

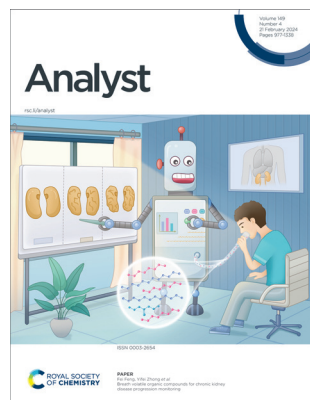
# Analyst

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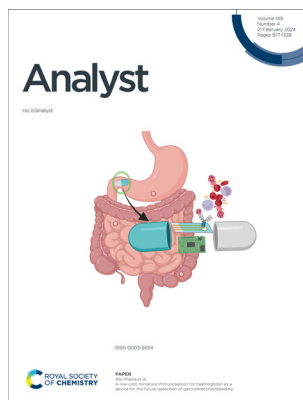
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ISSN 0003-2654 CODEN ANALAO 149(4) 977-1338 (2024)



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See Fei Feng, Yifei Zhong *et al.*,  
pp. 1074–1080.

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**Inside cover**  
See Ata Khalid *et al.*,  
pp. 1081–1089.

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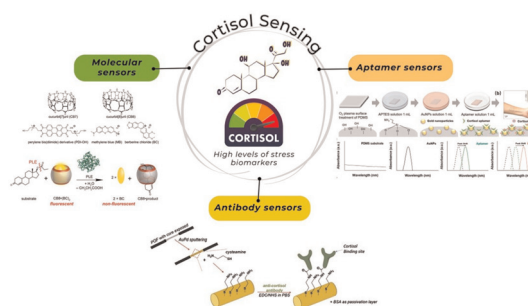
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### Cortisol sensing by optical sensors

Rossella Santonocito, Roberta Puglisi, Alessia Cavallaro,  
Andrea Pappalardo and Giuseppe Trusso Sfrassetto\*

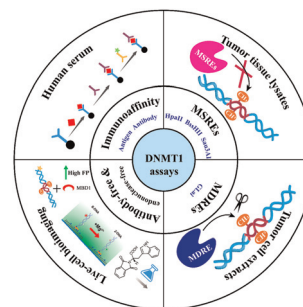


## TUTORIAL REVIEWS

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### A review on recent advances in assays for DNMT1: a promising diagnostic biomarker for multiple human cancers

Yang Yu, Wen Fu, Yaxing Xie, Xue Jiang, Hong Wang  
and Xiaolan Yang\*



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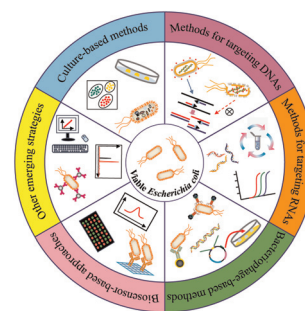


## TUTORIAL REVIEWS

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**Progress in methods for the detection of viable *Escherichia coli***

Linlin Zhuang, Jiansen Gong, Ying Zhao, Jianbo Yang, Guofang Liu, Bin Zhao, Chunlei Song, Yu Zhang\* and Qiuping Shen\*

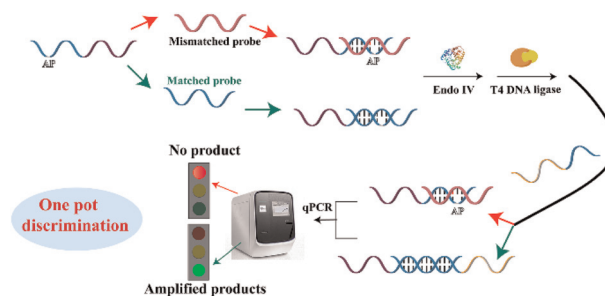


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**Endonuclease IV and T4 ligase enhanced detection of mutations in low abundance**

