

## IN THIS ISSUE

ISSN 0003-2654 CODEN ANALAO 150(1) 1–208 (2025)



### Cover

See Matthias Geissler, Lidija Malic *et al.*, pp. 9–33.

Image reproduced by permission of Matthias Geissler from *Analyst*, 2025, **150**, 9.



### Inside cover

See Wendell Karlos Tomazelli Coltro *et al.*, pp. 60–68.

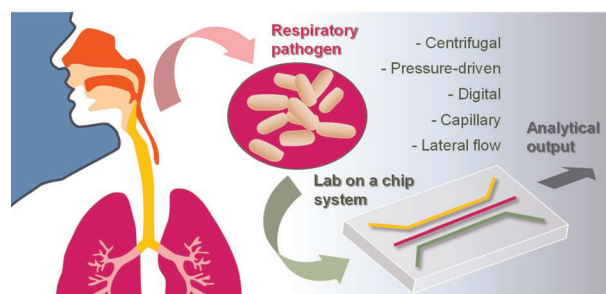
Image reproduced by permission of Wendell K. T. Coltro from *Analyst*, 2025, **150**, 60.

## TUTORIAL REVIEWS

9

### Microfluidic methods for the diagnosis of acute respiratory tract infections

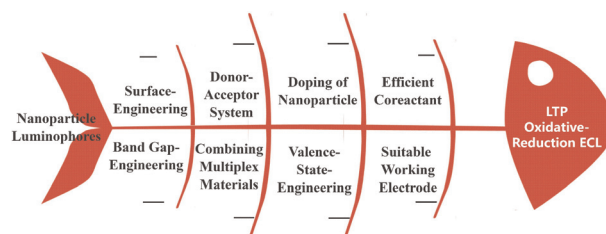
Kan-Zhi Liu, Ganghong Tian, Alex C.-T. Ko, Matthias Geissler,\* Lidija Malic, Byeong-Ui Moon, Liviu Clime and Teodor Veres



34

### Recent advances and future prospects in oxidative-reduction low-triggering-potential electrochemiluminescence strategies based on nanoparticle luminophores

Li Fu, Tianyuan Song, Qi Li, Guizheng Zou,\* Fuwei Zhang, Zongchao Li, Haotian Guan and Yingshu Guo\*



# Advance your career in science

with professional recognition that showcases  
your **experience, expertise and dedication**

## Stand out from the crowd

Prove your commitment  
to attaining excellence in  
your field

## Gain the recognition you deserve

Achieve a professional  
qualification that inspires  
confidence and trust

## Unlock your career potential

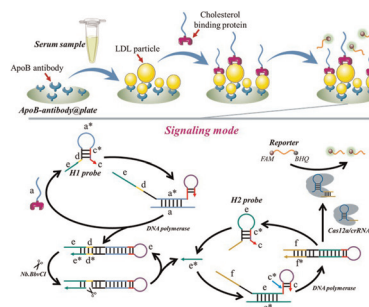
Apply for our professional  
registers (RSci, RSciTech)  
or chartered status  
(CChem, CSci, CEnv)

## Apply now

[rsc.li/professional-development](https://rsc.li/professional-development)

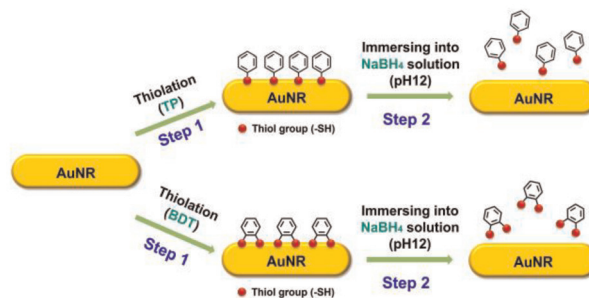


Xiaoya Liu, Hai Peng, Lisha Gong, Hong Zhang,  
Chenglong Zhao, Weiju Lai, Gang An\* and  
Xianxian Zhao\*



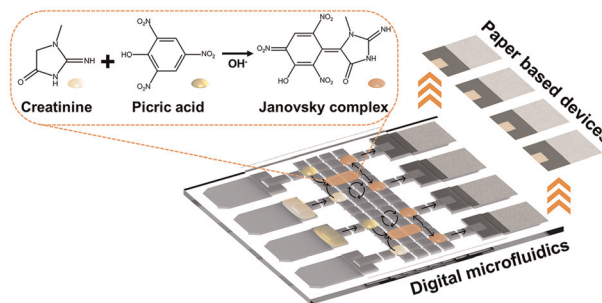
## Controlling chemical interface damping by removing aromatic monothiol and dithiol groups from gold nanorods using sodium borohydride solution

