

Analytical Methods

rsc.li/methods

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 1759-9679 CODEN AMNECT 16(10) 1419–1556 (2024)



Cover

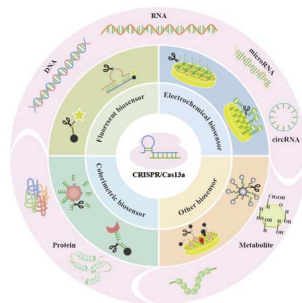
See Ann-Christin Pöppler *et al.*, pp. 1468–1472. Image reproduced by permission of Ann-Christin Pöppler from *Anal. Methods*, 2024, **16**, 1468.

CRITICAL REVIEWS

1426

Application of CRISPR/Cas13a-based biosensors in serum marker detection

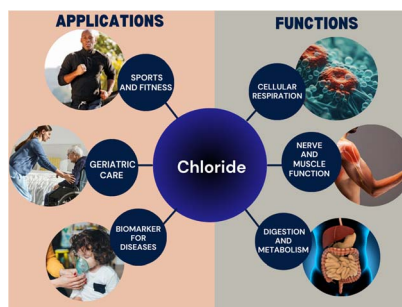
Wei He, Xiyu Liu, Jintong Na, Huimin Bian, Liping Zhong* and Guiyin Li*



1439

Wearable sweat chloride sensors: materials, fabrication and their applications

Vinay Patel, Anvi Mardolkar, Akshata Shelar, Ritu Tiwari and Rohit Srivastava*



Royal Society of Chemistry approved training courses

Explore your options.
Develop your skills.
Discover learning
that suits you.

**Courses in the classroom,
the lab, or online**

Find something for every
stage of your professional
development. Search our
database by:

- subject area
- location
- event type
- skill level

Members **get at least 10% off**

Visit rsc.li/cpd-training

**SAVE
10%**

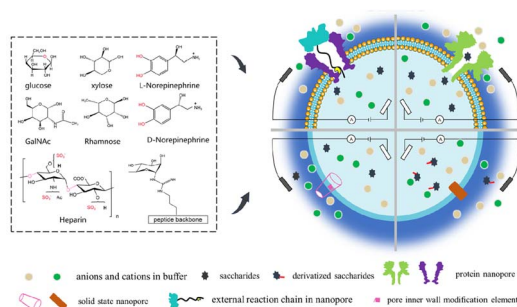


CRITICAL REVIEWS

1454

Recent advances in nanopore-based analysis for carbohydrates and glycoconjugates

Yan Zhao, Zhuoqun Su,* Xue Zhang, Di Wu, Yongning Wu and Guoliang Li*

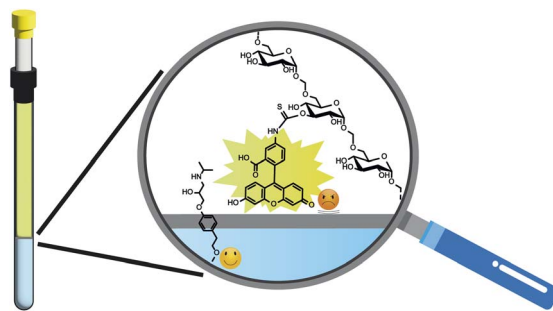


COMMUNICATIONS

1468

***In situ* setup for screening of drug permeation by NMR spectroscopy**

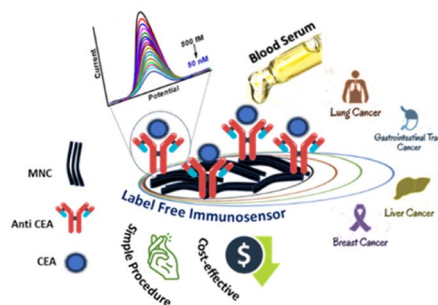
Malte Mildner, Simon Hanio, Sebastian Endres, Lena Scheller, Bettina Engel, Laura Castañar, Lorenz Meinel and Ann-Christin Pöppler*



1473

Realizing the label-free sensitive detection of carcinoembryonic antigen (CEA) in blood serum via a MNC-decorated flexible immunosensor

Daisy Mehta, Sukhjot Kaur and Tharamani C. Nagaiah*

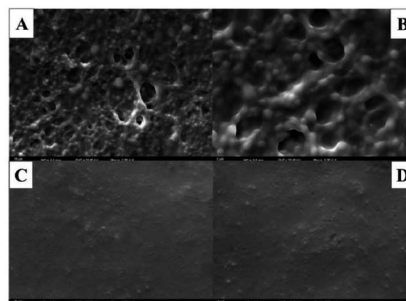


PAPERS

1480

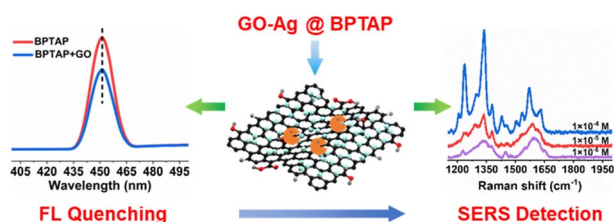
A novel electrochemical sensor based on a molecularly imprinted polymer for highly selective and sensitive determination of rutin from herbal supplements and plant extracts

