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Analytical Methods

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ISSN 1759-9679 CODEN AMNECT 17(18) 3603–3846 (2025)

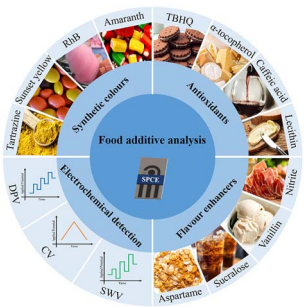
Cover
See Rejithamol R., Habdias A. Silva-Neto *et al.*, pp. 3613–3628. Image reproduced by permission of Habdias A. Silva-Neto *et al.* from *Anal. Methods*, 2025, **17**, 3613. The image was generated using AI.

MINIREVIEW

3613

Recent advances in screen-printed carbon electrodes for food additive analysis

Gabriel Chitolina-Rodrigues, Devu Chandran, Rejithamol R.* and Habdias A. Silva-Neto*

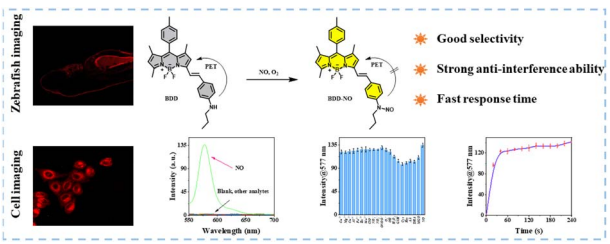


PAPERS

3629

A BODIPY-based fluorescent probe for rapid detection of NO in cells and zebrafish

Meng-Ting Wang, Hong-Cheng Xia, Xiang-Yu Wang, Han Zhang, Yue-Yue Zhao, Fengxiang Liu, Di Han* and Ying-Long Fu*



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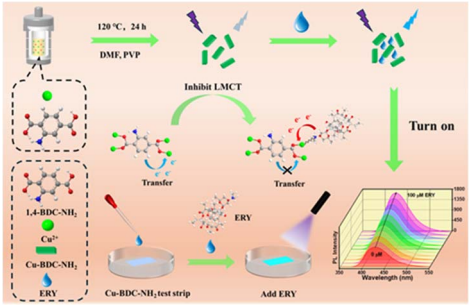
PAPERS

3636

A "turn-on" fluorescent sensor for the selective detection of erythromycin in aqueous solution

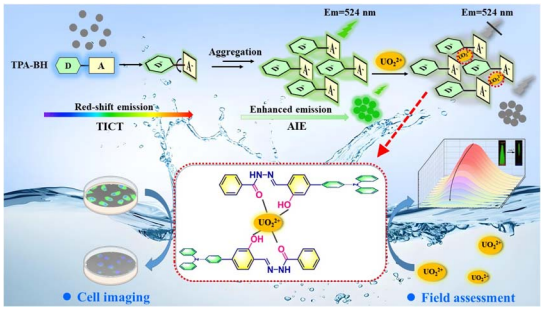
Changjiang Zhou, Zhichao Qiu, Zhuangzhuang Sun, Shaoxing Xu, Minrui Chen, Bo Xie, Hui-min Wen and Jun Hu*



3644

An ultrasensitive D–A fluorescent probe for dual-mode uranyl detection in environmental and biological systems

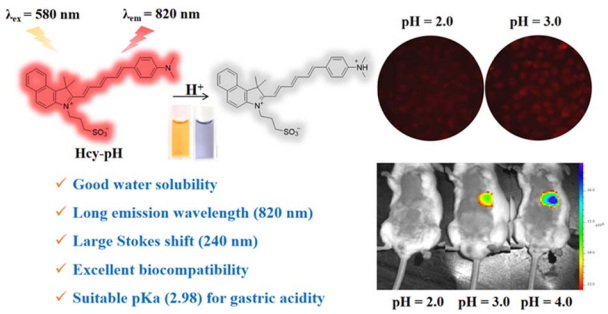
Zhen-ni Yi, Jie Xu, Fang Yang, Shen-neng Wang, Yi-peng Xiao, Yao-wen Wang, Di-yun Chen, Min-hua Su* and Hui Sun*



