

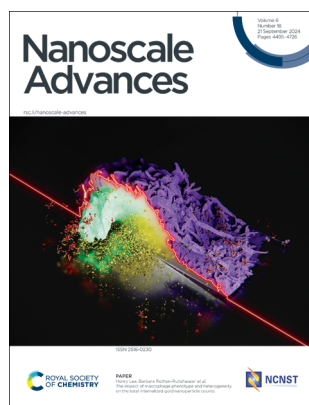
Nanoscale Advances

An open access journal publishing across the breadth of nanoscience and nanotechnology
rsc.li/nanoscale-advances

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 2516-0230 CODEN NAADAI 6(18) 4495–4726 (2024)



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.



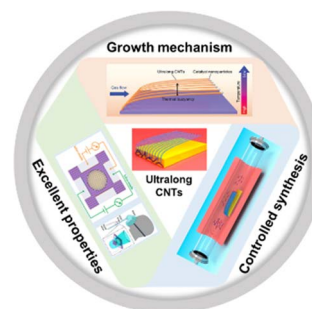
Inside cover
See Hideyuki Mitomo *et al.*, pp. 4583–4590. Image reproduced by permission of Hideyuki Mitomo from *Nanoscale Adv.*, 2024, 6, 4583.

REVIEWS

4504

Controlled synthesis, properties, and applications of ultralong carbon nanotubes

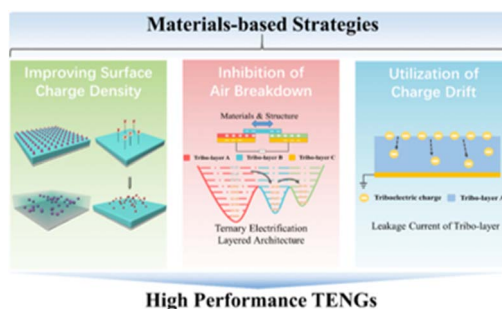
Kangkang Wang, Fei Wang, Qinyuan Jiang, Ping Zhu, Khaixien Leu and Rufan Zhang*



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*



**GOLD
OPEN
ACCESS**

EES Batteries

**Exceptional research on
batteries and energy storage**

Part of the EES family

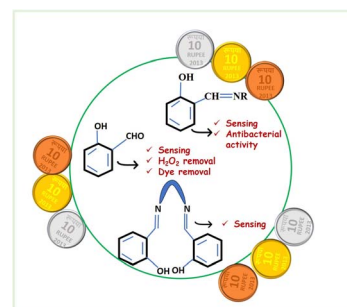
**Join
in** | Publish with us
rsc.li/EESBatteries

REVIEWS

4545

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

Mamta Sahu, Mainak Ganguly* and Priyanka Sharma

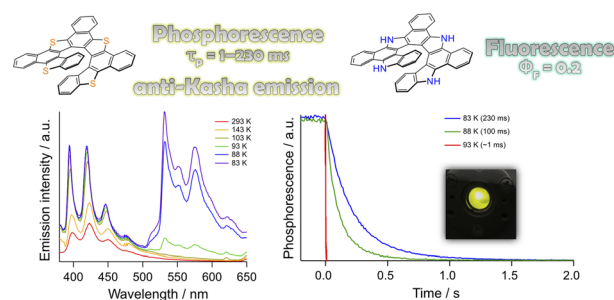


COMMUNICATION

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*



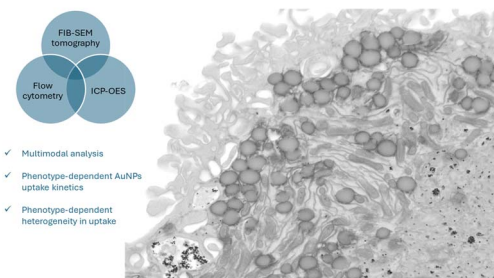
PAPERS

4572

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*

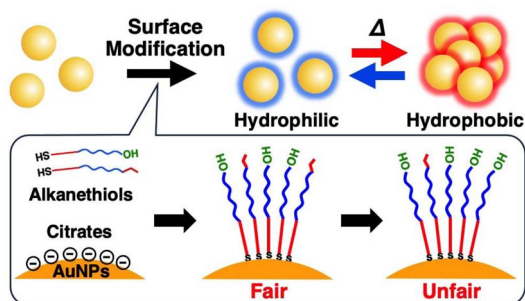
Quantification of gold nanoparticles in human monocyte-derived macrophages



