

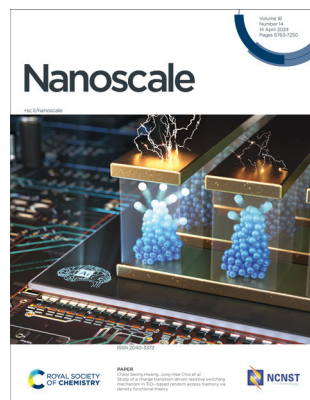
# Nanoscale

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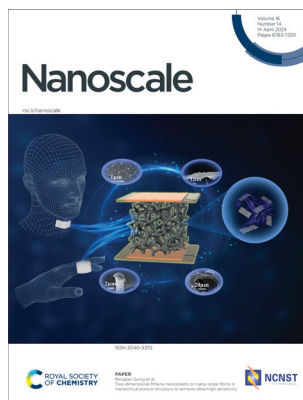
ISSN 2040-3372 CODEN NANOHL 16(14) 6763-7250 (2024)



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See Cheol Seong Hwang, Jung-Hae Choi *et al.*, pp. 6949–6960.

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### Inside cover

See Pengjian Gong *et al.*, pp. 6961–6972.

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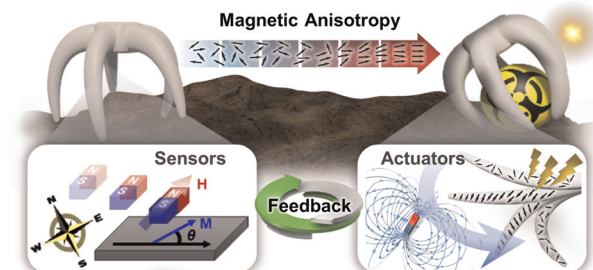


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# Environmental Science: Atmospheres

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Fundamental questions  
Elemental answers

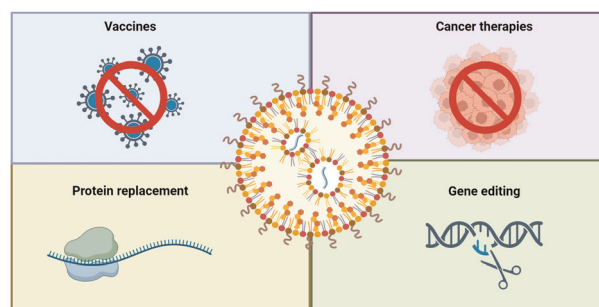


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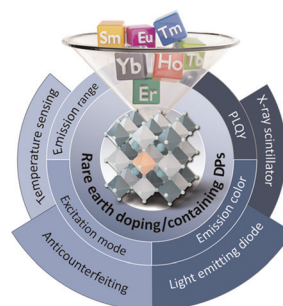
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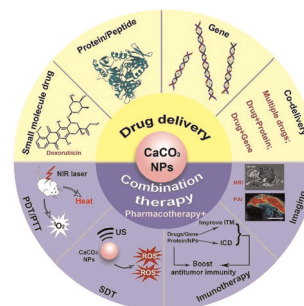
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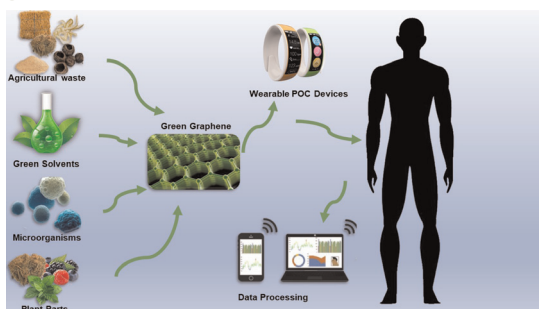
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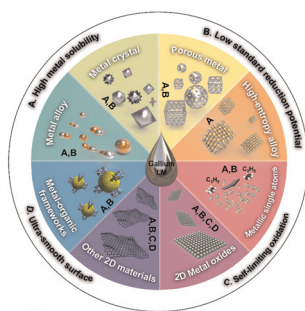


