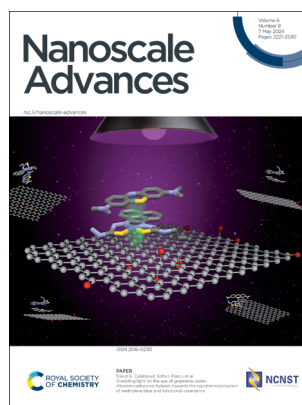
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Cover

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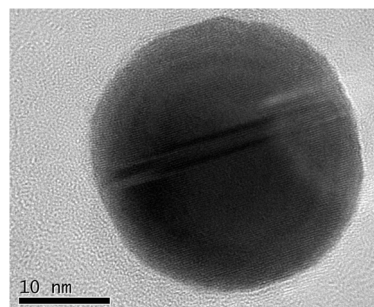
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COMMUNICATION

2231

Detonation of fulminating gold produces heterogeneous gold nanoparticles

Jan Maurycyszko, Stephen J. Eichhorn, Avinash J. Patil and Simon R. Hall*

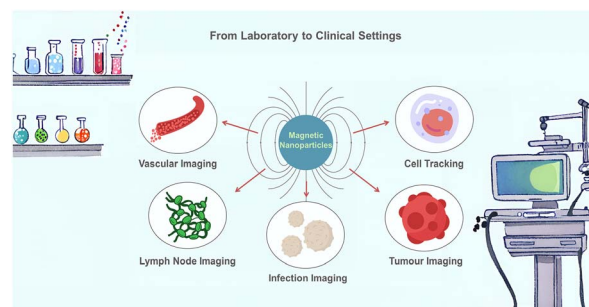


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Advancing MRI with magnetic nanoparticles: a comprehensive review of translational research and clinical trials

Radu Lapusan, Raluca Borlan and Monica Focsan*



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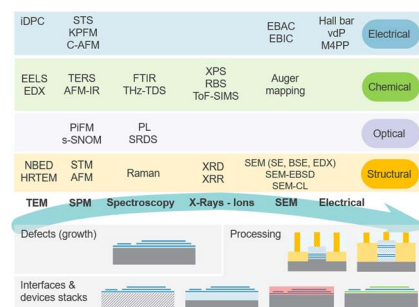
Fundamental questions
Elemental answers

REVIEWS

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Metrology for 2D materials: a perspective review from the international roadmap for devices and systems

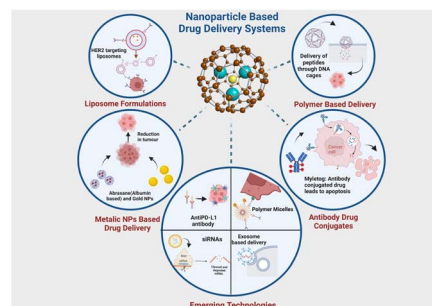
Umberto Celano,* Daniel Schmidt, Carlos Beitia, George Orji, Albert V. Davydov and Yaw Obeng



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Cutting-edge approaches for targeted drug delivery in breast cancer: beyond conventional therapies

Ramesh Chaudhari, Vishva Patel and Ashutosh Kumar*

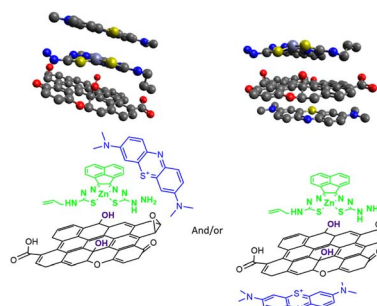


PAPERS

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Shedding light on the use of graphene oxide-thiosemicarbazone hybrids towards the rapid immobilisation of methylene blue and functional coumarins