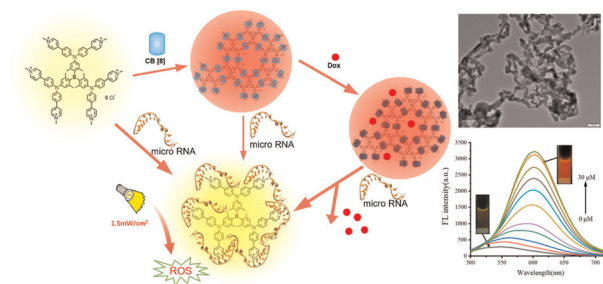
Bo Li and Chunyan Wang\*



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**CB[8]- and triarylboron-based supramolecular organic framework for microRNA detection, tumor-targeted drug delivery, and photodynamic therapy**

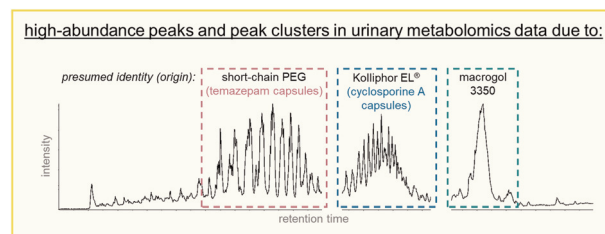
Xufeng Nie, Sijie Yan, Jian He, Yachuan Wang, Guowei Deng, Shilu Zhang,\* Hongyu Chen\* and Jun Liu\*



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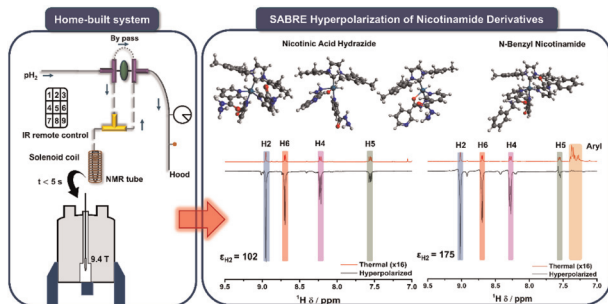
**High-abundance peaks and peak clusters associate with pharmaceutical polymers and excipients in urinary untargeted clinical metabolomics data: exploration of their origin and possible impact on label-free quantification**

Frank Klont,\* Fleur B. Nijdam, Stephan J. L. Bakker, Pekka Keski-Rahkonen, Gérard Hopfgartner and TransplantLines Investigators



## COMMUNICATIONS

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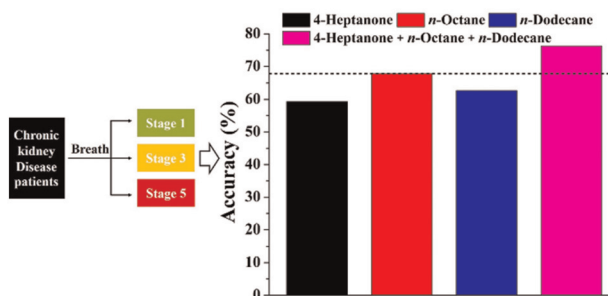


### SABRE hyperpolarization of nicotinamide derivatives and their molecular dynamics properties

Quy Son Luu, Quynh Thi Nguyen, Hung Ngo Manh, Seokki Yun, Jiwon Kim, Uyen Thi Do, Keunhong Jeong,\* Sang Uck Lee\* and Youngbok Lee\*

## PAPERS

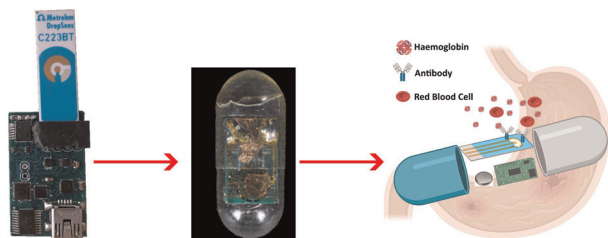
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### Breath volatile organic compounds for chronic kidney disease progression monitoring

