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 15(18) 2135-2286 (2023)



Cover

See Arthur Z. Yang et al., pp. 2181-2190. Image reproduced by permission of Shuang Yang and Xiaodong Yang from Anal. Methods, 2023, **15**, 2181.

MINIREVIEW

2142

Aptamer-based technology for gastric cancer theranostics

Qi-Yan Lv, Hui-Fang Cui* and Xiaojie Song

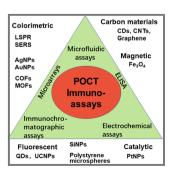


CRITICAL REVIEW

2154

The application of nanoparticles in point-of-care testing (POCT) immunoassays

Fengping Hou, Shiqi Sun, Sahibzada Waheed Abdullah, Yu Tang, Xiongxiong Li* and Huichen Guo*



Editorial Staff

Executive Editor

Philippa Ross

Deputy Editor

Alice Smallwood

Editorial Production Manager

Iason Woolford

Development Editor

Celeste Brady

Publishing Editors

Gabriel Clarke, Derya Kara-Fisher, Ziva Whitelock

Publishing Assistant Andrea Whiteside

Editorial Assistant

Leo Curtis

Publisher

Jeanne Andres

For queries about submitted articles please contact Jason Woolford, Editorial production manager, in the first instance. E-mail methods@rsc.org

For pre-submission queries please contact Philippa Ross, Executive editor. E-mail methods-rsc@rsc.org

Analytical Methods (electronic: ISSN 1759-9679) is published 48 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road Cambridge, UK CB4 0WF.

All orders, with cheques made payable to the Royal Society of Chemistry, should be sent to the Royal Society of Chemistry Order Department, Royal Society of Chemistry Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK

Tel +44 (0)1223 432398; E-mail orders@rsc.org

2023 Annual (electronic) subscription price: £2416; US\$4255. Customers in Canada will be subject to a surcharge to cover GST. Customers in the EU subscribing to the electronic version only will be charged VAT.

If you take an institutional subscription to any Royal Society of Chemistry journal you are entitled to free, site-wide web access to that journal. You can arrange access via Internet Protocol (IP) address at www.rsc.org/ip

Customers should make payments by cheque in sterling payable on a UK clearing bank or in US dollars payable on a US clearing bank.

Whilst this material has been produced with all due care, the Royal Society of Chemistry cannot be held responsible or liable for its accuracy and completeness, nor for any consequences arising from any errors or the use of the information contained in this publication. The publication of advertisements does not constitute any endorsement by the Royal Society of Chemistry or Authors of any products advertised. The views and opinions advanced by contributors do not necessarily reflect those of the Royal Society of Chemistry which shall not be liable for any resulting loss or damage arising as a result of reliance upon this material. The Royal Society of Chemistry is a charity, registered in England and Wales, Number 207890, and a company incorporated in England by Royal Charter (Registered No. RC000524), registered office: Burlington House, Piccadilly, London W1J 0BA, UK,

Telephone: +44 (0) 207 4378 6556. Advertisement sales:

Tel +44 (0) 1223 432246; Fax +44 (0) 1223 426017; E-mail advertising@rsc.org

For marketing opportunities relating to this journal, contact marketing@rsc.org

Analytical Methods

rsc.li/methods

Early applications of new analytical methods with clear societal impact.

Editor-in-Chief

Scott Martin, St. Louis University, USA

Associate Editors

Jonas Bergquist, Uppsala University, Sweden England, UK Wendell Coltro, Federal University of Goiás, Zhen Liu, Nanjing University, China

Christopher Easley, Auburn University, USA Juan García-Reyes, Jaén University, Spain Tony Killard, University of the West of

Chao Lu, Beijing University of Chemical Technology, China

Fiona Regan, Dublin City University, Ireland Michael Roper, Florida State University, USA Jill Venton, University of Virginia, USA

Advisory Board

Jailson de Andrade, Federal University of Bahia, Brazil

Lane Baker, Indiana University, USA Craig Banks, The Manchester Metropolitan University, UK

Emanuel Carrilho, University of São Paulo, Yi Chen, Chinese Academy of

Sciences, China

of Agriculture and Technology, Kenya Amanda Hummon, Ohio State University,

Lauro Kubota, Instituto de Ouímica, Brazil Ally Lewis, University of York, UK Juewen Liu, University of Waterloo, Canada Susan Lunte, University of Kansas, USA Jim Luong, Dow Chemical Canada ULC,

Anthony Gachanja, Jomo Kenyatta University Susheel Mittal, Thapar University, India

Antonio Molina-Díaz, University of Jaén,

Koji Otsuka, Kyoto University, Japan Brett Paull, University of Tasmania, Australia Zachary Schultz, Ohio State University, USA Guobao Xu, Changchun Institute of Applied Chemistry, China

Information for Authors

Full details on how to submit material for publication in Analytical Methods are given in the Instructions for Authors (available from http://www.rsc.org/authors). Submissions should be made via the journal's homepage:

Authors may reproduce/republish portions of their published contribution without seeking permission from the Royal Society of Chemistry, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)-Reproduced by permission of the Royal Society of Chemistry.