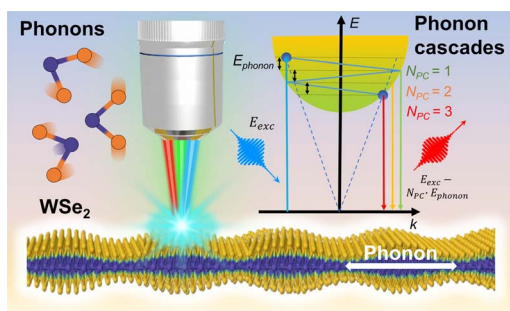
4583

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

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



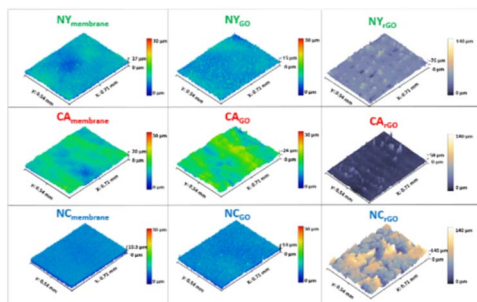
4591



Unveiling the complex phonon nature and phonon cascades in 1L to 5L WSe₂ using multiwavelength excitation Raman scattering

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

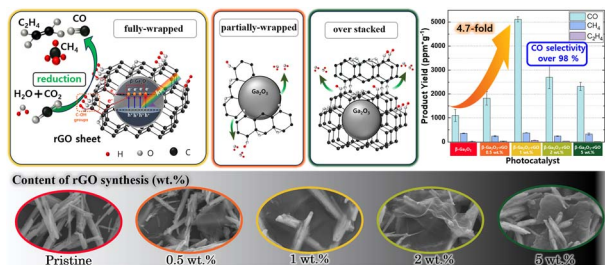
4604



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*

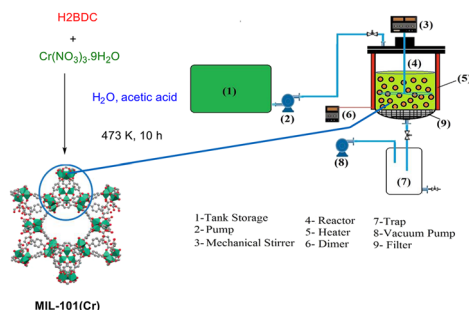
4611



Synergistic augmentation and fundamental mechanistic exploration of β -Ga₂O₃-rGO photocatalyst for efficient CO₂ reduction

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

4625



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

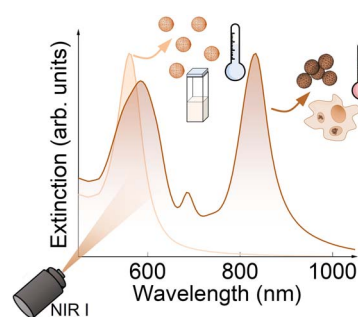
Parya Parak, Ahmad Nikseresht,* Masoud Mohammadi and Mohammad Saeid Emaminia