Lei Li, Jue Wang, Fei Feng,\* Jiayi Yan, Bin Zhao, Xinxin Li and Yifei Zhong\*

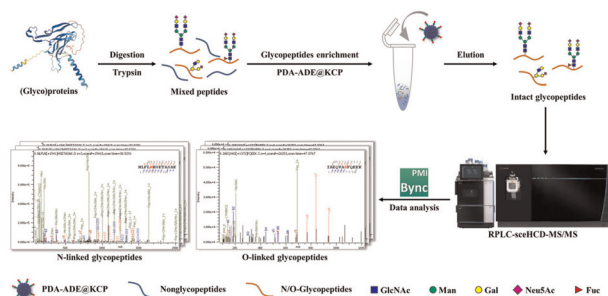
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### A low-cost miniature immunosensor for haemoglobin as a device for the future detection of gastrointestinal bleeding

Alper Demirhan, Iva Chianella, Samadhan B. Patil and Ata Khalid\*

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### An efficient strategy with a synergistic effect of hydrophilic and electrostatic interactions for simultaneous enrichment of N- and O-glycopeptides

Zhonghan Hu, Wenqing Gao,\* Rong Liu, Jiaqian Yang, Renlu Han, Junhui Li, Jiancheng Yu, Danhua Ma\* and Keqi Tang\*

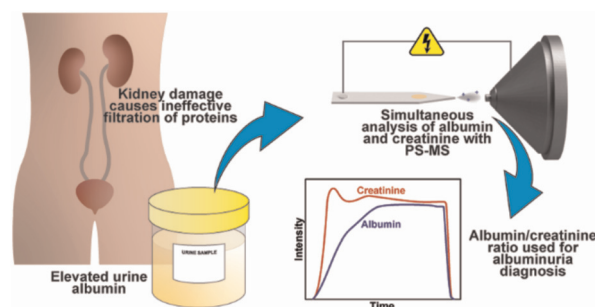


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### Simultaneous quantitation of urinary albumin and creatinine for rapid clinical albuminuria diagnostics using high-throughput paper spray mass spectrometry

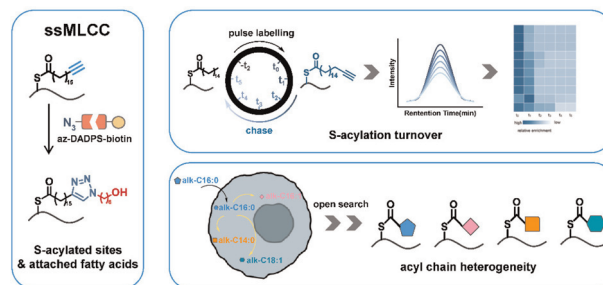
Igor Pereira, Jason L. Robinson and Chris G. Gill\*



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### Simultaneous and site-specific profiling of heterogeneity and turnover in protein S-acylation by intact S-acylated peptide analysis with a cleavable bioorthogonal tag

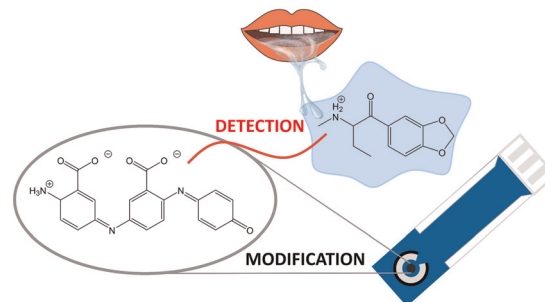
Roujun Wu, Guanghui Ji, Weiyu Chen, Lei Zhang, Caiyun Fang\* and Haojie Lu\*



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### Zwitterionic oligomers of 3-aminobenzoic acid on screen-printed electrodes: structure, properties and forensic application

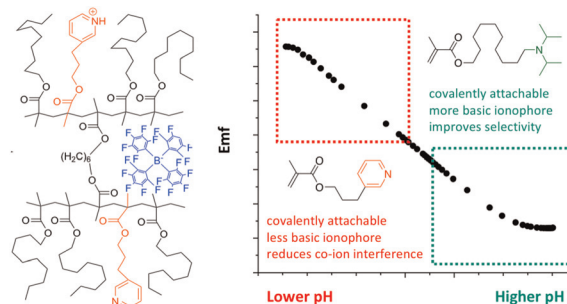
Tatiana V. Shishkanova, Eva Pospíšilová,\* Miroslava Trchová and Gabriela Broncová



