

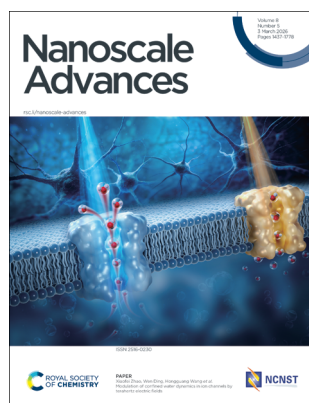
# Nanoscale Advances

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### Cover

See Xiaofei Zhao, Wen Ding, Hongguang Wang *et al.*, pp. 1512–1521. Image reproduced by permission of Hongguang Wang from *Nanoscale Adv.*, 2026, 8, 1512.

## EDITORIAL

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### Introduction to carbon nanoarchitectonics for advanced applications in energy, environment and bio

Katsuhiko Ariga,\* Lok Kumar Shrestha and Qingmin Ji

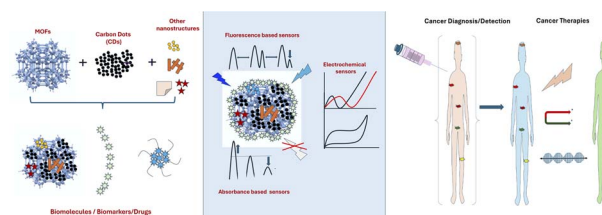


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### Carbon dots and metal–organic frameworks based nanohybrids for improved biosensing and biomedical applications

Tania P. Brito,\* Leonel Llanos and Dinesh P. Singh\*



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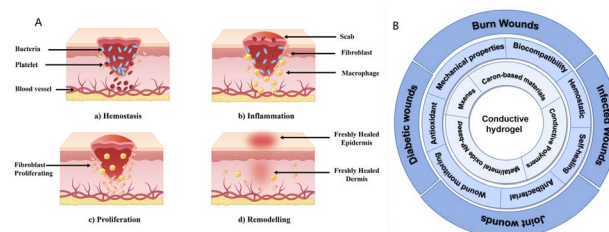
Fundamental questions  
Elemental answers

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Yun Lv, Yuting Li, Yueshuai Pan, Qianqian Li, Changfang Shi, Ruting Gu\* and Lili Wei\*

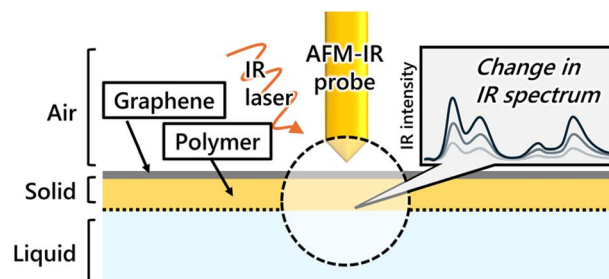


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Yasuhiko Fujita,\* Mariko Takahashi and Hirohmi Watanabe

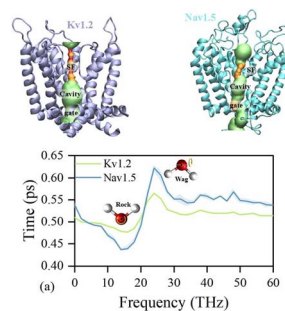


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## Modulation of confined water dynamics in ion channels by terahertz electric fields

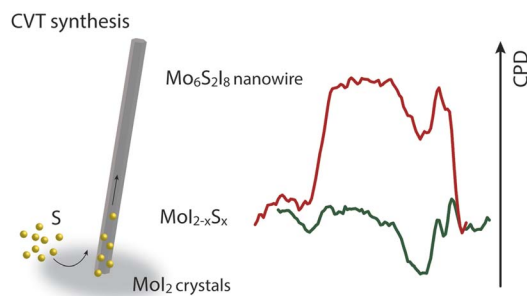
Xiaofei Zhao, Wen Ding, Hongguang Wang,\* Yongdong Li and Chunliang Liu



