

# Nanoscale Advances

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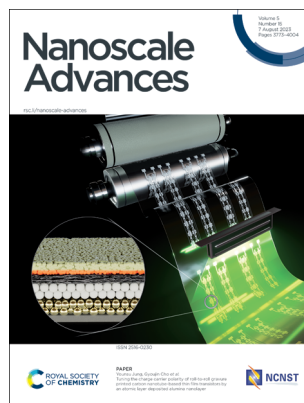
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ISSN 2516-0230 CODEN NAADAI 5(15) 3773–4004 (2023)



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See Riku Kawasaki, Atsushi Ikeda *et al.*, pp. 3857–3861. Image reproduced by permission of Riku Kawasaki from *Nanoscale Adv.*, 2023, 5, 3857.



### Inside cover

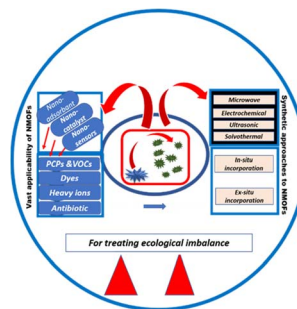
See Younsu Jung, Gyoujin Cho *et al.*, pp. 3879–3886. Image reproduced by permission of Gyoujin Cho from *Nanoscale Adv.*, 2023, 5, 3879.

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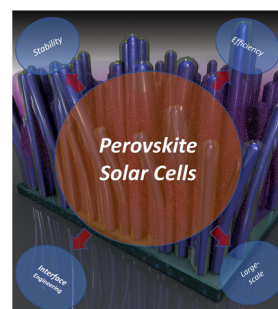
Indu Sharma, Jaspreet Kaur, Gargi Poonia, Surinder Kumar Mehta\* and Ramesh Kataria\*



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Rabia Sharif, Arshi Khalid, Syed Waqas Ahmad, Abdul Rehman, Haji Ghulam Qutab, Hafiz Husnain Akhtar, Khalid Mahmood,\* Shabana Afzal and Faisal Saleem



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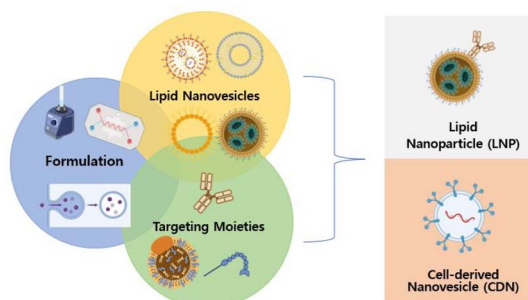


## REVIEWS

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**Strategies for targeted gene delivery using lipid nanoparticles and cell-derived nanovesicles**

Dong-yup Lee, Sivashanmugam Amirthalingam, Changyub Lee, Arun Kumar Rajendran, Young-Hyun Ahn and Nathaniel S. Hwang\*

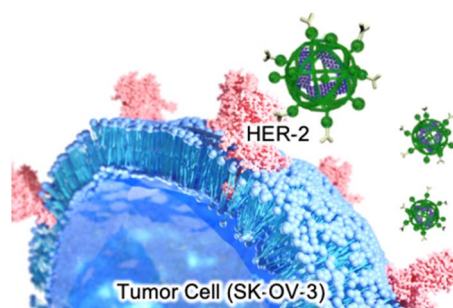


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**HER-2-targeted boron neutron capture therapy using an antibody-conjugated boron nitride nanotube/ $\beta$ -1,3-glucan complex**

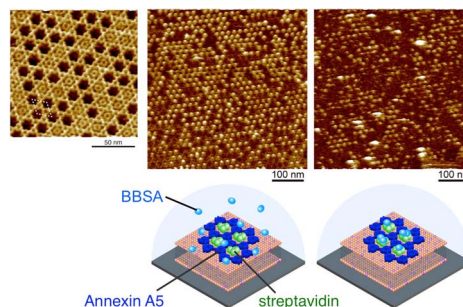
Keita Yamana, Riku Kawasaki,\* Kousuke Kondo, Hidetoshi Hirano, Shogo Kawamura, Yu Sanada, Kaori Bando, Anri Tabata, Hideki Azuma, Takushi Takata, Yoshinori Sakurai, Hiroki Tanaka, Tomoki Kodama, Seiji Kawamoto, Takeshi Nagasaki and Atsushi Ikeda\*



