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Analytical Methods

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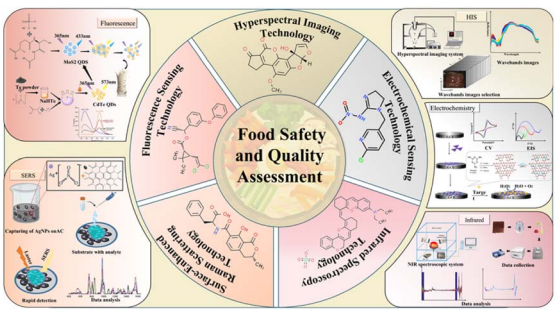
Cover
See Xue-Bo Chen *et al.*, pp. 4723–4733. Image reproduced by permission of Hongyang Xu and Xue-Bo Chen from *Anal. Methods*, 2025, **17**, 4723.

CRITICAL REVIEW

4697

Advancing food safety and quality assessment: a comprehensive review of non-destructive analytical technologies

Yuerong Feng, Xinai Zhang,* Jiaqian Liu, Zhecong Yuan, Shujie Gao and Jiyong Shi*

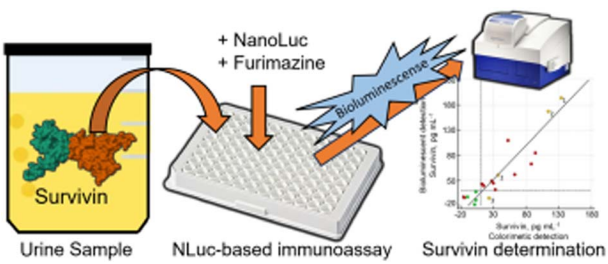


COMMUNICATION

4718

A urine survivin (BIRC5) bioluminescence-based immunoassay

Nikita S. Panamarev,* Andrey L. Matveev, Denis V. Chernyaev, Ruslan A. Zukov and Ludmila A. Frank



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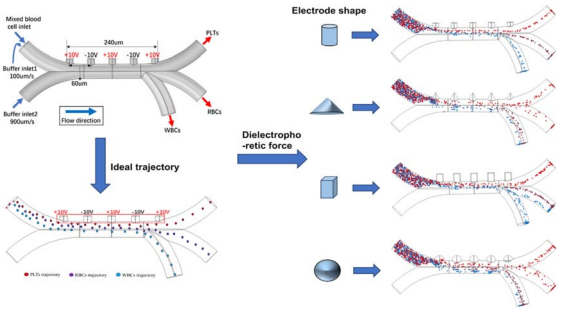
PAPERS

4723

A three-dimensional microfluidic model based on dielectrophoresis for the separation of blood cells

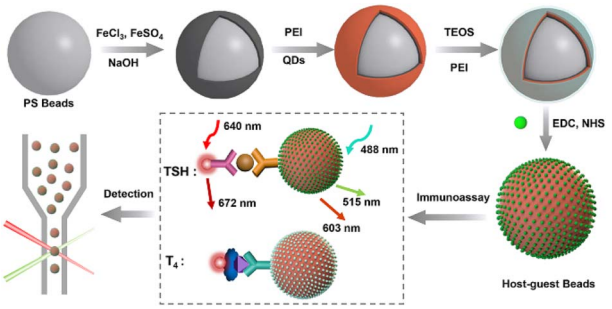
Hongyang Xu, Tao He, Yonghui Yang and Xue-Bo Chen*



4734

Controlled fabrication of novel magneto-fluorescent encoded microspheres with host–guest structures for simultaneous detection of thyroxine and thyroid stimulating hormone

