

# Analyst

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## IN THIS ISSUE

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### Cover

See Ryo Kato and Kaisei Maeda *et al.* pp. 6241–6247.

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## EDITORIAL

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### SPEC 2022: International Conference on Clinical Spectroscopy

Aidan D. Meade,\* Fiona M. Lyng and Hugh J. Byrne

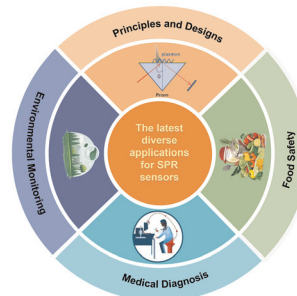


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### Surface plasmonic biosensors: principles, designs and applications

Hao Liu, Yusheng Fu, Rongzhi Yang, Jiuchuan Guo\* and Jinhong Guo\*



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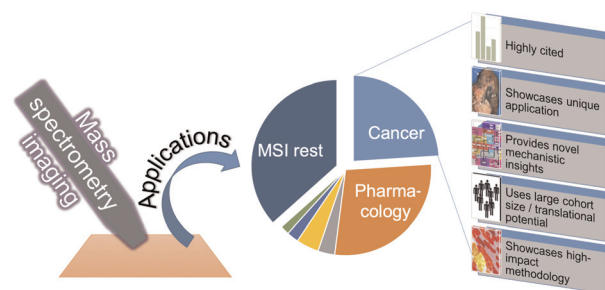


## CRITICAL REVIEWS

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## State-of-the-art mass spectrometry imaging applications in biomedical research

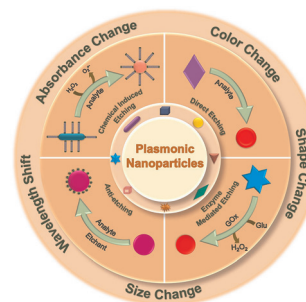
Kasper K. Krestensen, Ron M. A. Heeren and Benjamin Balluff\*



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## Plasmonic nanoparticle etching-based optical sensors: current status and future prospects

E. T. Athira and Jitendra Satija\*

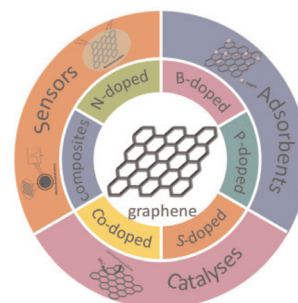


## TUTORIAL REVIEW

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## Advances in the synthesis of heteroatom-doped graphene-based materials and their application in sensors, adsorbents and catalysis

Ziwei Xian, Yanmei Chen, Na Li and Tao Zhu\*

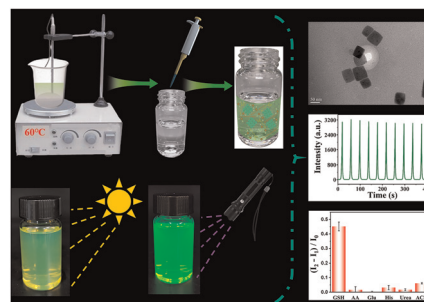


## COMMUNICATIONS

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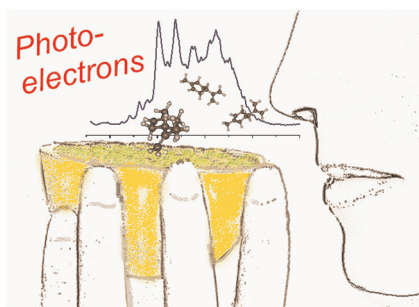
An improved ligand-assisted reprecipitation method to synthesize aqueous-phase CsPbBr<sub>3</sub> perovskite nanocrystals and investigate their electrochemiluminescence behavior

Xiaodong Luan, Shuochen Fan, Ke Xu, Haipeng Zhang, Xiaoyang Feng, Wenteng Zhang, Huaping Peng\* and Qile Li\*



