## **Analytical Methods**

#### rsc.li/methods

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

#### IN THIS ISSUE

ISSN 1759-9679 CODEN AMNECT 17(24) 4875-5080 (2025)



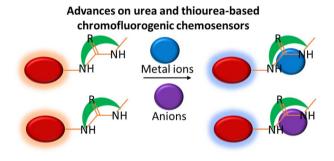
#### Cover Image reproduced by permission of Joanna Kasprzyk-Pochopień. The image was created using Google Gemini Al.

#### **CRITICAL REVIEWS**

4884

#### Urea/thiourea-based chromofluorogenic chemosensors for metal ions and anions

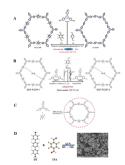
Patitapaban Mohanty, Pragyan Parimita Dash, Swagatika Mishra, Arup Kumar Ghosh,\* Bigyan Ranjan Jali\* and Suban K. Sahoo\*



4914

#### Advances in fluorine-containing materials for sample preparation in the food field

Jichao Liu, Xiuzhuang Li,\* Jiaojiao Yu and Xueyuan Zhou







# At the heart of open access for the global chemistry community

#### **Editor-in-chief**

**Russell J Cox** 

Leibniz Universität Hannover, Germany

#### We stand for:



**Breadth** We publish work in all areas of chemistry and reach a global readership



Quality Research to advance the chemical sciences undergoes rigorous peer review for a trusted, society-run journal



Affordability Low APCs, discounts and waivers make publishing open access achievable and sustainable



**Community** Led by active researchers, we publish quality work from scientists at every career stage, and all countries

### **Submit your work now**

rsc.li/rsc-advances

@RSC\_Adv

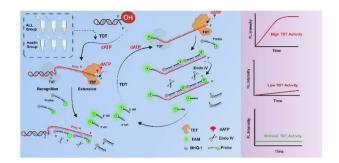
Article Online

#### COMMUNICATION

#### 4930

### Endo IV-assisted cascade amplification for ultrasensitive TdT detection in acute lymphoblastic

Juan Wang, Jia Wu, Yue Zhou, Ting Chen, Dongli Wang, Bei Yan\* and Hongyan Wang\*

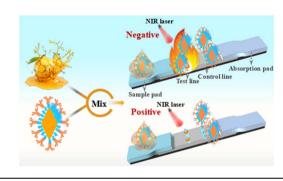


#### **PAPERS**

#### 4935

Detection of bitter limonin in citrus samples using plasmonic gold nanobipyramid-based dual-mode lateral flow immunoassay

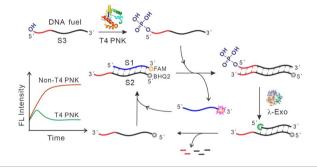
Tian Zhang, Chenxi Guo, Lu Yang, Lei Liu, Di Sun, Xinqi Long, Qi Wu, Qiyang Zhao, Yaohai Zhang, Jing Li, Yongliang Cui\* and Yue He\*



#### 4944

A renewable enzyme-driven dissipative DNA strand displacement strategy for T4 polynucleotide kinase activity assay and inhibitor screening

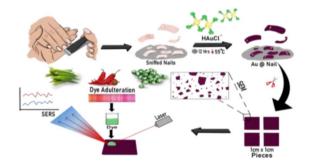
Shuang Li, Zhicheng Li, Fangfang Yang,\* Li Wang and Shufeng Liu\*



#### 4951

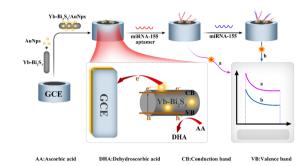
Sustainable synthesis of truncated Au-sensors embedded within robust snipped human nails to monitor dye adulteration in real food samples

Jayasree Kumar, Divya S. Parimi, Salman Khan, Rajapandiyan Panneerselvam\* and Anil K. Suresh\*



#### **PAPERS**

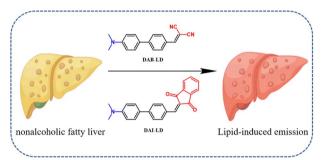
#### 4961



A near-infrared photoelectrochemical aptasensor based on a Yb-Bi<sub>2</sub>S<sub>3</sub>/AuNP nanocomposite for determining miRNA-155, a biomarker for allergic rhinitis

Yunliang Liu, Jing Gao, Yuting Huo, Yang Yang, Daoping Yue\* and Xianghang Lin\*

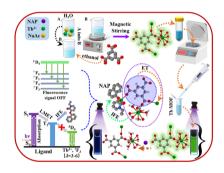
#### 4970



## Novel TICT-characterized fluorescent probes for efficient imaging of lipid droplets in nonalcoholic fatty liver disease

Dongxu Yang, Tianyi Qu, Ling Teng, Caihui Wang, Weiyi Bai, Shufen Li,\* Weihua Zhuang\* and Wengchuang Hu\*

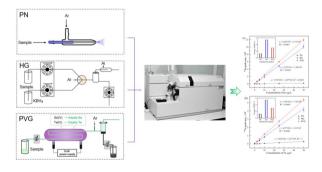
#### 4976



## Design of a Tb(III) – MOF fluorescent probe for rapid and reusable detection of napropamide

Kuiyu Yi\* and Qifeng Zhao

#### 4987



## Comparison of sampling modes for inductively coupled plasma mass spectrometry determination of Se and Te in geological samples

