# Nanoscale

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## IN THIS ISSUE

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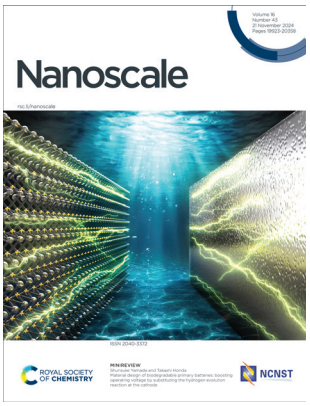


**Cover**
See Shunsuke Yamada and Takashi Honda, pp. 20027–20036.

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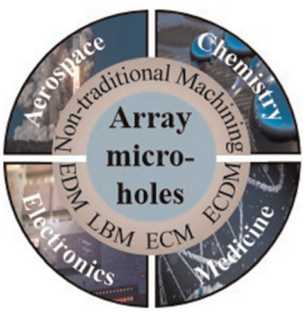
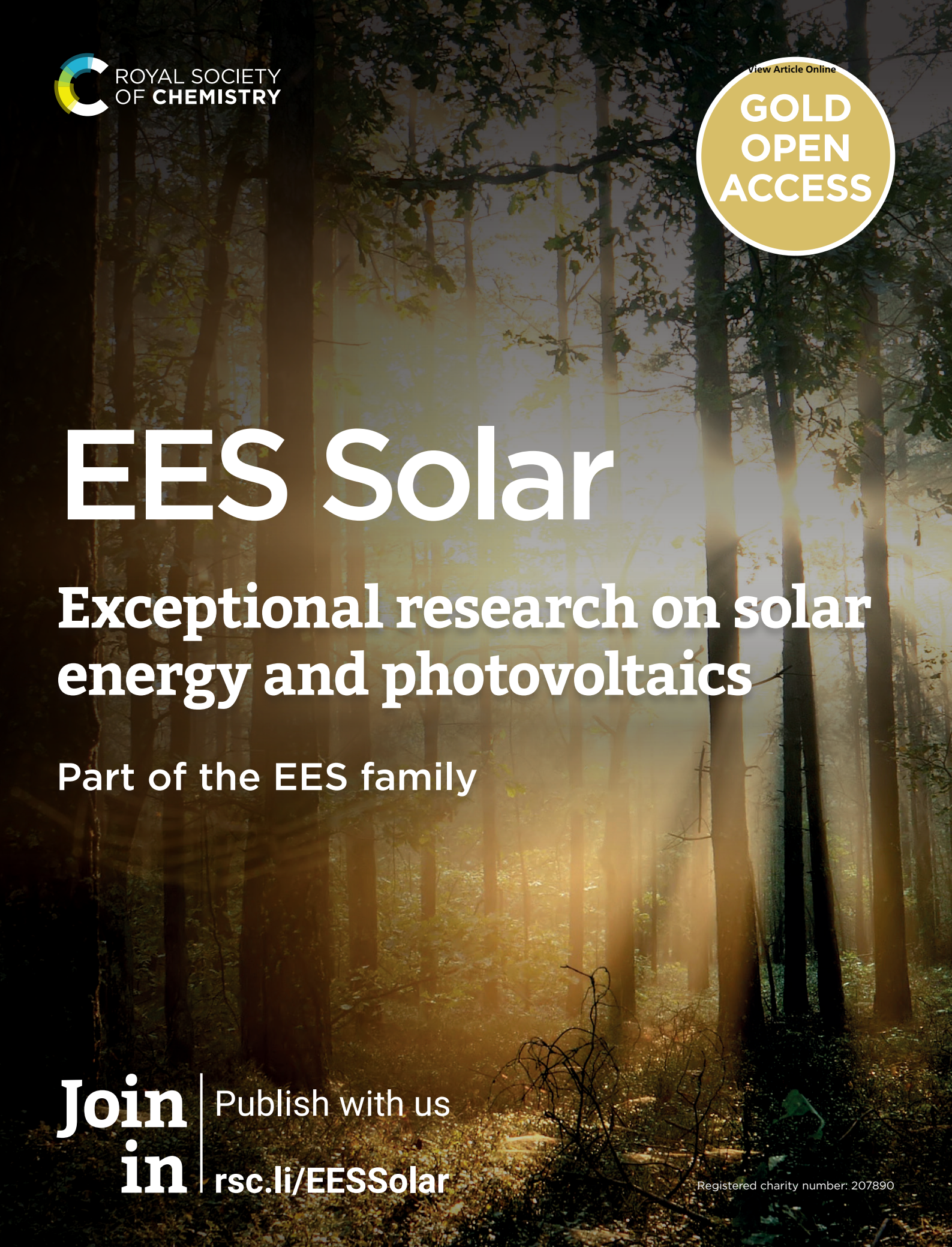
## EDITORIAL