3653

An indolium-based near-infrared fluorescent probe for non-invasive real-time monitoring of gastric pH *in vitro* and *in vivo*

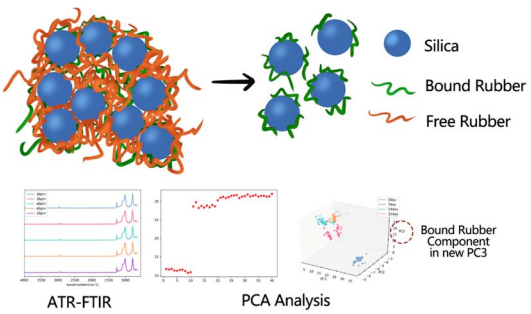
Jiaqi Lv, Yiqiang Yang, Weijie Wu, Hongbo He, Qingrong Qi, Dongyin Lian, Tao Jia* and Wencai Huang*



3660

Investigation of the interface structure and filler network formation of liquid silicone rubber/silica nanocomposites based on ATR-FTIR spectroscopy and chemometrics

Yuying Li, Qiuyu Long, Jia Luo, Chunhua Zhu* and Yu Liu*



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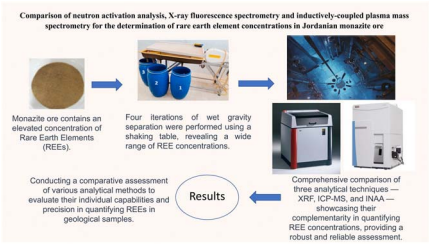
PAPERS

3668

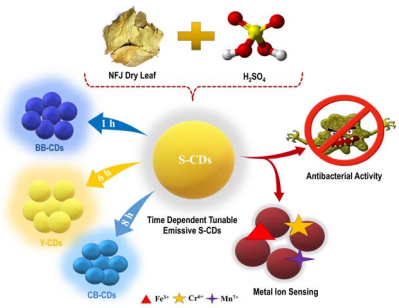


• ICP-MS, INAA, and XRF were systematically compared for the analysis of rare earth elements in Jordanian monazite, revealing ICP-MS as the most sensitive and accurate method for REE quantification.

Comparison of neutron activation analysis, X-ray fluorescence spectrometry and inductively-coupled plasma mass spectrometry for the determination of rare earth element concentrations in Jordanian monazite ore

Ahmad Alsabbagh, Kamal Harahshah,* Kafa Al-Khasawneh and Elizabeth J. New

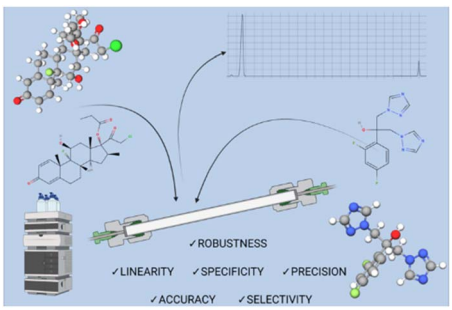
3679



Sustainable synthesis of tunable emissive sulphur-doped CDs: a synergistic approach for metal ion sensing and antimicrobial applications

Sneha V. Koparde, Omkar S. Nille, Akanksha G. Kolekar, Radhika B. Jadhav, Arpita Pandey Tiwari, Samadhan P. Pawar* and Govind B. Kolekar*

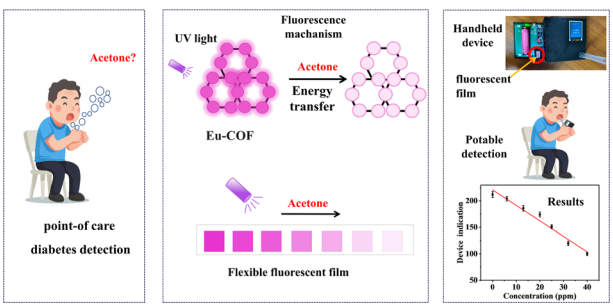
3694



A RP-HPLC-UV method for the dual detection of fluconazole and clobetasol propionate and application to a model dual drug delivery hydrogel

