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IN THIS ISSUE

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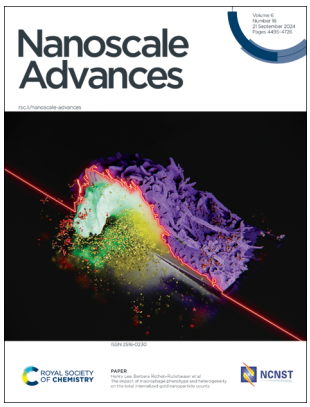


Cover
See Henry Lee, Barbara Rothen-Rutishauser *et al.*, pp. 4572–4582. Image reproduced by permission of Barbara Rothen-Rutishauser from *Nanoscale Adv.*, 2024, **6**, 4572.

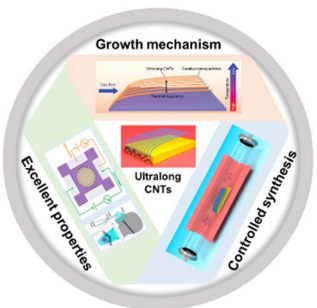
Inside cover
See Hideyuki Mitomo *et al.*, pp. 4583–4590. Image reproduced by permission of Hideyuki Mitomo from *Nanoscale Adv.*, 2024, **6**, 4583.

REVIEWS

4504

Controlled synthesis, properties, and applications of ultralong carbon nanotubes

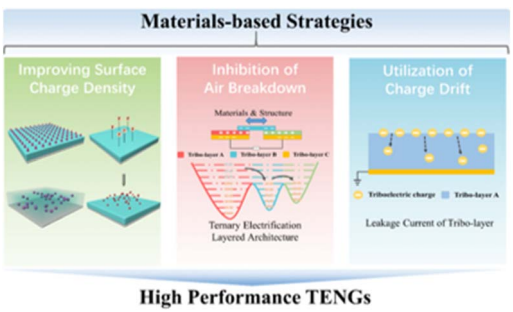
Kangkang Wang, Fei Wang, Qinyuan Jiang, Ping Zhu, Khaixien Leu and Rufan Zhang*



4522

A review of material design for high performance triboelectric nanogenerators: performance improvement based on charge generation and charge loss

Xiaochuan Li, Qianxi Yang, Dahu Ren, Qianying Li, Huake Yang, Xuemei Zhang and Yi Xi*



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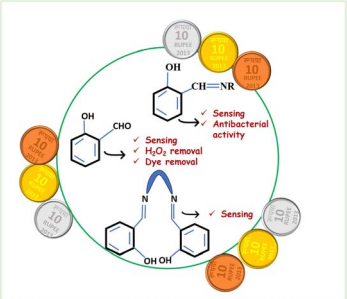
REVIEWS

4545

Recent applications of coinage metal nanoparticles passivated with salicylaldehyde and salicylaldehyde-based Schiff bases

Mamta Sahu, Mainak Ganguly* and Priyanka Sharma

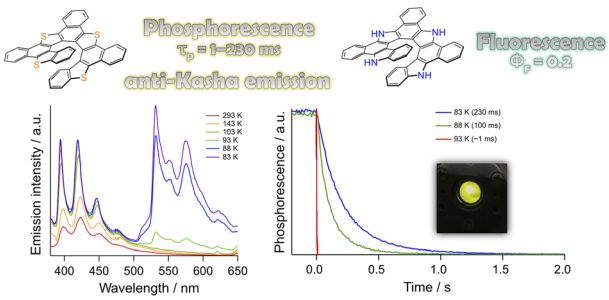


COMMUNICATION

4567

Impacts of heteroatom substitution on the excited state dynamics of π-extended helicenes

Yuto Kondo, Yusuke Tsutsui,* Yusuke Matsuo, Takayuki Tanaka* and Shu Seki*



PAPERS

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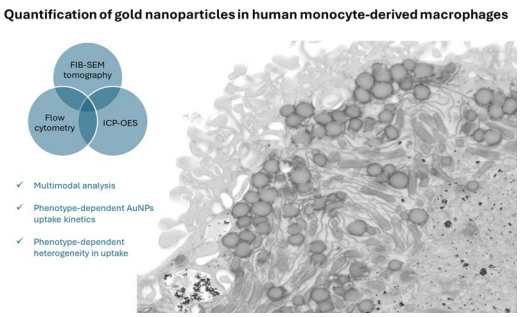
The impact of macrophage phenotype and heterogeneity on the total internalized gold nanoparticle counts

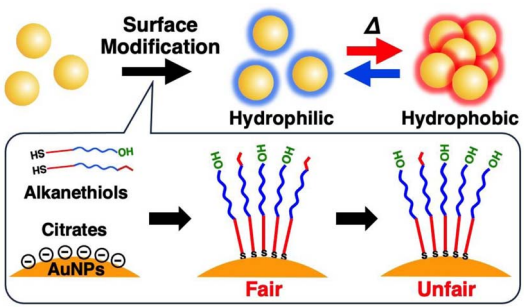
Henry Lee, Dimitri Vanhecke, Sandor Balog, Patricia Taladriz-Blanco, Alke Petri-Fink and Barbara Rothen-Rutishauser*