## COMMUNICATIONS

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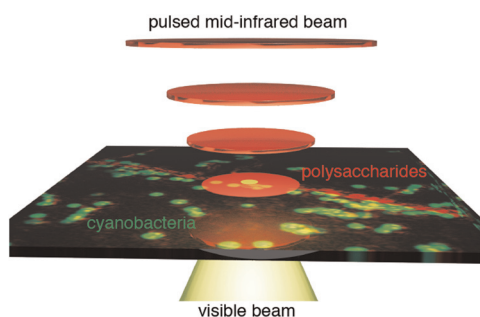


### Analysis of the volatile monoterpene composition of citrus essential oils by photoelectron spectroscopy employing continuously monitored dynamic headspace sampling

Hassan Ganjitabar, Rim Hadidi, Gustavo A. Garcia, Laurent Nahon and Ivan Powis\*

## PAPERS

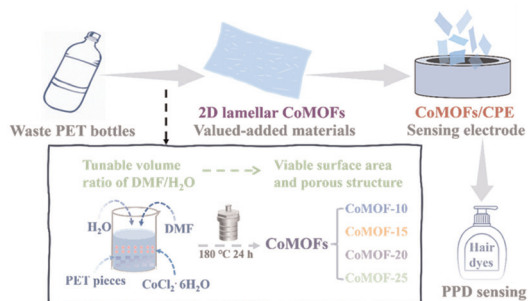
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### Label-free visualization of photosynthetic microbial biofilms using mid-infrared photothermal and autofluorescence imaging

Ryo Kato,\* Kaisei Maeda,\* Taka-aki Yano, Kan Tanaka and Takuo Tanaka

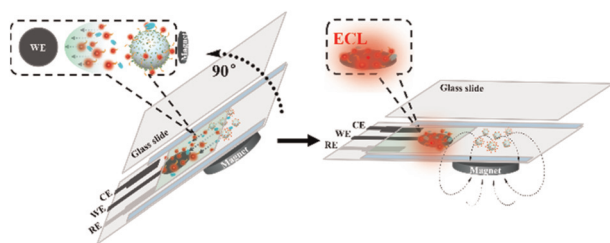
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### Co-based metal–organic frameworks synthesized from poly(ethylene terephthalate) waste plastics for rapid detection of *p*-phenylenediamine

Yanteng Xiao and Kangbing Wu\*

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### Disposable capillary-fill device for the determination of proteases incorporating elimination of light-shielding from the magnetic beads with cleavage of the electrogenerated chemiluminescence label-tagged peptide probe

Xiaolin Yang, Jie Li, Honglan Qi, Qiang Gao and Chengxiao Zhang\*

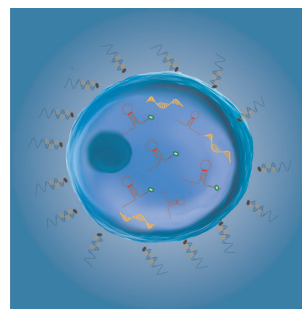


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### Long non-coding RNA (lncRNA) MALAT1 in regulating osteogenic and adipogenic differentiation using a double-stranded gapmer locked nucleic acid nanobiosensor

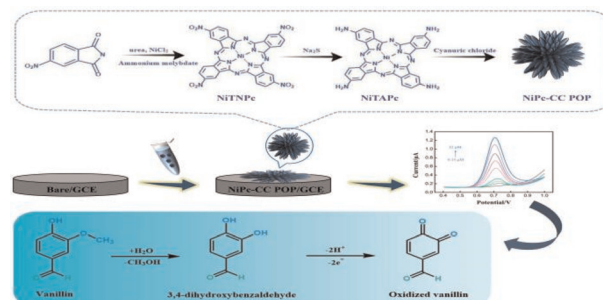
Samantha Fasciano, Shuai Luo and Shue Wang\*



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### Conductive phthalocyanine-based porous organic polymer as sensing platform for rapid determination of vanillin