### Point-of-care devices engaging green graphene: an eco-conscious and sustainable paradigm

Joydip Sengupta and Chaudhery Mustansar Hussain\*

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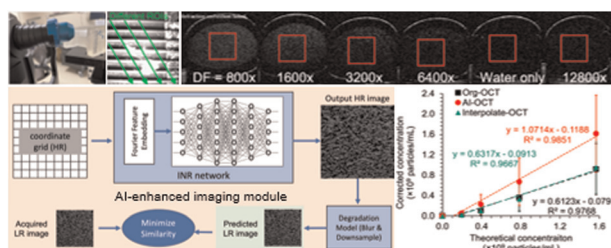


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Ming Wang and Yiliang Lin\*

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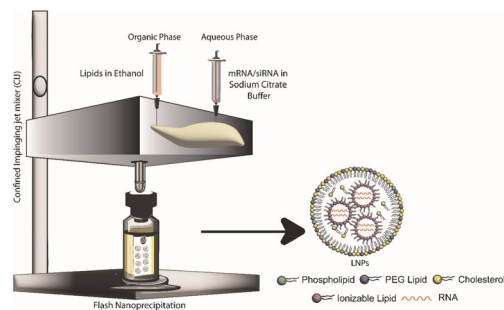
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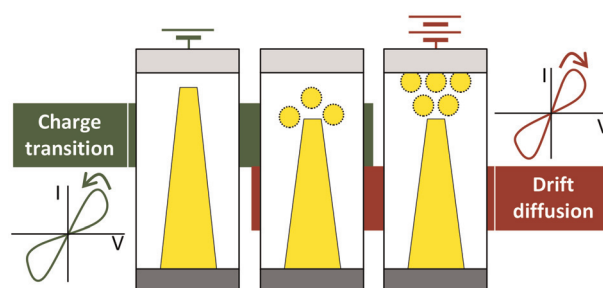
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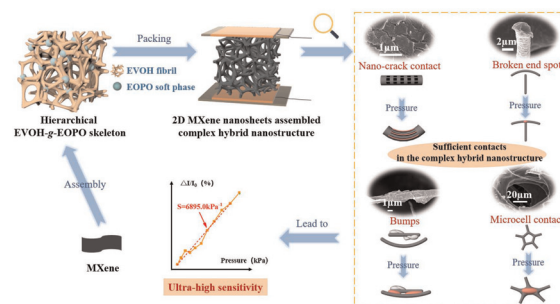
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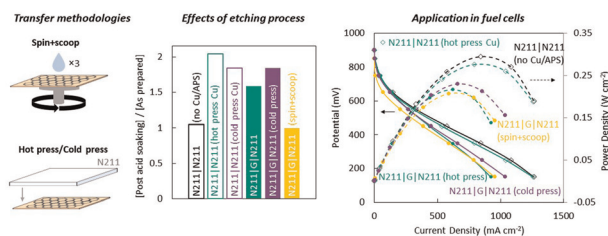
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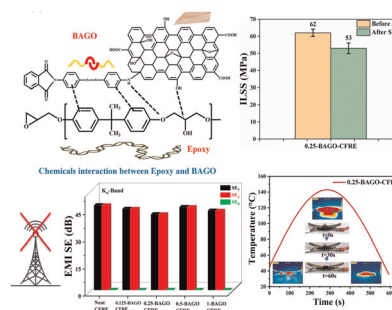
Nicole K. Moehring, Andrew E. Naclerio, Pavan Chaturvedi, Thomas Knight and Piran R. Kidambi\*



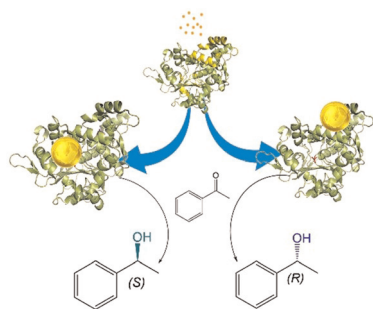
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### GO-tagged PEI sizing agent imparts self-healing and excellent mechanical properties to carbon fiber reinforced epoxy laminates

