

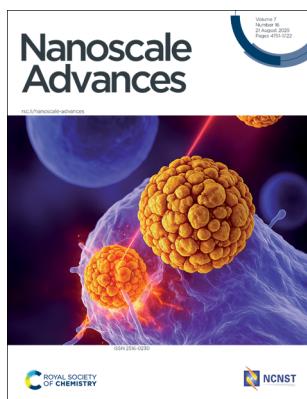
# Nanoscale Advances

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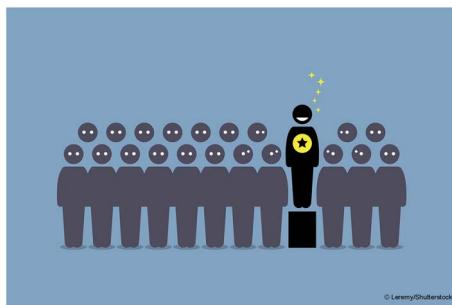
### Cover

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## EDITORIAL

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Outstanding Reviewers for *Nanoscale Advances* in 2024



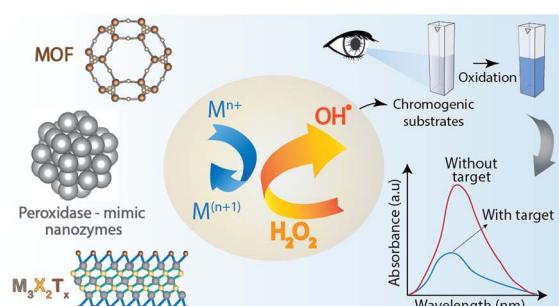
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**Nano-enhanced Fenton/Fenton-like chemistry: integrating peroxidase nanozymes, MOFs, and MXenes for next-generation colorimetric biosensors**

Hanh An Nguyen, Nguyen Tran Truc Phuong, Nguyen Bao Tran, Thi Ngoc Diep Trinh, Ngoc Xuan Dat Mai, Ngoc Quang Tran, Nhu Hoa Thi Tran\* and Kieu The Loan Trinh\*



# EES Solar

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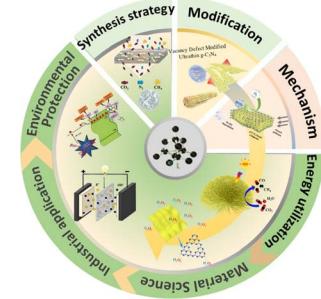
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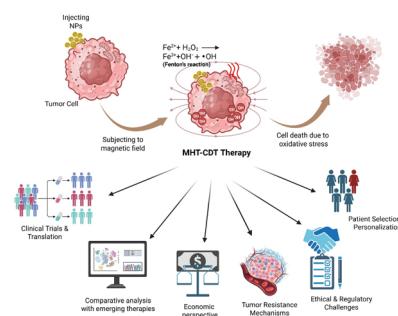
Neha Yadav, Qianqian Zhang, Dongfeng Qi, Ashish Yadav\* and Hongyu Zheng\*



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**The evolution of integrated magnetic hyperthermia and chemodynamic therapy for combating cancer: a comprehensive viewpoint**

Anjali Chauhan, Anamika Saini and Deepika Sharma\*

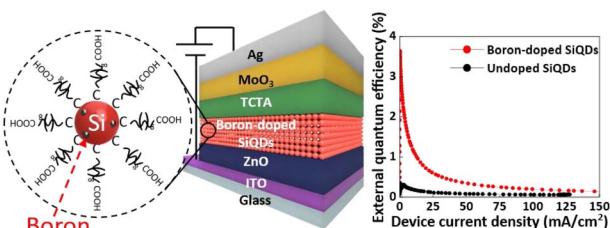


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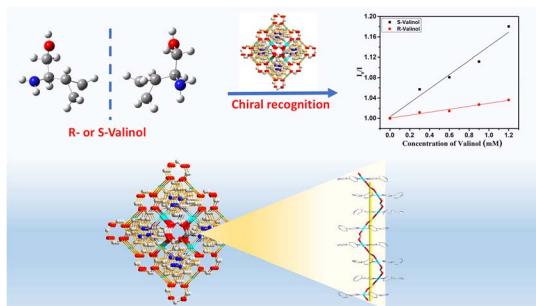
**Rational impurity doping for enhanced hole mobility in silicon quantum dots for light-emitting diodes**

