

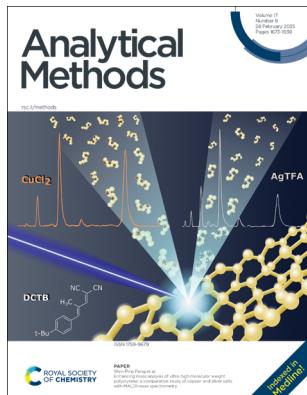
# Analytical Methods

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### Cover

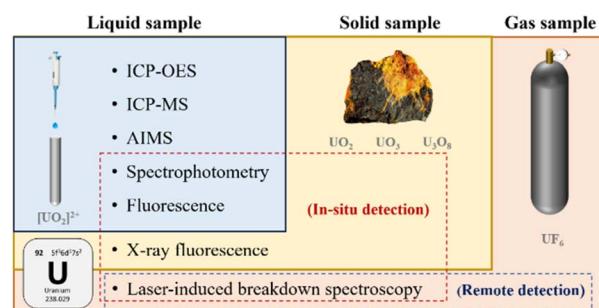
See Wen-Ping Peng et al., pp. 1754–1764. Image reproduced by permission of Wen-Ping Peng from *Anal. Methods*, 2025, 17, 1754.

## CRITICAL REVIEWS

1683

### A review of uranium (U) elemental detection methods

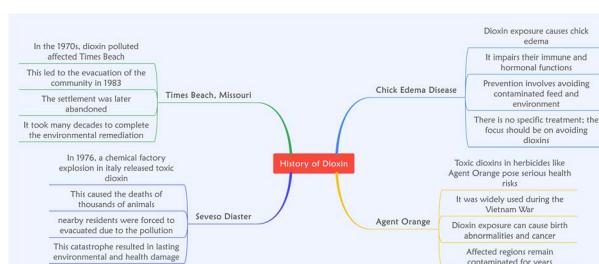
Xiang Yu,\* Xuebin Su,\* Zhe Wang, Zongyu Hou and Boping Li



1698

### Dioxins and their impact: a review of toxicity, persistence, and novel remediation strategies

Nikhila Mathew, Arvindh Somanathan, Abha Tirpude, Anupama M. Pillai, Pabitra Mondal and Tanvir Arfin\*



# RSC Applied Interfaces

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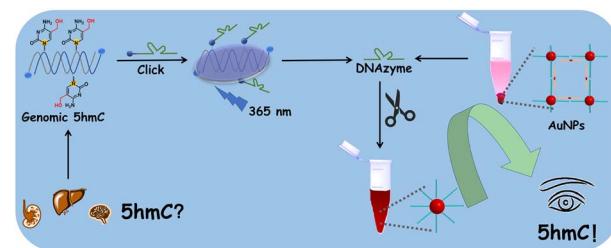
Fundamental questions  
Elemental answers

## COMMUNICATION

1749

**A photo-elutable 8–17 DNAzyme labeling and PCR-free colorimetric quantification strategy for 5-hydroxymethylcytosine in mammalian genomic DNA**

Mingfeng Lai, Shitao Lu, Bao Huang, Yanfeng Nie, Xu Wang, Jiaying Xiong and Zhenning Yu\*

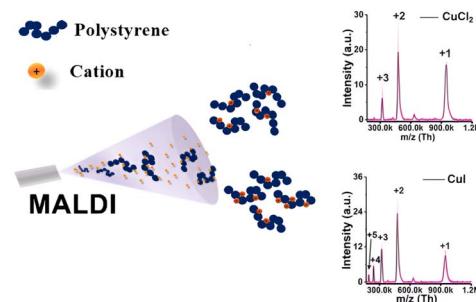


## PAPERS

1754

**Enhancing mass analysis of ultra-high molecular weight polystyrene: a comparative study of copper and silver salts with MALDI mass spectrometry**