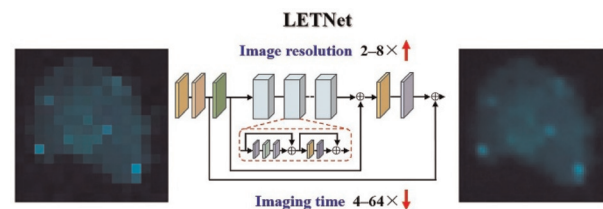
Gang Xiang, Wensi Xu, Wenfeng Zhuge, Qing Huang, Cuizhong Zhang and Jinyun Peng\*



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### Acceleration of high-quality Raman imaging via a locality enhanced transformer network

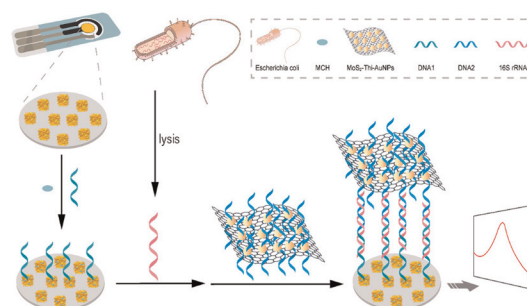
Shizhuang Weng,\* Rui Zhu, Yehang Wu, Cong Wang, Pan Li, Ling Zheng, Dong Liang\* and Zhangling Duan\*



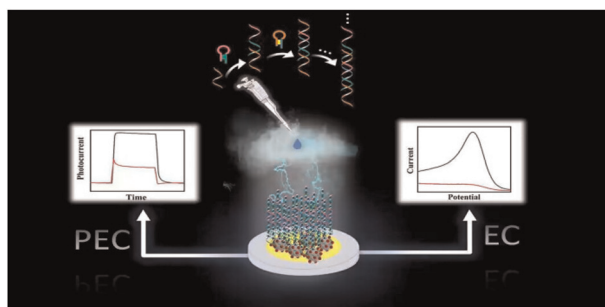
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### Construction of a point-of-care electrochemical biosensor for *Escherichia coli* 16S rRNA analysis based on MoS<sub>2</sub> nanoprobe

Lihui Yuwen, Xinyi Li, Liqun Wu, Yi Luo and Shao Su\*



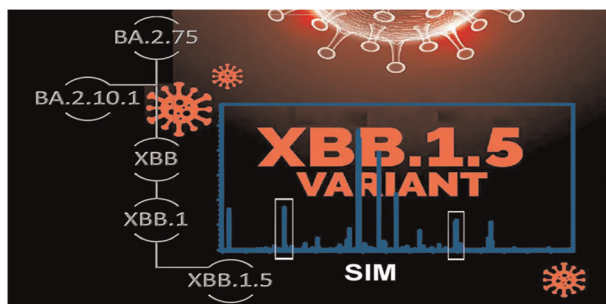
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### A dual-mode "signal-on" split-type aptasensor for bisphenol A via target-induced hybridization chain reaction amplification

You Wu, Zheng Wang, Jing Li, Jingjing Yang, Yinzhao Shen, Hongbo Li, Xiao-Ya Hu and Qin Xu\*

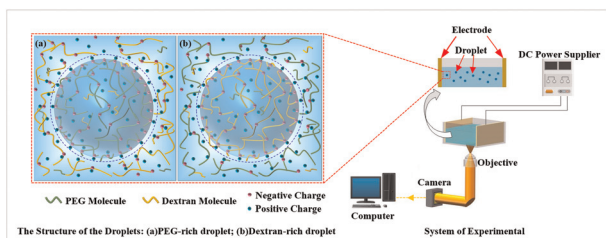
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### Distinguishing common SARS-CoV2 omicron and recombinant variants with high resolution mass spectrometry

Henry E. Lanyon, Benjamin P. Todd and Kevin M. Downard\*

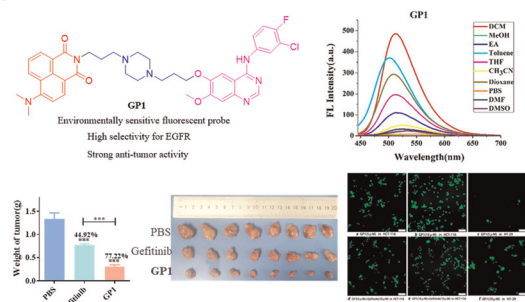
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### Surface charging and electrophoretic behavior of conductive polymer micro-droplets in conductive polymer liquid solutions

