

# Nanoscale Advances

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## IN THIS ISSUE

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pp. 2594–2601. Image  
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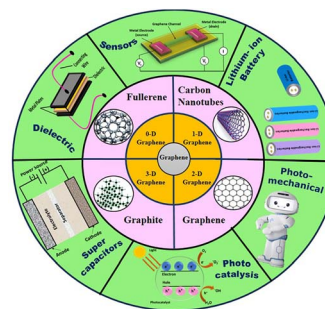
**Inside cover**  
See Anshu Pandey *et al.*,  
pp. 2602–2610. Image  
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Adv.*, 2024, **6**, 2602.

## REVIEW

2539

### Bioinspired graphene-based metal oxide nanocomposites for photocatalytic and electrochemical performances: an updated review

Ajay K. Potbhare, S. K. Tarik Aziz, Mohd. Monis Ayyub, Aniket Kahate, Rohit Madankar, Sneha Wankar, Arnab Dutta, Ahmed Abdala, Sami H. Mohmood,\* Rameshwar Adhikari\* and Ratiram G. Chaudhary\*



## MINIREVIEW

2569

### Nano revolution: pioneering the future of water reclamation with micro-/nano-robots

Subham Preetam\*



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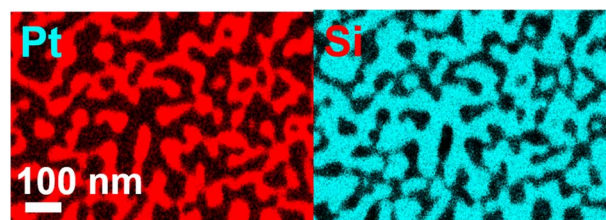
Fundamental questions  
Elemental answers

## COMMUNICATIONS

2582

**Sub-50 nm patterning of alloy thin films via nanophase separation for hydrogen gas sensing**

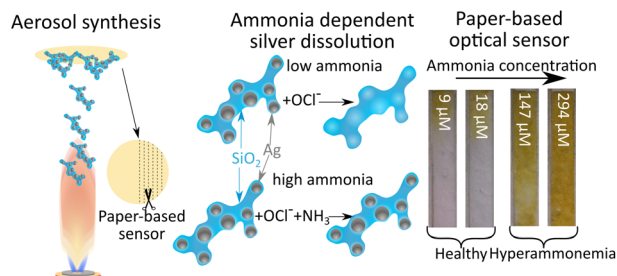
Sherjeel Mahmood Baig, Satoshi Ishii and Hideki Abe\*



2586

**Paper-based colorimetric hyperammonemia sensing by controlled oxidation of plasmonic silver nanoparticles**

Padryk Merkl and Georgios A. Sotiriou\*

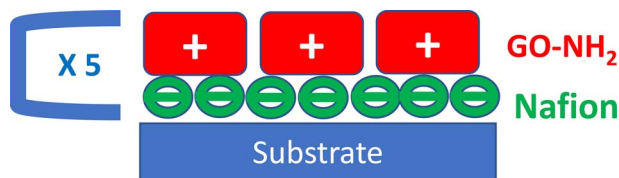


## PAPERS

2594

**Antimicrobial coatings based on amine-terminated graphene oxide and Nafion with remarkable thermal resistance**

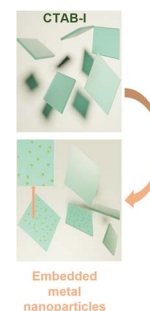
Mohammed Suleman Beg, Ella Nicole Gibbons, Spyridon Gavalas, Mark A. Holden, Marta Krysmann and Antonios Kelarakis\*



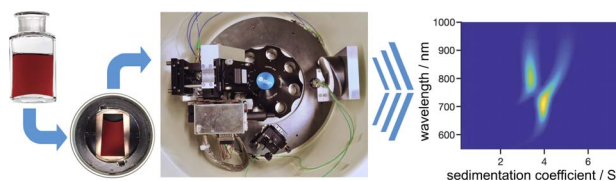
2602

**Embedding plasmonic nanoparticles in soft crystals: an approach exploiting CTAB-I structures**

Navyashree Vasudeva, Annie Jayasing, Kishorkumar Sindogi, Isha Yadav, T. N. Guru Row, Sheetal K. Jain and Anshu Pandey\*



