### Nanoscale Advances

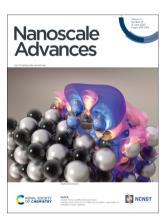
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#### IN THIS ISSUE

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# Cover See Hector Prats and Michail Stamatakis, pp. 3214–3224. Image reproduced by permission of Michail Stamatakis from Nanoscale Adv., 2023, 5, 3214.

#### **EDITORIAL**

3129

# Introduction to Epitaxial growth of nanostructures and their properties

Jin Zou

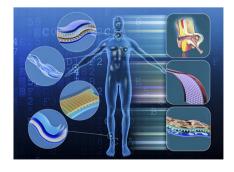


#### **REVIEWS**

3131

## Recent progress in flexible micro-pressure sensors for wearable health monitoring

Jianguo Hu, Guanhua Dun, Xiangshun Geng, Jing Chen, Xiaoming Wu and Tian-Ling Ren\*



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#### **REVIEWS**

#### 3146

Recent advancements in zero- to three-dimensional carbon networks with a two-dimensional electrode material for high-performance supercapacitors

Niraj Kumar, Sudip Ghosh, Dinbandhu Thakur, Chuan-Pei Lee\* and Prasanta Kumar Sahoo\*



#### 3177

#### Accounts of applied molecular rotors and rotary motors: recent advances

Anup Singhania, Sudeshna Kalita, Prerna Chettri and Subrata Ghosh\*

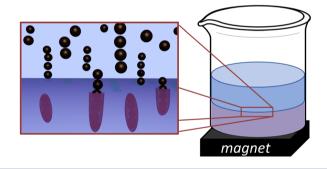


#### COMMUNICATION

#### 3209

#### Magnetically driven preparation of 1-D nano-necklaces capable of MRI relaxation enhancement

Aaron M. King, Teresa Insinna, Connor J. R. Wells, Isabel A. Raby, Yurii K. Gun'ko and Gemma-Louise Davies\*



#### **PAPERS**

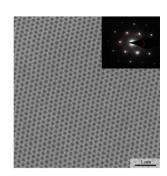
#### 3214

#### Stability and reactivity of metal nanoclusters supported on transition metal carbides

Hector Prats\* and Michail Stamatakis



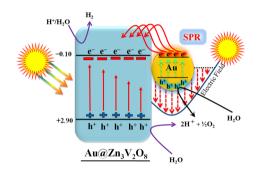
3225



#### High p doped and robust band structure in Mg-doped hexagonal boron nitride

Lama Khalil, Cyrine Ernandes, José Avila, Adrien Rousseau, Pavel Dudin, Nikolai D. Zhigadlo, Guillaume Cassabois, Bernard Gil, Fabrice Oehler, Julien Chaste and Abdelkarim Ouerghi\*

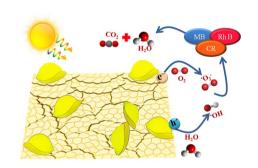
3233



#### Facile transfer of surface plasmon electrons of Au-NPs to Zn<sub>3</sub>V<sub>2</sub>O<sub>8</sub> surfaces: a case study of sunlight driven H<sub>2</sub> generation from water splitting

Muhammad Jalil, Khezina Rafiq,\* Muhammad Zeeshan Abid, Abdul Rauf, Shuxin Wang, Shahid Igbal and Ejaz Hussain\*

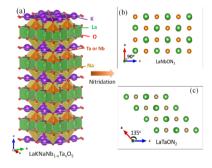
3247



#### Synergism of Co/Na in BiVO<sub>4</sub> microstructures for visible-light driven degradation of toxic dyes in water

Muhammad Zeeshan Abid, Khezina Rafiq, Abdul Rauf, Syed Shoaib Ahmad Shah, Rongchao Jin' and Ejaz Hussain\*

3260



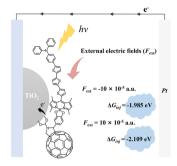
#### Defect engineering of two-dimensional Nb-based oxynitrides for visible-light-driven water splitting to produce H<sub>2</sub> and O<sub>2</sub>

Chang Xu, Yan Wang,\* Quansheng Guo and Xin Wang\*

#### 3267

Control and regulation of the performance of fullerene-based dye-sensitized solar cells with a D-D-A structure by external electric fields

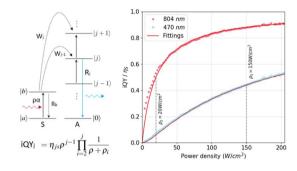
Xinyue Wang, Cong Shen, Jingping Li, Meixia Zhang\* and Peng Song\*



#### 3279

Generalised analytical model of the transition power densities of the upconversion luminescence and quantum yield

- J. S. Matias,\* K. Komolibus, K. W. Kho,
- S. Konugolu-Venkata-Sekar and S. Andersson-Engels



#### 3287

The smallest superatom Au<sub>4</sub>(PPh<sub>3</sub>)<sub>4</sub>I<sub>2</sub> with two free electrons: synthesis, structure analysis, and electrocatalytic conversion of CO2 to CO

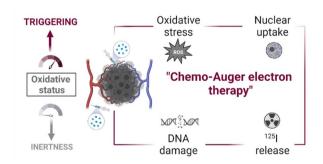
Cheng Zhang, Mei Ding, Yonggang Ren, Along Ma, Zhengmao Yin,\* Xiaoshuang Ma\* and Shuxin Wang\*



