

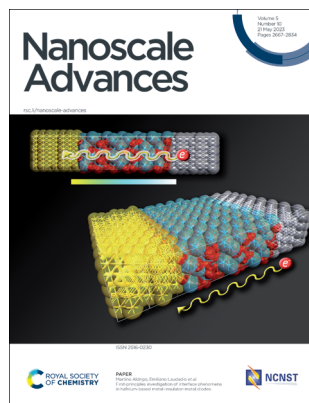
# Nanoscale Advances

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### Inside cover

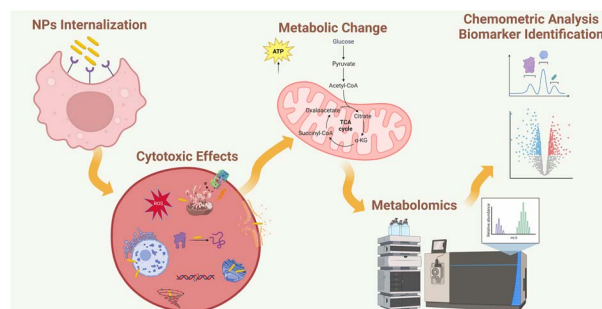
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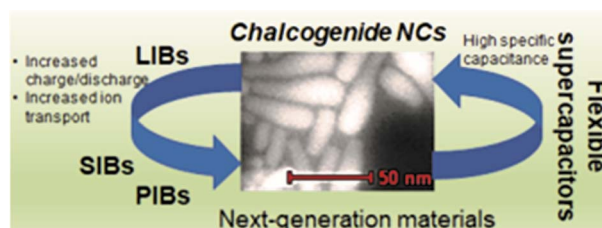
Mohammad Awashra\* and Piotr Młynarz



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### Transition metal chalcogenides for next-generation energy storage

Soubantika Palchoudhury,\* Karthik Ramasamy, Jinchen Han, Peng Chen and Arunava Gupta\*



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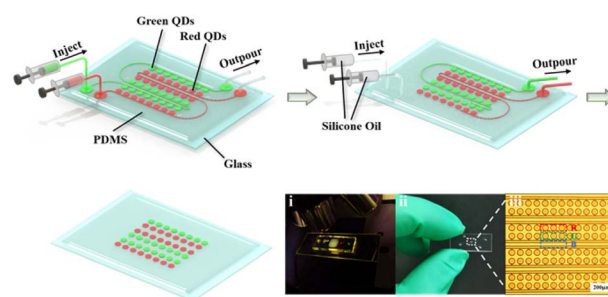


## COMMUNICATION

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### Microfluidic static droplet generated quantum dot arrays as color conversion layers for full-color micro-LED displays

Licai Zhu, Jin Tao,\* Panyuan Li, Wenchao Sun, Jiwei Li, KaiLi Fan, Jinguang Lv, Yuxin Qin, Kaifeng Zheng, Baixuan Zhao, Yingze Zhao, Yupeng Chen, Yingwen Tang, Weibiao Wang and Jingqiu Liang\*

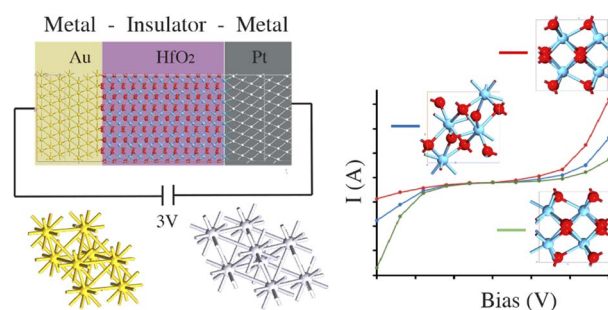


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### First-principles investigation of interface phenomena in hafnium-based metal-insulator-metal diodes

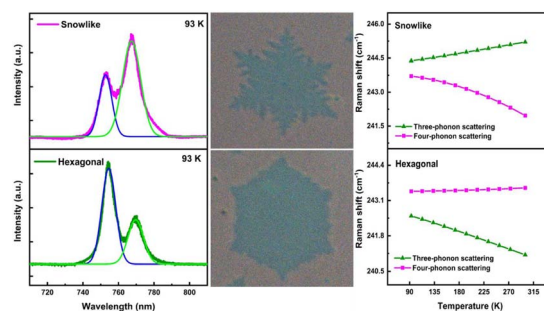
Eleonora Pavoni, Elaheh Mohebbi, Pierluigi Stipa, Luca Pierantoni, Davide Mencarelli, Mircea Dragoman, Martino Aldrigo\* and Emiliano Laudadio\*



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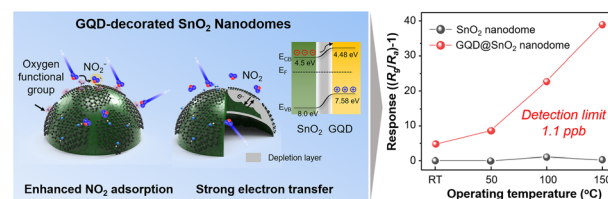
Jay Deep Gupta, Priyanka Jangra, Bishnu Pada Majee and Ashish Kumar Mishra\*