4583

Fair surface modification with mixed alkanethiols on gold nanoparticles through minimal unfair ligand exchange

Kun Xiong, Masaharu Nagayama, Kuniharu Ijiro and Hideyuki Mitomo*



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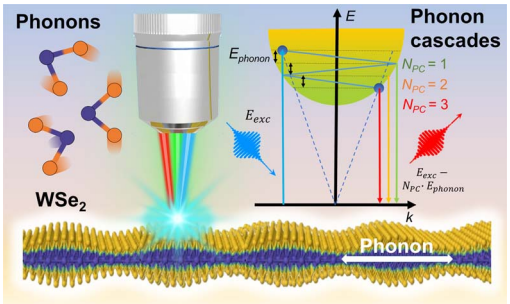

Unveiling the complex phonon nature and phonon cascades in 1L to 5L WSe_2 using multiwavelength excitation Raman scattering

Claire Blaga, Ángel Labordet Álvarez, Akshay Balgarkashi, Mitali Banerjee, Anna Fontcuberta i Morral and Mirjana Dimitrievska*

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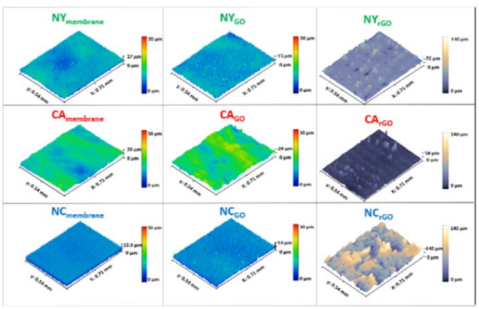

The impact of different flexible substrates on the photothermal reduction quality of graphene oxide

Matheus Guitti Bonando, Gabriel Monte Mór Moreira, Nathália Maria Moraes Fernandes, David Steinberg, Alisson Ronieri Cadore, Cecília de Carvalho Castro Silva and Lúcia Akemi Miyazato Saito*

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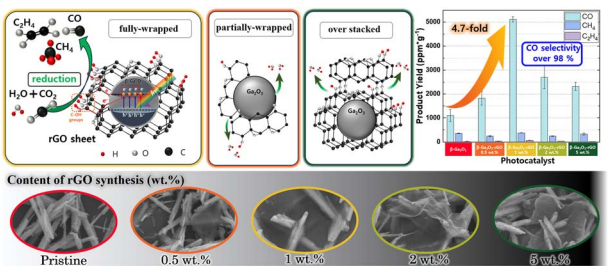

Synergistic augmentation and fundamental mechanistic exploration of β-Ga_2O_3-rGO photocatalyst for efficient CO_2 reduction

Hye-In Jung, Hangyeol Choi, Yu-Jin Song, Jung Han Kim and Yohan Yoon*

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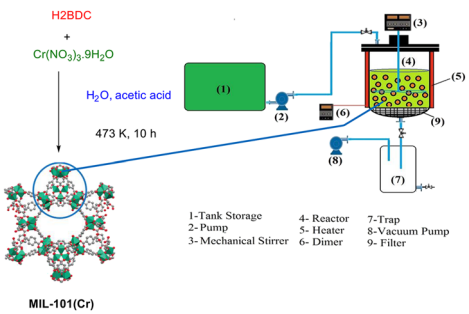

Application of MIL-101(Cr) for biofuel dehydration and process optimization using the central composite design method

Parya Parak, Ahmad Nikseresht,* Masoud Mohammadi and Mohammad Saeid Emaminia

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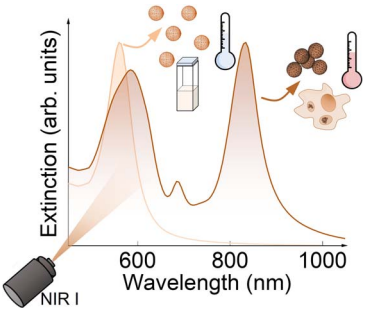
Finite element modeling of plasmonic resonances in photothermal gold nanoparticles embedded in cells

Marina París Ogáyar, Rosalía López-Méndez, Ignacio Figueruelo-Campanero, Tamara Muñoz-Ortiz, Claire Wilhelm, Daniel Jaque, Ana Espinosa* and Aida Serrano*