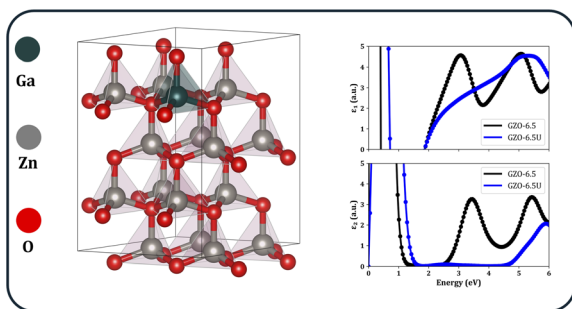
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Anja Pogačnik Krajnc,\* Janez Jelenc, Luka Pirker, Srečo D. Škapin and Maja Remškar



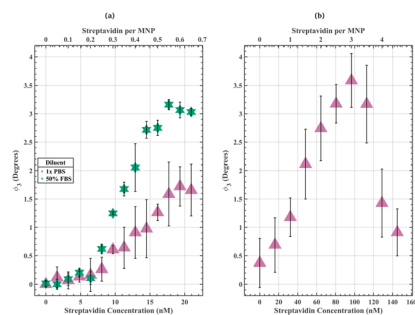
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### Gallium-doped zinc oxide semiconductor nanoparticles for plasmonic applications: a combined experimental and computational study

Naga Venkateswara Rao Nulakani, Yiqiang Chen, Alessandro Genovese, Rachid Sougrat and Dalaver Hussain Anjum\*

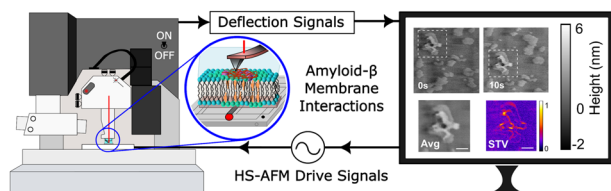
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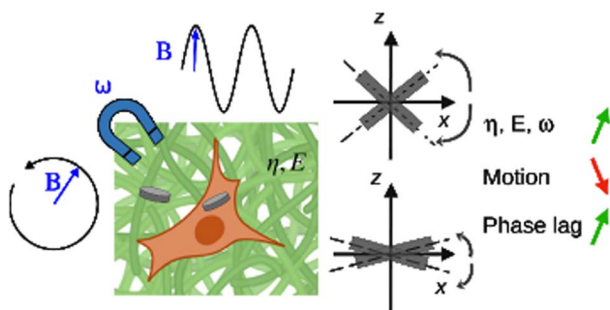
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Morgan Robinson, Loren Picco, Oliver D. Payton, Nikolas Zelem, Charlotte Baur, Michael A. Beazely, Mervyn J. Miles and Zoya Leonenko\*

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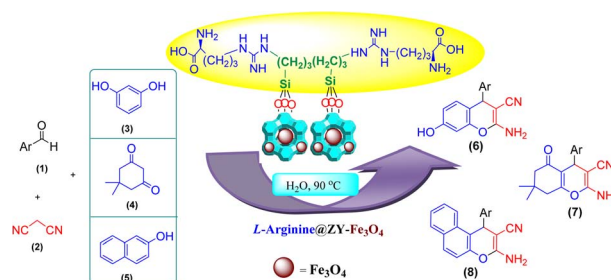
Andrea Visonà,\* Robert Morel, H el ene Joisten, Bernard Dieny and Alice Nicolas



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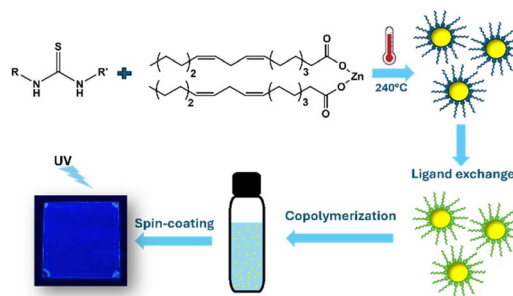
Mehdi Kalhor\* and Samira Zebardast