Samir Mandal, Ketaki Samanta,\* Kunal Manna, Subodh Kumar\* and Suryasarathi Bose\*



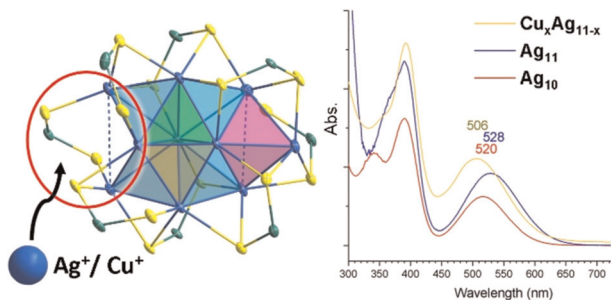
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### Design of a gold nanoparticles site in an engineered lipase: an artificial metalloenzyme with enantioselective reductase-like activity

Carla Garcia-Sanz, Blanca de las Rivas and Jose M. Palomo\*

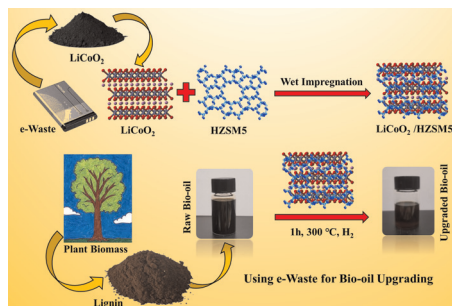
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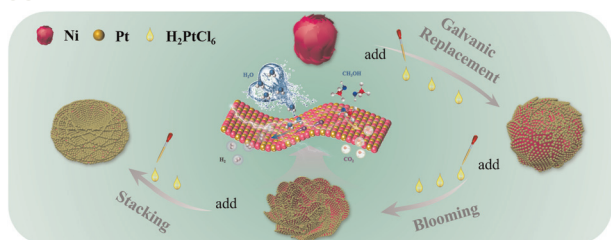
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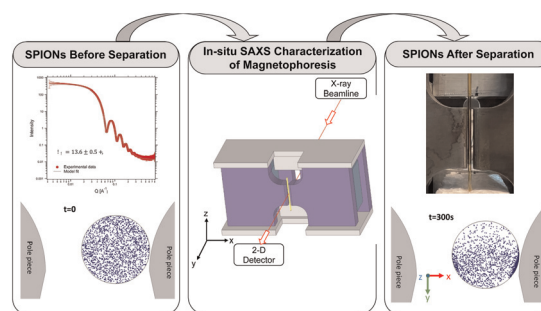
Jin Zhao, Jinjin Wang, Ying Wang, Junming Zhang, Ergui Luo, Baoliang Lv, Tianjun Hu\* and Jianfeng Jia\*



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## Numerical modeling and *in situ* small angle X-ray scattering characterization of ultra-small SPION magnetophoresis in a high field and gradient separator

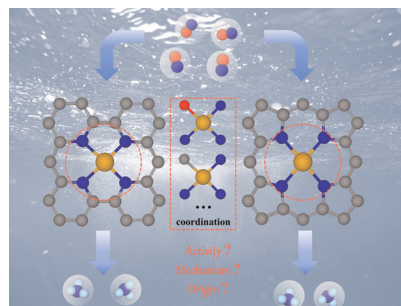
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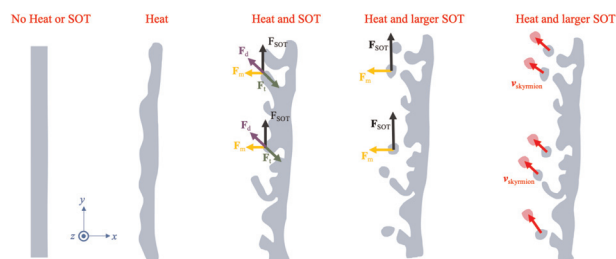
Haobo Li, Donghai Wu, Jiarui Wu, Wenjing Lv, Zhiyao Duan\* and Dongwei Ma\*