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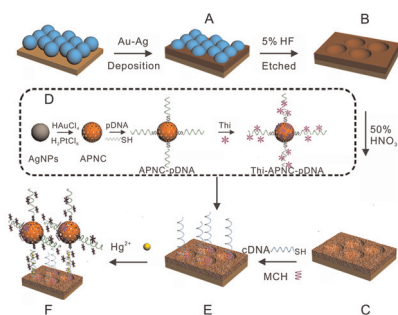
### Covalently attached ionophores extend the working range of potentiometric pH sensors with poly(decyl methacrylate) sensing membranes

Kwangrok R. Choi, Madeline L. Honig and Philippe Bühlmann\*



## PAPERS

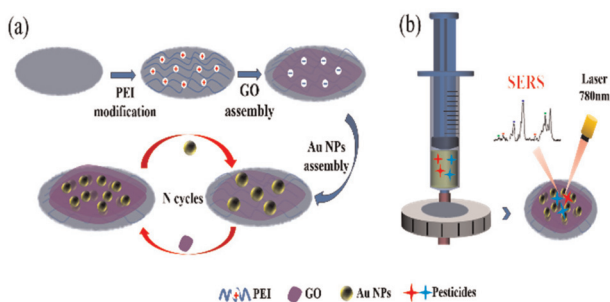
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### Unique three-dimensional ordered macroporous dealloyed gold–silver electrochemical sensing platforms for ultrasensitive mercury(II) monitoring

Nan Jiang, Chengzhou Zhang, Lingna Ge, Shan Huang\* and Xiaojun Chen\*

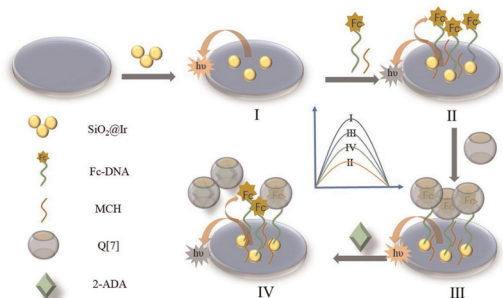
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### Constructing graphene oxide/Au nanoparticle cellulose membranes for SERS detection of mixed pesticide residues in edible chrysanthemum

Zhilei Zhao, Mingshuo Cao, Dizhe Wei, Xiangyang Li, Meng Wang\* and Wenlei Zhai\*

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### Electrochemiluminescence of an iridium complex doped with SiO<sub>2</sub> nanoparticles to detect 2-adamantanamine based on the host–guest interaction of cucurbit[7]uril

Yahui Zhang, Haifeng Yao and Yongping Dong\*

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### Metabolomics-derived biomarkers for biosafety assessment of Gd-based nanoparticle magnetic resonance imaging contrast agents

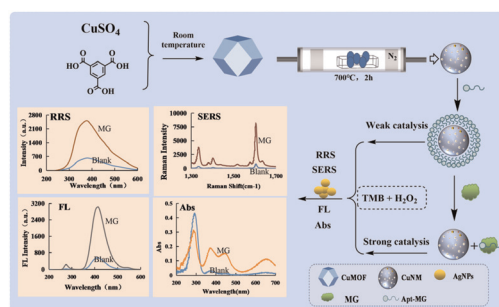
Chen Xu, Jie Sun, Chenhao Zhang, Lu Yang, Hong Kan, Daguang Zhang, Guan Xue and Kai Dong\*



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### A new and highly efficient CuMOF-based nanoenzyme and its application to the aptamer SERS/FL/RRS/Abs quadruple-mode analysis of ultratrace malachite green

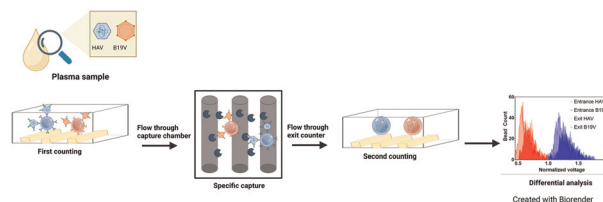
Shuxin Chen, Yue Liu, Zhiyu Qin, Guiqing Wen\* and Zhiliang Jiang\*



