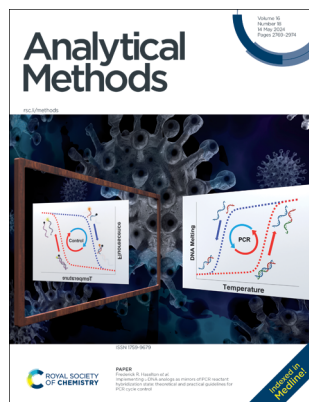


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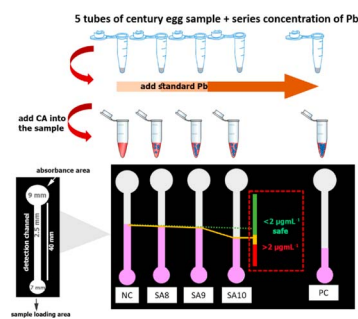
**Cover**  
See Frederick R. Haselton *et al.*, pp. 2840–2849. Image reproduced by permission of Nicholas Spurlock from *Anal. Methods*, 2024, **16**, 2840.

## CRITICAL REVIEWS

2777

### Paper-based sensors: affordable, versatile, and emerging analyte detection platforms

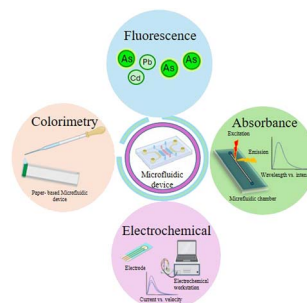
Sumit Malik, Joginder Singh, Kajal Saini, Vivek Chaudhary, Ahmad Umar,\* Ahmed A. Ibrahim, Sheikh Akbar and Sotirios Baskoutas



2810

### Integrated microfluidic platforms for heavy metal sensing: a comprehensive review

Sharmila Sajankila Nadumane, Rajib Biswas and Nirmal Mazumder\*



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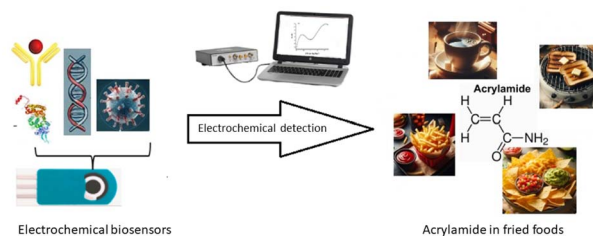
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## CRITICAL REVIEWS

2824

**Acrylamide in food products and the role of electrochemical biosensors in its detection: a comprehensive review**

Alexandra Virginia Bounegru\* and Iulian Bounegru

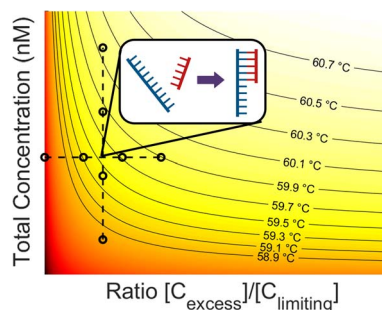


## PAPERS

2840

**Implementing L-DNA analogs as mirrors of PCR reactant hybridization state: theoretical and practical guidelines for PCR cycle control**

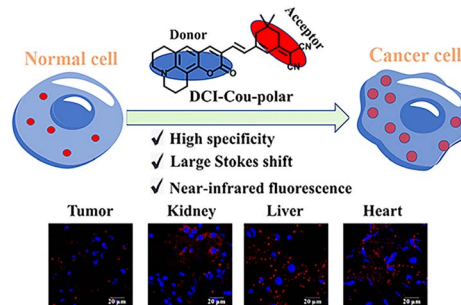
Nicholas Spurlock, William E. Gabella, Dalton J. Nelson, David T. Evans, Megan E. Pask, Jonathan E. Schmitz and Frederick R. Haselton\*



2850

**A highly selective probe engineered to detect polarity and distinguish normal cells and tumor cells in tissue sections**

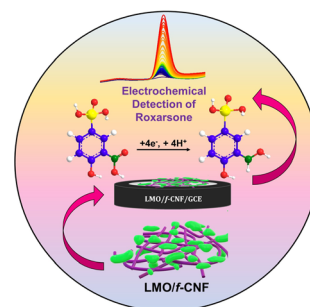
Sai Zhu, Lixuan Dai, Xiaoli Zhong and Weiyang Lin\*