Robyn A. Macartney, Annabelle T. R. Fricker, Andrew M. Smith, Stefano Fedele, Ipsita Roy and Jonathan C. Knowles*

3705



Eu-COF-based fluorescence and portable detection of acetone in exhaled breath

Zhe Jiao,* Xiudong Shi, Xiaolin Zhang, Xiaofang Zhao,* Yueting Wang, Feng Xu and Jing Zhang*

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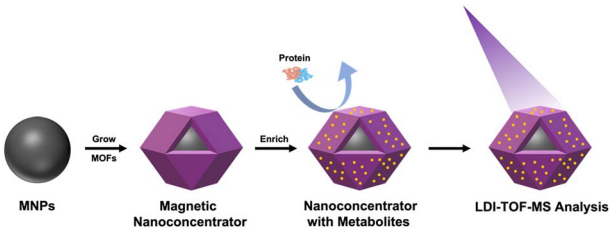
PAPERS

3713

Rapid quantitative analysis of urinary nicotine metabolites *via* a high-performance nanoconcentrator

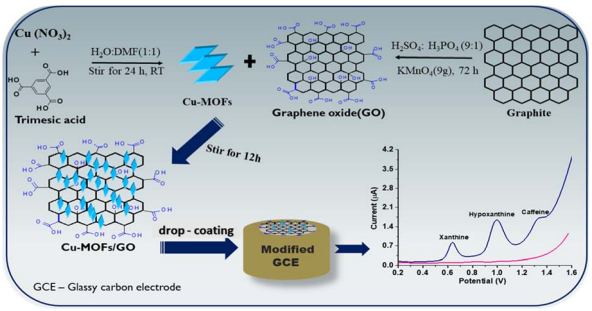
Chenyu Yang, Man Zhang, Huaqing Lin,* Nianrong Sun* and Chunhui Deng*



3720

Cu-MOFs/GO composite-based electrochemical sensor for the simultaneous measurement of xanthine, hypoxanthine and caffeine at trace levels

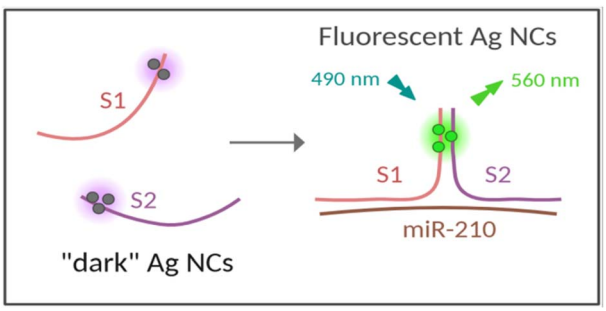
K. M. Supritha and M. Pandurangappa*



3729

Binary light-up fluorescent probe based on silver nanoclusters for MicroRNA detection

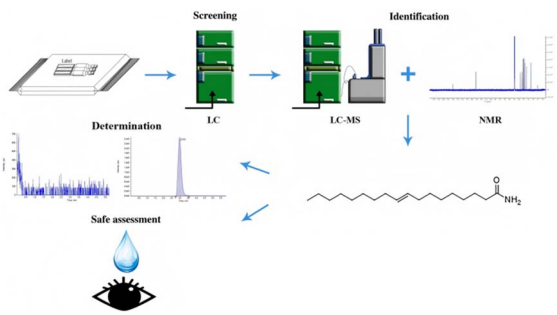
Marina A. Kapitonova,* Zakhar V. Reveguk, Polina S. Malova, Kuan Hu and Alexei I. Kononov