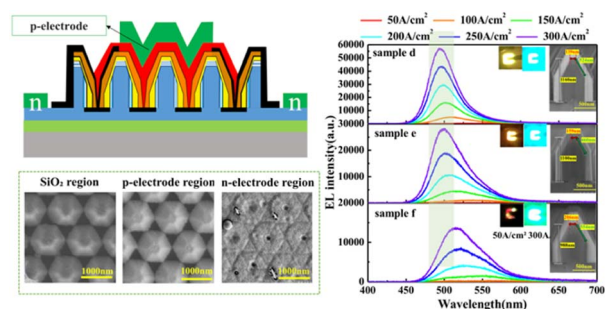
Danielle Bradley, Sophia Sarpaki, Vincenzo Mirabello, Simone Giuseppe Giuffrida, Gabriele I. Kociok-Köhn, David G. Calatayud* and Sofia I. Pascu*



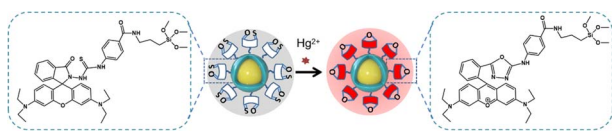
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Investigation of emission plane control in GaInN/GaN multiple-quantum shells for efficient nanowire-based LEDs

Soma Inaba, Weifang Lu,* Ayaka Shima, Shiori Ii, Mizuki Takahashi, Yuki Yamanaka, Yuta Hattori, Kosei Kubota, Kai Huang, Motoaki Iwaya, Tetsuya Takeuchi and Satoshi Kamiyama



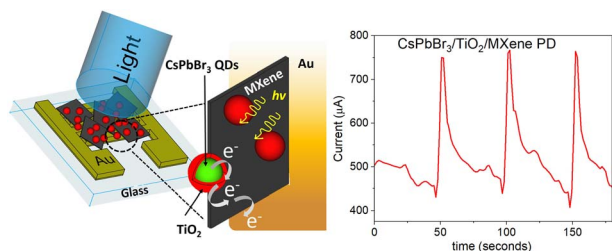
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“Turn-on” and pinhole-free ultrathin core–shell Au@SiO₂ nanoparticle-based metal-enhanced fluorescent (MEF) chemodosimeter for Hg²⁺

Ying Cui, Shanji Fan, Yunran Zhai, Yingjie Liu, Junhua Li, Jiawen Hu* and Lijia Wang*

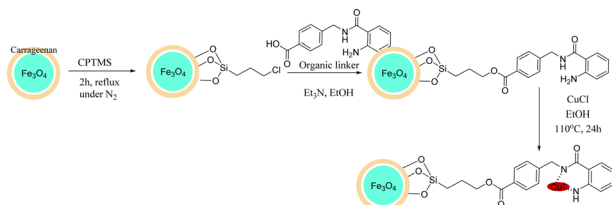
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Stability and photocurrent enhancement of photodetectors by using core/shell structured CsPbBr₃/TiO₂ quantum dots and 2D materials

Chathurika Maduwanthi, Chao-An Jong, Waleed S. Mohammed and Shu-Han Hsu*

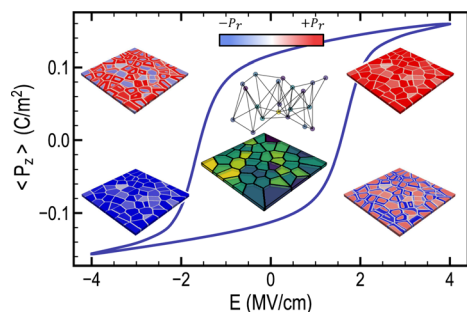
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Copper supported modified magnetic carrageenan as a bio-based catalyst for the synthesis of novel scaffolds bearing the 1,2,3-triazole unit through the click reaction

Nima Khaleghi, Maryam Esmkhani, Milad Noori, Navid Dastyafteh, Minoo Khalili Ghomi, Mohammad Mahdavi, Mohammad Hosein Sayahi* and Shahrzad Javanshir*