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### Multiplexed electrical detection of whole viruses from plasma in a microfluidic platform

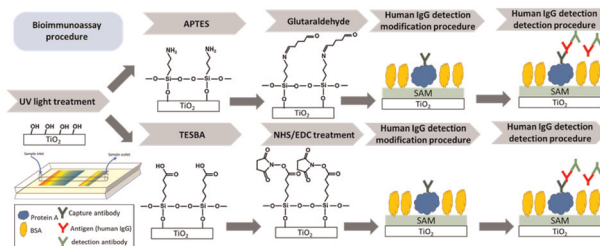
Aaron Jankelow, Chih-Lin Chen, Thomas W. Cowell, Javier Espinosa de los Monteros, Zheng Bian, Victoria Kindratenko, Katherine Koprowski, Sriya Darsi, Hee-Sun Han, Enrique Valera\* and Rashid Bashir\*



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### 4-(Triethoxysilyl)butanoic acid as a self-assembled monolayer for surface modification of titanium dioxide

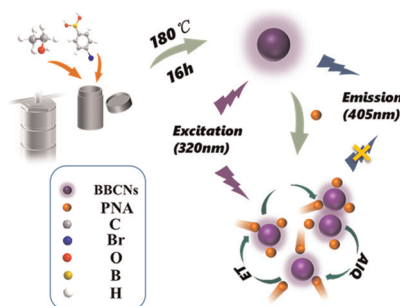
Yu-Hsing Lai, Yan-Chang Lee, Hsun-Yuan Li and Wen-Hsin Hsieh\*



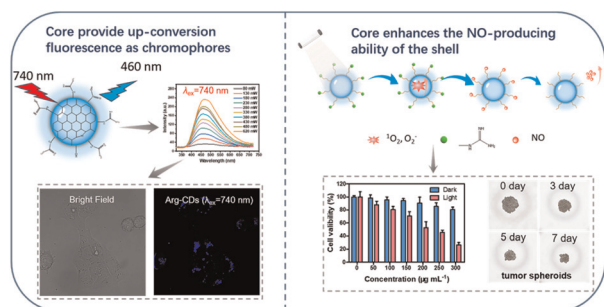
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### Selective identification of *p*-nitroaniline by bromine-mediated polarization of carbon dots

Feng Li, Kai-Qi Liu, Wen-Juan Wang,\* Zhen-Tao Jiang, Fen-Ying Kong, Heng-Ye Li, Zhong-Xia Wang\* and Wei Wang\*



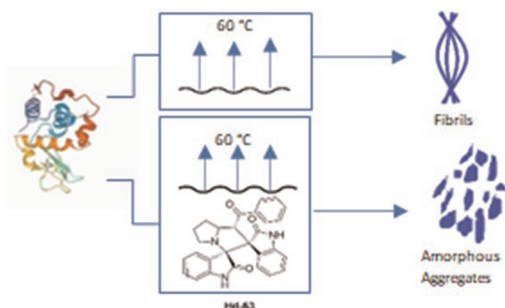
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### Core-shell structured carbon dots with up-conversion fluorescence and photo-triggered nitric oxide-releasing properties

Xiaoyan Wu, Meiyang Wang, Feng Yu, Hao Cai, Antonio Claudio Tedesco, Zijian Li and Hong Bi\*

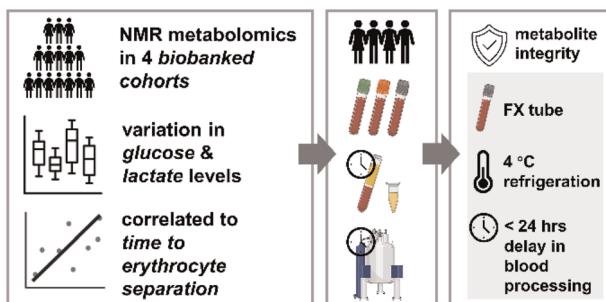
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### Characterizing fibril morphological changes by spirooxindoles for neurodegenerative disease application

