

# Analytical Methods

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## IN THIS ISSUE

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### Cover

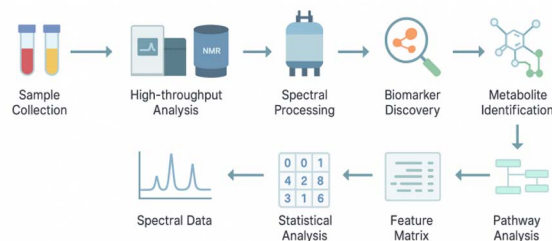
See Fiona Regan *et al.*, pp. 8877–8888. Image reproduced by permission of Fiona Regan from *Anal. Methods*, 2025, 17, 8877. Background colours were generated on Gemini (<https://gemini.google.com/>), permitted by Dublin City University.

## MINIREVIEW

8847

### Evaluating untargeted metabolomics pipelines for sports nutrition research: a review

Yongfu Liu, Xinghua Liu, Yuting Hu, Feng Gao, Wenjun Yu and Fan Cheng\*

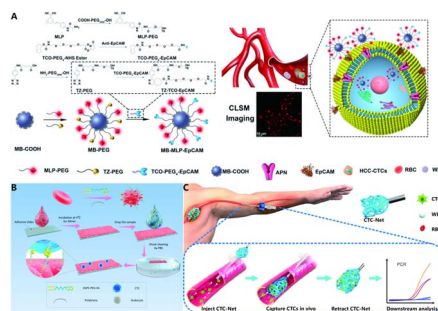


## CRITICAL REVIEW

8865

### Detection and indications of circulating tumor cells in hepatocellular carcinoma

Longtao Liu, Lingling Qu, Xia Wu, Zhihao Wang, Shiyan He, Zhenyu Liu, Tong Zhang, Jie Wang,\* Shouye Zhao\* and Jing Lin\*



# RSC Applied Polymers

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both natural and synthetic

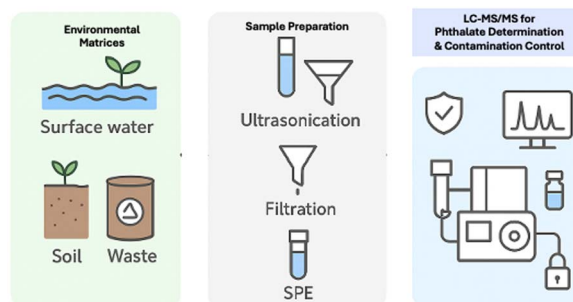
Interdisciplinary and open access

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Fundamental questions  
Elemental answers

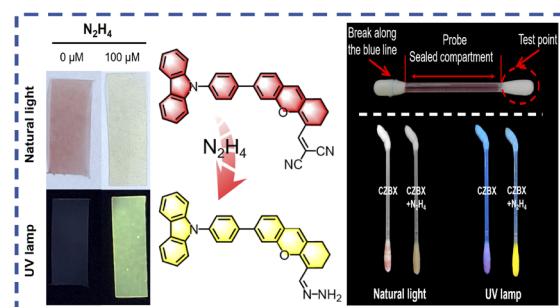
8877

## Demonstrating the application of a liquid chromatography-mass spectrometry method for the determination of phthalate diesters in complex solid and liquid environmental samples

Fiona Regan,<sup>\*</sup> Catherine Allen and Jenny Lawler

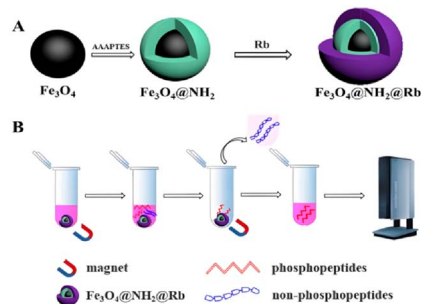
8889

## Carbazole-xanthene-based swab/film fluorescent sensors for on-site visual detection of hydrazine in environmental and agricultural samples

Yonghe Zhang, Fang Zeng<sup>\*</sup> and Shuizhu Wu<sup>\*</sup>

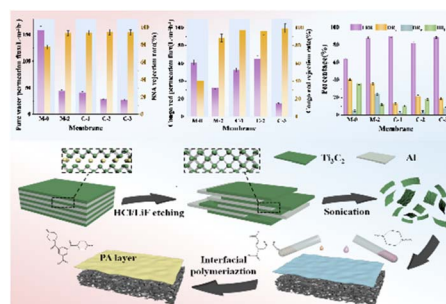
8898

## Design of a novel rhodamine B based pH-responsive magnetic adsorbent and its application in phosphopeptidomics

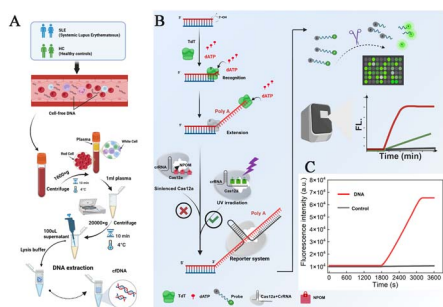
Jinfeng Zhang, Bo Hu, Huifeng Zhang, Haijiao Zheng, Shufang Yang<sup>\*</sup> and Qiong Jia<sup>\*</sup>