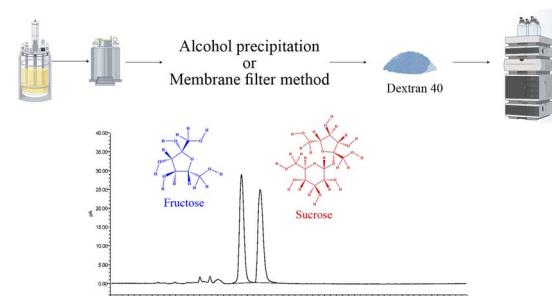
Avinash A. Patil, Thị Khanh Ly Lại, Ching-Chieh Lee, Yi-Pang Chiu, Zhe-Xuan Liu, Che-Jen Lin and Wen-Ping Peng\*



1765

**Quantitative analysis of carbohydrate residues in dextran 40 from various sources: a comparative study using high-performance liquid chromatography coupled with a charged aerosol detector**

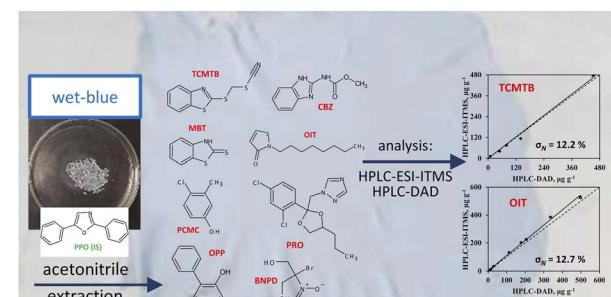
Shenggu Xie, Zhuyu Jin, Yan Huang and Qiaoqiao Huang\*



1774

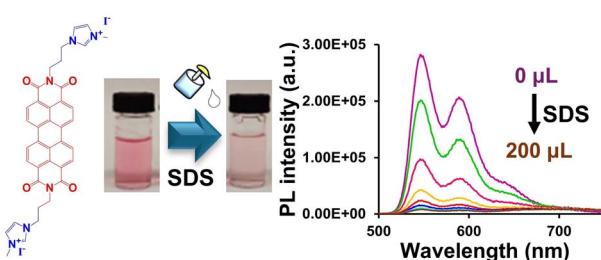
**Determination of eight fungicides in tanned leather by liquid chromatography with mass spectrometry and with diode array spectrophotometric detection**

Francisco Javier Acevedo-Aguilar, Israel Enciso Donis, Kazimierz Wrobel, Alma Rosa Corrales Escobosa, Luis Mario Magaña Maldonado and Katarzyna Wrobel\*



## PAPERS

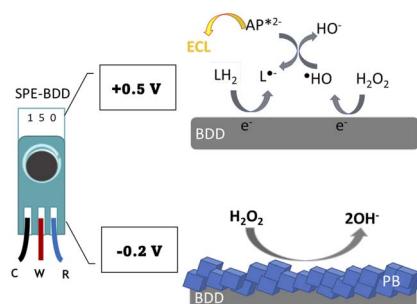
1784



### A perylene-based fluorescent probe for highly efficient SDS detection

Amrit Kaur, Mina Bagherifard, Alissa Brooke Anderson, Neelam Tariq, Zois Syrgiannis and Ioannis Spanopoulos\*

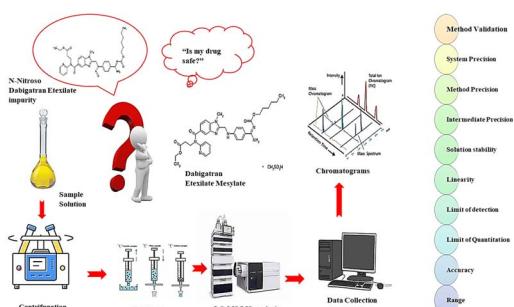
1790



### Comparison between electrochemiluminescence of luminol and electrocatalysis by Prussian blue for the detection of hydrogen peroxide

Isnaini Rahmawati,\* Andrea Fiorani, Irkham, Wulan Tri Wahyuni, Ruri Agung Wahyuono, Yasuaki Einaga and Tribidasari A. Ivandini\*

