

# Analyst

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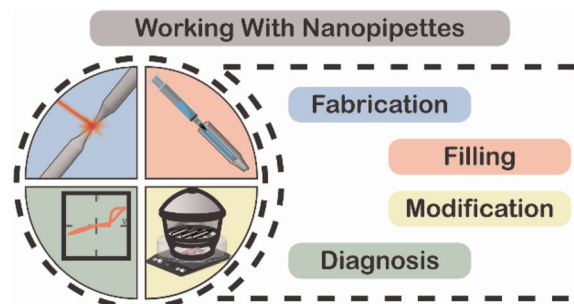
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Haitao Yu from *Analyst*,  
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### A practical guide to working with nanopipettes

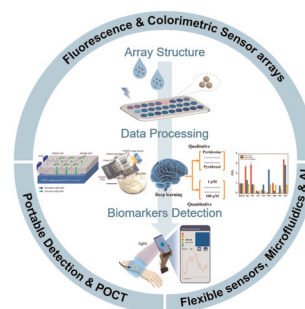
Dominik Duleba, Adria Martínez-Aviñó and  
Robert P. Johnson\*



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### Recent advances in fluorescence-colorimetric sensor arrays and their applications in biomedical fields

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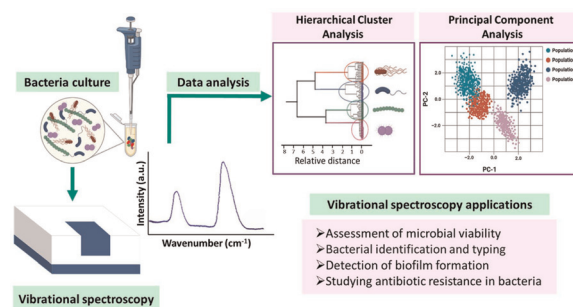
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## TUTORIAL REVIEWS

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### Vibrational spectroscopy combined with chemometric approaches in bacterial studies: a review of recent advances and applications

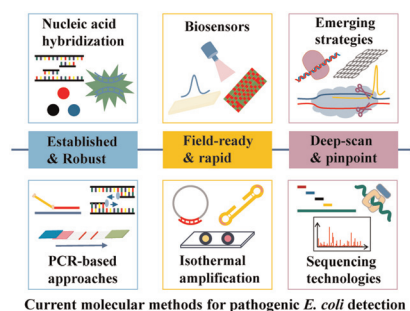
Maryam Kazemi, Arash Mahboubi, Reza Jahani\* and Hamid Reza Moghimi\*



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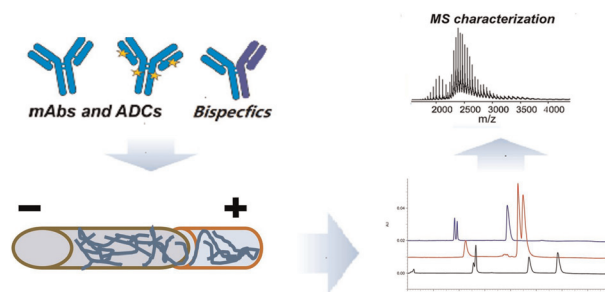


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### Recent advances and applications of capillary electrophoresis-sodium dodecyl sulfate for characterization and fragment identification of monoclonal antibodies and their derivatives

Yalan Yang, Meng Li, Gangling Xu, Yongbo Ni, Luyun Guo and Chuanfei Yu\*

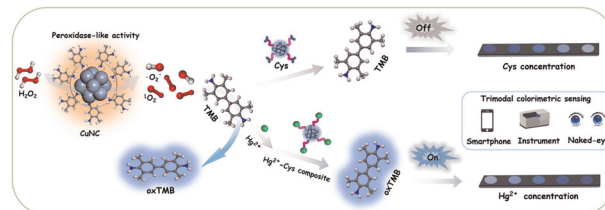


## COMMUNICATIONS

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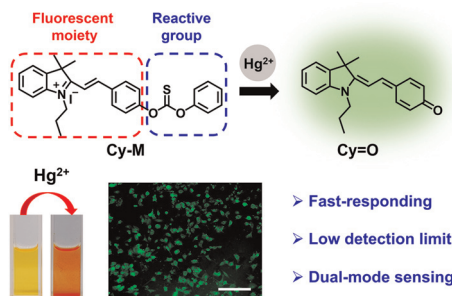
### A valence-state-defect-mediated copper nanocluster nanozyme with high peroxidase-like activity for multimodal colorimetric detection of mercury(II)