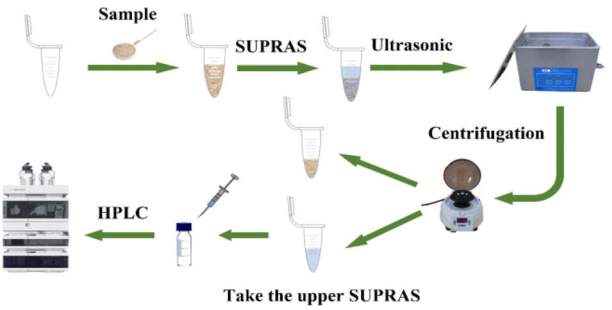
Chenxing Jiang, Qin Wang, Ziyu Shi, Shengnan Liu, Guoqiang Chen, Bo Liang,* Daquan Li* and Xuesong Ye*



4745

Supramolecular solvent-based ultrasound-assisted extraction of fangchinoline and tetrandrine from the roots of *Stephaniae tetrandrae*

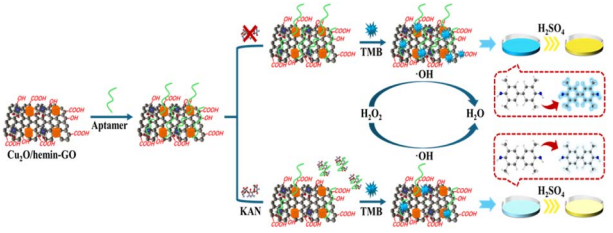
Yingzhen Wang, Bingyue Cao, Shanshan Shi, Shulin Gao* and Dandan Ge



4753

A Cu_2O/hemin-GO nanozyme with aptamer-enhanced peroxidase-mimic activity for colorimetric detection of kanamycin in milk

Yaoting Mou, Lu Han, Yanhao Yin, Jianghua Liu, Yanqing Xu, Yuhang Tian, Yanfang Wu, Dongfei Chen, Yemin Guo, Xia Sun and Falan Li*



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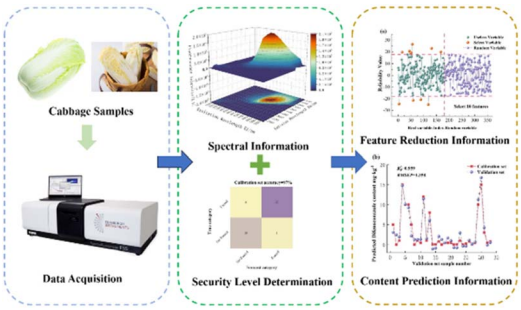
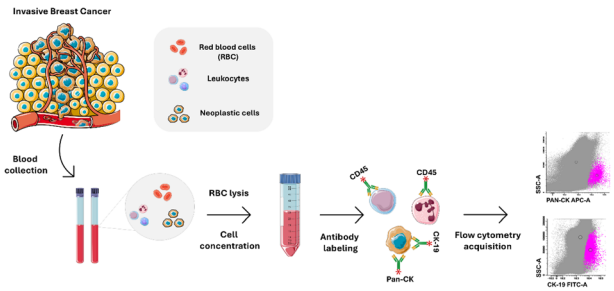
4764



The fluorescence spectrum combined with a broad learning system to characterize the content of difenoconazole in cabbage

Di Wu, Xiaorong Sun,* Yuhan Liu, Cuiling Liu* and Jingzhu Wu

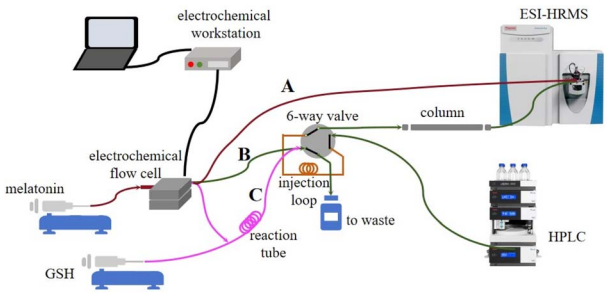
4771



Bulk-lysis protocols as a sensitive method for investigation of circulating CK19 cells in the peripheral blood of patients with breast cancer by flow cytometry

Daniella Serafin Couto Vieira, Laura Otto Walter, Maria Eduarda Cunha da Silva, Lisandra de Oliveira Silva, Heloísa Zorzi Costa, Chandra Chiappin Cardoso, Fernando Carlos de Lander Schmitt and Maria Cláudia Santos-Silva*