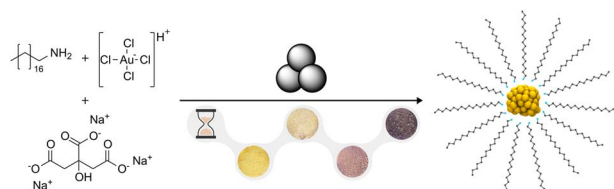
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### Role of graphene quantum dots with discrete band gaps on SnO<sub>2</sub> nanodomains for NO<sub>2</sub> gas sensors with an ultralow detection limit

Jinho Lee, Minsu Park, Young Geun Song, Donghwi Cho, Kwangjae Lee, Young-Seok Shim\* and Seokwoo Jeon\*



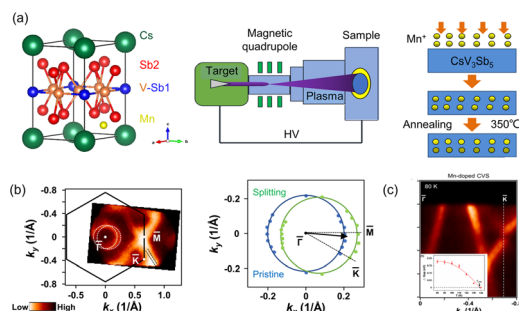
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### *In situ* study of Au nanoparticle formation in a mechanochemical-aging-based method

Austin J. Richard, Michael Ferguson, Blaine G. Fiss, Hatem M. Titi, Jesus Valdez, Nikolas Provatas, Tomislav Friščić\* and Audrey Moores\*

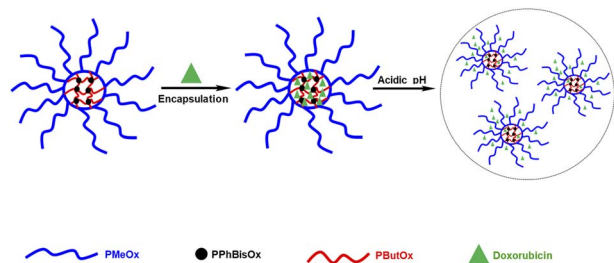
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### Band splitting and enhanced charge density wave modulation in Mn-implanted $\text{CsV}_3\text{Sb}_5$

Xiaoxu Lei, Pengdong Wang, Mengjuan Mi, Yan Zhang, Aixi Chen, Liwu Cai, Ting Wang, Rong Huang, Yilin Wang,\* Yiyao Chen\* and Fang-Sen Li\*

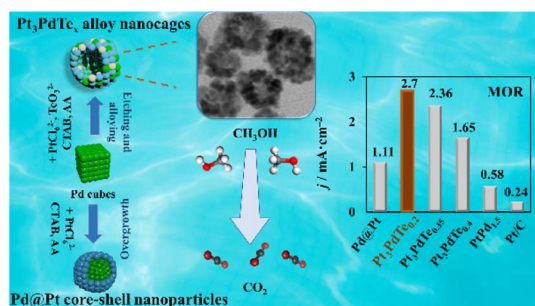
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### Poly(2-oxazoline)-based core cross-linked star polymers: synthesis and drug delivery applications

Nedah Alkattan, Noura Alasmael, Viko Ladelta, Niveen M. Khashab\* and Nikos Hadjichristidis\*

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### Te-induced fabrication of $\text{Pt}_3\text{PdTe}_{0.2}$ alloy nanocages by the self-diffusion of Pd atoms with unique MOR electrocatalytic performance

Yuhe Shi, Ling Zhang,\* Huiwen Zhou, Ruanshan Liu, Shichen Nie, Guojie Ye, Fengxia Wu, Wenxin Niu,\* Jing Long Han\* and Ai Jie Wang

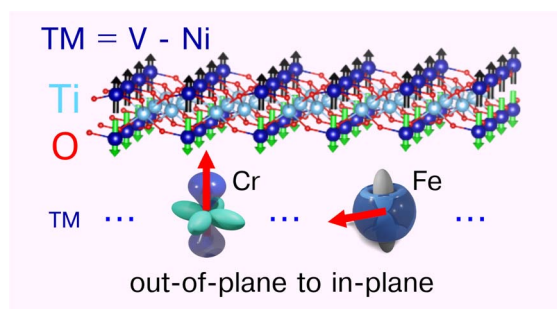


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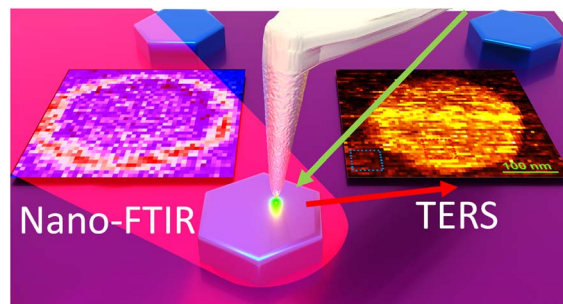
R. H. Aguilera-del-Toro, M. Arruabarrena, A. Leonardo and A. Ayuela\*



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**Local phonon imaging of AlN nanostructures with nanoscale spatial resolution**

Ilya Milekhin,\* Kirill Anikin, Nina N. Kurus, Vladimir G. Mansurov, Timur V. Malin, Konstantin S. Zhuravlev, Alexander G. Milekhin, Alexander V. Latyshev and Dietrich R. T. Zahn



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Han Liu, Fuming Zhang, Xinyu Lin, Jinggao Wu and Jing Huang\*