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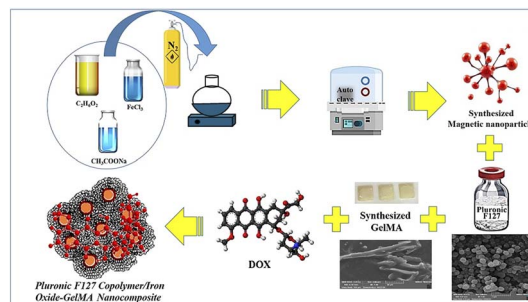
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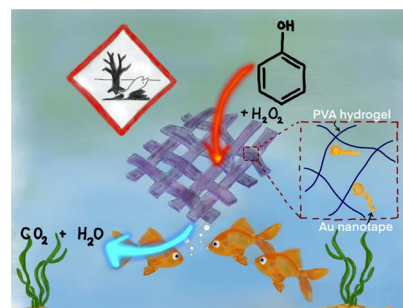
Reza Davarnejad,\* Kimia Haghighatnejad, Omid Sartipzadeh Hematabad, Zahra Mohammadpour,\* Majid Komijani and John F. Kennedy



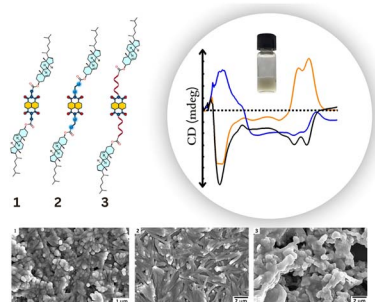
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### Atomically thin gold embedded in inkjet-printed PVA hydrogels: flexible catalysts for ambient phenol degradation

Nizzy James, Sean Collins, Quentin Ramasse, Kevin Critchley and Stephen D. Evans\*



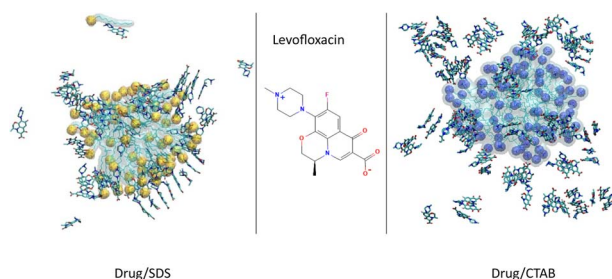
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### Unravelling the interplay between structures, self-assembly patterns, AIEE and chiroptical properties of NDI-bis-cholesteryl systems

Gargee Roy, Aakash Ravikant Likhar and Deepak Asthana\*

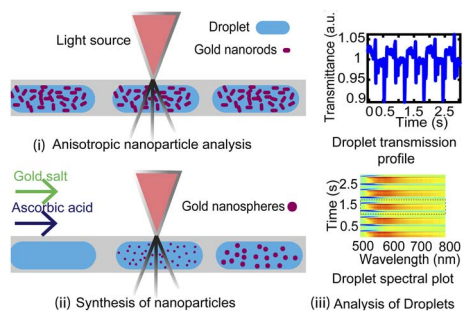
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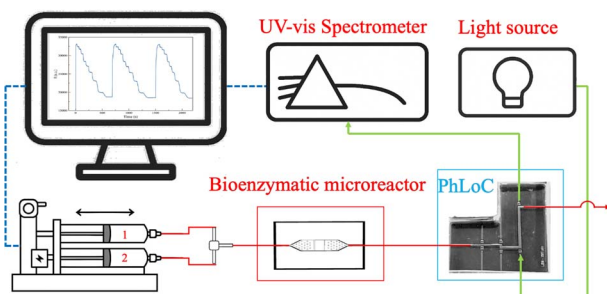
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### An enzymatic microfluidic sensor for $\beta$ -lactam antibiotics based on cross-linked ancestral $\beta$ -lactamase crystals

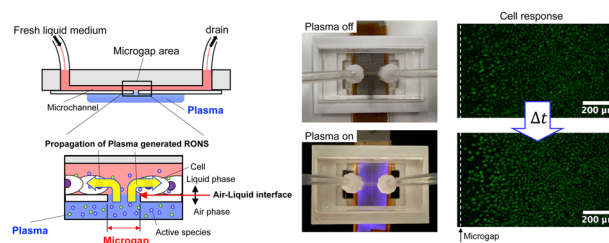
Isaac Rodríguez-Ruiz, Pablo Moya-Garrido, Valeria A. Rizzo, Sergio Martínez-Rodríguez, Sébastien Teychené, José Manuel Sanchez-Ruiz and José A. Gavira\*