Hiroyuki Yamada,\* Tadaaki Nagao and Naoto Shirahata\*



## COMMUNICATIONS

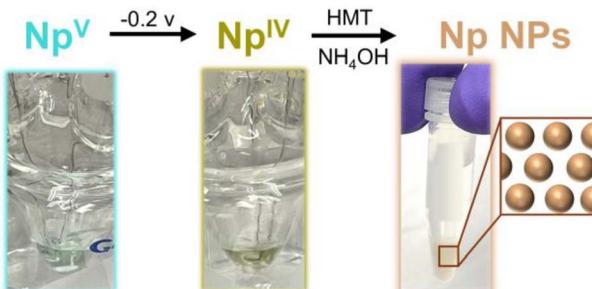
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**A metal–organic framework with chiral nanochannels for enantioselective fluorescence switching of amino alcohols**

Ritu Ladhi, Arshminder Kaur Dhillon and Monika Singh\*

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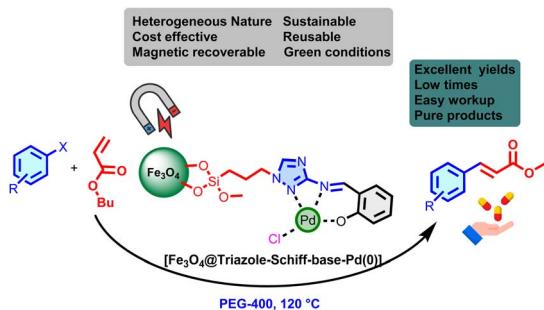


**Synthetic engineering of neptunium oxide nanoparticles**

Ashley M. Hastings,\* Nic Cicchetti, Joseph R. Boro, Tashi Parsons-Davis and Jennifer A. Shusterman

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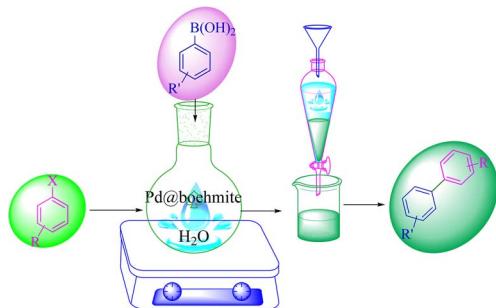
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**A nanomagnetic triazole-based Schiff-base complex of palladium(0) as an efficient heterogeneous catalyst for the Mizoroki–Heck C–C cross-coupling reaction under green conditions**

Yassin T. H. Mehdar,\* Fatimah Mohammed Alshamsan, Asma Ahmad Nashawi, Hussein Eledum, Ahmed Mohajja Alshammari and Jawza A. Almutairi

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**A new palladium complex Schiff-base on functionalized nanoboehmite as a reusable and practical catalyst for selective Suzuki C–C bond formation**

Samaneh Heydarian,\* Bahman Tahmasbi and Mitra Darabi

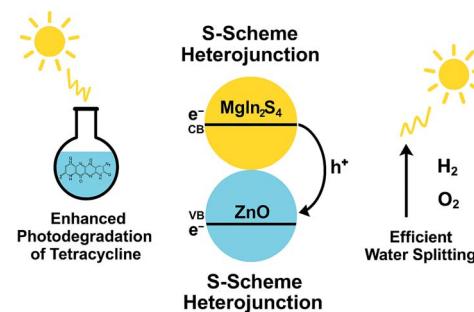


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**Interfacial S-scheme charge transfer in  $\text{MgIn}_2\text{S}_4/\text{ZnO}$  heterojunction for enhanced photodegradation of tetracycline and efficient water splitting**