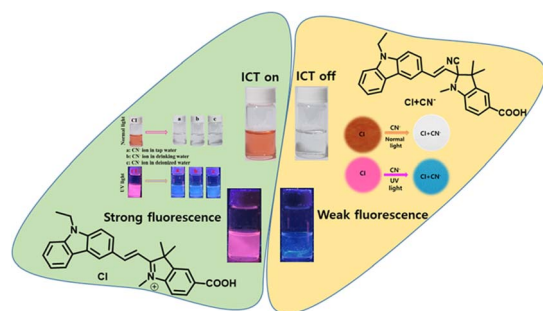
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**Design and fabrication of La-based perovskites incorporated with functionalized carbon nanofibers for the electrochemical detection of roxarsone in water and food samples**

Mariya Antony John Felix, Santhiyagu Sahayaraj Rex Shanlee, Shen-Ming Chen,\* Sundaresan Ruspika, Ramachandran Balaji,\* Narendhar Chandrasekar and Periyanyagam Arockia Doss



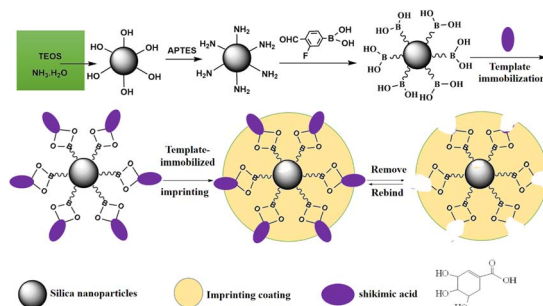
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### A reaction based carbazole–indolium conjugate probe for the selective detection of environmentally toxic ions

Jayasudha Palanisamy,\* Mansour K. Gatasheh and Ashraf Atef Hatamleh

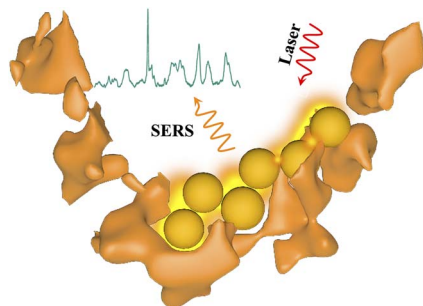
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### The preparation of a boronate affinity-based controlled oriented imprinting coating on a silica nanoparticle surface for the separation and purification of shikimic acid in herbal medicine

Yumin Yang, Daojin Li\* and Bingqian Liu

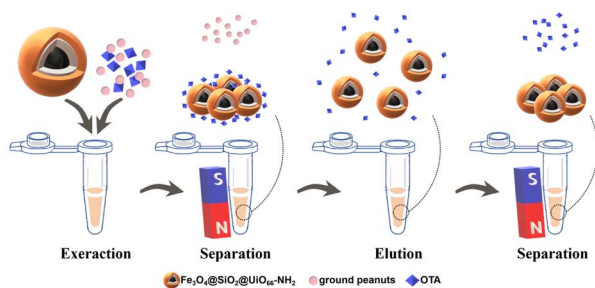
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### Three-dimensional hotspot structures constructed from nanoporous gold with a V-cavity and gold nanoparticles for surface-enhanced Raman scattering

Yang Xu, Yan Wu, Jianjun Wei,\* Yuanyu Zhao and Peili Xue

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### Novel advanced materials and magnetic solid phase extraction as approaches in sample preparation to enhance the analysis of ochratoxin A in peanuts

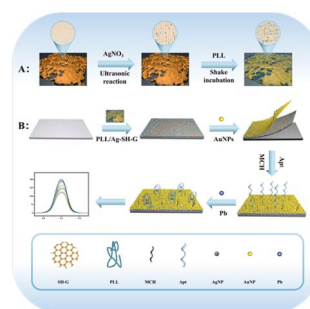
Bingchen Wang, Yifan Wang, Xiuyuan Zhang and Kuo He\*



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### An electrochemical aptasensor based on silver-thiolated graphene for highly sensitive detection of $Pb^{2+}$

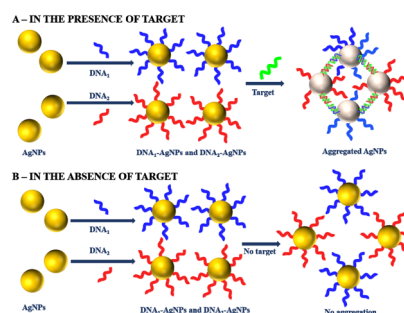
Jie Zhou, Changchun Hu, Shuo Li, Chuanxiang Zhang, Yuan Liu, Zhu Chen, Song Li, Hui Chen and Yan Deng\*



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### A simple and rapid colorimetric detection of *Staphylococcus aureus* relied on the distance-dependent optical properties of silver nanoparticles