3739

Multistage characterization of label-derived oleamide: chromatographic purification with NMR structural elucidation and UPLC/Q-TOF-MS quantitation for pharmaceutical packaging compatibility assessment

Chunwang Fu, Fan Jiang, Chunhua Li, Xiaobai Xue, Chao Liu, Guojie Liu, Mengyu Zou, Yu Jiang, Shuo Lei and Qiang Yang*



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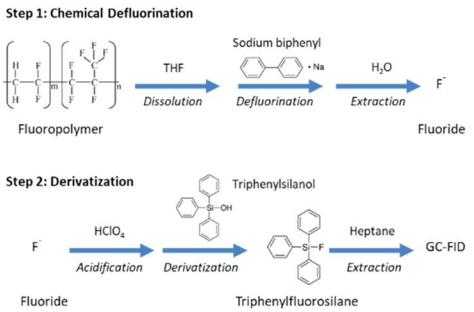
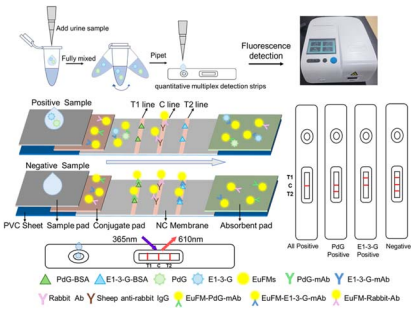


Defluorination and derivatization of fluoropolymers for determination of total organic fluorine in polyolefin resins by gas chromatography

Yujuan Hua, Peilin Yang, Tianzi Huang, Shayne Green and Jim Luong*

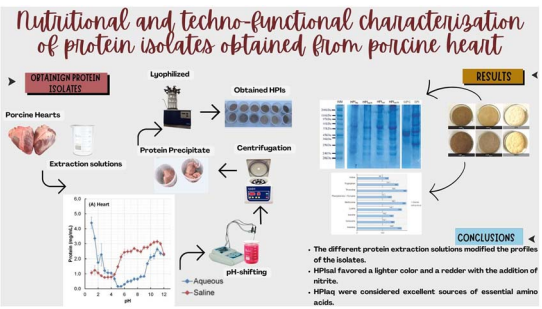
3757



Development of a time-resolved fluorescence microsphere immunochromatographic assay for simultaneous quantitative detection of urinary estrone-3-glucuronide and pregnanediol-3-glucuronide

Yu Yi, Xiangnan He, Jianfeng Mei, Bailong Wang, Shujiang Wu and Guoqing Ying*

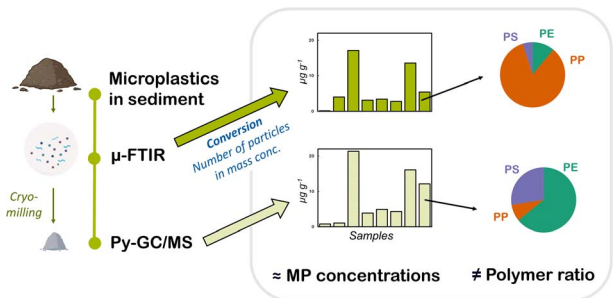
3767



Nutritional and techno-functional characterization of protein isolates obtained from porcine heart

Marielle Maria Oliveira Paula, Ana Paula Rocha de Moura, Bruna Fernandes Andrade, Simone de Fátima Viana da Cunha, Paulo Rogério Fontes, Alcinéia de Lemos Souza Ramos and Eduardo Mendes Ramos*

3781



Sequential combination of micro-FTIR imaging spectroscopy and pyrolysis-GC/MS for microplastic quantification. Application to river sediments