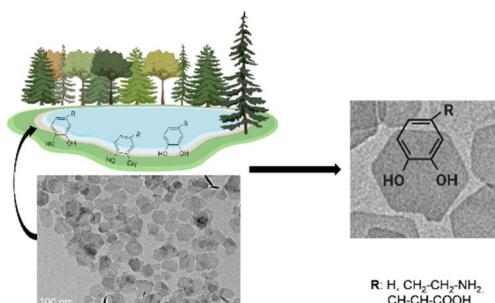
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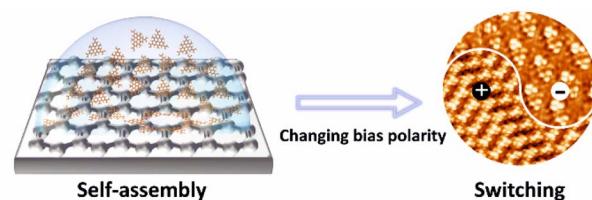
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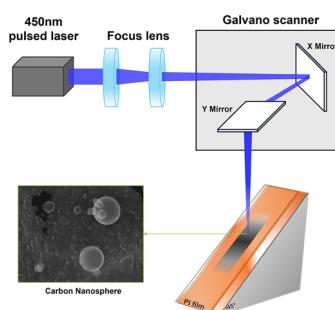
Baoxin Jia, Mihaela Enache, Bettina D. Gliemann, Angelina Jocic, Milan Kivala\* and Meike Stöhr\*



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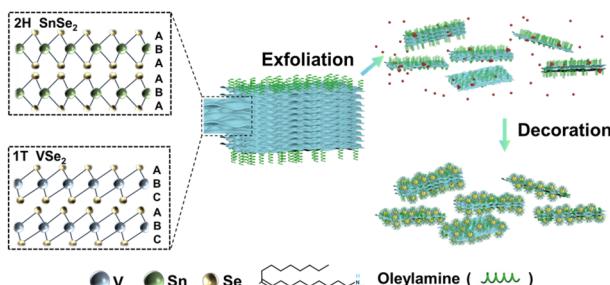
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Cheol Hwan Kim, Chae Yoon Shin, Jun Uk Lee, Sung-Yeob Jeong\* and Bo Sung Shin\*



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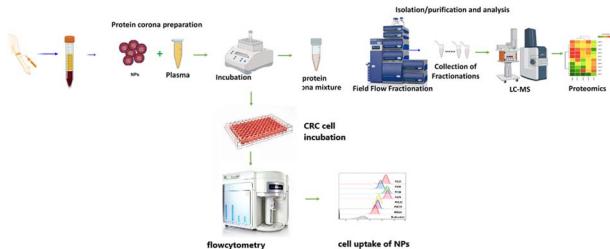
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### Synthesis, redox exfoliation, and magnetic nanoparticle decoration of VSe<sub>2</sub> and SnSe<sub>2</sub> nanosheets

Zhengxi Xuan, Zheng Fu, B. Medini Rajapakse, Ali Jawaid, Shuo Liu, Richard A. Vaia,\* Luis Velarde,\* Paras N. Prasad\* and Mark T. Swihart\*

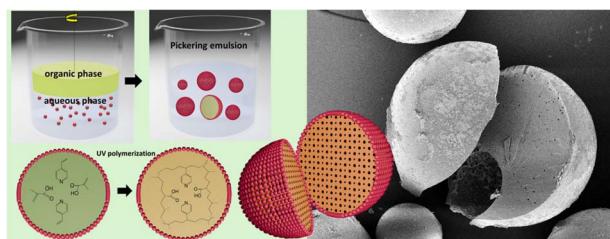
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### Optimizing surface properties and particle morphology for metal ion adsorption: precise tuning via Pickering emulsion polymerization

Andrei Honciuc,\* Oana-Iuliana Negru and Mirela Honciuc

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### Highly efficient removal of dibutyl phthalate from wastewater using a novel hydrophilic–lipophilic magnetic adsorbent based on silica-coated iron oxide nanoparticles