4635

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

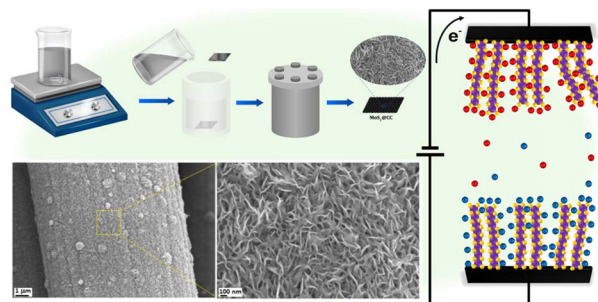
Marina París Ogáyar, Rosalía López-Méndez, Ignacio Figueruelo-Campanero, Tamara Muñoz-Ortiz, Claire Wilhelm, Daniel Jaque, Ana Espinosa* and Aida Serrano*



4647

Optimization and scalability assessment of supercapacitor electrodes based on hydrothermally grown MoS₂ on carbon cloth

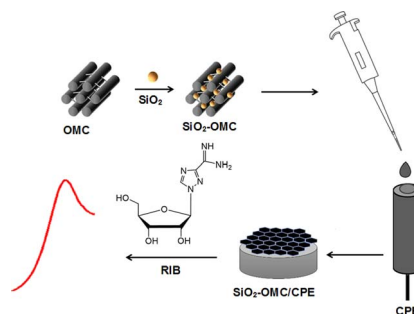
Jasna Mannayil,* Olli Pitkänen,* Minna Mannerkorpi and Krisztian Kordas



4657

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

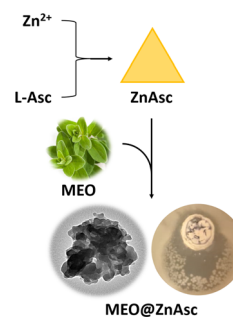
Amir Hosein Ali Naghian, Zahra Hashemi, Fereshteh Chekin* and Na'il Saleh*



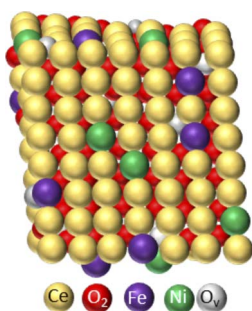
4664

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*



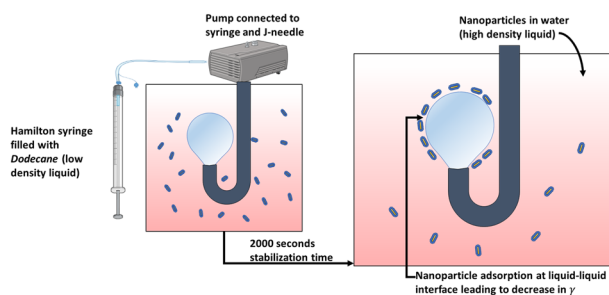
4672



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*

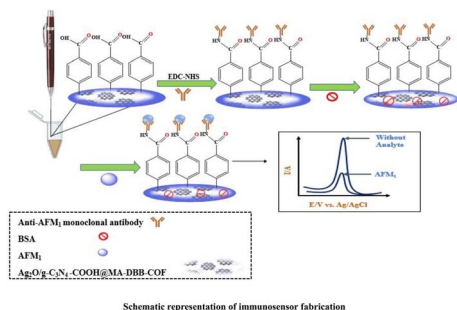
4683



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

Chandan Kumar, Suman Bhattacharjee and Sunita Srivastava*

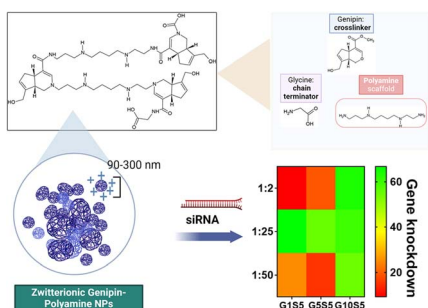
4693



A field-portable electrochemical immunosensor based on a multifunctional $\text{Ag}_2\text{O}/\text{g-C}_3\text{N}_4/\text{MA-DBB}$ 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

4704



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



CORRECTION

4724

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

Chandan Kumar, Suman Bhattacharjee and Sunita Srivastava*