## REVIEWS



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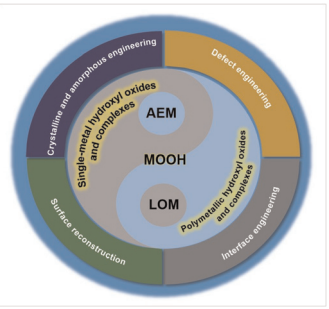
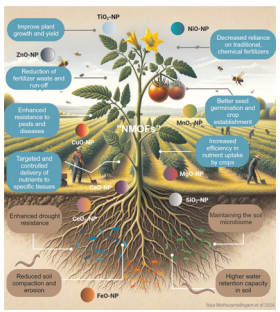
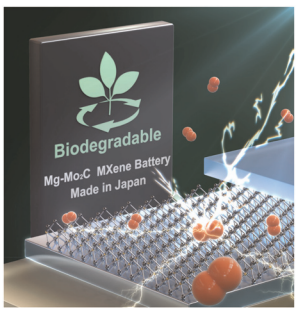




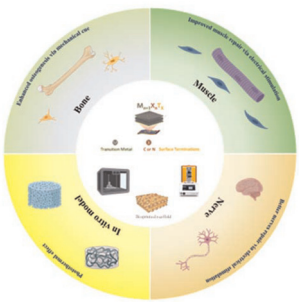




## MINIREVIEWS



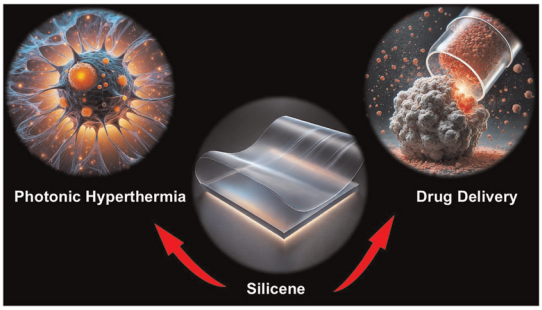




## MINIREVIEWS

20048

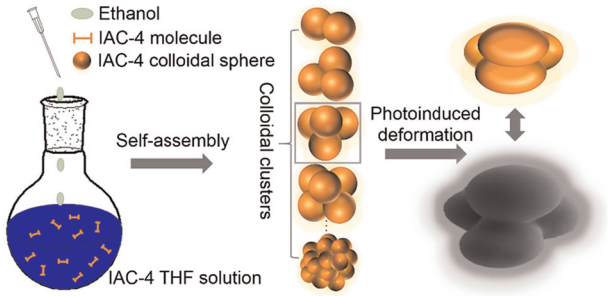



### Two-dimensional silicene-based technologies in oncology: an emerging avenue

Joydip Sengupta and Chaudhery Mustansar Hussain*

## COMMUNICATIONS

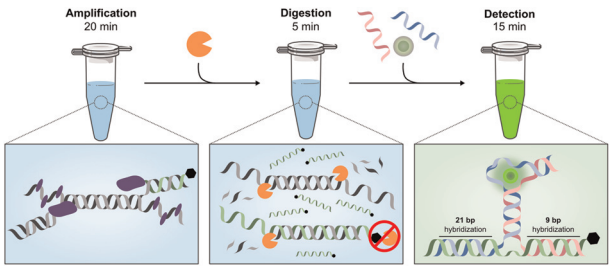
20060




### Photomanipulatable colloidal clusters from the aggregation of azo molecular glass spheres

Bo Tang,* Lier Wang, Xitong Ai, Chuyi Liao, Zhiyuan Xiong, Yaning He and Xiaogong Wang*