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Ultrafast and accurate prediction of polycrystalline hafnium oxide phase-field ferroelectric hysteresis using graph neural networks

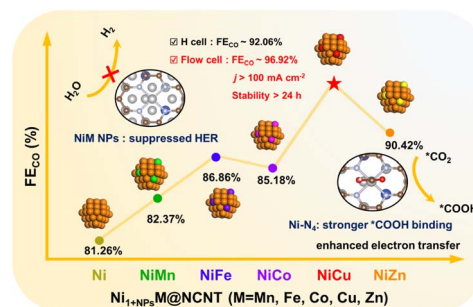
Alhada-Lahbabi Kévin,* Deleruyelle Damien and Gautier Brice



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Revealing the synergistic effect of Ni single atoms and adjacent 3d metal doped Ni nanoparticles in electrocatalytic CO₂ reduction

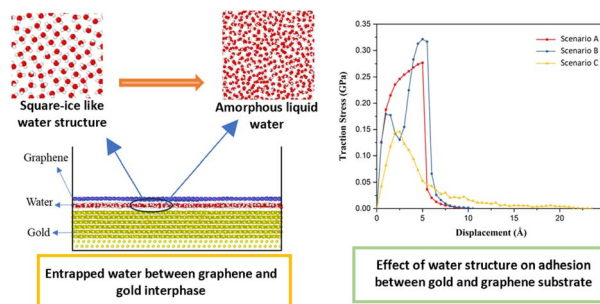
Yingjie Liu, Zhaohui Wu, Sha Bai, Tianyang Shen, Qian Li, Guihao Liu, Xiaoliang Sun, Yihang Hu, Ziheng Song, Jinfeng Chu* and Yu-Fei Song*



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Molecular dynamics simulation-based study to analyse the properties of entrapped water between gold and graphene 2D interfaces

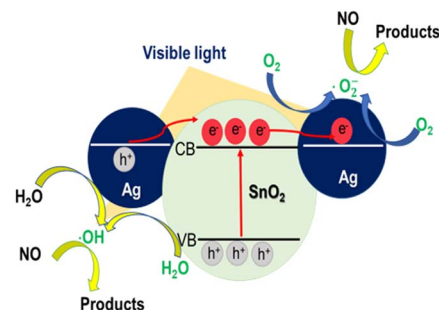
Shashank Mishra,* Fengyuan Liu, Dhayalan Shakthivel, Beena Rai and Vihar Georgiev



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Visible light photocatalytic NO_x removal with suppressed poisonous NO₂ byproduct generation over simply synthesized triangular silver nanoparticles coupled with tin dioxide

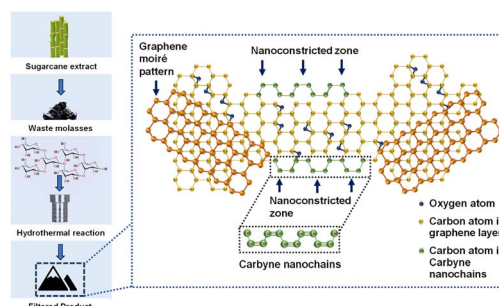
Viet Van Pham,* Thang Quoc Nguyen, Hai Viet Le and Thi Minh Cao



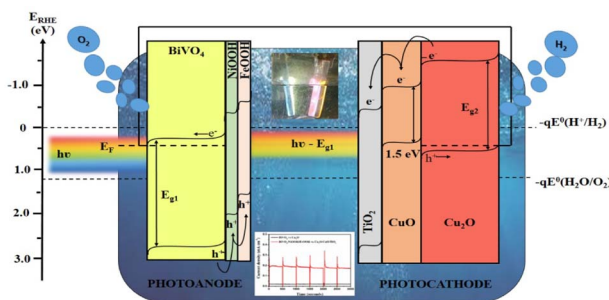
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Unravelling the formation of carbyne nanocrystals from graphene nanoconstrictions through the hydrothermal treatment of agro-industrial waste molasses