Anthony Dahdah, Nilamuni H. de Silva, Subashani Maniam and Ewan W. Blanch\*

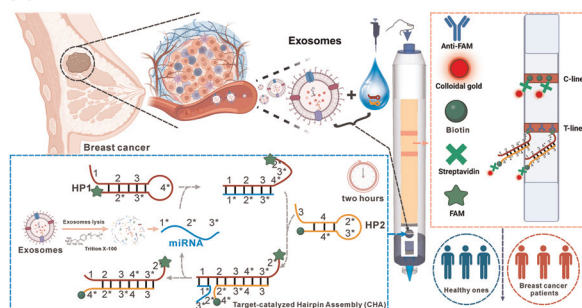
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### Sodium fluoride preserves blood metabolite integrity for biomarker discovery in large-scale, multi-site metabolomics investigations

Wenzheng Xiong, Daniel C. Anthony, Suzie Anthony, Thi Bao Tien Ho, Edouard Louis, Jack Satsangi and Daniel E. Radford-Smith\*

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### All-in-one detection of breast cancer-derived exosomal miRNA on a pen-based paper chip

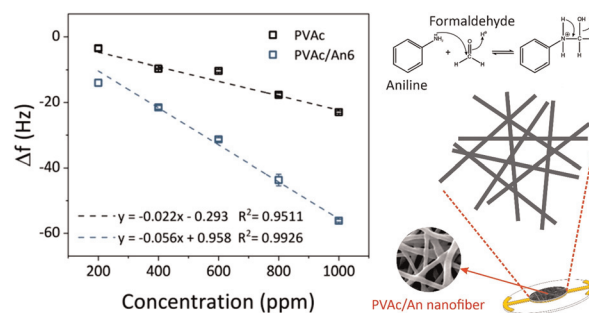
Song Guo, Han Xie, Xudong Zhao, Honghao He, Xiaojun Feng, Yiwei Li, Bi-Feng Liu and Peng Chen\*



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### Formaldehyde gas sensors based on a quartz crystal microbalance modified with aniline-doped polyvinyl acetate nanofibers

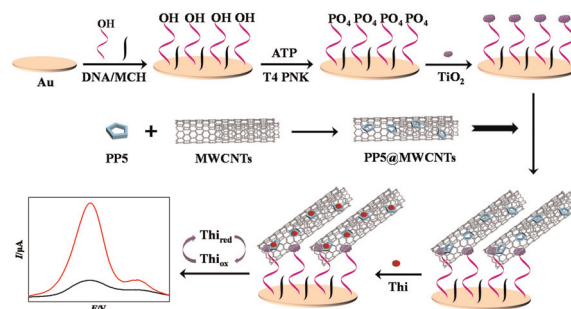
Sintia Ainus Sofa, Roto Roto,\* Rizky Aflaha, Taufik Abdillah Natsir, Nur Aisyah Humairah, Ahmad Kusumaatmaja, Kuwat Triyana and Ruchi Gupta



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### An electrochemical biosensor for T4 polynucleotide kinase activity assay based on host-guest recognition between phosphate pillar[5]arene@MWCNTs and thionine

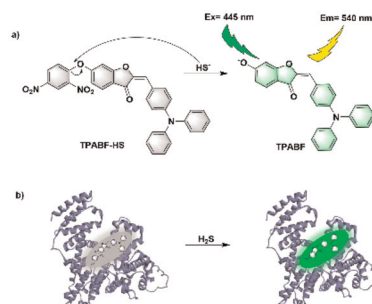
Aiwen Su, Dan Luo, Shixuan Li, Yanli Zhang,\* Hongbin Wang, Lijuan Yang,\* Wenrong Yang and Pengfei Pang\*



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### A human serum albumin-binding-based fluorescent probe for monitoring hydrogen sulfide and bioimaging