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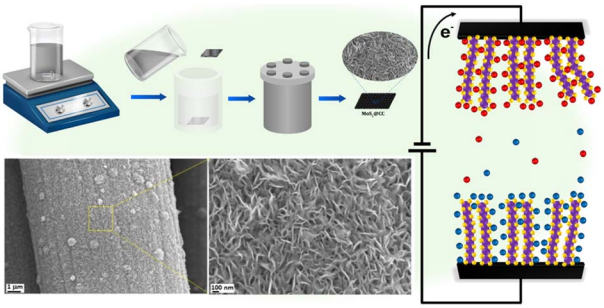
Optimization and scalability assessment of supercapacitor electrodes based on hydrothermally grown MoS_2 on carbon cloth

Jasna Mannayil,* Olli Pitkänen,* Minna Mannerkorpi and Krisztian Kordas



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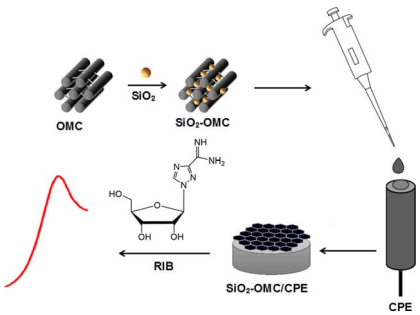
An ordered mesoporous carbon–silica hybrid for the detection of the antiviral drug ribavirin in clinical samples

Amir Hosein Ali Naghian, Zahra Hashemi, Fereshteh Chekin* and Na'il Saleh*



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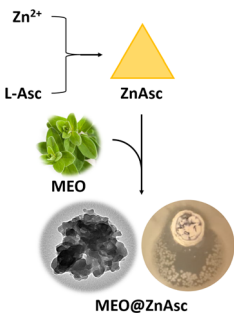
Synergistic antioxidant and antibacterial effects of a Zn-ascorbate metal–organic framework loaded with marjoram essential oil

Rana R. Haikal, Noha El Salakawy, Alaa Ibrahim, Shaimaa L. Ali and Wael Mamdouh*



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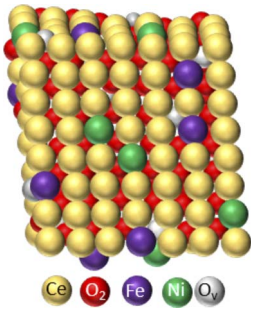

Impact of morphology and oxygen vacancy content in Ni, Fe co-doped ceria for efficient electrocatalyst based water splitting

Abhaya Kumar Mishra, Joshua Willoughby, Shanna L. Estes, Keliann Cleary Kohler and Kyle S. Brinkman*

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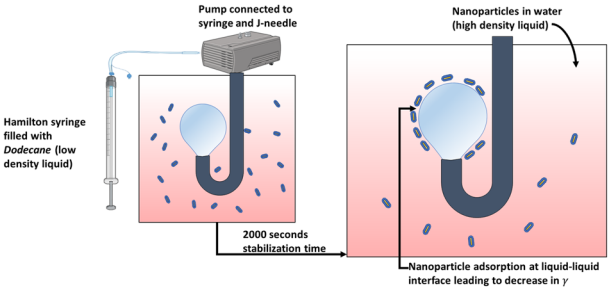
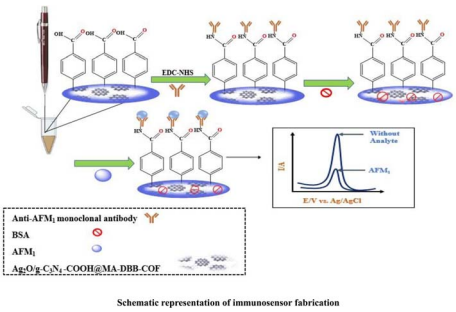


Shape anisotropy induced jamming of nanoparticles at liquid interfaces: a tensiometric study

Chandan Kumar, Suman Bhattacharjee and Sunita Srivastava*

4693



A field-portable electrochemical immunosensor based on a multifunctional Ag_2O/g-C_3N_4@MA-DBB covalent organic framework receptor interface for single-step detection of aflatoxin M_1 in raw milk samples

Iram Naz, Akhtar Hayat,* Farhat Jubeen,* Sadia Asim and Abida Kausar

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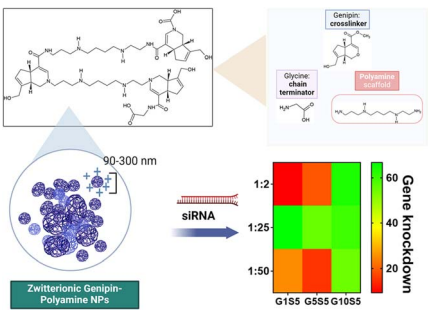

Efficient siRNA delivery to murine melanoma cells *via* a novel genipin-based nano-polymer

Giulia Della Pelle,* Tim Bozic, Marija Vukomanović, Gregor Sersa, Bostjan Markelc and Nina Kostevšek

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CORRECTION

4724

Correction: Shape anisotropy induced jamming of nanoparticles at liquid interfaces: a tensiometric study

Chandan Kumar, Suman Bhattacharjee and Sunita Srivastava*

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