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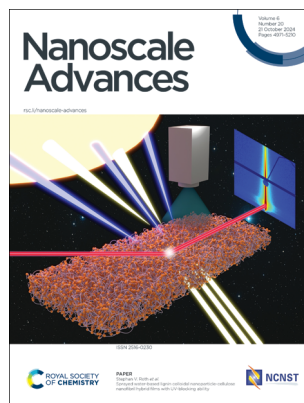
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Cover
See Chisato Takahashi and Keiichi Moriguchi, pp. 5020–5030. Image reproduced by permission of Chisato Takahashi and Keiichi Moriguchi from *Nanoscale Adv.*, 2024, 6, 5020. Image created by Yuka Naraki.



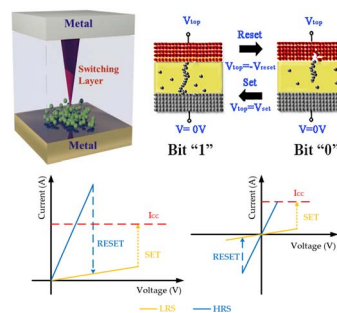
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See Stephan V. Roth *et al.*, pp. 5031–5041. Image reproduced by permission of Shouzheng Chen and Stephan V. Roth from *Nanoscale Adv.*, 2024, 6, 5031.

REVIEWS

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An overview of critical applications of resistive random access memory

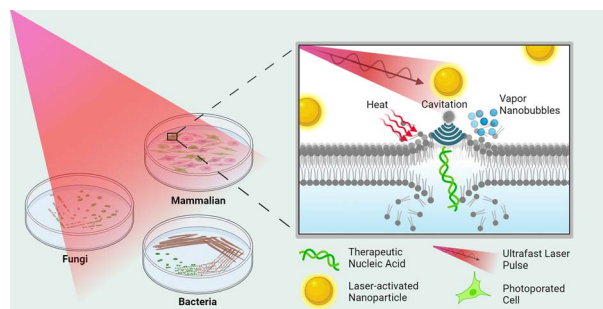
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Nanoparticle-Mediated Photoporation: Expanding Horizons in Drug Delivery

Erin McGraw, Guillaume M. Laurent and L. Adriana Avila*



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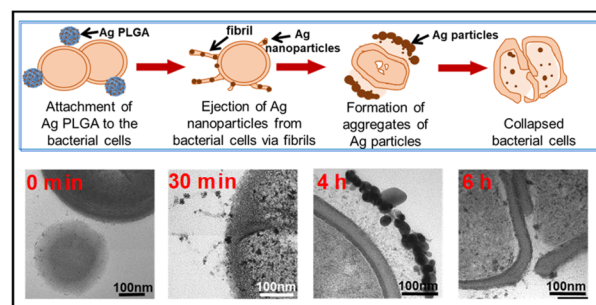
Fundamental questions
Elemental answers



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Effects of silver-decorated PLGA nanoparticles on *Staphylococcus epidermidis* biofilms and evaluation of the detoxification limit of bacteria against these nanoparticles

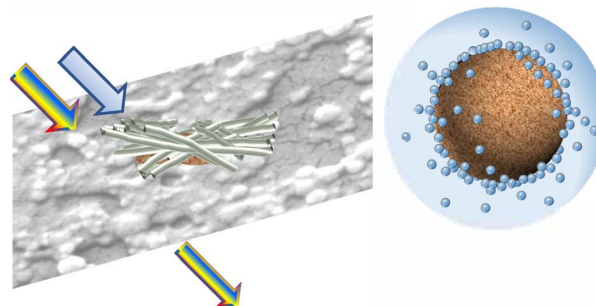
Chisato Takahashi* and Keiichi Moriguchi



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Sprayed water-based lignin colloidal nanoparticle-cellulose nanofibril hybrid films with UV-blocking ability

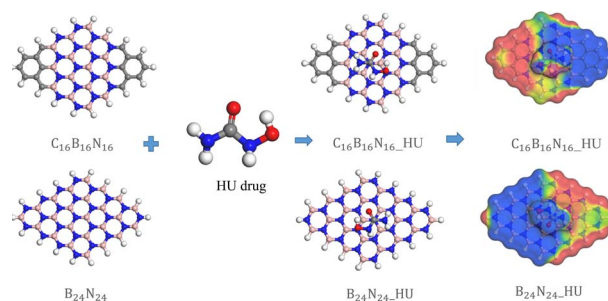
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Assessment of the drug delivery potential of graphene, boron nitride and their in-plane doped structures for hydroxyurea anti-cancer drug via DFT study

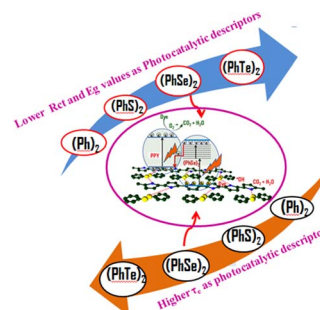
Mehedi Hasan Opi, Tanvir Ahmed, Mithila Roy Swarna, Afiya Akter Piya and Siraj Ud Daula Shamim*