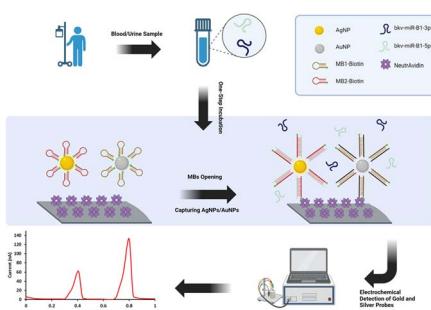
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### Ultrasensitive LC-MS/MS quantitation of the *N*-nitroso-dabigatran etexilate impurity in dabigatran etexilate mesylate using an electrospray ionization technique

Anant D. Yadav, Ashish C. Alaspure, Sandesh R. Lodha, Amrutlal L. Prajapat and Anil H. Gore\*

1804



### Advanced multiplexed electrochemical nanobiosensors for simultaneous detection of BK polyomavirus miRNAs in renal transplants

Mohammad Shenagari, Ammar Ebrahimi, Elahe Bozorgzadeh,\* Masoud Khosravi and Elham Hasan-Alizadeh

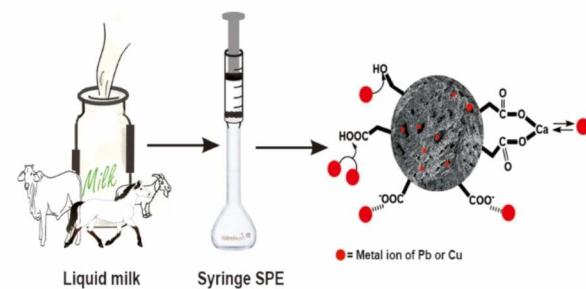


## PAPERS

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**Fast preconcentration of Pb(II) and Cu(II) in liquid milk by syringe solid-phase extraction using alginate and PVA biopolymer loaded with activated carbon**

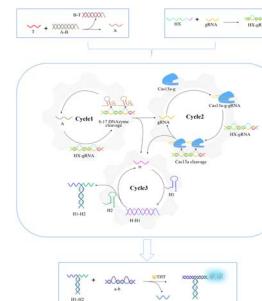
Ahmad Akhib Ainul Yaqin, Suherman Suherman, Dwi Siswanta\* and Ahmad Hosseini-Bandegharaei



1825

**Multiple signal amplification strategy for ultrasensitive sensing of *Mycobacterium bovis* based on 8–17 DNAzyme and CRISPR-Cas13a**

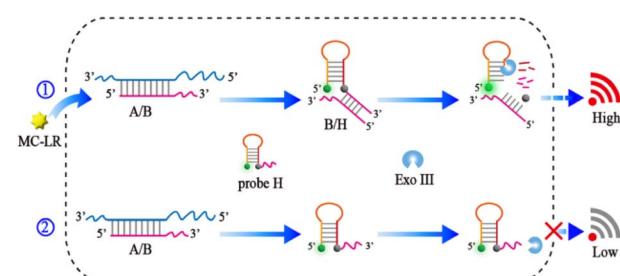
Xin Fu, Sainan Gao, He Zhang,\* Wenjie Ma, Yong Chen, Jiamei Luo and Bin Ye



1834

**A probe-mediated fluorescent biosensor for MC-LR detection using exonuclease III as a signal amplifier**

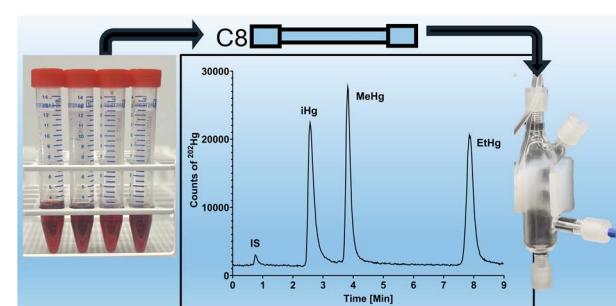
Yuyan Wang, Ying Zeng, Xiaoya Ren, Jun Qiu, Jiafeng Pan\* and Fei Yang\*