Zhong-Xia Wang,\* Peng Shan, Ze-Yu Sun, Weijie Ding, Fen-Ying Kong, Heng-Ye Li and Wei Wang\*



## COMMUNICATIONS

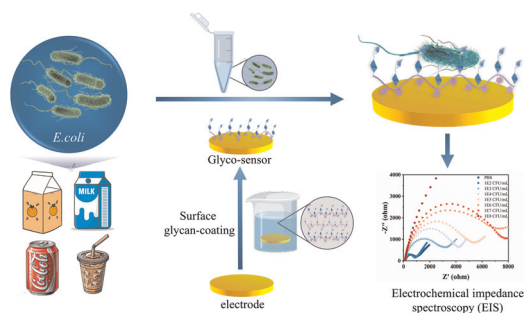
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### A fast-responding dual-mode probe for colorimetric and turn-on fluorescence sensing of mercury(II) in water and living cells

Yanxin Wu, Huiyuan Wang, Kai Wei, Chendong Ji\* and Meizhen Yin\*

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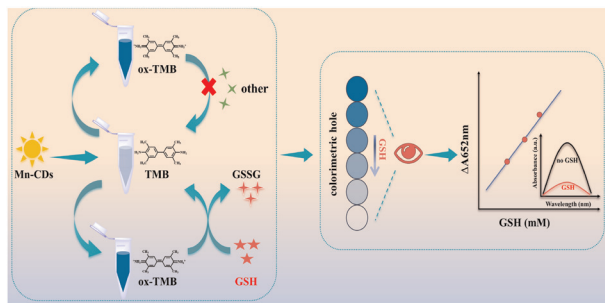


### Protection-free fabrication of glycopolymer-decorated electrodes for label-free electrochemical detection of pathogenic bacteria

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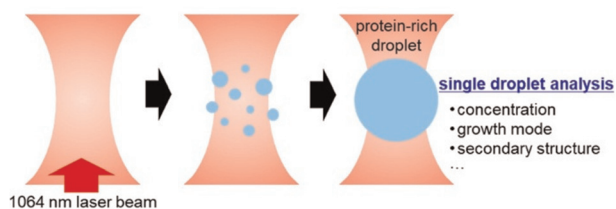


### H<sub>2</sub>O<sub>2</sub>-free colorimetric sensing platform of Mn-doped carbon dots with oxidase-mimetic activity for the detection of glutathione in liver disease serum

Lin Bo, Lili Jiang, Zhaogui Deng, Minmin Xu, Yifei Liu, Hui Zhang, Xianwei Zuo\* and Haitao Yu\*

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### Optical tweezers for controlling LLPS



### Microanalysis of a single droplet produced by optical tweezers in an aqueous solution of bovine serum albumin

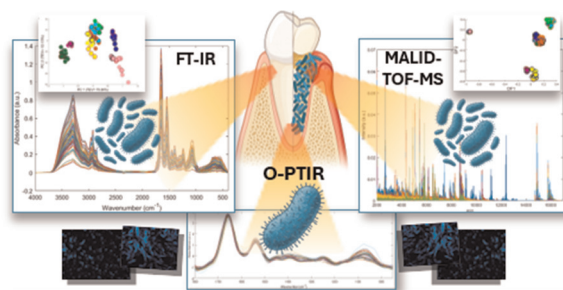
Ayana Takayanagi, Yasuyuki Tsuboi and Ken-ichi Yuyama\*



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### Metabolic fingerprinting of periodontal bacteria: a multi-scale mass spectrometry and vibrational spectroscopy approach

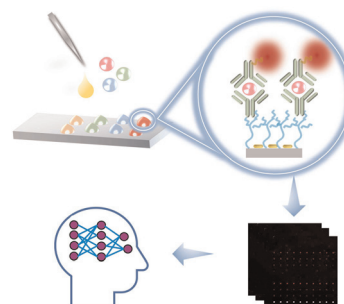
Jawaher Albahri, Daniel Smaje, Yun Xu, Steven Robinson, Heather Allison, Kathryn A. Whitehead and Howbeer Muhamadali\*



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### Development of liquid biopsy for screening colorectal cancer through the combination of an antibody microarray-based metal-enhanced sandwich immunofluorescent assay of cytokines with machine learning

