

Sensors & Diagnostics

rsc.li/sensors

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 2635-0998 CODEN SDEIAR 3(1) 1-156 (2024)



Cover
See Hong Xu *et al.*, pp. 9–27.
Image reproduced by permission of Yutong Zhang, Hongchen Gu and Hong Xu from *Sens. Diagn.*, 2024, 3, 9.



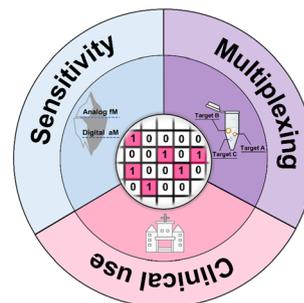
Inside cover
See Darshak R. Trivedi *et al.*, pp. 64–78.
Image reproduced by permission of Darshak R. Trivedi from *Sens. Diagn.*, 2024, 3, 64.

CRITICAL REVIEW

9

Recent progress in digital immunoassay: how to achieve ultrasensitive, multiplex and clinical accessible detection?

Yutong Zhang, Hongchen Gu and Hong Xu*

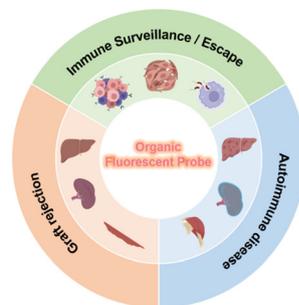


TUTORIAL REVIEW

28

Organic fluorophore-based fluorescent probes for abnormal immune response diagnosis and treatment evaluation

Shan Zuo, Yanhua Li, Tianbing Ren* and Lin Yuan*





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

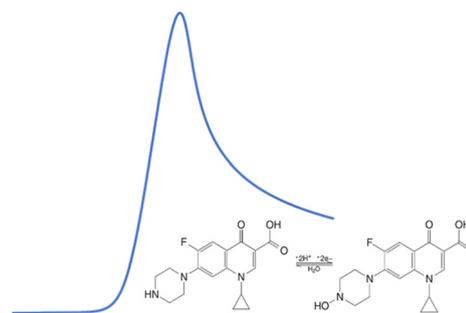


PERSPECTIVE

40

Electroanalytical overview: the measurement of ciprofloxacin

Robert D. Crapnell, Prashanth S. Adarakatti and Craig E. Banks*

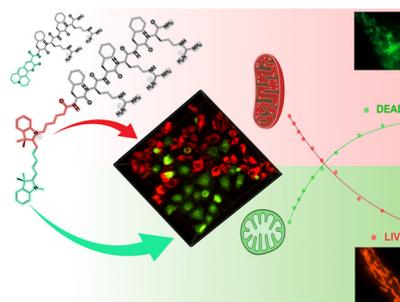


COMMUNICATION

59

Unveiling cellular vitality: peptide fluorescent probes illuminate mitochondrial dynamics and ROS activity

Ixsoyen Vázquez-Sandoval, Jasmine Bernal-Escalante, Adriana Romo-Pérez and Arturo Jiménez-Sánchez*

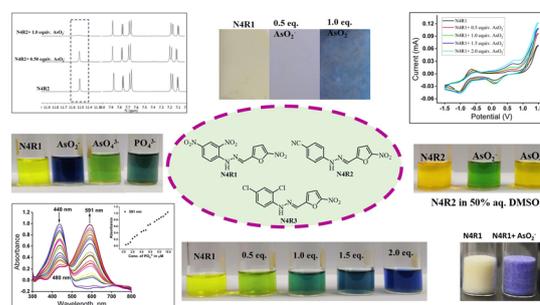


PAPERS

64

Development of multi-analyte responsive sensors: optical discrimination of arsenite and arsenate ions, ratiometric detection of arsenite, and application in food and water samples

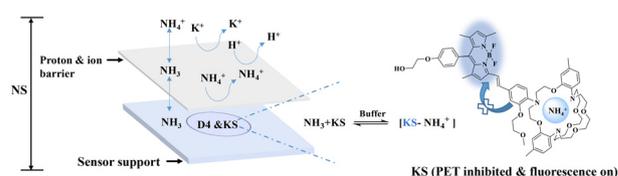
Nagaraj K. A. Nityananda Shetty and Darshak R. Trivedi*