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## Generation of skyrmions by combining thermal and spin-orbit torque: breaking half skyrmions into skyrmions

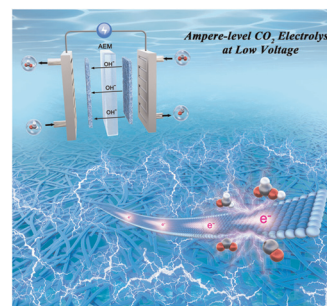
Sheng Yang, Laichuan Shen, Yuelel Zhao, Kai Wu, Xiaoguang Li, Ka Shen, Senfu Zhang, Xiaohong Xu, Johan Åkerman and Yan Zhou\*



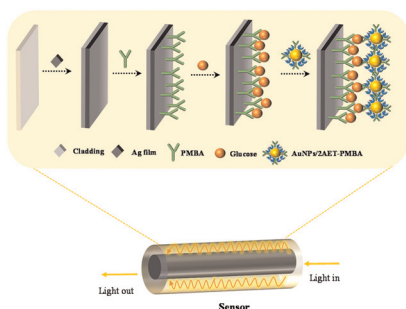
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## Realizing ampere-level CO<sub>2</sub> electrolysis at low voltage over a woven network of few-atom-layer ultralong silverene nanobelts with ultrahigh aspect ratio by pairing with formaldehyde oxidation

Min Zhang, Xinyu Wang, Junjie Ding, Chaogang Ban, Yajie Feng, Chaohe Xu\* and Xiaoyuan Zhou\*



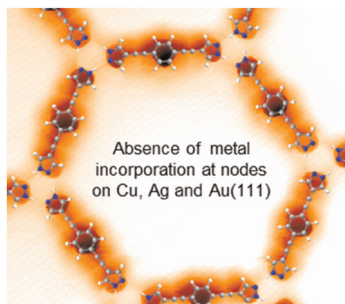
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### Silver-coated hollow fiber surface plasmon resonance sensor for glucose detection with enhanced limit of detection

Yangyang Xu, Xian Zhang, Xiao-Song Zhu\* and Yi-Wei Shi

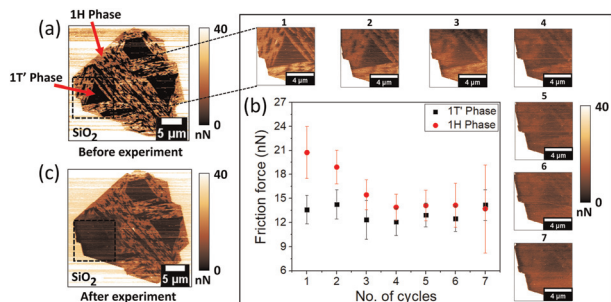
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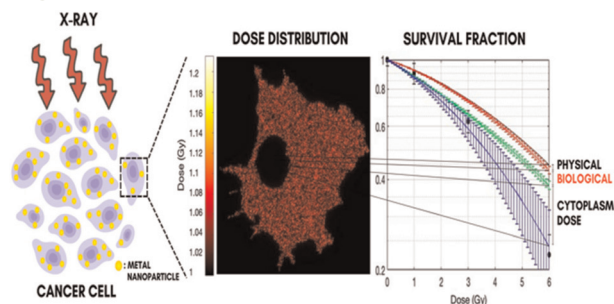
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### Transforming friction: unveiling sliding-induced phase transitions in CVD-grown WS<sub>2</sub> monolayers under single-asperity sliding nanocontacts

Himanshu Rai, Deepa Thakur, Aayush Gadal, Zhijiang Ye,\* Viswanath Balakrishnan\* and Nitya Nand Gosvami\*