Ji Min Kim and Ji Won Ha\*



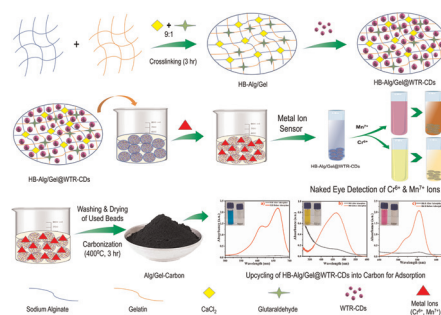
## 60

Larissa G. Velasco, Danielly S. Rocha, Richard P. S. de Campos and Wendell K. T. Coltro\*

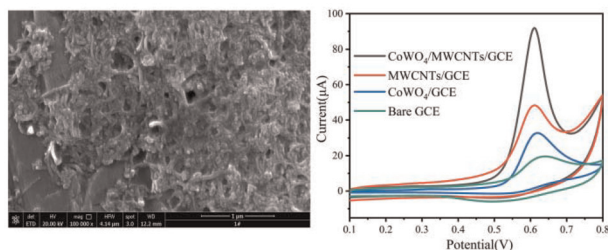


## 69

Omkar S. Nille, Akanksha G. Kolekar, Pooja V. Devre,  
Sneha V. Koparde, Aniket H. Sawat, Daewon Sohn,  
Shashikant P. Patole,\* Prashant V. Anbhule,  
Anil H. Gore\* and Govind B. Kolekar\*



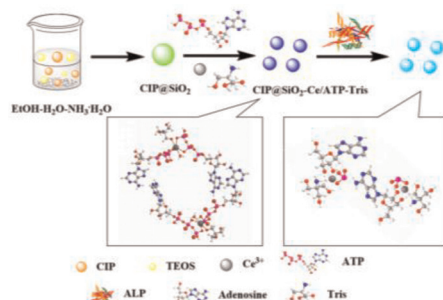
81



### A sensitive electrochemical sensor based on CoWO<sub>4</sub>/multi-walled carbon nanotubes for the selective determination of chlorpromazine hydrochloride

Si Zeng, Peiyao Zhu, Deyu Liu, Yongmei Hu, Qitong Huang\* and Haiping Huang\*

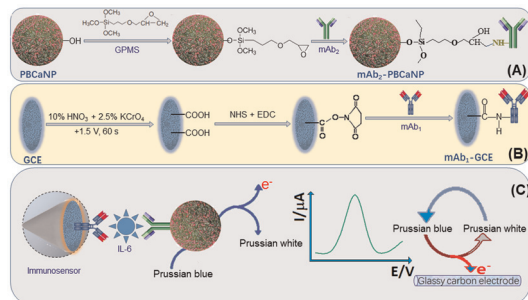
87



### A novel ratiometric fluorescent probe based on an internal reference of lanthanide/nucleotide for alkaline phosphatase detection

Haoran Yu, Ziqing Qiang, Yelin Sun, Mengyao Sun, Lei Zhang, Bohao Yu,\* Wen Lei and Weibing Zhang\*

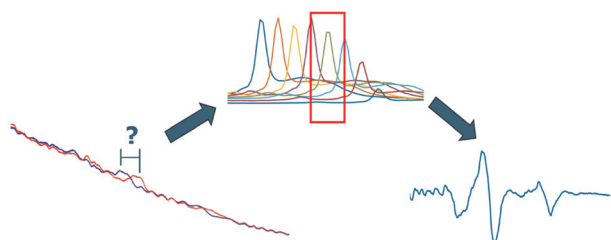
94



### Prussian blue-doped CaCO<sub>3</sub> nanoparticle-labeled secondary antibodies for electrochemical immunoassay of interleukin-6 with migraine patients

Zhong Chen, Wenhui He, Renhe Lin, Dongzhi Wu, Xiaoling Jiang\* and Yunfan Cheng\*

103



### Optimising Shifted Excitation Raman Difference Spectroscopy (SERDS) for application in highly fluorescent biological samples, using fibre optic probes

H. Sheridan, A. P. Dudgeon, J. C. C. Day, C. Kendall, C. Hall and N. Stone\*



## PAPERS

120

### Ti-based MOF nanosheets as a mass spectrometry imaging matrix for low molecular weight compounds to reveal the spatiotemporal content changes of hepatotoxic components during the processing of *Polygonum multiflorum*

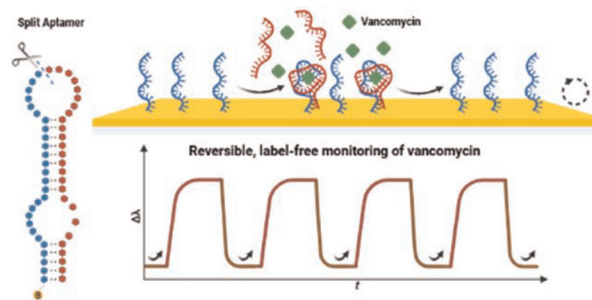
Feng-yan Kuang, De-jun Hu, Lu Wang, Fei Chen\* and Guang-ping Lv\*