8905

## Study of multifunctional controlled separation performance of PVDF/EAA/MXene nanofiltration membranes for the treatment of dyeing wastewater

Dongju Liu, Kunlan Diao, Yu Xue and Daohai Zhang<sup>\*</sup>

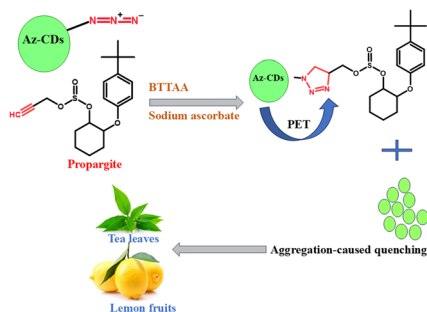
8916



### Light-controlled CRISPR–Cas12a one-pot platform for ultrasensitive cell-free DNA detection in systemic lupus erythematosus diagnosis

Jing Pu, Shaolan Zhou, Wenxin Ma, Chang Liu, Le Guo, Bei Yan\* and Zhenghao Huo\*

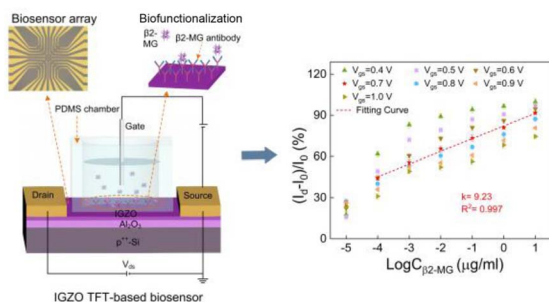
8923



### Selective detection of terminal alkyne acaricide via click-reactive carbon dots: applications in food safety monitoring

Ramadan Ali, Khalid Alhazzani, Ahmed Z. Alanazi, James Barker, Aya M. Mostafa, Mohamed M. El-Wekil, Mohamed N. Goda and Al-Montaser Bellah H. Ali\*

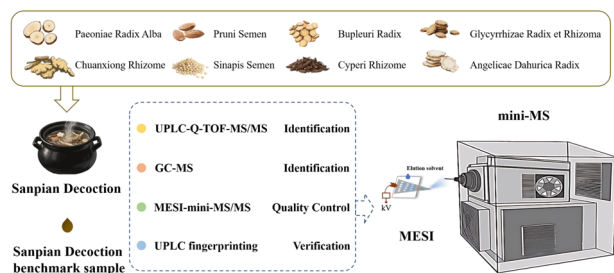
8935



### IGZO thin-film transistor biosensor array for highly sensitive detection of $\beta$ 2-microglobulin

Xinyue Zhang, Xiaohong Wen, Xinle Han, Yongliang Deng, Xiangmei Dong, Xuefeng Zhao and Xiumin Gao\*

8943



### A multi-component quality control strategy for Sanpian Decoction using MESI-mini-MS/MS: rapid on-site evaluation of complex traditional Chinese medicine formulas

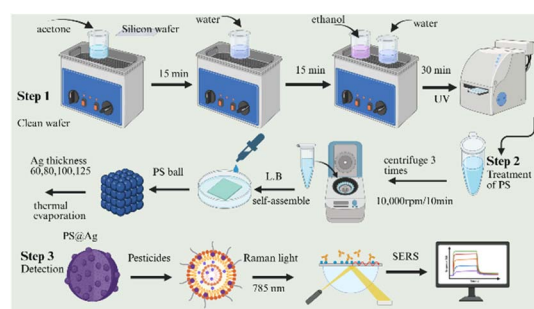
Xuan Gu, Jiayan Lin, Xiuhuan Guo, Shuidan Zhao, Liping Li, Xiumei Cui, Yanwu Cheng\* and Mei Zhang\*



8959

### Simultaneous detection of multiple pesticide residues in tobacco leaves using a PS@Ag SERS substrate and portable Raman spectrometer

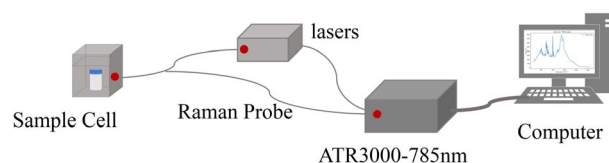
Junaid Younus, Qi Wang, Weifan Pan, Jimin Shao, Xiaowei Guo\* and Xue Yang\*