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Rodrigo Hernández Millares, Chaewon Bae, Seok-Jin Kim, Taewan Kim, So-Yeon Park, Kangwon Lee\* and Sung-Joon Ye\*



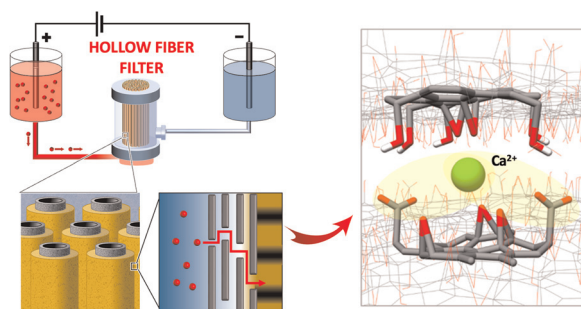


## PAPERS

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### Selective ion transport in large-area graphene oxide membrane filters driven by the ionic radius and electrostatic interactions

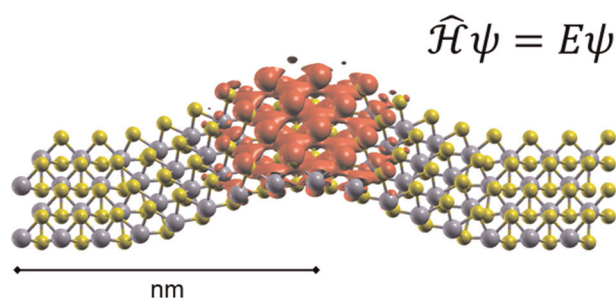
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### Electronic properties of MoSe<sub>2</sub> nanowrinkles

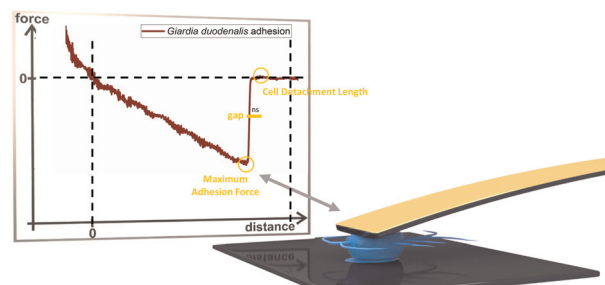
Stefan Velja,\* Jannis Krumland and Caterina Cocchi\*



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### Characterization of a unique attachment organelle: Single-cell force spectroscopy of *Giardia duodenalis* trophozoites

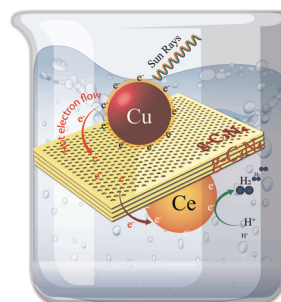
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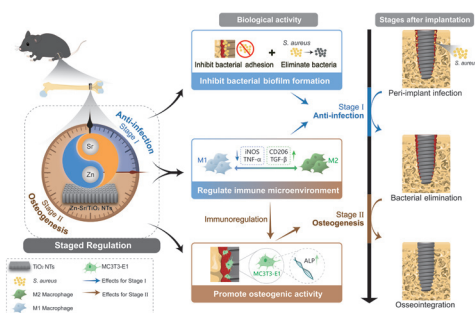
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### Proceeding of catalytic water splitting on Cu/Ce@g-C<sub>3</sub>N<sub>4</sub> photocatalysts: an exceptional approach for sunlight-driven hydrogen generation

Muhammad Zeeshan Abid, Aysha Tanveer, Khezina Rafiq,\* Abdul Rauf, Rongchao Jin and Ejaz Hussain\*



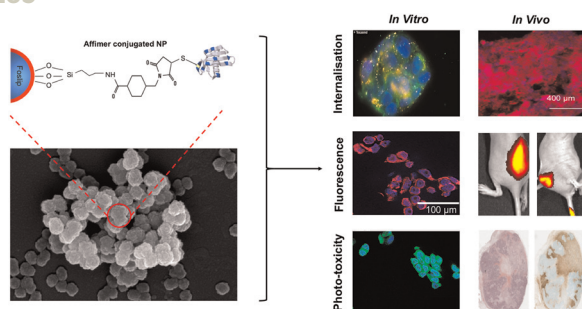
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## Ion-incorporated titanium implants for staged regulation of antibacterial activity and immunoregulation-mediated osteogenesis