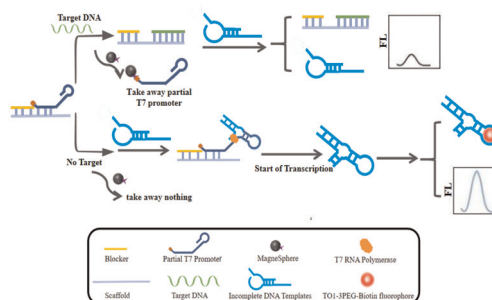
Wanyu Zhang, Shasha Li, Xudong Sun and Zhenxin Wang\*



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### A fluorescence biosensor based on a cell-free transcription system for species-specific DNA sequence detection and seahorse product identification

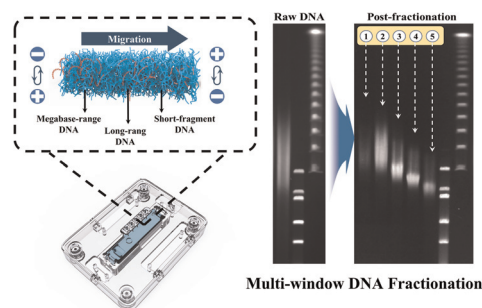
Linyue Tang, Qian Xie, Ming Chen, Cuiying Lin,\* Fang Luo, Zhongqin Li\* and Zhenyu Lin\*



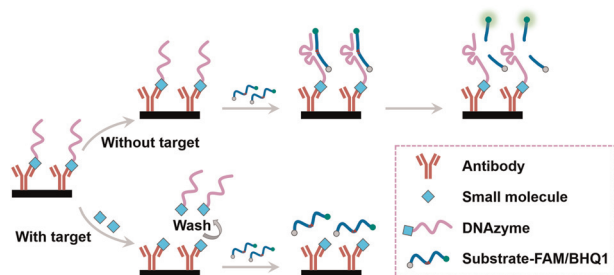
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### Integrated microfluidic platform for programmable multi-window DNA fractionation and *in situ* recovery

Dongliang Li, Chunlei Yang, Leiyang Xu, Tao Zeng, Xiao Shi, Quanxin Yun,\* Yuliang Dong\* and Yuning Zhang\*



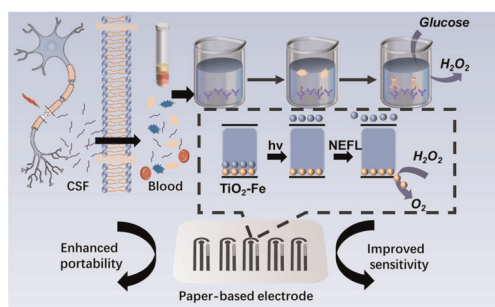
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### A DNAzyme amplifier-based immunoassay for small molecule detection

Han Pang and Qiang Zhao\*

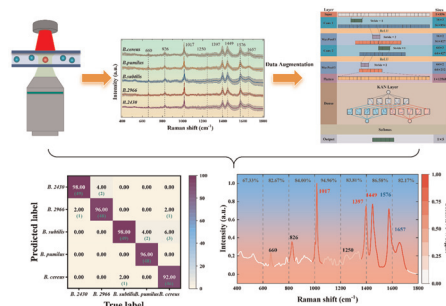
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### Transition metal doping boosting paper-based photoelectrochemical immunosensing for neurofilament light chain protein detection

Cheng-Hua Xu, An-Yang Tao, Mei-Qing Meng, Xi-Le Zhang, Cheng Fang, Feng-Zao Chen\* and De-Man Han\*

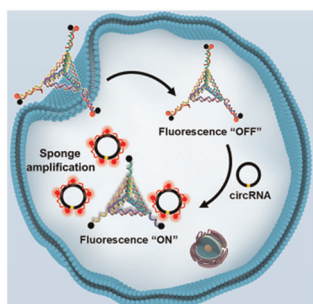
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### Boosting living *Bacillus* spore identification: Kolmogorov–Arnold network-guided convolutional neural network combined with laser tweezers Raman spectroscopy

Yifan Sun, Xiao Peng, Fusheng Du, Lin He, Yuan Lu,\* Yufeng Yuan\* and Junle Qu

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### Sensitive detection and accurate bioimaging of circRNA based on sponge amplification using a DNA tetrahedral nanoprobe

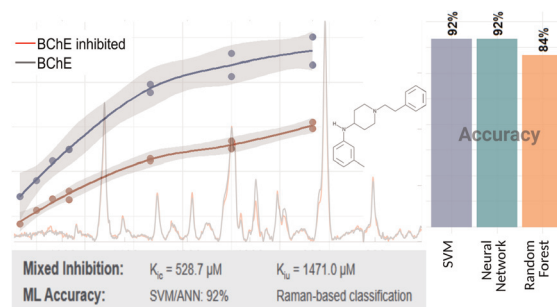
Gege Xie, Shengrong Yu,\* Rong Feng, Jingwen Chen, Yiming Wang, Haorong Liu, Yong-Xiang Wu,\* Shengjia Yu\* and Keqi Tang\*