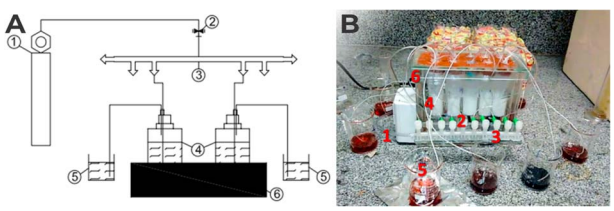
4778



Analysis of melatonin simulated metabolism based on electrochemistry coupled online with high performance liquid chromatography-mass spectrometry

Yanyan Niu, Lisi Wang, Yuxue Chen, Juan Zhou and Wei Sun*

4788



Development of a low-cost equipment alternative to the Kjeldahl distiller for the determination of total volatile basic nitrogen

Nelson de Abreu Delvaux Júnior,* Maria Eliana Lopes Ribeiro de Queiroz, André Fernando de Oliveira, Antônio Augusto Neves, Fernanda Fernandes Heleno, Amanda Maria Leal Pimenta, Flávio Pinto Monção, Flaviano Oliveira Silvério, Fernanda Menezes Maia, Luís Felipe Rodrigues Costa and Luciano Pereira Rodrigues*

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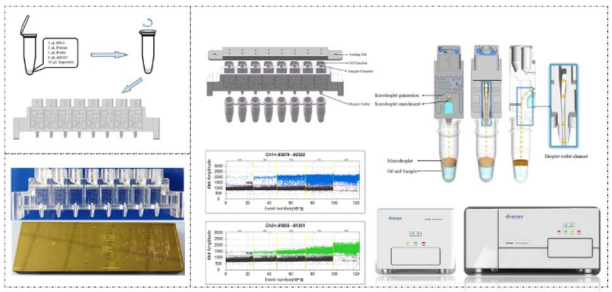
4796

Development of a non-transfer microdroplet generation chip and digital molecular detection system

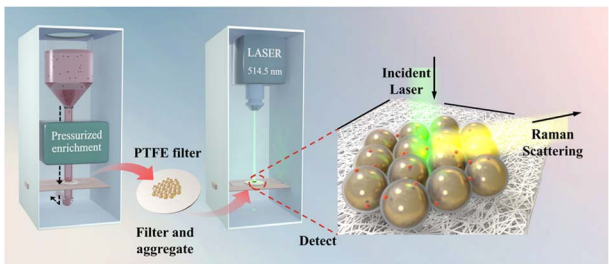
Rui Sun, Lei Li, Tong Fang, Chaoyi Hu, Haiwen Li* and Huancai Yin*



4805

Citrate-capped gold nanoparticle SERS platforms for ultrasensitive detection of cypermethrin

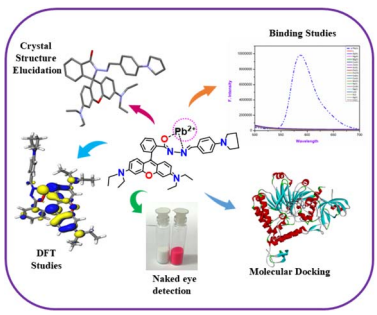
Peifang Wang, Zhimin Yang, Weixiang Tao, Chongchong Liu and Gang Zhou*



4812

Rhodamine-based turn-on fluorescent and colorimetric chemosensor for selective Pb^{2+} detection: insights from crystal structure, molecular docking, real sample analysis, and logic gate applications

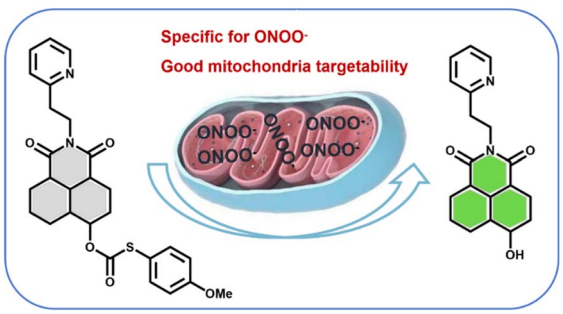
Ram Kumar, Bholey Singh,* Rita Kakkar, Avneesh Mittal and Balaram Pani*