Deyu Li, Yongxin Song\* and Dongqing Li\*

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### Design, synthesis and biological evaluation of small molecule fluorescent probes targeting EGFR for tumor detection and treatment

Depu Song, Tengli Ding, Weibin Zhai, Lulian Shao, Ning Guo, Lei Jiang, Wei Zhang, Fenqin Zhao, Jianhong Wang, Junfeng Wang, Jing Ma\* and Lin Yan\*

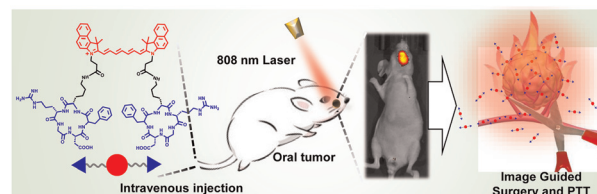


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 **$\alpha\beta 3$  integrin-targeted ICG-derived probes for imaging-guided surgery and photothermal therapy of oral cancer**

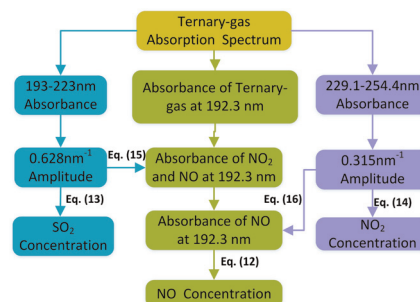
Changhe Men, Yuqi Zhang, Peiyang Shi, Zichun Tang\* and Xiaju Cheng\*



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**Quantitative analysis of SO<sub>2</sub>, NO<sub>2</sub> and NO mixed gases based on ultraviolet absorption spectrum**

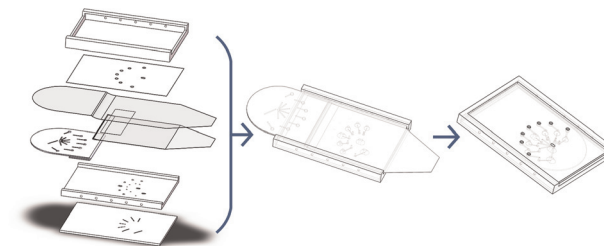
Yibiao Yang, Jinhuan Li, Zihui Zhang,\* Jianing Wang\* and Guanyu Lin



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**A film-linked electrostatic self-assembly microfluidic chip**

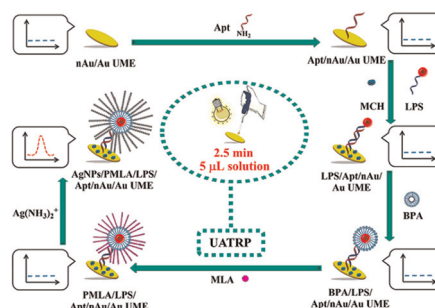
Gege Ding, Junsheng Wang,\* Yuezhu Wang, Chunxu Li, Runze Li, Jie Wen, Jianan Luo, Qiaochan Yu, Junhua Zhou and Xiongfei Geng

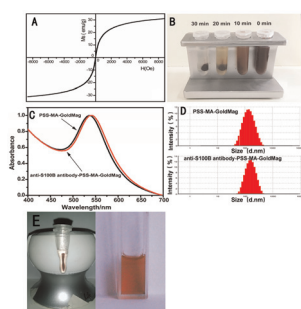


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**Ultramicro and ultrasensitive detection of lipopolysaccharides based on triple-signal amplification via ultrafast ATRP and an ultramicroelectrode**

Shipeng Jiang, Mingyang Sun, Peiran Meng, Xiaoyu Zhang and Yue Sun\*





## A biosensor for S100B detection based on PSS-MA-GoldMag-LFIA in early clinical diagnosis of brain damage

Xiaomei Zhang, Qinlu Zhang, Songdi Wu, Kai Hua\* and Yali Cui\*