8968

### Light fuel classification based on Raman spectroscopy and region-adaptive convolutional neural networks

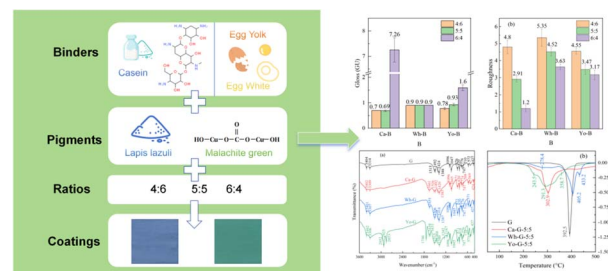
Bin Tang,\* Yongjiao Yuan, Hua Yang, Wenjuan Zhang, Zihang Xia, Mi Zhou and Tao Song



8979

### Multi-analytical characterization of the physicochemical stability of proteinaceous binders in traditional painted coatings

Tong Chen, Tongtong Li,\* Jianing Li and Xinyou Liu\*



8991

### A green HPLC-UV method for the simultaneous analysis of enalapril, enalaprilat and diketopiperazine in pharmaceutical formulations

Matheus Miranda Fracetti,\* Paula Rocha Chellini and Marccone Augusto Leal de Oliveira

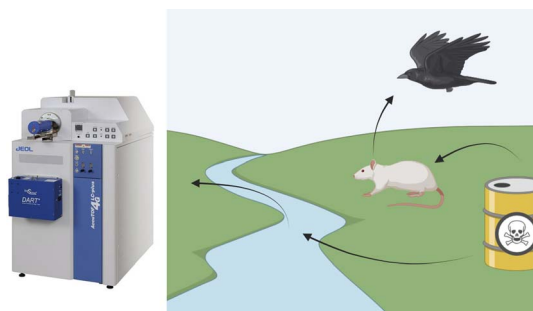
**Method 1**  
ACN:phosphate buffer 25:75  
v/v and flow 1.8 mL min<sup>-1</sup>



**Method 3**  
EtOH: phosphate buffer  
30:70 v/v and flow 1.8 mL  
min<sup>-1</sup>



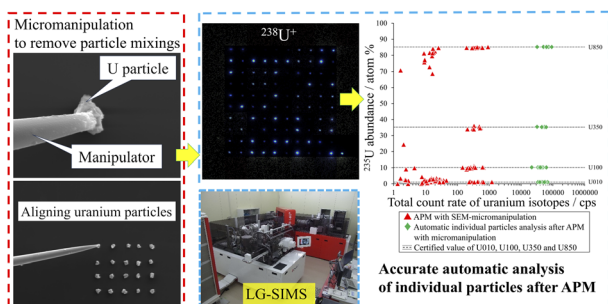
9000



### Detection of anticoagulant rodenticides by direct analysis in real time time-of-flight mass spectrometry: novel screening techniques and rapid semi-quantitative determination

Trista Yu, Arun S. Moorthy,\* Pamela Brunswick, Bianca Rosary, Robert Cody, Marcus Gian, Vanessa Dang, Honoria Kwok, Jeffrey Yan and Dayue Shang\*

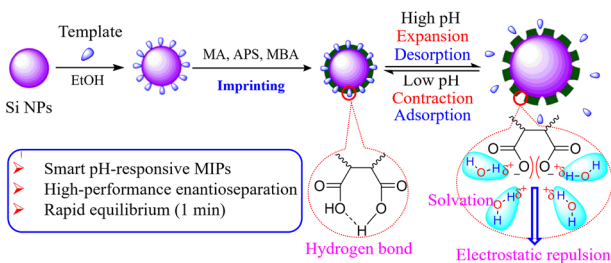
9017



### Accurate automatic analysis of individual uranium particles to improve the timeliness of safeguards environmental sample analysis using an LG-SIMS instrument and SEM-micromanipulation

Ryohei Tomita,\* Jumpei Tomita, Takumi Yomogida, Daisuke Suzuki, Yutaka Miyamoto and Kenichiro Yasuda

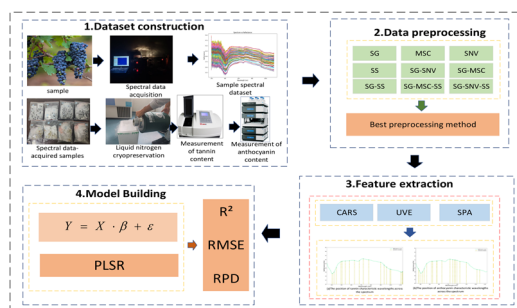
9026



### pH-Switchable molecularly imprinted polymers for enantioselective recognition and separation of (S)-amlodipine besylate from its chiral counterpart

Hang Gong,\* Xiaoli Ouyang, Feng Chen, Chunyan Chen,\* Bin Yang, Junjie Du and Changqun Cai\*

9038



### Construction of prediction models for phenolic compounds in Cabernet Sauvignon grapes based on visible/near-infrared spectroscopy

Shaorui Wang, Bo Li, Xuedan Zhang, Yanling Li, Pingzeng Liu, Ke Zhu\* and Yan Zhang\*