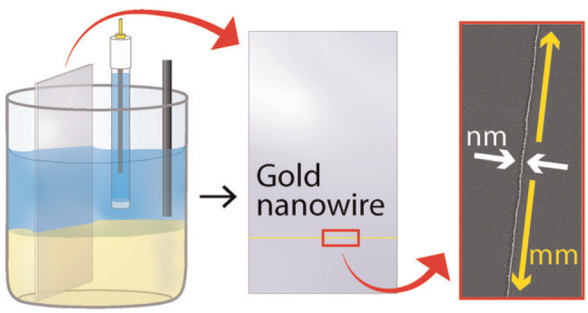
20067




### Nucleic acid detection with single-base specificity integrating isothermal amplification and light-up aptamer probes

Jaekyun Baek, Jihyun Park and Youngeun Kim*

20073




### Single gold nanowires with ultrahigh (>$10^4$) aspect ratios by triphasic electrodeposition

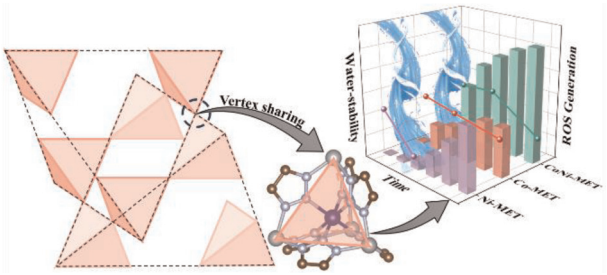
Guillermo Colón-Quintana, Thomas B. Clarke, Sakshi A. Ailawar and Jeffrey E. Dick*

## COMMUNICATIONS

20082

### Dual metal centers within a water-stable Co/Ni bimetallic metal-triazolate framework contribute to durable photocatalysis for water treatment

Minling Zheng, Yubo Liu, Qifu Zhang, Wenjing Li, Yong Zhang, Guangxue Feng, Yating Hu* and Shaoming Huang

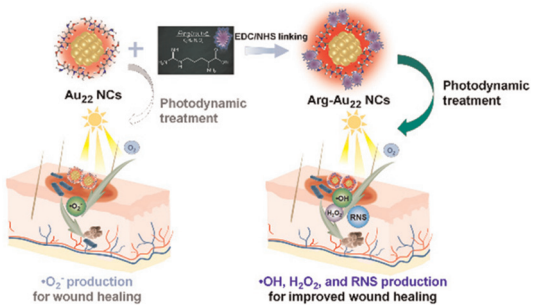



## PAPERS

20089

### Modulating the photodynamic modality of $Au_{22}$ nanoclusters through surface conjugation of arginine for promoted healing of bacteria-infected wounds

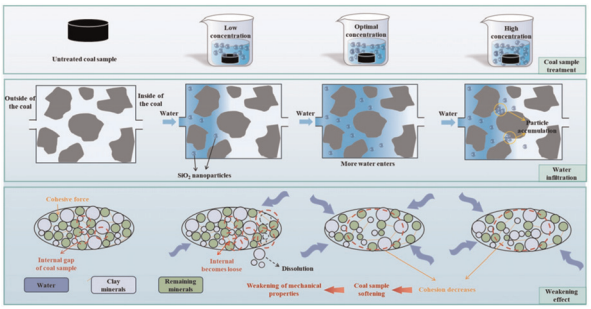
Xinyue Dou,* Sariah Saalah, Chel-Ken Chiam, Jianping Xie* and Coswald Stephen Sipaut*