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**Protein nanoarrays using the annexin A5 two-dimensional crystal on supported lipid bilayers**

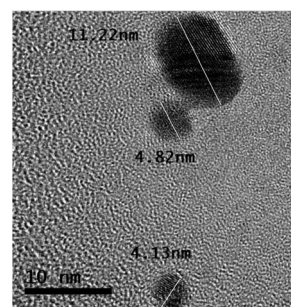
Hiroaki Kominami, Yoshiki Hirata, Hirofumi Yamada and Kei Kobayashi\*



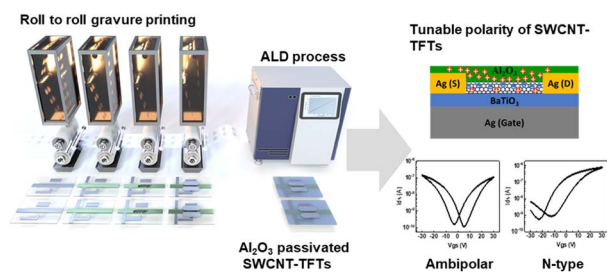
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**Developing tiny-sized particles, different modification behaviors of gold atoms, and nucleating distorted particles**

Mubarak Ali\* and I.-Nan Lin



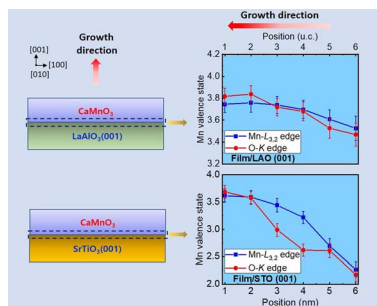
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### Tuning the charge carrier polarity of roll-to-roll gravure printed carbon nanotube-based thin film transistors by an atomic layer deposited alumina nanolayer

Wei Zhang, Sagar Shrestha, Sajjan Parajuli, Bijendra Bishow Maskey, Jinhwa Park, Hao Yang, Younsu Jung\* and Gyoujin Cho\*

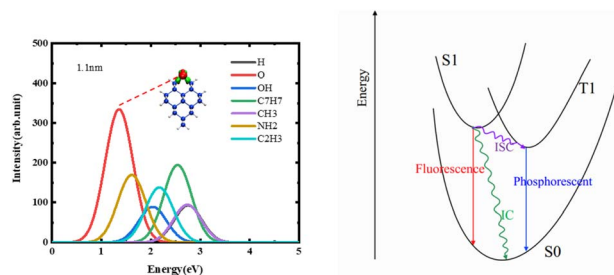
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### Strain-induced Mn valence state variation in $\text{CaMnO}_{3-\delta}$ /substrate interfaces: electronic reconstruction versus oxygen vacancies

Van-Hien Hoang, Nam-Suk Lee\* and Heon-Jung Kim\*

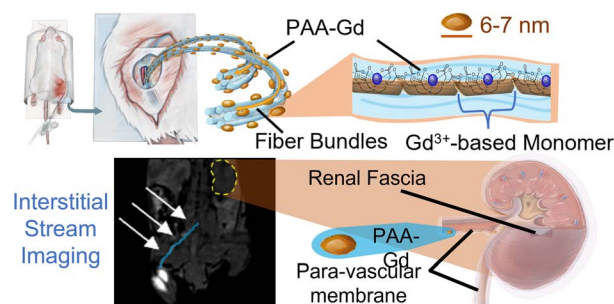
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### The luminescence mechanism of ligand-induced interface states in silicon quantum dots

Jian Zhou, Fengyang Ma, Kai Chen, Wuyan Zhao, Riyi Yang, Chong Qiao, Hong Shen, Wan-Sheng Su,\* Ming Lu, Yuxiang Zheng, Rongjun Zhang, Liangyao Chen and Songyou Wang\*