Sarah Alharthi, Tahira Bibi, Eman Y. Santali and Ashraf Ali\*

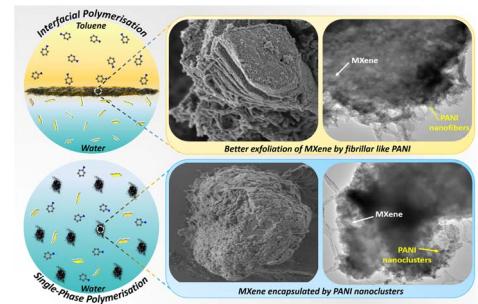


## PAPERS

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**Liquid/liquid interface assisted *in situ* polymerisation of aniline on  $Ti_3C_2T_x$  MXene for electrochemical detection of dopamine**

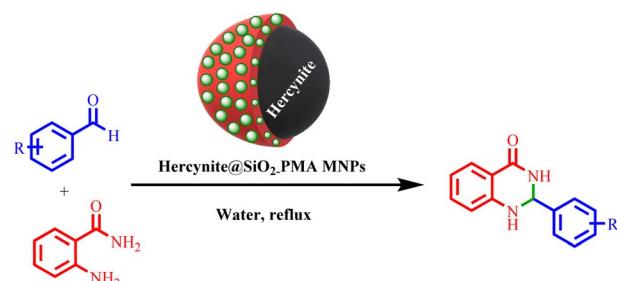
Anjali Sugunan, Aiswarya Anil Syamala, Athul Beena Radhakrishnan and Mini Mol Menampampambath\*



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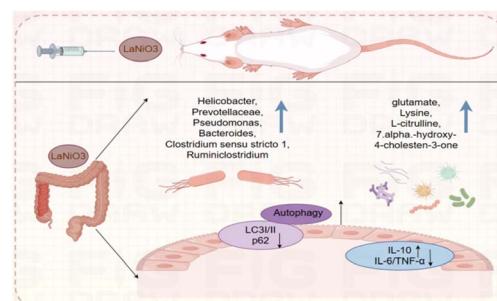
Kowsar Azizi, Saba Ghasemi\* and Ahmad Nikseresht\*



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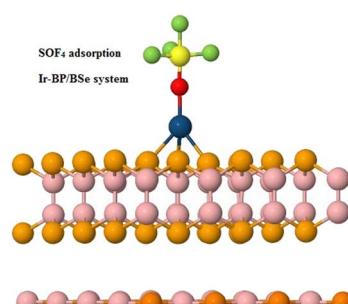
Xiaoying Lin,\* Yanfei Zhang, Qingxuan Liu, Di Wu, Lili Zuo, Yuanbao Zhang, Nianqiu Shi\* and Rui Chen\*



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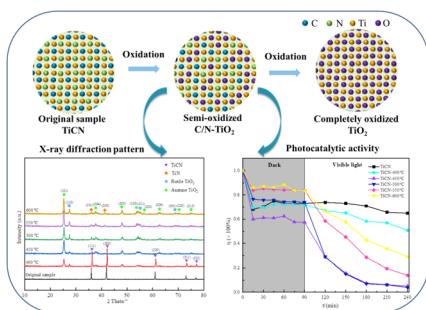
**Iridium (Ir) and osmium (Os) modified BP/BSe heterostructures as promising nanoscale molecule sensors for detection of  $H_2S$ ,  $SO_2F_2$  and  $SOF_4$  gases: a DFT outlook**

Amirali Abbasi\*



## PAPERS

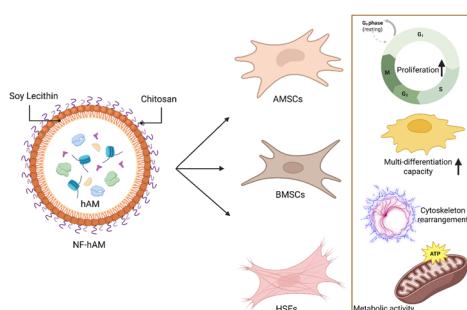
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### Oxidation behavior of TiC and TiCN and their potential photocatalytic activity in a semi-oxidized state