20100

### Effect of $SiO_2$ nanofluid concentration on micro-mechanical weakening behavior of coal

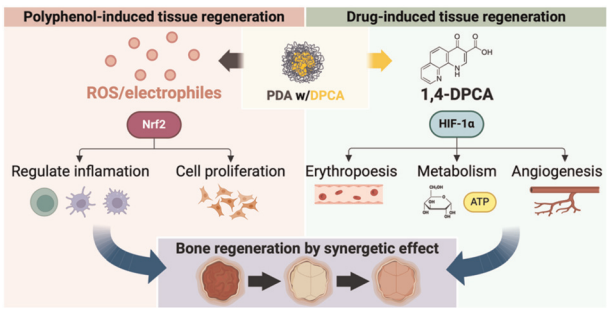
Quanle Zou, Bochao Xu,* Weizhi Wang, Yulin Hu, Ting Liu,* Qingsong Li, Tengfei Ma, Haolong Zheng and Zixuan Huo



20118

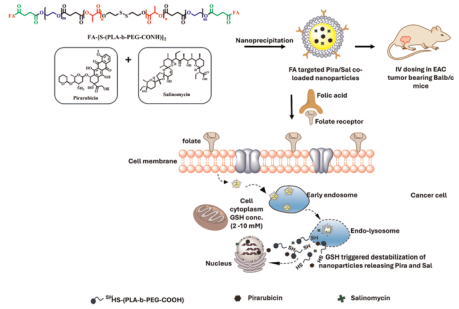
### Synergistic effect of ROS-generating polydopamine on drug-induced bone tissue regeneration

Hyeju Han, Bongkyun Kang, Shazid Md. Sharker, Tabassum Binte Kashem, Yuejin Kim, Jeehee Lee, Minok Park, Eunjeong Kim, YunJae Jung, Jinkyu Lim,* Seungwon Ryu* and Kyueui Lee*



## PAPERS

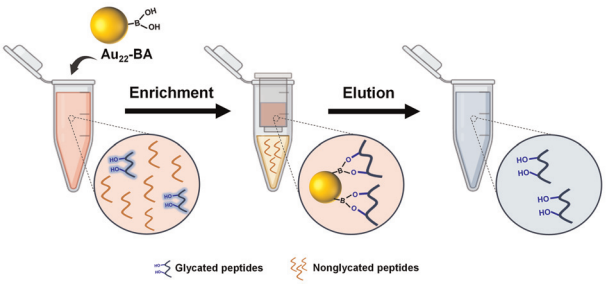
20131




### Folic acid-targeted redox responsive polylactic acid-based nanoparticles co-delivering pirarubicin and salinomycin suppress breast cancer tumor growth *in vivo*

Priya Gupta, Ankushi Bansal,* Harshdeep Kaur, Mohd Anees, Neetu Singh and Harpal Singh*

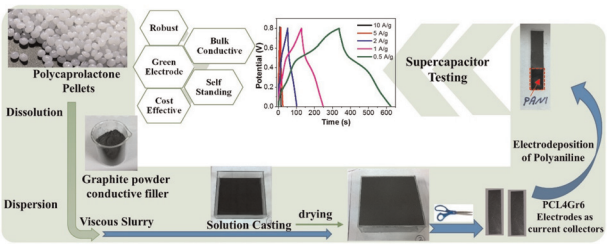
20147




### Effective enrichment of glycated proteome using ultrasmall gold nanoclusters functionalized with boronic acid

Hongmae Heo, Seonghyeon Cho, Yuhyeon Kim, Soomin Ahn, Jeong-hun Mok, Hookeun Lee* and Dongil Lee*

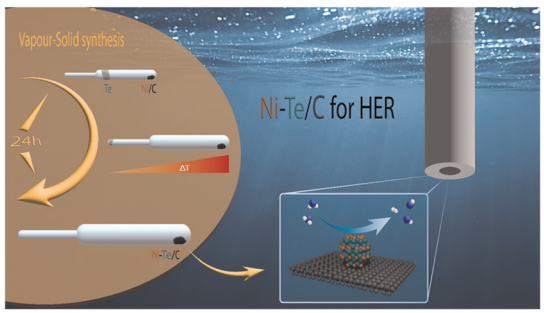
20155




### An eco-friendly polycaprolactone/graphite composite as a robust freestanding electrode platform for supercapacitive energy storage