This journal is @ The Royal Society of Chemistry 2023. Apart from fair dealing for the purposes of research or private study for non-commercial purposes, or criticism or review, as permitted under the Copyright, Designs and Patents Act 1988 and the Copyright and Related Rights Regulation 2003, this publication may only be reproduced, stored or transmitted, in any form or by any means, with the prior permission in writing of the Publishers or in the case of reprographic reproduction in accordance with the terms of licences issued by the Copyright Licensing Agency in the UK. US copyright law is applicable to users in the USA. Registered charity number: 207890

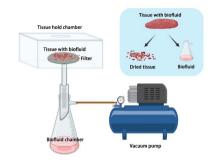


PAPERS

2181

Isolation of biofluids from tissues using a vacuumassisted filtration biomedical device

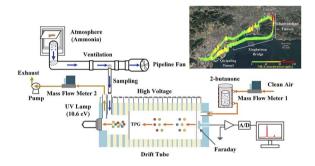
Arthur Yang, Yufeng Zhou, John Hardy, Shiqing Fu, Yuan Wang, Li Zhang, Zhen Wu, Xumin Zhang, Ci Wu, Junfeng Ma, Zeyang Zhou, Xiaodong Yang* and Shuang Yang*



2191

Real-time monitoring of atmospheric ammonia based on modifier-enhanced vacuum ultraviolet photoionization ion mobility spectrometry

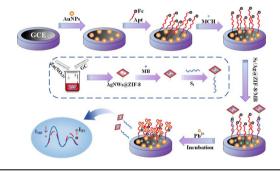
Xueying Bai, Shimin Liu, Wei Huang,* Weiguo Wang, Dongming Li, Aibo Wang, Yi Chen, Yuanzhi Zhang, Huaiwen Cang and Haiyang Li*



2199

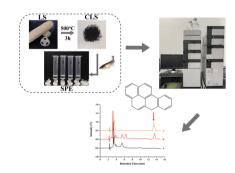
A ratiometric electrochemical sensor for detecting lead in fish based on the synergy of semicomplementary aptamer pairs and Aq nanowires@zeolitic imidazolate framework-8

Kuiguo Han, Liang Chen, Wen Zhang, Yangun Tong, Jiyong Shi, Xiaoyu Su and Xiaobo Zou*



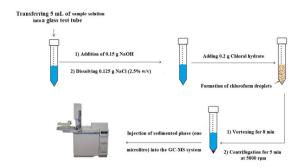
Carbonized loofah sponge-based solid-phase extraction of benzo[a]pyrene from fish followed by liquid chromatography-ultraviolet detection

Yaqi Zhu, Saiyi Zhong, Xitian Peng,* Qiongwei Yu* and Yuqi Feng



PAPERS

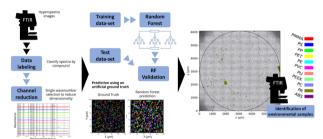
2219



In situ formation of chloroform for dispersive liquid—liquid microextraction of some aromatic amines from aqueous samples optimized by central composite design prior to GC-MS analysis

Shabnam Shagaghipour, Saeed Mohammad Sorouraddin,* Mir Ali Farajzadeh and Mohammad Reza Afshar Mogaddam*

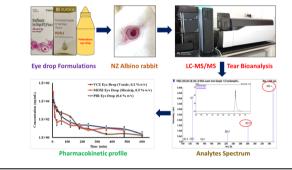
2226



Random forest microplastic classification using spectral subsamples of FT-IR hyperspectral images

Jordi Valls-Conesa,* Dominik J. Winterauer, Niels Kröger-Lui, Sascha Roth, Fan Liu, Stephan Lüttjohann, Roland Harig and Jes Vollertsen

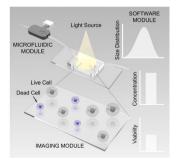
2234



Simultaneous estimation of voriconazole, moxifloxacin, and pirfenidone in rabbit lacrimal matrix using LC-MS/MS: an application to preclinical ocular pharmacokinetics

Amol Chhatrapati Bisen, Sristi Agrawal, Sachin Nashik Sanap, Anjali Mishra, Arpon Biswas, Sarvesh Kumar Verma and Rabi Sankar Bhatta*

2244



An optofluidic platform for cell-counting applications

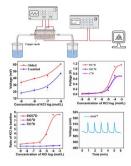
Meryem Beyza Avci, S. Deniz Yasar and Arif E. Cetin*

PAPERS

2253

A five-electrode capacitively coupled contactless conductivity detector with a low limit of detection

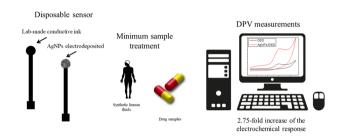
Chunqiong Hu, Bo Xie, Hongmei Li and Dan Xiao*



2262

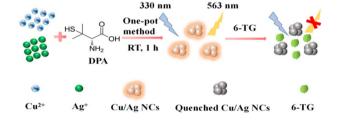
Electrochemical monitoring of levofloxacin using a silver nanoparticle-modified disposable device based on a lab-made conductive ink

Thalles Pedrosa Lisboa, Gabriela Couto da Silva, Raylla Santos Oliveira, Wallace Burger Veríssimo de Oliveira, Cassiano Cunha de Souza, Maria Auxiliadora Costa Matos and Renato Camargo Matos*



A novel fluorescent nanoprobe for sensitive detection of 6-thioguanine in human serum based on Cu/Ag nanoclusters

Wenjing Chen, Dongbao Hu, Meng Yang, Yi Zhu, Yunying Wu, Xi Li, Juntong Zhang, Jiqiu Yang, Yan Huang and Jianxin Xie*



General method for detecting acrylamide in foods and comprehensive survey of acrylamide in foods sold in Southeast China

Li Yangping, Li Yuxiang, Chen Hongjing, Zhang Wenting and Yang Yan*