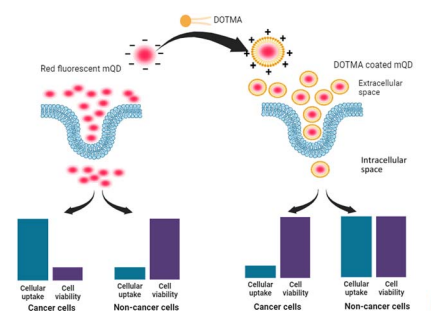
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Design and development of symmetric aromatic bischalcogenide-based photocatalysts for water treatment application: a concise study of diphenyl diselenide polypyrrole nanocatalysis

Tabee Jan, Shabnam Raheem and Masood Ahmad Rizvi*



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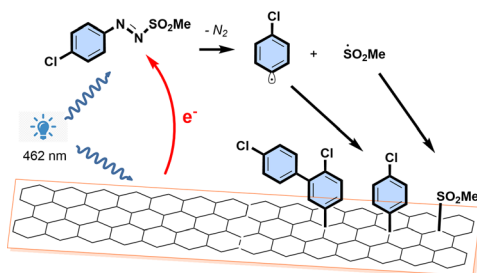


Cellular uptake and viability switching in the properties of lipid coated carbon quantum dots for potential bioimaging and therapeutics

Sweny Jain, Nidhi Sahu, Dhiraj Bhatia* and Pankaj Yadav*

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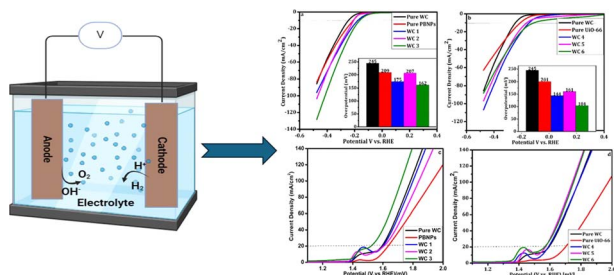
Covalent Functionalization of graphene by blue light



Covalent functionalization by using blue light activated radicals: on the reaction mechanisms of arylazo sulfone binding on graphene

Alessandro Mameli, Alessandro Kovtun,* Derek Jones, Vasiliki Benekou, Vincenzo Palermo, Marco Bandini and Manuela Melucci

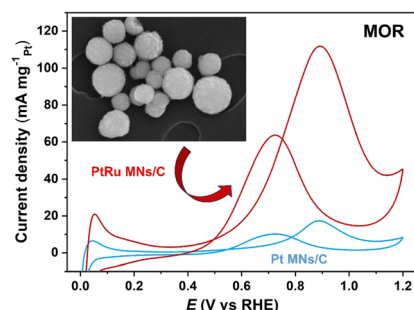
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Electrocatalytic activity of tungsten carbide hybrids with two different MOFs for water splitting: a comparative analysis

Umair Sohail, Erum Pervaiz,* Rafiq Khosa and Maryum Ali

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PtRu mesoporous nanospheres as electrocatalysts with enhanced performance for oxidation of methanol

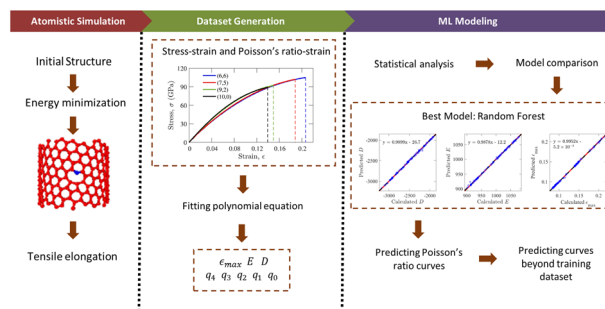
Jiangbin Guo, Qiyu Yan, Man Zhang, Jun Fang, Shuiyuan Luo and Jing Xu*



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Predicting the mechanical properties of pristine and defective carbon nanotubes using a random forest model

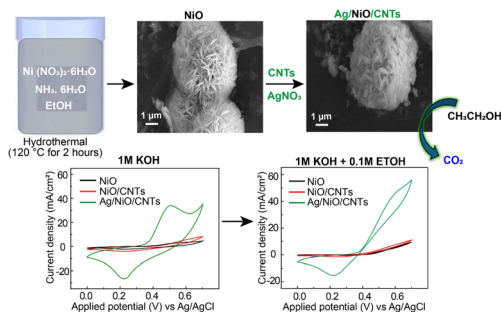
Ihtesham Ibn Malek, Koushik Sarkar and Ahmed Zubair*



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Silver decorated nickel oxide nanoflake/carbon nanotube nanocomposite as an efficient electrocatalyst for ethanol oxidation

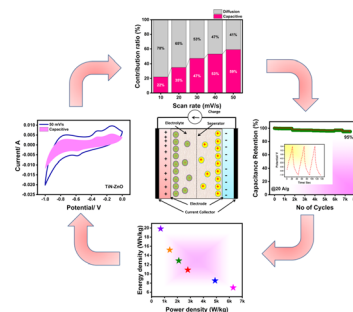
Nada Gamal ElSayed, Ahmed A. Farghali, Waleed M. A. El Rouby and Mai F. M. Hmamm*



