

## IN THIS ISSUE

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### Cover

See Haimei Mao,  
Hongliang Zhao, Yi Wan *et al.*,  
pp. 1235–1247.

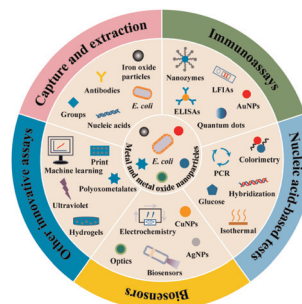
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*Analyst*, 2025, **150**, 1235.

## TUTORIAL REVIEW

1206

### Recent advances in metallic and metal oxide nanoparticle-assisted molecular methods for the detection of *Escherichia coli*

Linlin Zhuang, Jiansen Gong, Di Zhang, Ping Zhang,  
Ying Zhao, Li Sun, Jianbo Yang, Yu Zhang\* and  
Qiuping Shen\*

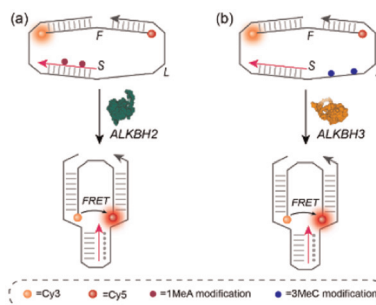


## COMMUNICATION

1229

### “Repair and fold” DNA nanotweezers for measuring DNA alkylation repair mediated by ALKBH

Fengze Jiang, Cui Zhang, Xiangnan Wang, Yuan Yin,  
Jieling Hong,\* Hao Tang, Li-Juan Tang and  
Zhenkun Wu\*



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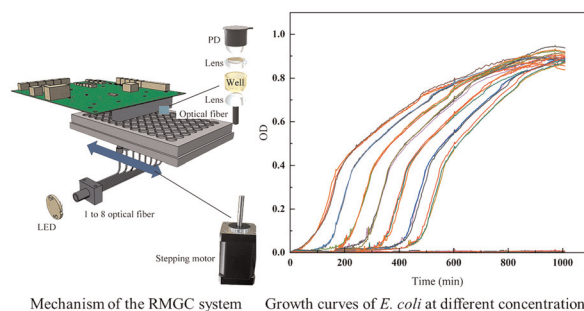


## PAPERS

1235

### Real-time microbial growth curve (RMGC) system: an improved microplate reader with a graphical interface for automatic and high-throughput monitoring of microbial growth curves

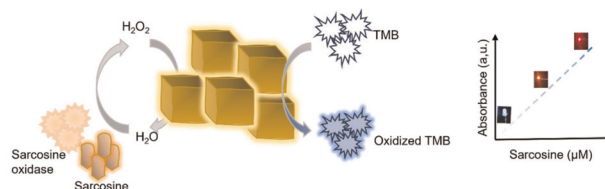
Yongjie Zhong, Zhuoyuan Lai, Changhua He, Shengsen Peng, Tianci Guo, Hui Yang, Fan Yang, Yi Shen, Zhengliang Huang, Zhaoyong Fu, Kelin Wang, Fengge Song, Jinghao Yang, Masoud Negahdary, Haimei Mao,\* Hongliang Zhao,\* Yi Wan,\* Khaydar E. Yunusov and Abdushkur A. Sarimsakov



1248

### Copper nanocubes as low-cost enzyme mimics in a sarcosine-sensing reaction cascade

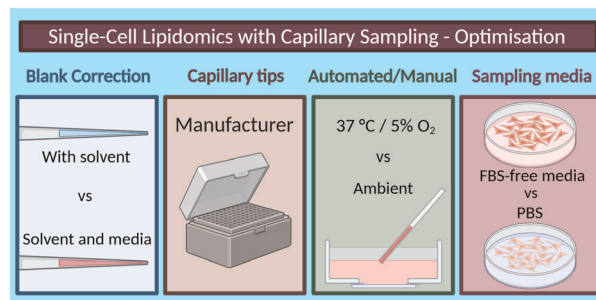
Anuja Tripathi\* and Mark P. Styczynski\*