#### 3293

Platinum nanoparticles labelled with iodine-125 for combined "chemo-Auger electron" therapy of hepatocellular carcinoma

Kamil Wawrowicz,\* Kinga Żelechowska-Matysiak, Agnieszka Majkowska-Pilip, Mateusz Wierzbicki and Aleksander Bilewicz



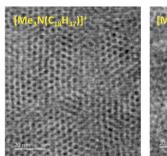
#### 3304

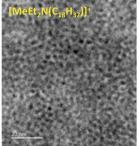


#### Single-particle dispersion of carbon dots in the nano-hydroxyapatite lattice achieving solid-state green fluorescence

Lunzhu Wang, Xinru Wang, Shuoshuo Zhou, Jian Ren, Liting Liu, Cairong Xiao and Chunlin Deng\*

#### 3316

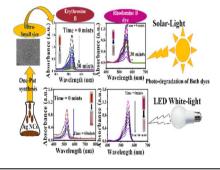




#### Effects of surfactant head group modification on vertically oriented mesoporous silica produced by the electrochemically assisted surfactant assembly method

Nabil A. N. Mohamed, Yisong Han, Sarah Harcourt-Vernon, Andrew L. Hector,\* Anthony R. Houghton, Gillian Reid, Daryl R. Williams and Wenjian Zhang

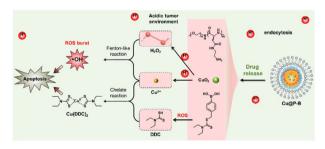
#### 3326



#### Facile synthesis of water-soluble silver nanoclusters for the photocatalytic degradation of dyes by multivariate optimization approach

Saif Ullah, Qinzhen Li, Rooh Ullah, Sadat Anwar, Muhammad Fazal Hameed and Manzhou Zhu\*

#### 3336



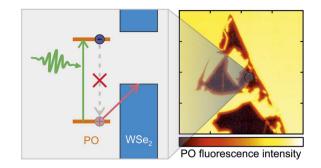
#### Co-delivery of a tumor microenvironmentresponsive disulfiram prodrug and CuO<sub>2</sub> nanoparticles for efficient cancer treatment

Fen-Ting Cheng, Ya-Di Geng, Yun-Xiao Liu, Xuan Nie, Xin-Ge Zhang, Zhao-Lin Chen, Li-Qin Tang, Long-Hai Wang,\* Ye-Zi You and Lei Zhang\*

#### 3348

#### Strong quenching of dye fluorescence in monomeric perylene orange/TMDC hybrid structures

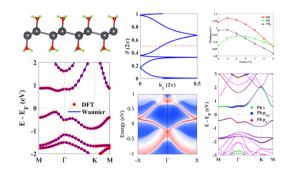
Tim Völzer, Alina Schubert, Erik von der Oelsnitz, Julian Schröer, Ingo Barke, Rico Schwartz, Kenji Watanabe, Takashi Taniguchi, Sylvia Speller, Tobias Korn and Stefan Lochbrunner<sup>3</sup>



#### 3357

Large band gap quantum spin Hall insulators in plumbene monolayer decorated with amidogen, hydroxyl and thiol functional groups

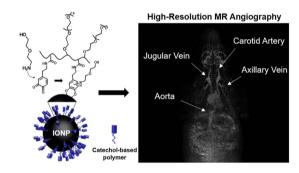
Sumaiya Jahan Tabassum, Tanshia Tahreen Tanisha, Nishat Tasnim Hiramony and Samia Subrina\*



#### 3368

Amine-assisted catechol-based nanocoating on ultrasmall iron oxide nanoparticles for high-resolution  $T_1$  angiography

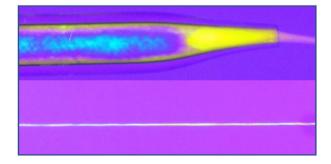
Hyunhong Kim, Sunyoung Woo, Hoesu Jung, Hyo-Suk Ahn, Ning Chen, HyungJoon Cho\* and Jongnam Park\*



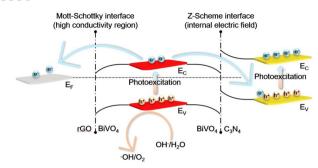
#### 3376

Wet spinning imogolite nanotube fibres: an in situ process study

Joseph F. Moore, Erwan Paineau, Pascale Launois\* and Milo S. P. Shaffer\*



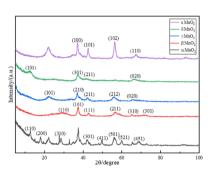
#### 3386



# Nanoarchitectonics on Z-scheme and Mott-Schottky heterostructure for photocatalytic water oxidation *via* dual-cascade charge-transfer pathways

Yao Li, Siyuan Liu, Runlu Liu, Jian Pan, Xin Li, Jianyu Zhang, Xiaoxiao Zhang, Yixin Zhao, Dawei Wang, Hengdao Quan and Shenmin Zhu\*

#### 3396



# Physicochemical properties of different crystal forms of manganese dioxide prepared by a liquid phase method and their quantitative evaluation in capacitor and battery materials

Yang Pan, Wang Jiawei, Wang Haifeng,\* Wang Song, Yang Chunyuan and He Yue