Sampathkumar Jeevanandham, Dakshi Kochhar, Omnarayan Agrawal, Siddhartha Pahari, Chirantan Kar, Tamal Goswami, Indra Sulania and Monalisa Mukherjee*



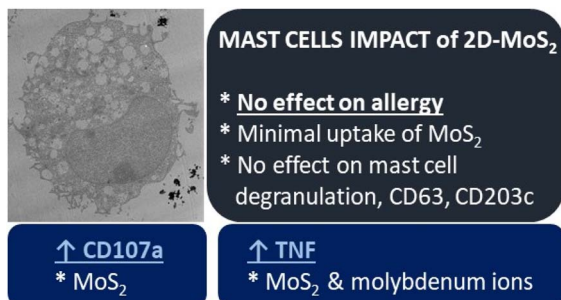
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Photoelectrochemical performance of a nanostructured BiVO₄/NiOOH/FeOOH–Cu₂O/CuO/TiO₂ tandem cell for unassisted solar water splitting

S. R. Sitaaraman, A. Nirmala Grace, Jiefang Zhu and Raja Sellappan*

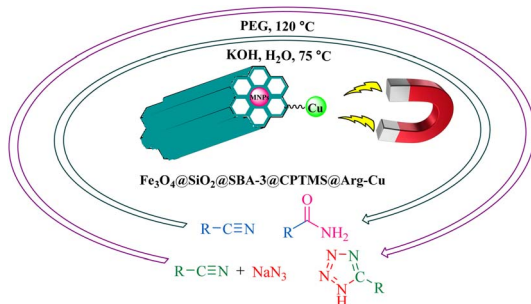
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Cytotoxicity assessment of exfoliated MoS₂ using primary human mast cells and the progenitor cell-derived mast cell line LAD2

Hazel Lin, Antonio Esau del Rio Castillo, Viviana Jehová González, Francesco Bonaccorso, Ester Vázquez, Bengt Fadeel and Alberto Bianco*

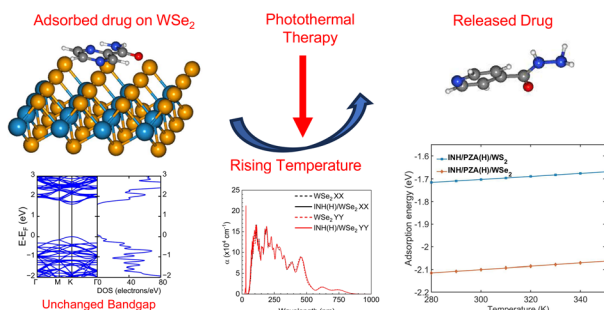
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Fe₃O₄@SiO₂@SBA-3@CPTMS@Arg-Cu: preparation, characterization, and catalytic performance in the conversion of nitriles to amides and the synthesis of 5-substituted 1H-tetrazoles

Zahra Heidarneshad, Arash Ghorbani-Choghmarani* and Zahra Taherinia

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First-principles calculations on monolayer WX₂ (X = S, Se) as an effective drug delivery carrier for anti-tuberculosis drugs

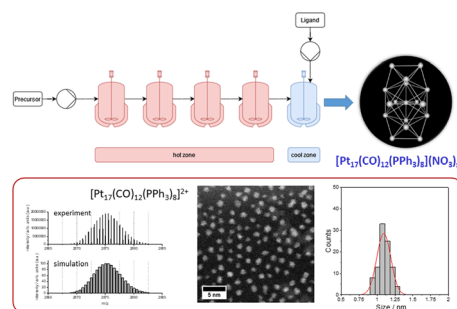
Khaled Mahmud, Taki Yashir and Ahmed Zubair*



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Continuous flow synthesis of atom-precise platinum clusters