1840

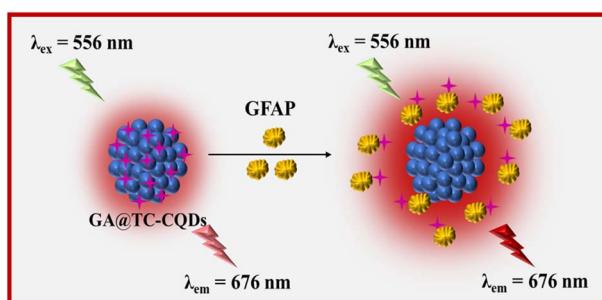
**A rapid method for the determination of methylmercury and inorganic mercury species in whole blood by liquid chromatography with detection using vapor generation ICP-MS/MS**

Emily J. Pacer, Christopher D. Palmer and Patrick J. Parsons\*



## PAPERS

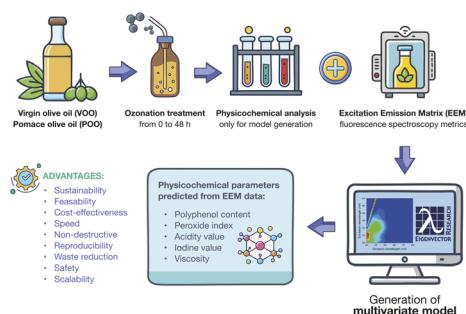
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**Near infrared-emitting carbon dots for the detection of glial fibrillary acidic protein (GFAP): a non-enzymatic approach for the early identification of stroke and glioblastoma**

Susan Varghese, Merin K. Abraham, Ali Ibrahim Shkhair, Geneva Indongo, Greeshma Rajeevan, Arathy B. K., Anju S. Madanan and Sony George\*

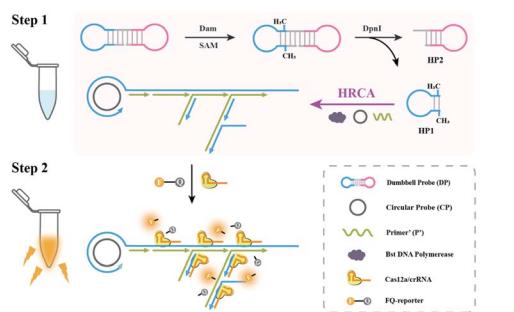
1860



**Excitation–emission matrix spectroscopy coupled with chemometrics for monitoring ozonation of olive oil and olive pomace oil**

Paula Domínguez-Lacueva, Ewa Sikorska and María J. Cantalejo-Díez\*

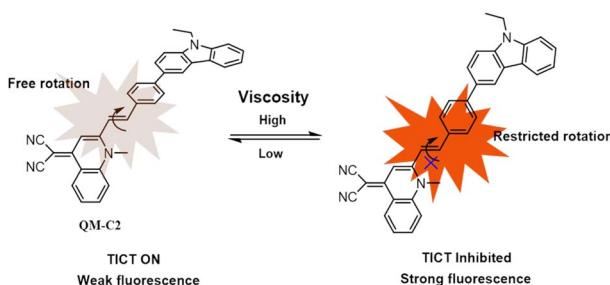
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**A universal two-step strategy for multiple DNA MTase activity: enhancing sensitivity through CRISPR/Cas12a-assisted hyperbranched rolling circle amplification (CA-HRCA)**

Shiying Zhou, Human Sun, Liyuan Deng, Shuyu Zhu, Jian Chen, Danqun Huo\* and Changjun Hou\*

1877



**A quinoline-malononitrile-based fluorescent probe with aggregation-induced emission effect for the *in vivo* monitoring of viscosity**

Wenjie Zhang, Qiuying Song, Jing He, Hongmin Jia,\* Zhuye Shang,\* Zhiqiang Zhang and Qingtao Meng\*

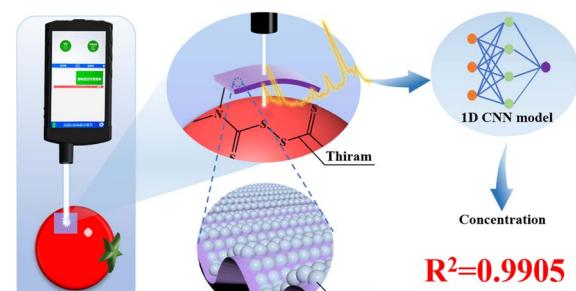


## PAPERS

1884

**Rapid detection and quantitative analysis of thiram in fruits using a shape-adaptable flexible SERS substrate combined with deep learning**