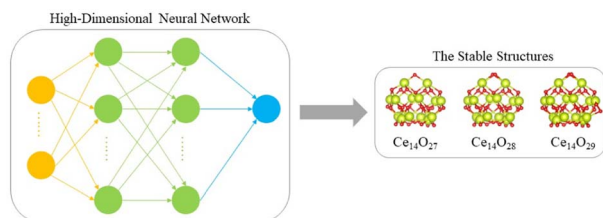
2611



### Development of an advanced multiwavelength emission detector for the analytical ultracentrifuge

Vanessa Lautenbach, Georgy Onishchukov, Simon E. Wawra, Uwe Frank, Lukas Hartmann, Wolfgang Peukert and Johannes Walter\*

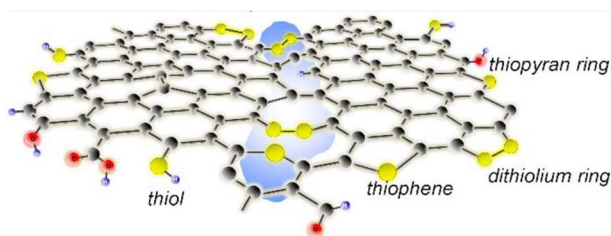
2623



### Exploring the stable structures of cerium oxide nanoclusters using high-dimensional neural network potential

Huabing Cai, Qinghua Ren\* and Yi Gao\*

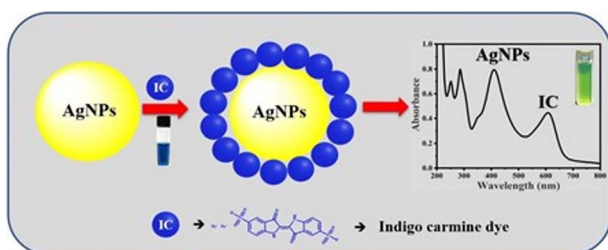
2629



### Defect healing and doping of CVD graphene by thermal sulfurization

Giuseppe Valerio Bianco,\* Alberto Sacchetti, Antonella Milella, Maria Michela Giangregorio, Stefano Dicorato and Giovanni Bruno

2636



### Anomalous spectral shift of localized surface plasmon resonance

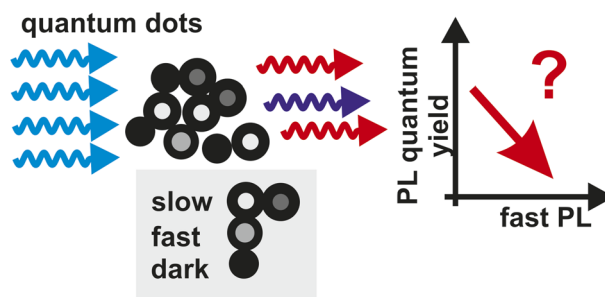
Saikiran Kosame, Mukkath Joseph Josline, Jae-Hyun Lee and Heongkyu Ju\*



2644

## Why do Si quantum dots with stronger fast emission have lower external photoluminescence quantum yield?

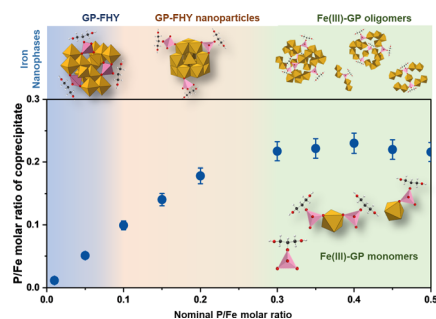
Tomáš Popelář, Filip Matějka, Jakub Kopenec, Giacomo Morselli, Paola Ceroni and Kateřina Kůsová\*



2656

## Impact of organic phosphates on the structure and composition of short-range ordered iron nanophases

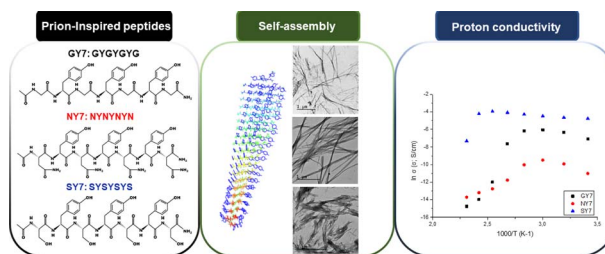
Zhengzheng Chen,\* Jeffrey Paulo H. Perez,\* Glen J. Smales, Roberts Blukis, Brian R. Pauw, Jessica A. Stammeier, Jörg Radnik, Andrew J. Smith and Liane G. Benning