1261

### Single-cell lipidomics: protocol development for reliable cellular profiling using capillary sampling

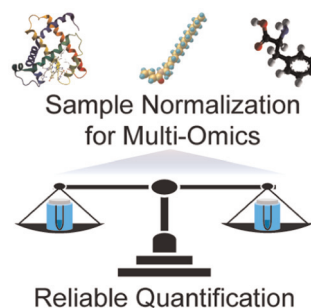
Anastasia Kontiza, Johanna von Gerichten, Matt Spick, Emily Fraser, Catia Costa, Kyle D. G. Saunders, Anthony D. Whetton, Carla F. Newman and Melanie J. Bailey\*



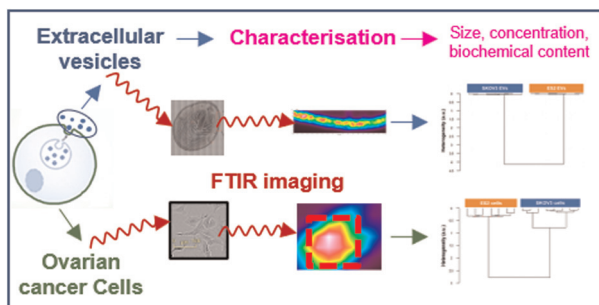
1271

### Evaluating sample normalization methods for MS-based multi-omics and the application to a neurodegenerative mouse model

Gwang Bin Lee, Cha Yang, Fenghua Hu and Ling Hao\*



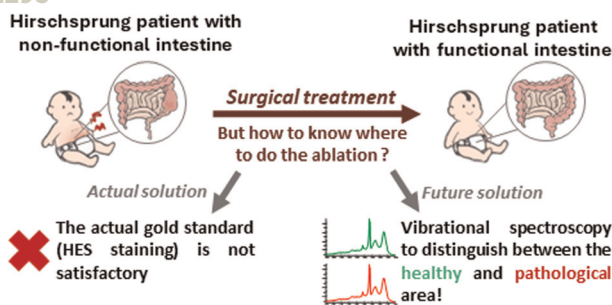
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### Extracellular vesicles derived from ovarian cancer cell lines discriminated by biochemical and Fourier transform infrared spectroscopy approaches

Lefkothea Pantazi, Valérie Untereiner, Paolo Rosales, Romain Rivet, Sandra Audonnet, Isabelle Prout, Laurent Ramont, Ganesh D. Sockalingum\* and Stéphane Brézillon\*

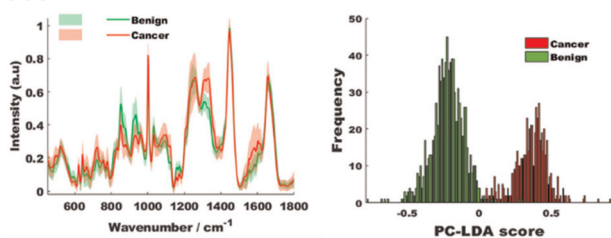
1293



### Tissue analysis by vibrational spectroscopy in Hirschsprung disease: feasibility and potential as a new intraoperative tool

C. Combescot, O. Piot,\* V. Untereiner, A. Durlach and F. Laconi

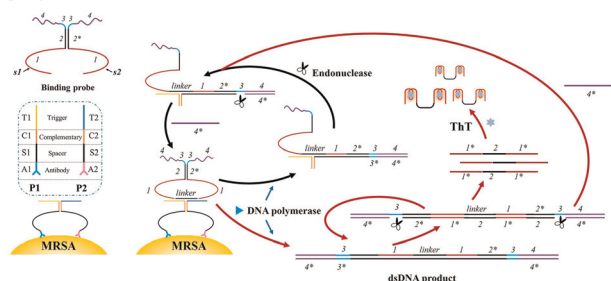
1303



### Raman spectroscopy of ovarian and peritoneal tissue in the assessment of ovarian cancer

Diana Frimpong, Angela C. Shore, Benjamin Gardner, Claire Newton, Joya Pawade, Jonathan Frost, Laura Atherton and Nick Stone\*

1310



### Dual proximity ligation mediated chain extension and displacement assisted signal cycles for sensitive and accurate methicillin-resistant *Staphylococcus aureus* (MRSA) detection