Rajeev Gupta* and Monika Singhal

20168

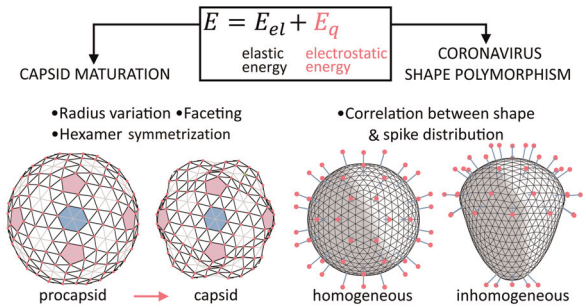



### Active site engineering of intermetallic nanoparticles by the vapour–solid synthesis: carbon black supported nickel tellurides for hydrogen evolution

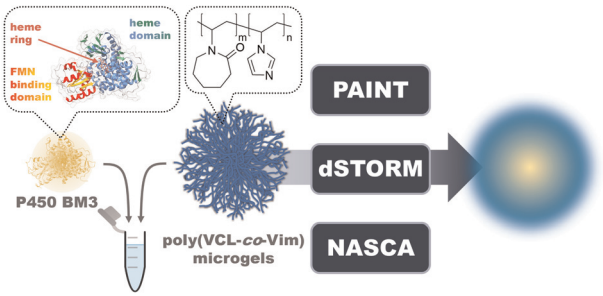
Daniel Garstenauer, Patrick Guggenberger, Ondřej Zobač, Franz Jirsa and Klaus W. Richter*

## PAPERS

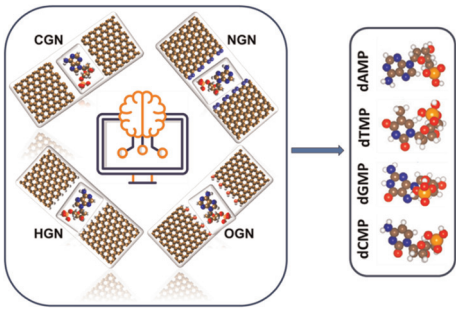




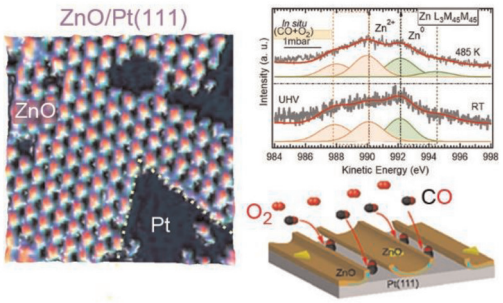




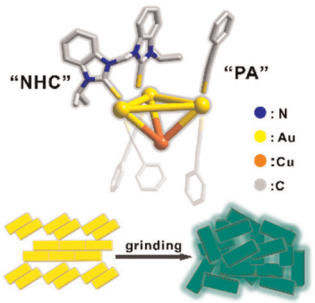





PAPERS

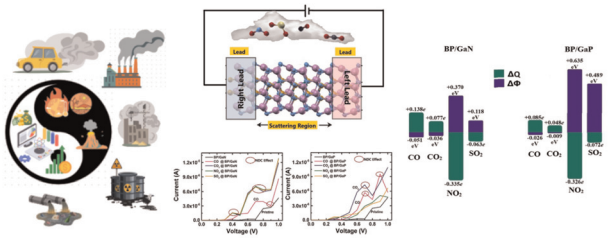
20228




## N-Heterocyclic carbene-stabilized gold–copper nanoclusters: synthesis, bonding and mechanochromism

Dongjie Zuo, Huifang Guo, Qinghua Xu, Ayisha He, Zilin Li, Simin Li* and Hui Shen*