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### A robust MRI contrast agent for specific display of the interstitial stream

Xiaohan Zhou, Junwei Cheng, Fangfei He, Zhuo Ao, Peisen Zhang, Jing Wang, Qing Li, Weinan Tang, Yiyang Zhou, Yan Liang, Yi Hou,\* Wentao Liu\* and Dong Han\*

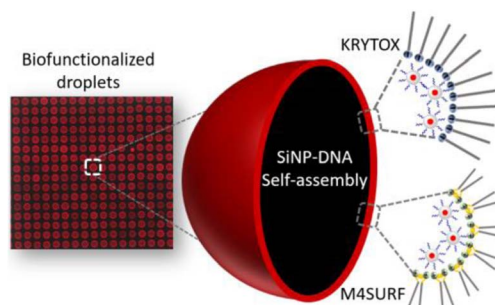




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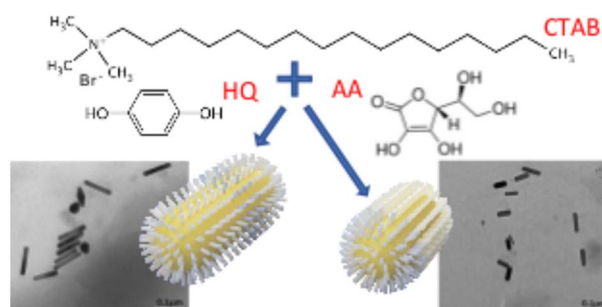
Sahana Sheshachala, Birgit Huber, Jan Schuetzke, Ralf Mikut, Tim Scharnweber, Carmen M. Domínguez,\* Hatice Mutlu\* and Christof M. Niemeyer\*



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### Gold nanorods derivatized with CTAB and hydroquinone or ascorbic acid: spectroscopic investigation of anisotropic nanoparticles of different shapes and sizes

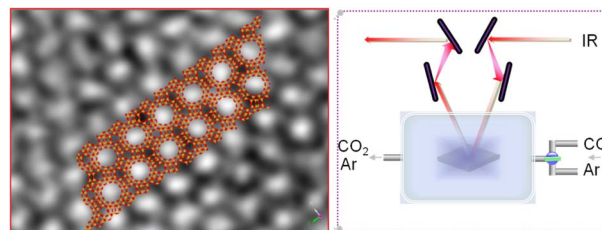
Simone Amatori, Alberto Lopez, Carlo Meneghini, Annarica Calcabrini, Marisa Colone, Annarita Stringaro, Sofia Migani, Ivan Khalakhan, Giovanna Iucci, Iole Venditti and Chiara Battocchio\*



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### In situ infrared CO detection using silver loaded EMT zeolite films

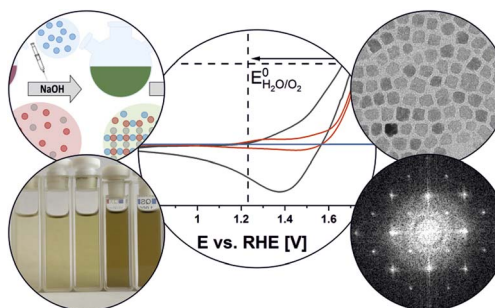
Yuda Wang, Haitao He, Jiao Sun,\* Xinyao Zhang, Mahmut Zulpaya, Xianhong Zheng, Lin Xu and Biao Dong



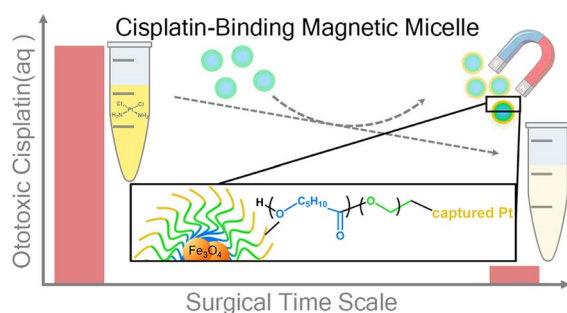
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### Size-controlled liquid phase synthesis of colloidal stable Co<sub>3</sub>O<sub>4</sub> nanoparticles