Huali Xu,\* Xiangke Yang, Wen Wang and Xiaomin Yuan

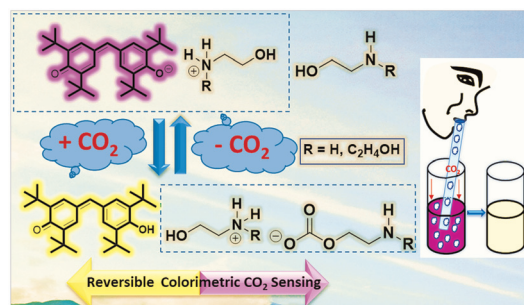


## PAPERS

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### Molecular combination between alkanolamines and galvinal for ratiometric colorimetric sensing of CO<sub>2</sub> gas

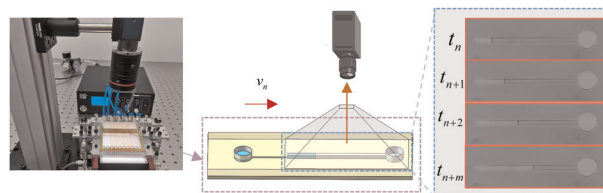
Ajay Kumar Sharma, Poonam Sharma, Pushkar Mehara and Pralay Das\*



1326

### Measurement of fluid viscosity based on pressure-driven flow digital-printed microfluidics

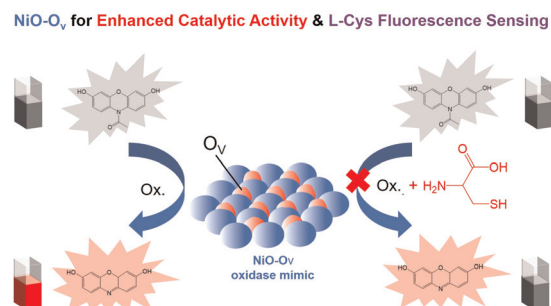
Yan Ge, Xingxing Huang, Baojian Zhang, Zhixiong Song, Xusheng Tang, Shuai Shao, Lujiale Guo, Peng Liang\* and Bei Li\*



1338

### Oxygen vacancy-enriched NiO nanozymes achieved *via* facile annealing in argon for detection of L-Cys

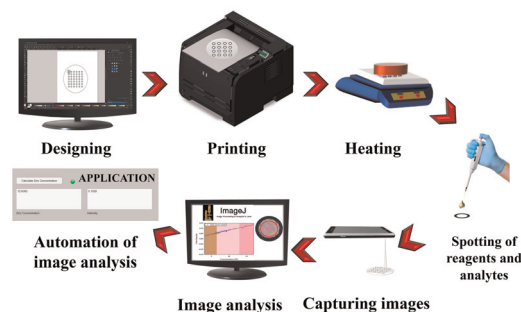
Sihua Wu, Jinhui Zou, Baohua Zhang,\* Jiantian Lu, Guanrong Lin, Yuwei Zhang\* and Li Niu



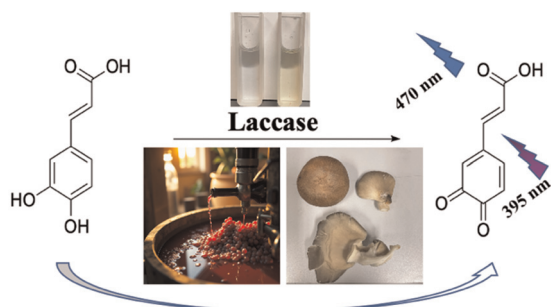
1347

### Paper-based microfluidic device for serum zinc assay by colorimetry

Kalpita Nath, Debasish Sarkar\* and Sunando DasGupta\*



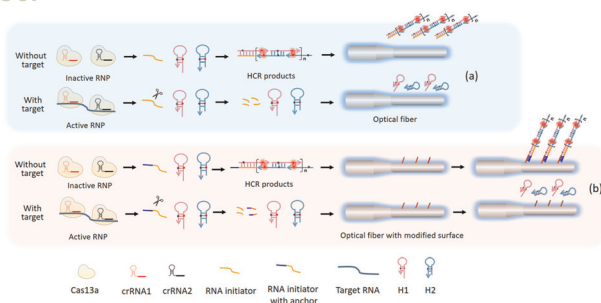
1361



### A highly sensitive caffeic acid fluorescent probe for detecting laccase in grape juice and mushrooms

Haolin Zhang, Zixu He, Xiaofan Zhang and Xiaohua Li\*

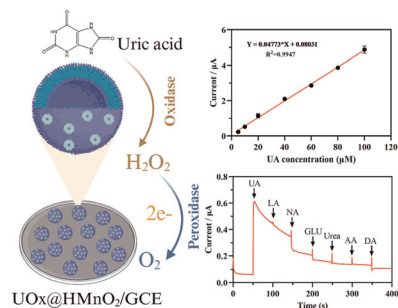
1367



### A CRISPR/Cas13a-based and hybridization chain reaction coupled evanescent wave biosensor for SARS-CoV-2 gene detection