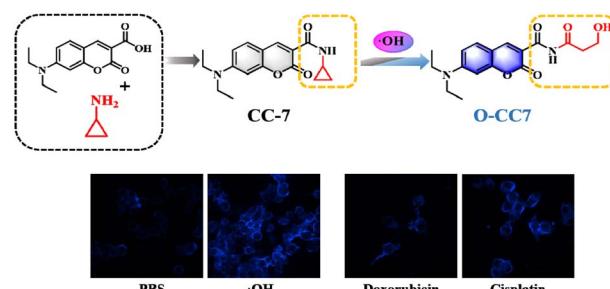
Hongjun Wang, Ziyang Bian, Yue Wang, Huijuan Niu, Zhenshan Yang and Hefu Li\*



1892

**Radical-triggered ring-opening of aminocyclopropane for detection of hydroxyl radicals in living cells**

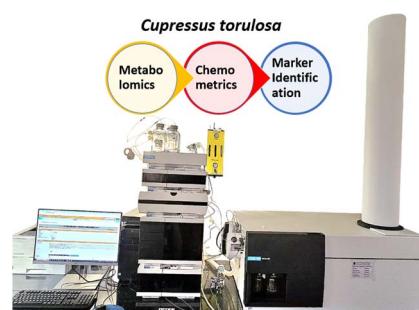
Shiqi Jin, Wang Qian, Ruiyang Suo, Yi Li, Huan Ling, Shuqi Li, Kai Deng, Yongchang Wei,\* Bo Wu\* and Huaxia Chen\*



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**UPLC-QTOF-MS-based metabolomics and chemometrics studies of geographically diverse *C. torulosa* needles**

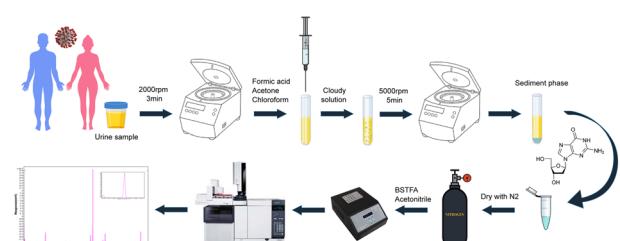
Radhika Khanna,\* Khushaboo Bhadriya, Gaurav Pandey and V. K. Varshney\*



1915

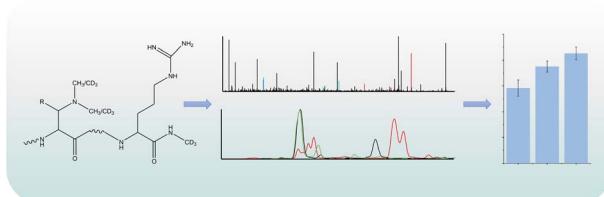
**Dispersive liquid–liquid microextraction for the determination of urinary 8-hydroxy 2'-deoxyguanosine in COVID-19 patients by gas chromatography-mass spectrometry**

Sanaz Zare, Zohreh Zahraei,\* Mohammad Khodadadi, Maryam Zarean and Azam Salehi



## PAPERS

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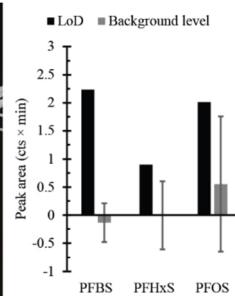


## Analysis of phosphorylation site occupancy of peptides based on a chemical derivatization method

Xingdan Wang, Zhenghu Min, Xiaoqiu Yang, Qiwei Zhang\* and Qi Zheng

## TECHNICAL NOTE

1930



## Homebuilt cost-effective nitrogen blowdown evaporator

Eamonn Clarke\* and Marc D. Porter