Johannes Kießling,\* Sabine Rosenfeldt and Anna S. Schenk\*



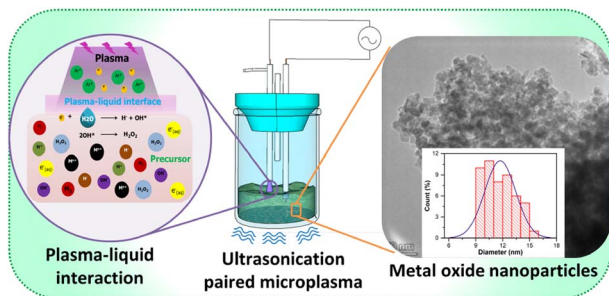
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### Chelate-functionalized magnetic micelles for sequestration of cisplatin

Kang Du, Pan Liao, Shengsong Yang, Dora von Trentini, Kushal Sharma, Xiaorui Shi, Christopher B. Murray, Daqing Li\* and Ivan J. Dmochowski\*

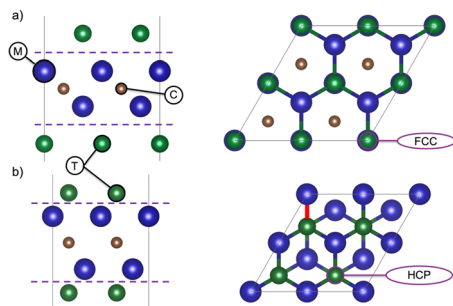
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### A simple microplasma reactor paired with indirect ultrasonication for aqueous phase synthesis of cobalt oxide nanoparticles

Sosiawati Teke, Md. Mokter Hossain, Roshan Mangal Bhattarai, Shirjana Saud, Avik Denra, Mai Cao Hoang Phuong Lan Nguyen, Adnan Ali, Van Toan Nguyen and Young Sun Mok\*

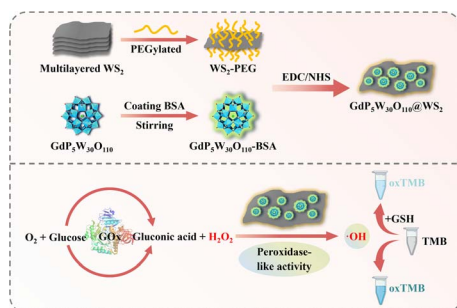
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### A systematic study of work function and electronic properties of MXenes from first principles

Khabib Yusupov,\* Jonas Björk and Johanna Rosen

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### A polyoxometalate-based heterojunction nanozyme with peroxidase-mimic catalytic activity for sensitive biomolecule detection

Guobo Du, Mingzhu Lv, Huan Wang, Chenghui Liu, Qiqi Xu, Jiajie Liu, Zhu Yang, Yuan Yong\* and Yunwei Han\*

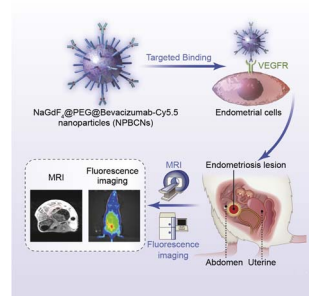


## PAPERS

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**Endometriosis-targeted MRI imaging using bevacizumab-modified nanoparticles aimed at vascular endothelial growth factor**

Qi Zhang, Shiman Wu, Yajie Li, Mao Lai, Qing Li, Caixia Fu, Zhenwei Yao\* and Junhai Zhang\*



## CORRECTION

4002

**Correction: Optimization and characterization of miRNA-129-5p-encapsulated poly (lactic-co-glycolic acid) nanoparticles to reprogram activated microglia**

Irina Kalashnikova, Heather R. Campbell, Daniel Kolpek and Jonghyuck Park\*