Yang Li, Yikan Zhao, Zhihao Yi and Shitong Han\*

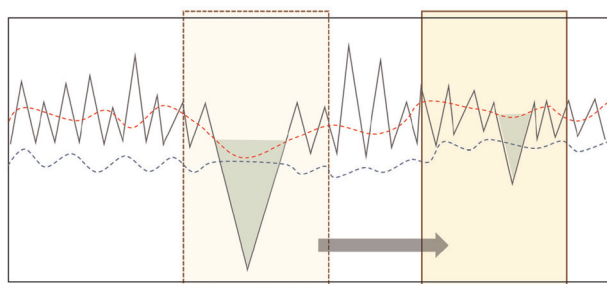
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### A UOx@HMnO<sub>2</sub> biozyme-nanozyme driven electrochemical platform for specific uric acid bioassays

Chenlong He, Huawei Liu, Ming Yin, Jing Chen, Wensi Huang, Han Zhou, Shengming Wu and Yilong Wang\*

1386



### A robust signal processing program for nanopore signals using dynamic correction threshold with compatible baseline fluctuations

Guohao Xi, Jimeng Su, Jie Ma, Lingzhi Wu and Jing Tu\*

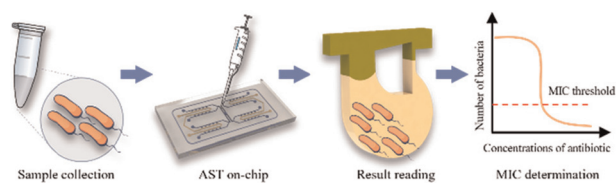


## PAPERS

1398

## An integrated microfluidic chip for rapid and multiple antimicrobial susceptibility testing

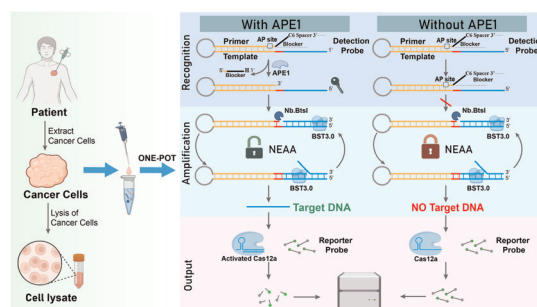
Zirui Pang, Lulu Shi, Mingyu Wang\* and Jifang Tao\*



1409

## Nicking enzyme assisted amplification combined with CRISPR-Cas12a system for one-pot sensitive detection of APE1

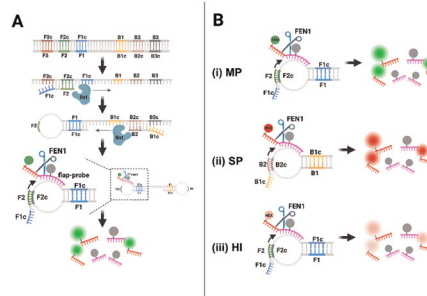
Wei Dai, Han Wang, Hanxu Ji, Xian Xiao, Yiyuan Li, Dayang Jiang, Yangkang Luo, Xianjin Xiao, Bei Yan, Jie Yu\* and Longjie Li\*



1419

## FEN1-assisted LAMP for specific and multiplex detection of pathogens associated with community-acquired pneumonia

Guopeng Teng, Gongde Lin, Pengfan Wei, Lizhi Li\*, Hongyuan Chen, Qingquan Chen\* and Qiuyuan Lin\*



1427

## Exploring the potential of Fourier transform-infrared spectroscopy of urine for non-invasive monitoring of inflammation associated with a kidney transplant

Elie Sarkees, Vincent Vuiblet, Fayek Taha and Olivier Piot\*