M. Mesud Hurkul,* Seyda Yayla, Ahmet Cetinkaya, S. Irem Kaya, Lokman Uzun and Sibel A. Ozkan*



PAPERS

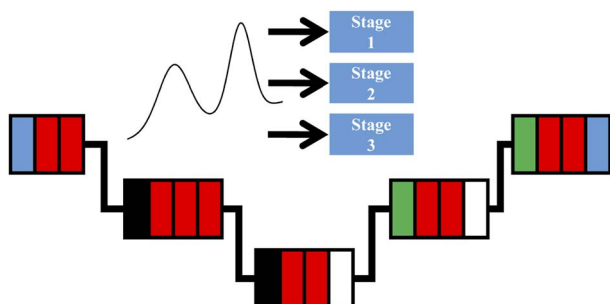
1489



Highly sensitive fluorescent explosives detection via SERS: based on fluorescence quenching of graphene oxide@Ag composite aerogels

Lingyan Shi, Wei Liu, Xuan He,^{*} Zihan Wang, Weiping Xian, Jie Wang and Sheng Cui^{*}

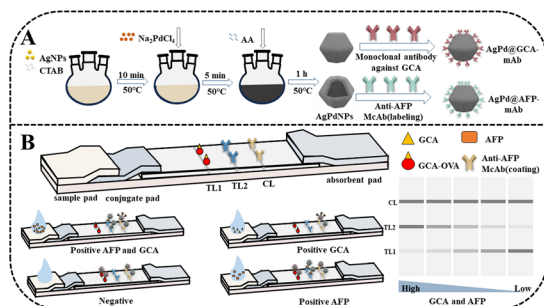
1496



A three-stage deep learning-based training frame for spectra baseline correction

Qingliang Jiao, Boyong Cai, Ming Liu,^{*} Liquan Dong, Mei Hei, Lingqin Kong and Yuejin Zhao

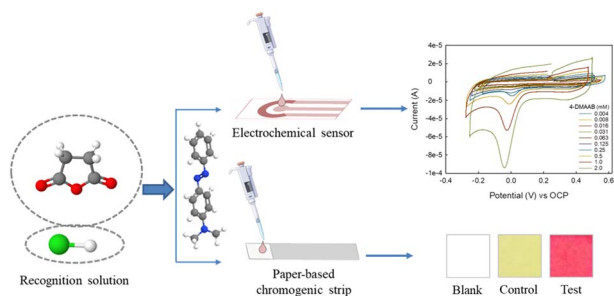
1508



An AgPd NP-based lateral flow immunoassay for simultaneous detection of glycocholic acid and alpha-fetoprotein

Shilin Jiang, Yaqiong Chen, Jinhui Liang, Huanxin Xiao, Mingxia Lin, Xiping Cui^{*} and Suqing Zhao^{*}

1515



A paper-based chromogenic strip and electrochemical sensor for the detection of 4-(dimethylamino)azobenzene

Pawankumar Rai, Srishti Mehrotra, Suryansh Verma and Sandeep K. Sharma^{*}

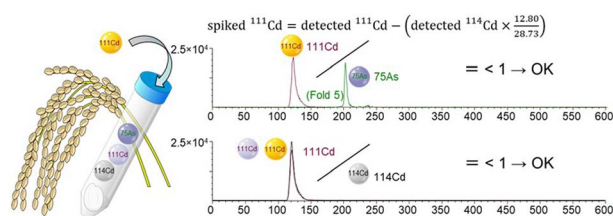


PAPERS

1523

Combination of isotope dilution with liquid chromatography-inductively coupled plasma mass spectrometry for the simultaneous monitoring and evaluation of cadmium and inorganic arsenic in polished rice

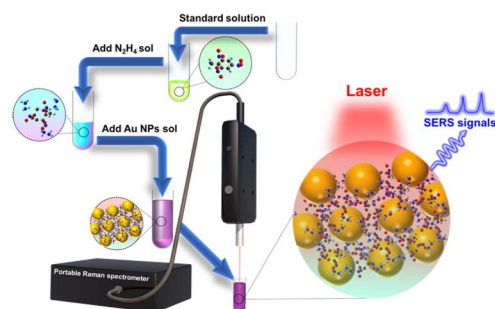
Tomohiro Narukawa,* Satoki Okabayashi,
Motohiro Tsuboi and Koichi Chiba



1531

Rapid detection of trace nitrobenzene in water via SERS using a portable Raman spectrometer

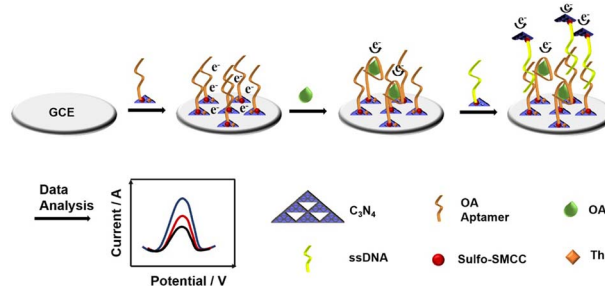
Zhen-Wei Yang,* Zhou Yu, Ju-Fang Zheng,*
Ya-Hao Wang* and Xiao-Shun Zhou



1538

A 2D carbon nitride-based electrochemical aptasensor with reverse amplification for highly sensitive detection of okadaic acid in shellfish

Yating Chen, Yiwei Liu, Ping Zhu, Shuge Liu,
Miaomiao Wang, Yage Liu, Zhiyao Wang, Wei Chen,
Zhan Qu,* Liping Du* and Chunsheng Wu*



1546

Streptavidin-biotin system-mediated immobilization of a bivalent nanobody onto magnetosomes for separation and analysis of 3-phenoxybenzoic acid in urine

Fang Tang, Yating Wang, Di Wang, Yayun Yang,
Jiashu Chang, Huabo Sun, Shaopeng Gu* and Jinxin He*