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### Characterizing DPPM inhibition of butyrylcholinesterase: integrated enzymatic kinetics and Raman spectroscopy with chemometric analysis

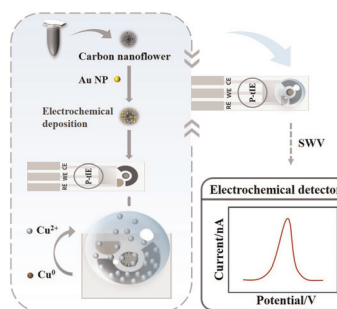
Aubrey Barney, Ashley Newland, Abraham Olayeri, Jan Halámek and Lenka Halámková\*



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### Electrochemical determination of copper in seawater based on a patch-type integrated electrode modified with gold nanoparticle-decorated carbon nanoflowers

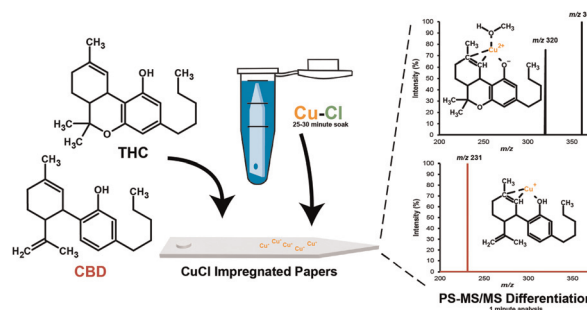
Shengjie Chu, Fei Pan, Yuxuan Zhang, Haitao Han,\* Dawei Pan and Xueping Hu\*



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### Computational and design of experiment strategies to improve differentiation and quantitation of trace-level cannabinoids by copper cationization paper spray mass spectrometry

Jindar N. S. Sbotto and Chris G. Gill\*



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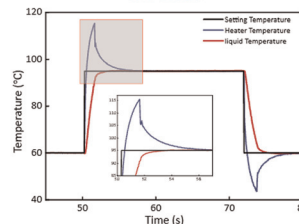
### A reagent-centred thermal control system driven by a cascade temperature control algorithm for high-speed PCR

Yuheng Luo, Wangyang Hu, Jiajia Wu, Baoce Sun, Gang Jin\* and Qiang Xu\*

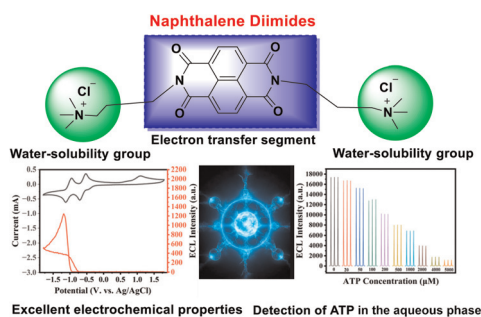
Conventional PCR  
~60min



Reagent-Centred Control  
~4.4 min



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**Dramatically enhancing electrochemiluminescence performance in the aqueous phase using naphthalene diimides with excellent electron-transfer capability and water solubility**

Dalong Xu, Yuqi Wang, Mingxiu Tian, Liuxiang Chen and Zhengang Han\*

## CORRECTIONS

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**Correction: Synchrotron-based infrared microspectroscopy unveils the biomolecular response of healthy and tumour cell lines to neon minibeam radiation therapy**

R. González-Vegas, O. Seksek, A. Bertho, J. Bergs, R. Hirayama, T. Inaniwa, N. Matsufuji, T. Shimokawa, Y. Prezado, I. Yousef and I. Martínez-Rovira\*

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**Correction: High-sensitivity SpectroChip-integrated LFIA platform for rapid point-of-care quantification of cardiovascular biomarkers**

Cheng-Hao Ko\* and Wei-Yi Kong

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**Correction: Highly-selective and sensitive plasmon-enhanced fluorescence sensor of aflatoxins**

Tetyana Sergeyeva,\* Daria Yarynka, Vitaly Lytvyn, Petro Demydov, Andriy Lopatynskiy, Yevgeny Stepanenko, Oleksandr Brovko, Anatoliy Pinchuk and Volodymyr Chegel\*