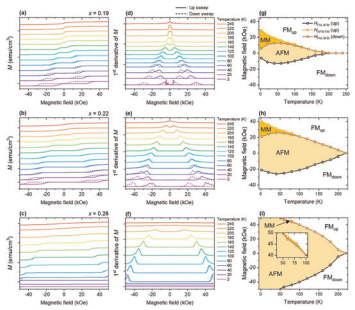
20235




## BP/GaN and BP/GaP core/shell nanowires: theoretical insights into photovoltaic and gas-sensing abilities

Rishit S. Shukla, Vidit B. Zala, Sanjeev K. Gupta* and P. N. Gajjar*

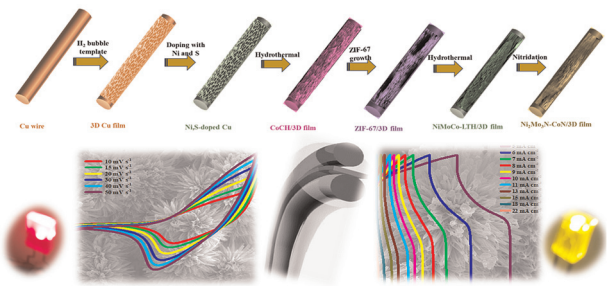
20252




## Metamagnetic transition and meta-stable magnetic state in Co-doped $Fe_3GaTe_2$

Hyo-Bin Ahn, Hyunjong Lim, Jaegu Song, Jisung Lee, Seung-Young Park, Minwoong Joe, Chang-Jong Kang, Kyoung-Whan Kim, Tae-Eon Park, Tuson Park and Changgu Lee*

20260

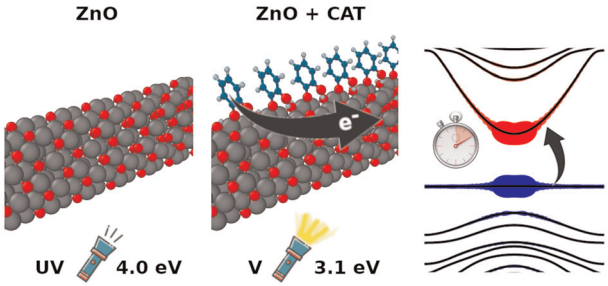



## Ni,S co-doped Cu dendrites decorated with core–shell architecture assisted by MOF and $Fe_{0.92}Co_{0.08}S$ nanoflakes on nanocellulose/graphene fibers for fabrication of flexible wire-type micro-supercapacitor

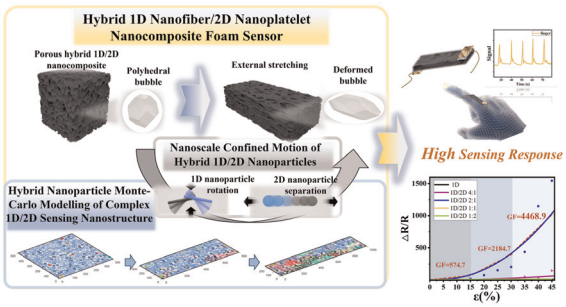
Leila Naderi and Saeed Shahrokhian*

## PAPERS

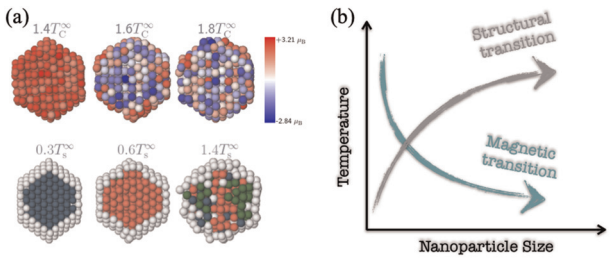




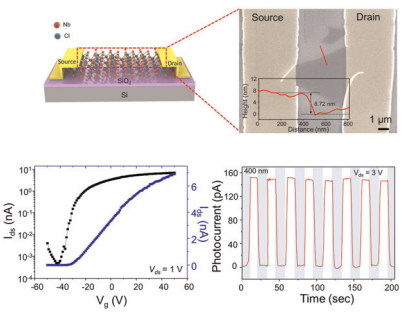






## PAPERS



## CORRECTION

RETRACTION

20356

# Retraction: Enhanced activity of vancomycin by encapsulation in hybrid magnetic nanoparticles conjugated to a cell-penetrating peptide

Wenjie Zhang, Reza Taheri-Ledari, Zoleikha Hajizadeh, Ehsan Zolfaghari, Mohammad Reza Ahghari, Ali Maleki,* Michael R. Hamblin* and Ye Tian*