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## Analysis of the effects of plasma-generated active species on cells cultured in a microperfusion system

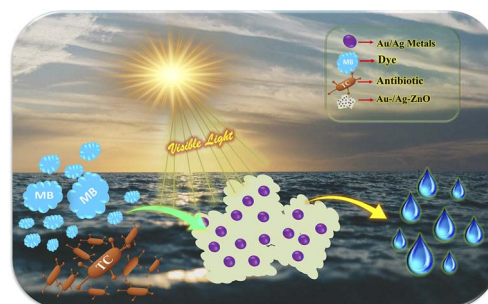
Hayata Okino and Shinya Kumagai\*



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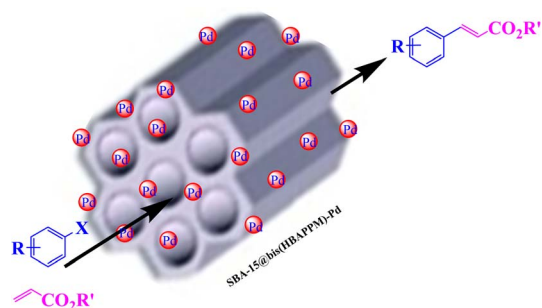
Asha Kumawat, Sunil Chichholiya, Mamta Devi Sharma, Poonam Kumari, Rajesh Kumar Meena and Pragati Fageria\*



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## A supported palladium Schiff-base complex on SBA-15 as a reusable supported catalyst in the Heck coupling reaction

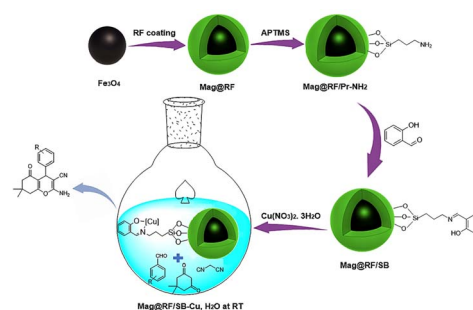
Amin Darabi, Mohsen Nikoorazm\* and Bahman Tahmasbi\*



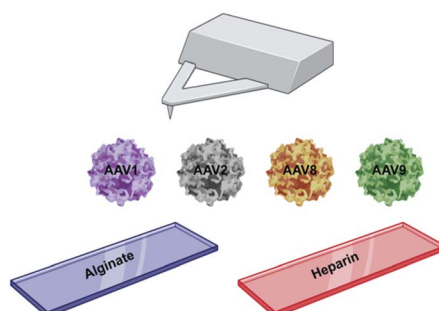
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Parivash Bazmayon, Dawood Elhamifar\* and Shiva Kargar



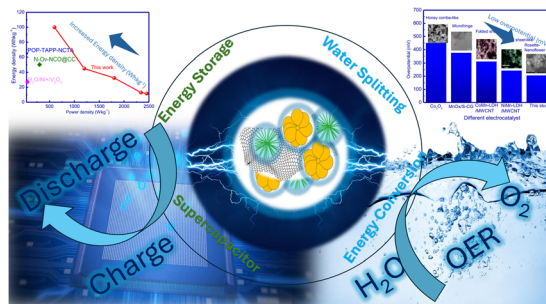
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John J. Amante, James R. Mandeville, Hannah Hargrove, Xiaohui Frank Zhang and Cathal J. Kearney

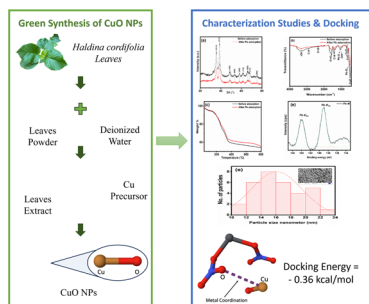
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Sammar Min Allah, Muhammad Kashif Aslam,<sup>\*</sup> Iftikhar Hussain, Muhammad Ehtasham ul-Haq, Ali H. Al-Marzouqi<sup>\*</sup> and Maowen Xu<sup>\*</sup>

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Nabila Shehata, Simranjeet Singh, Radhika Varshney, Pavithra N, Daljeet Singh Dhanjal and Praveen C. Ramamurthy<sup>\*</sup>

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