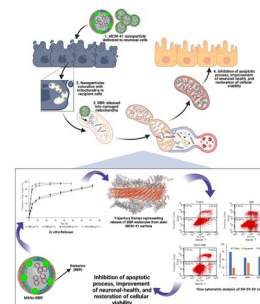
Christian Schmitt, Nicola Da Roit, Marco Neumaier, Carina B. Maliakkal, Di Wang, Thilo Henrich, Christian Kübel, Manfred Kappes and Silke Behrens*



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In vitro profiling and molecular dynamics simulation studies of berberine loaded MCM-41 mesoporous silica nanoparticles to prevent neuronal apoptosis

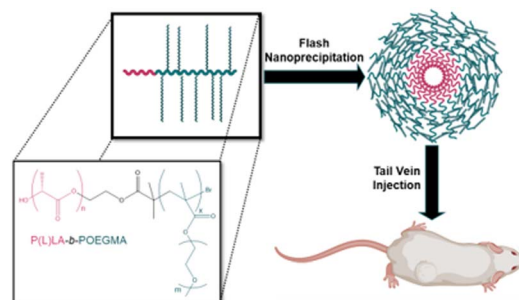
Anurag Kumar Singh, Snigdha Singh, Tarun Minocha, Sanjeev Kumar Yadav, Reema Narayan, Usha Yogendra Nayak, Santosh Kumar Singh* and Rajendra Awasthi*



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The effect of comb length on the in vitro and in vivo properties of self-assembled poly(oligoethylene glycol methacrylate)-based block copolymer nanoparticles

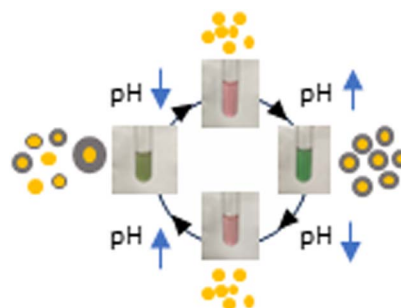
Andrew Singh, Andrew Lofts, Ramya Krishnan, Matthew Campea, Lan Chen, Yonghong Wan and Todd Hoare*



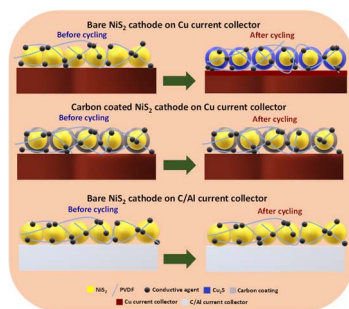
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Gold-copper oxide core-shell plasmonic nanoparticles: the effect of pH on shell stability and mechanistic insights into shell formation

Stephen F. Bartolucci, Asher C. Leff and Joshua A. Maurer



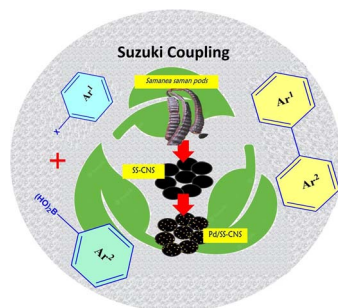
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Overcoming copper-induced conversion reactions in nickel disulphide anodes for sodium-ion batteries

Milan K. Sadan,^{*} Taehong Kim, Anupriya K. Haridas, Hooam Yu, Denis Cumming, Jou-Hyeon Ahn and Hyo-Jun Ahn^{*}

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Sustainable carbonaceous nanomaterial supported palladium as an efficient ligand-free heterogeneous catalyst for Suzuki–Miyaura coupling

Apoorva Shetty, Dhanya Sunil, Thitima Rujiralai, Sanjeev P. Maradur, Abdullah N. Alodhayb and Gurumurthy Hegde^{*}

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Correction: Excitons in metal halide perovskite nanoplatelets: an effective mass description of polaronic, dielectric and quantum confinement effects

Jose L. Movilla, Josep Planelles and Juan I. Climente^{*}