Nadia Bouzid,* Bruno Tassin, Johnny Gasperi and Rachid Dris

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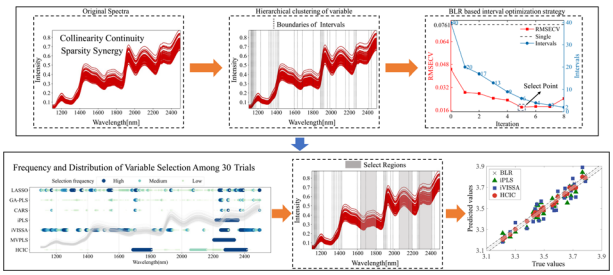
3793

Hierarchical clustering and optimal interval combination (HCIC): a knowledge-guided strategy for consistent and interpretable spectral variable interval selection

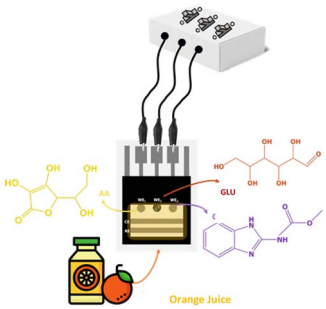
Pengcheng Wu, Tao Chen, Manshang Wang, Lei Xing, Xiaobo Zou and Haoran Li*



3806

Stencil-printed multiplex system for electrochemical determination of carbendazim, ascorbic acid and glucose in juice samples

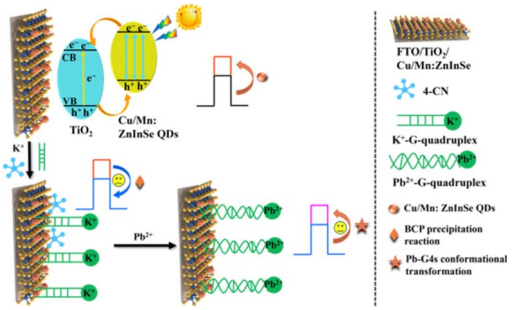
Ana Paula Z. Moscardi, Luís M. C. Ferreira, Gustavo Martins, David R. C. D. de Paula, Anne Raquel Sotiles, Fernando Wypych, Márcio F. Bergamini* and Luiz Humberto Marcolino-Junior*



3816

Enhanced photoelectrochemical sensing of Pb^{2+} based on Cu/Mn:ZnInSe ternary quantum dots coupled with G-quadruplex DNAzyme

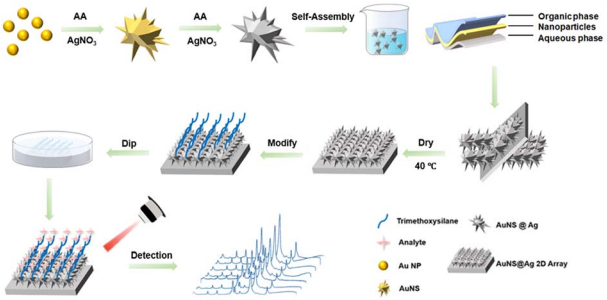
Juan Huang, Yi Zhang, Cunyin Zhou, Quan Ding, Qiong Wang,* Shini Peng and Yunchu Hu



3825

A gold–silver nanostar 2D array composite structure for rapid SERS determination of PAHs

Haibo Xing, Tong Chen, Yong Qian, Qi Huang, Tianze We, Xiaojun Hu, Jian Zhao* and Bo Wang*



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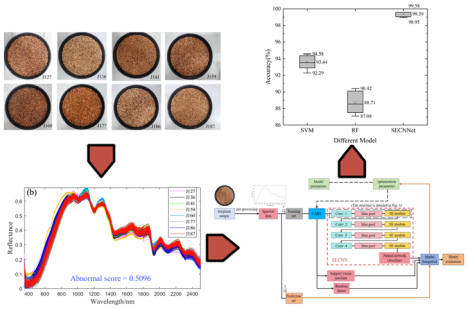

Identification of sorghum variety using hyperspectral technology with squeeze-and-excitation convolutional neural network algorithms

Peng Du, Wei Yang, Chao Song,* Qiuyun Wang, De Zhao and Xun Gao*

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