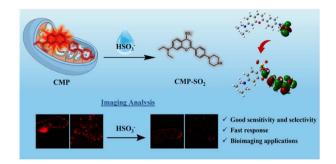
Yonghai Yuan,\* Feng Yang, Qiu Zhang, Qinghong Xu and Meilan Wen

#### **PAPERS**

#### 4998

A mitochondria-targeted long-wavelength fluorescent probe for imaging sulfur dioxide in ferroptosis

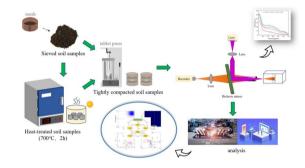
Yulong Wu, Tianyu Zhang, Guangyi Jiang, Qingxia Duan, Chen Zuo\* and Wei Shu



#### 5006

Identifying organic matter fractions and revealing their dynamic spatial variation within riparian soil profiles along an urbanized river via solid-phase SFS with moving window 2-dimensional correlation spectroscopy

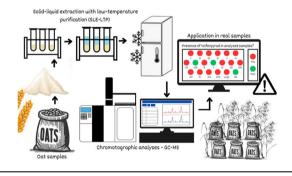
Chenrui Tang, Qinggian Li, Junwen Hou, Jun Liu, Hongjie Gao,\* Jie Li and Huibin Yu\*



#### 5018

Determining tolfenpyrad in oat samples using solidliquid extraction with low-temperature purification and analysis by gas chromatography coupled with mass spectrometry

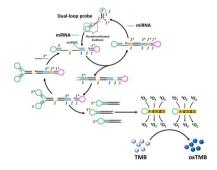
Karine Rocha Teófilo, Lucélio Marques Alves Costa, Gustavo Rodrigues Amarante Figueiredo, Lázaro Chaves Sicupira and Flaviano Oliveira Silvério\*



#### 5027

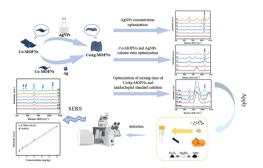
Two-end self-priming induced cascade amplification system for label-free photosensitization colorimetric detection of microRNA

Wenjuan Yi, Yujie Chen, Caiyun Gao, Qiufang Qin and Heping Qin\*



#### **PAPERS**

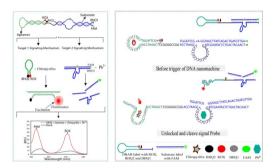
#### 5034



#### Ultra-thin CoAq-MOFNs for SERS for the rapid analysis of imidacloprid pesticide residues in citrus

Xinzheng Zhu, Ruimei Wu, Xu Wang, Xin Fu, Zhongshou Liu, Xiang Geng\* and Jie Teng\*

#### 5045

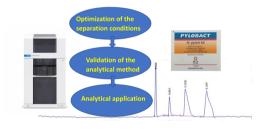


#### An aptazyme driven dual-FRET nanoplatform for simultaneous detection of chlorpyrifos and lead ions

Sanwal Aslam, Jiahui Dai, Xiangyang Wu, Ayyanu Ravikumar, Arunjegan Amalraj, G. Tamil Selvan, Emmanuel Chigozie Aham, Zhen Zhang\* and Hongjun Zhao\*

#### 5055

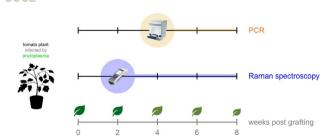
#### **Determination of CLR, OMP, and TID** in tablets using CE



#### Development and validation of a capillary zone electrophoresis method for the simultaneous analysis of clarithromycin, omeprazole, and tinidazole in pharmaceutical formulations

Abdalla A. Elbashir\* and Oliver J. Schmitz

#### 5062



#### Non-invasive Raman spectroscopy for monitoring metabolite changes in tomato plants infected by phytoplasma

Lorenzo Pandolfi, Niccolò Miotti, Guido Faglia, Carlo Pennacchio, Andrea Ponzoni, Marina Ciuffo, Sabrina Palmano, Martino Schillaci, Emanuela Gobbi, Massimo Turina and Camilla Baratto\*

#### AMC TECHNICAL BRIEFS

#### 5069

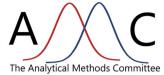
#### Scientific investigation of Asian lacquerware

Analytical Methods Committee, AMCTB No. 116

#### **AMC Technical Briefs**

are produced by the Analytical Methods Committee (AMC) - the branch of the Analytical Division that handles matters of technical importance to the analytical science community.

Find out more at: www.rsc.org/amc



#### 5074

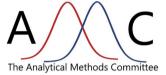
#### Diffusive samplers for ambient air quality monitoring

Analytical Methods Committee, AMCTB No. 117

#### **AMC Technical Briefs**

are produced by the Analytical Methods Committee (AMC) - the branch of the Analytical Division that handles matters of technical importance to the analytical science community.

Find out more at: www.rsc.org/amc



#### CORRECTION

#### 5078

Correction: Label-free fluorescence "turn-on" detection of  $SO_3^{2-}$  by gold nanoclusters: integration in a hydrogel platform and intracellular detection

Abhay Sachdev,\* Rocky Raj, Ishita Matai, Vinay Kumar, P. Gopinath and Sunita Mishra