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Facile synthesis and electrochemical analysis of TiN-based ZnO nanoparticles as promising cathode materials for asymmetric supercapacitors

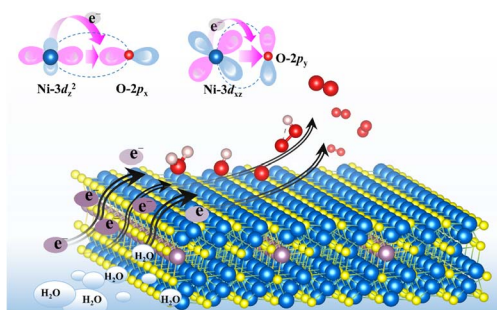
Junaid Riaz, Jianchun Cao,* Yongguo Zhang, Amina Bibi* and Xiaolong Zhou*



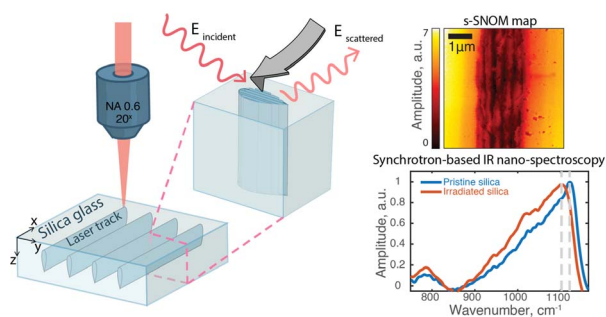
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TM-doping modulated p-d orbital coupling to enhance the oxygen evolution performance of Ni₃S₂

Qiuhong Li, Minghao Zhang, Rui Wang, Jing Pan* and Huailiang Fu*



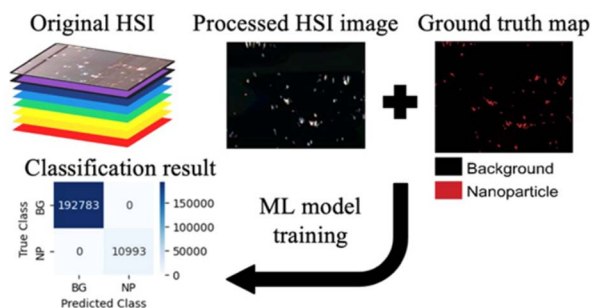
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Nano-FTIR spectroscopy reveals SiO₂ densification within fs-laser induced nanogratings

Nadezhda Shchedrina,^{*} Gergely Nemeth, Ferenc Borondics, Nadege Ollier and Matthieu Lancry

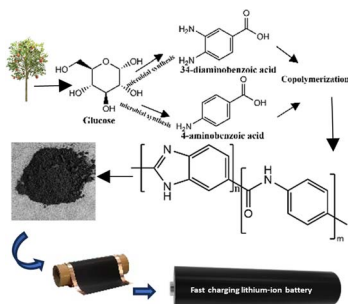
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Hyperspectral enhanced imaging analysis of nanoparticles using machine learning methods

Kaeul Lim and Arezoo Ardekani^{*}

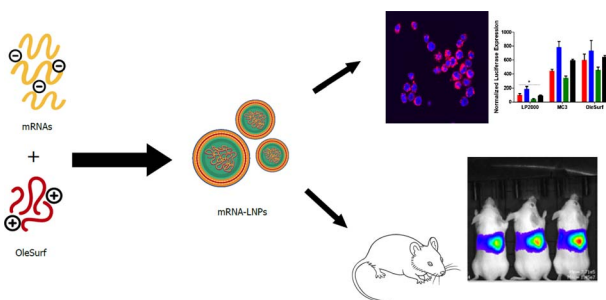
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Bio-based poly(benzimidazole-co-amide)-derived N, O co-doped carbons as fast-charging anodes for lithium-ion batteries

Kottisa Sumala Patnaik, Bharat Srimitra Mantripragada, Rajashekar Badam, Koichi Higashimine, Xianzhu Zhong, Tatsuo Kaneko and Noriyoshi Matsumi^{*}

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Synthesis and bioactivity of a novel surfactin-based lipopeptide for mRNA delivery

Mohammed S. Alqahtani,^{*} Rabbani Syed, Ali S. Alqahtani, Omer M. Almarfadi, Monzurul A. Roni and Satya S. Sadhu



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Expression of concern: Decoration of graphene oxide nanosheets with carboxymethylcellulose hydrogel, silk fibroin and magnetic nanoparticles for biomedical and hyperthermia applications

Mostafa Ghafori Gorab, Hooman Aghamirza Moghim Aliabadi, Amir Kashtiaray, Mohammad Mahdavi, Milad Salimi Bani, Andisheh Etminan, Nabi Salehpour, Reza Eivazzadeh-Keihan* and Ali Maleki*

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