4831

The highly specific fluorescence visualization of mitochondrial peroxynitrite *via* a naphthalimide probe

Fangyun Xin,* Haixu Wang, Yuanqian Yang, Hong Wang, Mingming Xing, Yao Fu, Ying Tian* and Yong Tian*



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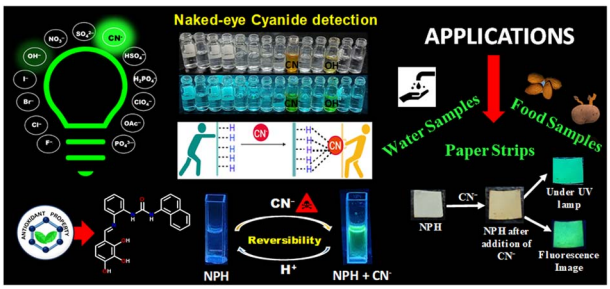
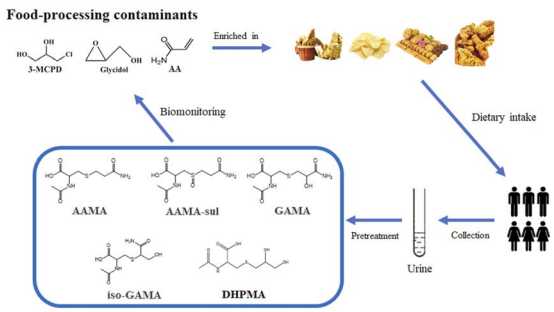
4838



A urea-based polyphenol receptor demonstrates colorimetric and fluorometric detection of cyanide in real-life applications

Sanjana Das and Gopal Das*

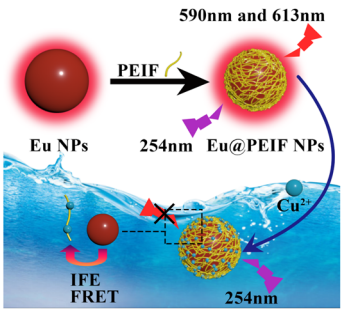
4846



Ultra-high performance liquid chromatography–tandem mass spectrometry for profiling mercapturic acids in human urine after daily exposure to acrylamide, 3-monochloropropane-1,2-diol and glycidol

Wei Jia, Xing Ke, Anxian Huang, Pan Zhuang, Yiju Zhang, Xuzhi Wan, Jingjing Jiao, Ziqing Kong* and Yu Zhang*

4856

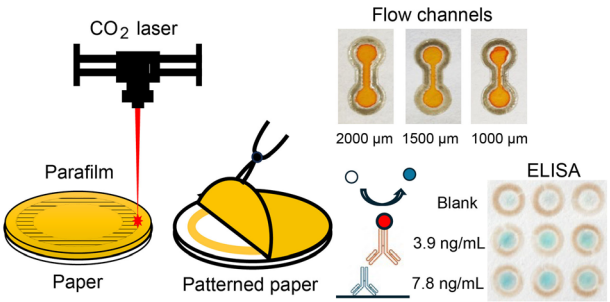


A label-free fluorescence sensing platform based on $NaY_{0.47}F_4$:$Ce_{0.1}$,$Gd_{0.4}$,$Eu_{0.03}$@PEIF down-conversion for selective detection of Cu^{2+} in aqueous environments

Dongxu Yan, Wen Yao, Siwei Chen, Xinrong Guo* and Lishi Wang*

TECHNICAL NOTE

4866



Laser melting of Parafilm-wax: a novel approach to hydrophobic barrier formation in paper-based microfluidics

Akshay A. Kamble, Gourav Samal and Bhushan J. Toley*

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