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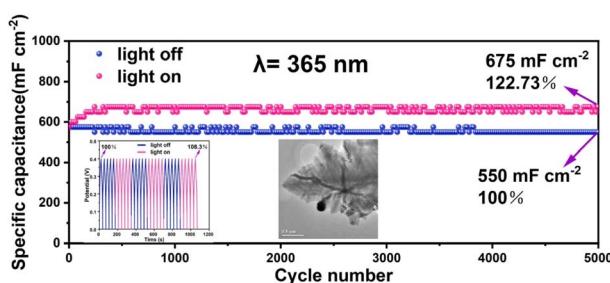
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### Amniotic membrane-encapsulated chitosan–lecithin nanoparticles promote the regenerative potential of mesenchymal stromal cells and fibroblasts

Ahmed M. Abou-Shanab, Mostafa Fytory, Shaimaa Shouman, Dina Atta, Asmaa Khairy, Radwa Ayman Salah, Ormaima Idris and Nagwa El-Badri\*

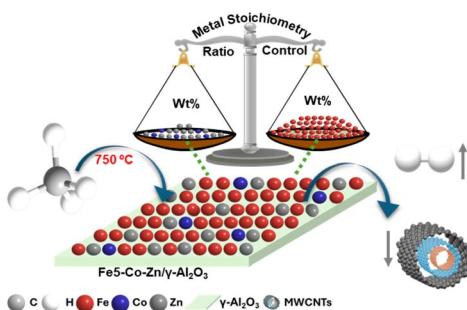
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### Designed formation of Cu<sub>2</sub>S hierarchical nanostructures as self-supported photoelectrodes for photo-supercapacitors

Ruitong Xu, Muhammad Arif, Guopeng Pan, Lin Xu\* and Ting Zhu\*

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### Boosting turquoise hydrogen and carbon nanotube production via catalytic methane decomposition: influence of active metal ratios in Fe5–Co–Zn/γ-Al<sub>2</sub>O<sub>3</sub> nanocatalysts

Aakash Rajpoot, Afaq Ahmad Khan and Ejaz Ahmad\*

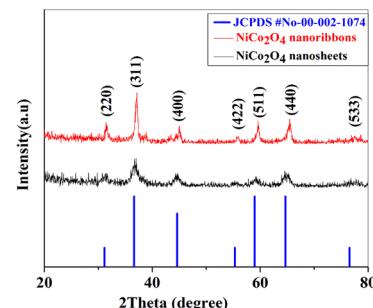


## PAPERS

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**Enhanced electrocatalytic performance of  $\text{NiCo}_2\text{O}_4$  nanosheets and nanoribbons for methanol oxidation in alkaline media: morphology-dependent insights**

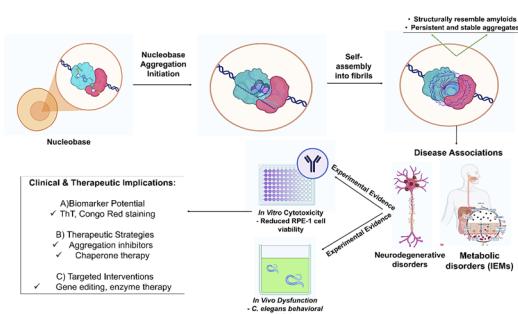
Hagar Ali, Waleed M. A. El Rouby, M. H. Khedr and Mai F. M. Hmamm\*



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**Nucleobase self-assembly: aggregation, morphological characterization, and toxicity analysis**

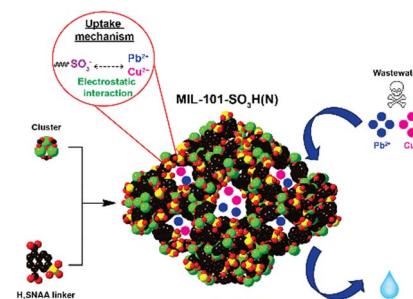
Raj Dave, Ankita Jaiswal, Ankur Singh, Anam Naseer, Monisha Patel, Aamir Nazir,\* Dhiraj Bhatia,\* Nidhi Gour\* and Sandeep Verma\*



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**A new MIL-101-type chromium-based metal-organic framework with densely packed sulfonic groups: an ultra-high uptake of toxic  $\text{Pb}^{2+}$  and  $\text{Cu}^{2+}$  ions from an aqueous medium**

My V. Nguyen,\* Huy K. Duong, Hung N. Nguyen, Loc C. Luu and Thai M. Nguyen



## CORRECTION

5120

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