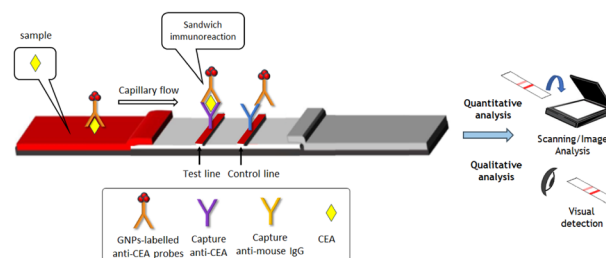
Phan Ngoc Anh Thu, Nguyen Hoang Men, Cam-Duyen Thi Vo, Vo Van Toi and Phuoc Long Truong\*



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### A simplified lateral flow immunosensor for the assay of carcinoembryonic antigen in low-resource settings

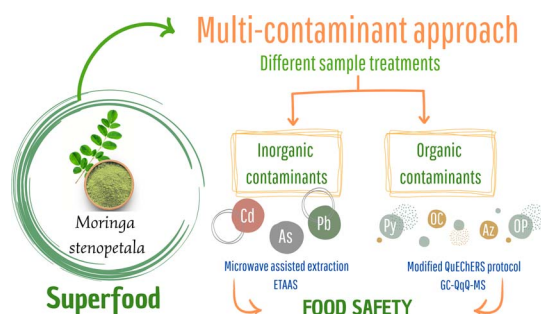
Ioanna Tsogka, Electra Mermiga, Varvara Pagkali, Christos Kokkinos and Anastasios Economou\*



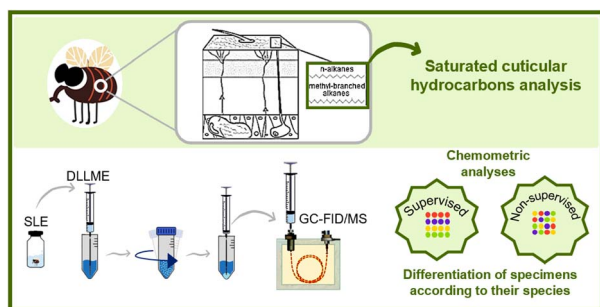
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### Holistic food safety evaluation of herbs: methods for the determination of organic and inorganic trace contaminants in *Moringa stenopetala* as a case study

Ignacio Machado, Natalia Gérez, Analía Bertón, Horacio Heinzen and María Verónica Cesio\*



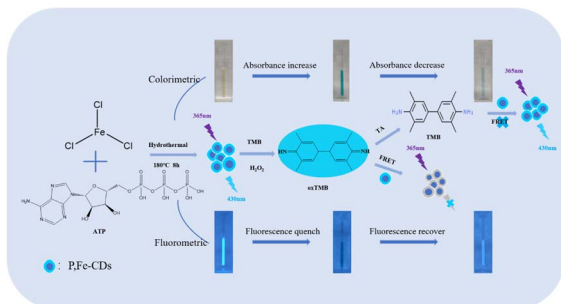
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### Discrimination of Diptera order insects based on their saturated cuticular hydrocarbon content using a new microextraction procedure and chromatographic analysis

L. O. León-Morán, M. Pastor-Belda, P. Viñas, N. Arroyo-Manzanares, M. D. García, M. I. Arnaldos and N. Campillo\*

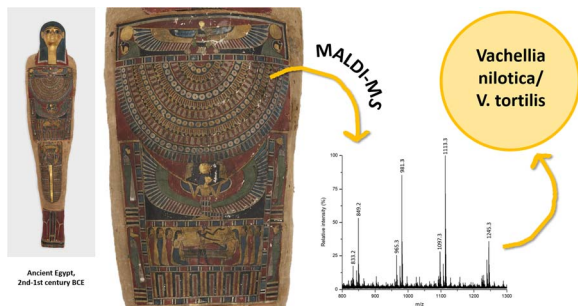
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### Dual-signal detection of tannic acid in red wines based on the peroxidase activity of carbon dots

Bin Liu, Yu Yin, Qianwen Li, Wanwan Li, Fubing Xiao, Jinquan Liu, Yan Tan\* and Shengyuan Yang\*

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### New insight from MALDI-TOF MS and multivariate data analysis on the botanical origin of polysaccharide-based paint binders in ancient Egypt

Clara Granzotto,\* Amra Aksamija, Gerjen H. Tinnevelt, Viktoriia Turkina and Ken Sutherland

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### Correction: High-resolution magic-angle spinning NMR metabolic profiling with spatially localized spectroscopy under slow sample spinning

Alan Wong