Bingfeng Wu, Yufei Tang, Keyi Yao, Xin Luo, Shuqi Feng, Kai Wang, Xuemei Zhou\* and Lin Xiang\*

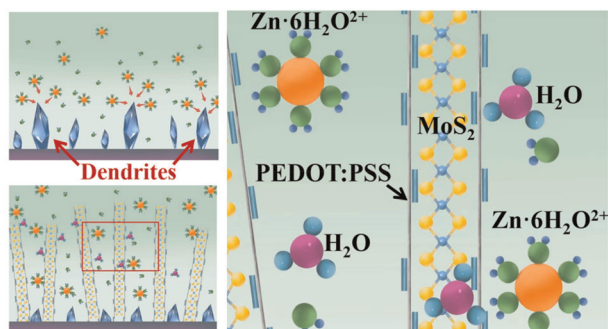
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## Photoactive imaging and therapy for colorectal cancer using a CEA-Affimer conjugated Foslip nanoparticle

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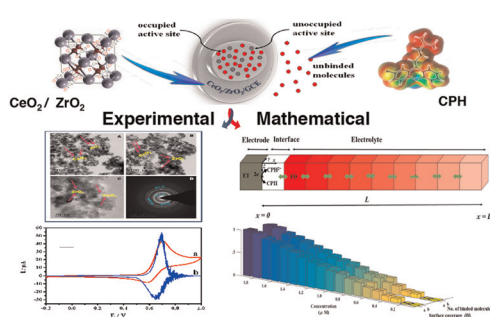
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## A dendrite-free Zn anode enabled by PEDOT:PSS/MoS<sub>2</sub> electrokinetic channels for aqueous Zn-ion batteries

Hai Wang, Qin Zhao, Weimin Li,\* Shun Watanabe\* and Xiaobo Wang\*

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## An innovative experimental and mathematical approach in electrochemical sensing for mapping a drug sensor landscape

Madheswaran Madhavan, Babu Shobana, Duraisamy Pandiaraja\* and Periakaruppan Prakash\*

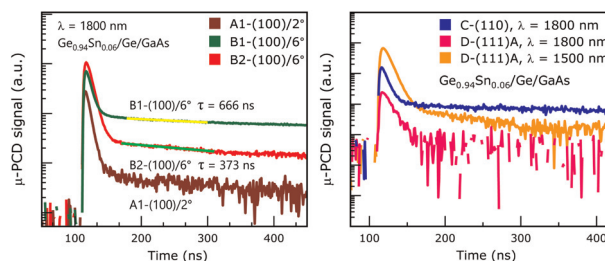


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### GeSn-on-GaAs with photoconductive carrier lifetime >400 ns: role of substrate orientation and atomistic simulation

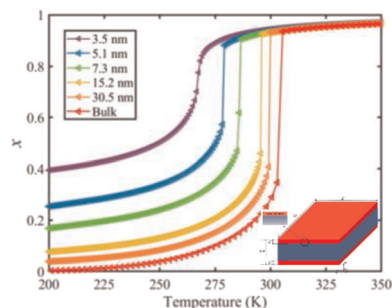
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### Effects of the surface energy and surface stress on the phase stability of spin crossover nano-objects: a thermodynamic approach

Shiteng Mi, Karl Ridier, Gábor Molnár, William Nicolazzi\* and Azzedine Bousseksou\*



## CORRECTION

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Bruno S. D. Onishi, Albano N. Carneiro Neto, Ricardo Bortoletto-Santos, Valmor. R. Mastelaro, Luís D. Carlos, Rute A. S. Ferreira\* and Sidney J. L. Ribeiro\*