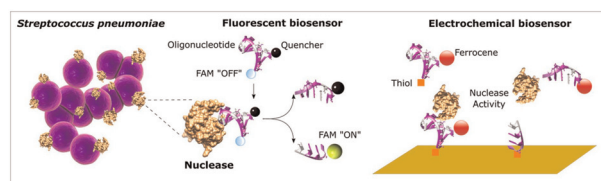
Meng-Ya Guo, Xiao-Jing Liu, Yun-Zhang Li, Bao-Zhong Wang,\* Yu-Shun Yang\* and Hai-Liang Zhu\*



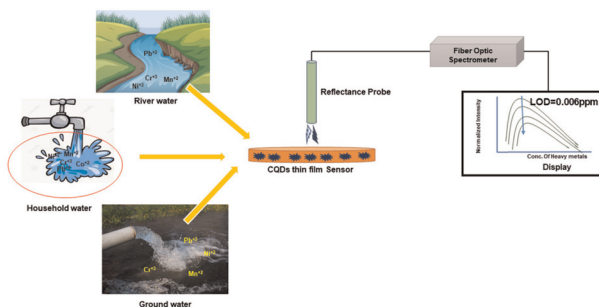
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### Fluorescent and electrochemical detection of nuclease activity associated with *Streptococcus pneumoniae* using specific oligonucleotide probes

Garazi Goikoetxea, Khadija-Tul Kubra Akhtar, Alona Prysiazhniuk, Baris A. Borsa, Mehmet Ersoy Aldag, Murat Kavruk, Veli C. Ozalp and Frank J. Hernandez\*



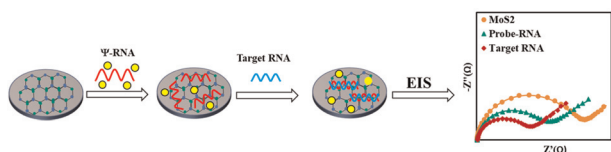
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### Chemical sensor thin film-based carbon quantum dots (CQDs) for the detection of heavy metal count in various water matrices

Tanmay Vyas and Abhijeet Joshi\*

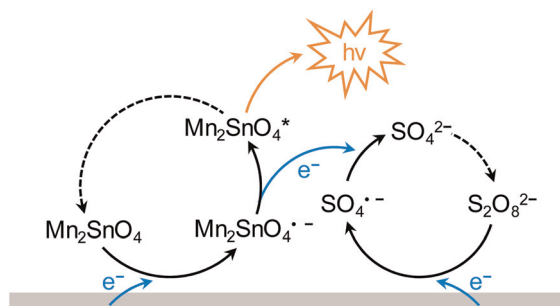
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### Pseudouridine-modified RNA probe for label-free electrochemical detection of nucleic acids on 2D MoS<sub>2</sub> nanosheets

Prabhangshu Kumer Das, Omair Adil, Anthony P. DeGregorio, Minako Sumita and Mohtashim Hassan Shamsi\*

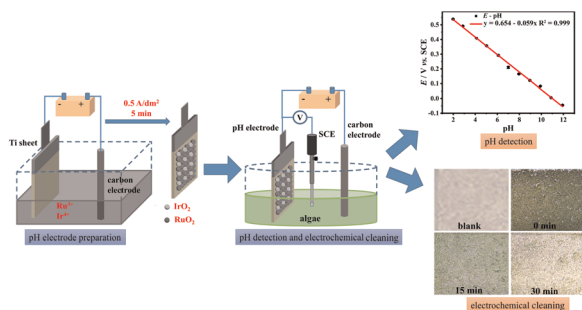
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### A simplified molecularly imprinted ECL sensor based on Mn<sub>2</sub>SnO<sub>4</sub> nanocubes for sensitive detection of ribavirin

Kaida Kuang, Ya Li, Yang Chen,\* Yu Ji and Nengqin Jia\*

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### An electrochemically cleanable pH electrode based on an electrodeposited iridium oxide–ruthenium oxide–titanium composite

Guangxing Hu, Yongxing Diao, Shuang Cui, Hongda Wang, Yan Shi\* and Zhuang Li\*