131

### Real-time monitoring of vancomycin using a split-aptamer surface plasmon resonance biosensor

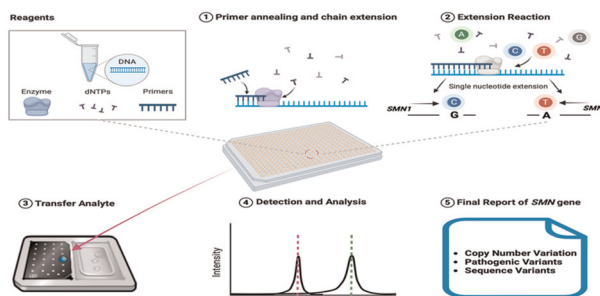
Cátia Santa, Soohyun Park, Artur Gejt, Heather A. Clark, Bastian Hengerer and Khulan Sergelen\*



142

### Development and validation of a one-step SMN assay for genetic testing in spinal muscular atrophy via MALDI-TOF MS

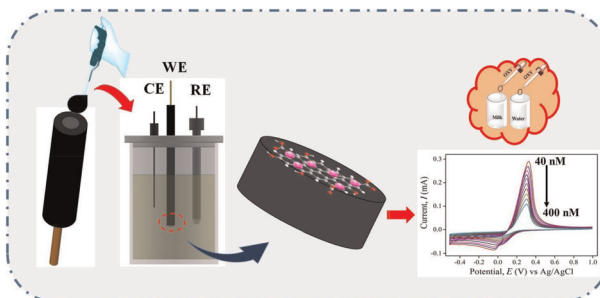
Xiaodong Xing, Xing Ji, Xinzhu Liu, Xiaohui Jin, Zhenglei He, Ajing Xu, Wengao Jiang, Wenbo Ji, Yan Liu, Jian Zhang and Xiaohui Huang\*



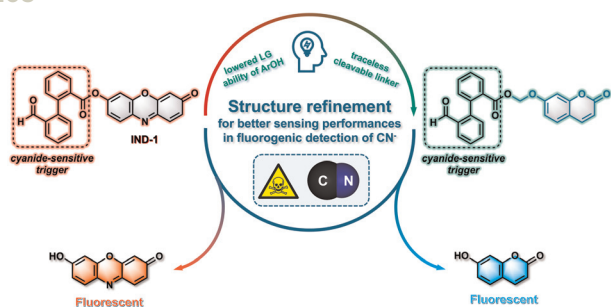
154

### Tuning the electro-catalytic activity of the Zn–Cu MOF/rGO nanocomposite as a novel enzyme-free electrochemical sensor for the detection of the oxytocin hormone

Md Zainul Abedeen, Manish Sharma, Himmat Singh Kushwaha and Ragini Gupta\*



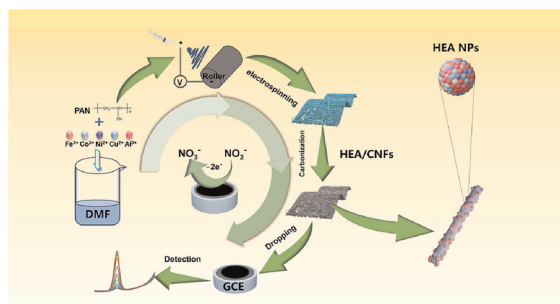
168



### Fluorogenic detection of cyanide ions in pure aqueous media through an intramolecular crossed-benzoin reaction: limitations unveiled and possible solutions

Vincent Gaumerd, Yoan Capello, Quentin Bonnin, Pierre-Yves Renard and Anthony Romieu\*

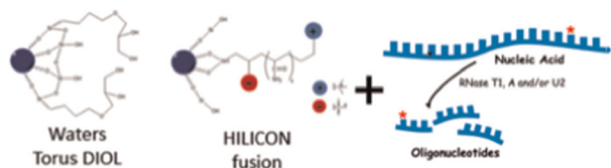
177



### Nanofibers decorated with high-entropy alloy particles for the detection of nitrites

Wang Yang, Wanchen Xie, Chongtao Zhang, Fang Duan, Shuanglong Lu and Mingliang Du\*

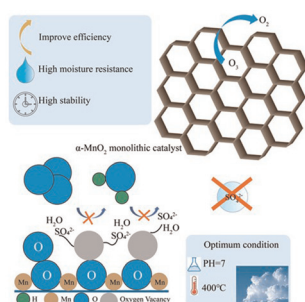
185



### Stationary phase effects in hydrophilic interaction liquid chromatographic separation of oligonucleotides

Scott Abernathy, Asif Rayhan and Patrick A. Limbach\*

197



### $\alpha\text{-MnO}_2$ catalysts with efficient ozone-catalyzed decomposition under high humidity conditions

Jiafan Ji, Qianqian Yan, Yi Chen, Gaosheng Zhao, Bin Jia,\* Li Xu and Ping Cheng\*