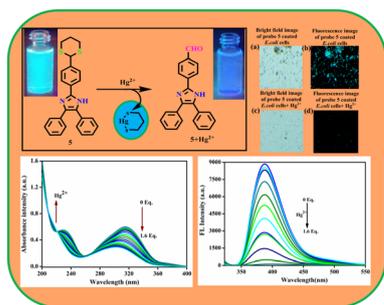
79

Highly selective fluorescent sensor for ammonium ions

Min Shen, Tingting Pan,* Yonghao Chen, Juwei Ning, Fengyu Su* and Yanqing Tian*



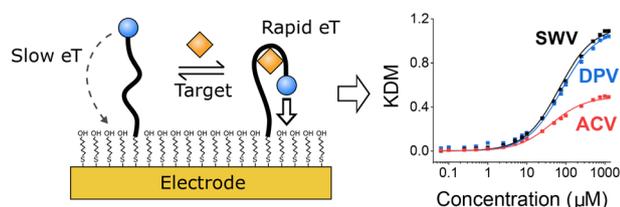
87



Turn-off fluorescence of imidazole-based sensor probe for mercury ions

Uma Krishnan, Saravanakumar Manickam and Sathiyarayanan Kulathu Iyer*

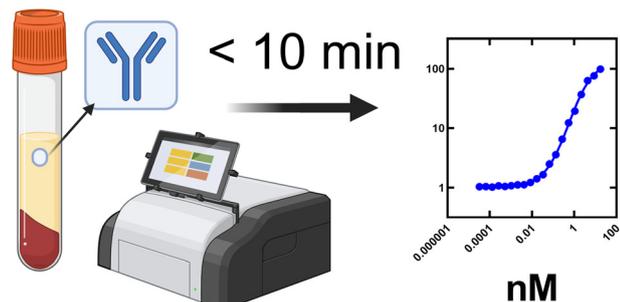
95



Comparison of voltammetric methods used in the interrogation of electrochemical aptamer-based sensors

Elsi Verrinder, Kaylyn K. Leung, Murat Kaan Erdal, Lior Sepunaru and Kevin W. Plaxco*

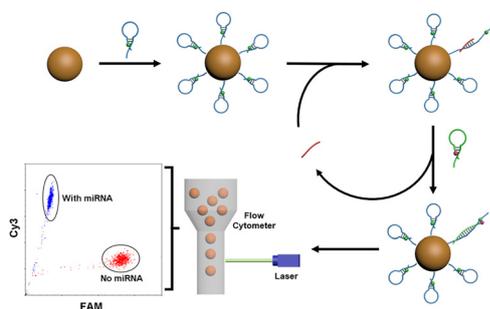
104



Therapeutic drug monitoring of immunotherapies with novel Affimer-NanoBiT sensor construct

Emma Campbell, Hope Adamson, Timothy Luxton, Christian Tiede, Christoph Wälti, Darren C. Tomlinson and Lars J. C. Jeuken*

112



Bead-enriched catalyzed hairpin assembly for the flow cytometric detection of microRNA via FRET signal readout

Zhengkun Dong, Wenjiao Fan,* Wei Ren and Chenghui Liu*

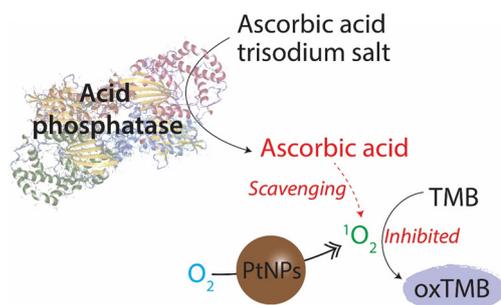


PAPERS

117

Single-step colorimetric detection of acid phosphatase in human urine using an oxidase-mimic platinum nanozyme

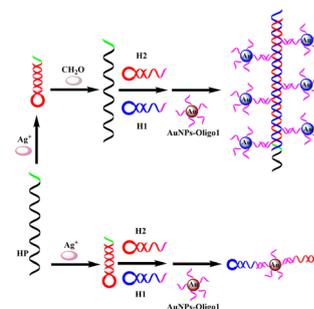
Sanjana Naveen Prasad, Sanje Mahasivam, Sabeen Hashmi, Vipul Bansal* and Rajesh Ramanathan*



129

Colorimetric and dynamic light scattering dual-readout assay for formaldehyde detection based on the hybridization chain reaction and gold nanoparticles

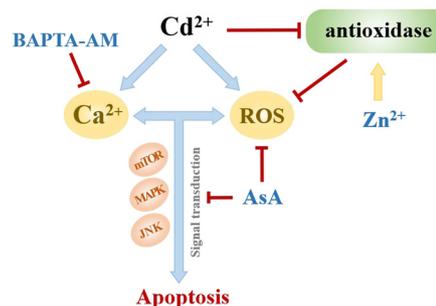
Wenxiu Huang, Linyuan Chen, Li Zou* and Liansheng Ling*



135

Study on inhibitory effects of AsA, ZnCl₂, and BAPTA-AM on Cd²⁺-induced cell oxidative stress and cytotoxicity by scanning electrochemical microscopy (SECM) technology

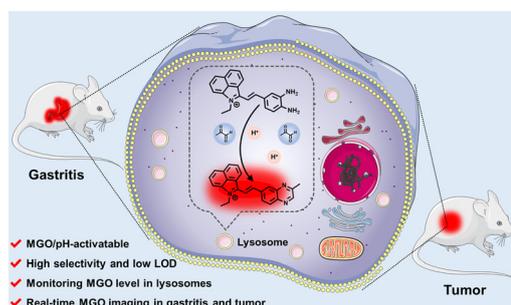
Ke Gao, Yuying Du, Na Pan, Xuewei Zhou, Liping Lu* and Xiayan Wang



147

Acid-promoted fluorescent probe for monitoring endogenous methylglyoxal in tumors and gastritis

Weijia Xu, Senyao Liu, Wenwen Cao and Hu Xiong*



CORRECTION

153

Correction: Real-time, smartphone-based processing of lateral flow assays for early failure detection and rapid testing workflows

Monika Colombo, Léonard Bezingue, Andres Rocha Tapia, Chih-Jen Shih, Andrew J. deMello* and Daniel A. Richards*