2669

## Harnessing prion-inspired amyloid self-assembly for sustainable and biocompatible proton conductivity

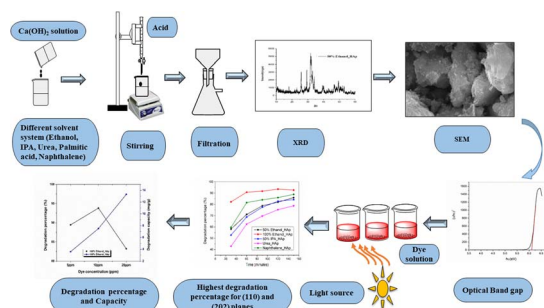
Susanna Navarro,\* Andreu Andrio, Marta Diaz-Caballero, Salvador Ventura and Vicente Compañ\*



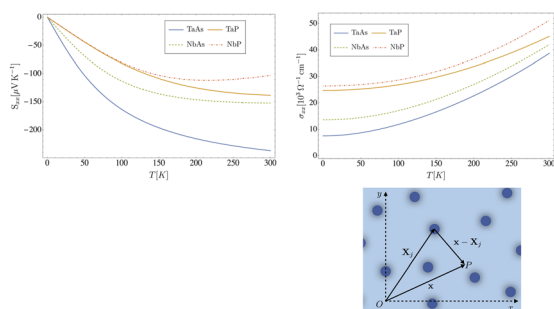
2682

## Different solvents and organic modifiers for the control of crystallographic parameters in nanocrystallite hydroxyapatite for amplification of photocatalytic activity

Md. Kawsar, Md. Sahadat Hossain, Sumaya Tabassum, Newaz Mohammed Bahadur and Samina Ahmed\*



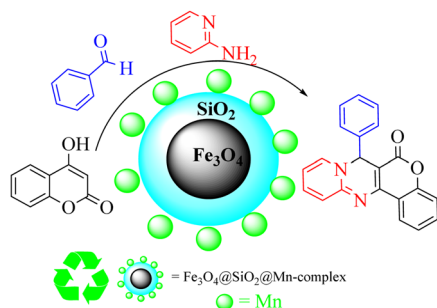
2701



### Thermoelectric transport in Weyl semimetals under a uniform concentration of torsional dislocations

Daniel A. Bonilla and Enrique Muñoz\*

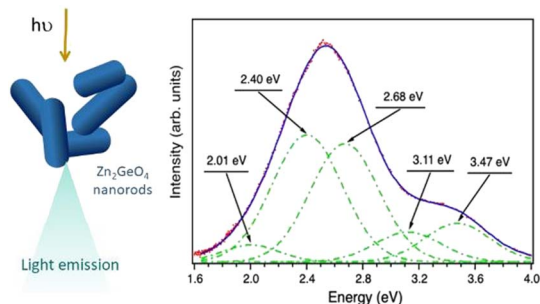
2713



### An immobilized Schiff base–Mn complex as a hybrid magnetic nanocatalyst for green synthesis of biologically active [4,3-*d*]pyrido[1,2-*a*]pyrimidin-6-ones

Mohammad Ali Bodaghifard,\* Seied Ali Pourmousavi,  
Najmieh Ahadi and Payam Zeynali

2722



### Controllable synthesis and morphology-dependent light emission efficiency of Zn<sub>2</sub>GeO<sub>4</sub> nanophosphors

Miguel Tinoco,\* José Miguel Lendínez,  
José M. González-Calbet, Bianchi Méndez,  
Julio Ramírez-Castellanos and Pedro Hidalgo\*

## CORRECTION

2728

### Correction: Influence of the carbazole moiety in self-assembling molecules as selective contacts in perovskite solar cells: interfacial charge transfer kinetics and solar-to-energy efficiency effects

Dora A. González, Carlos E. Puerto Galvis, Wenhui Li, Maria Méndez, Ece Aktas, Eugenia Martínez-Ferrero  
and Emilio Palomares

