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See Lingqian Zhang, Chengjun Huang *et al.*, pp. 1672–1681.

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CRITICAL REVIEW

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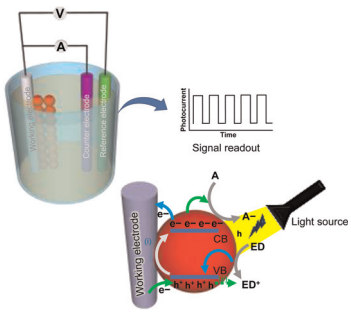
Semiconductor quantum dots in photoelectrochemical sensors from fabrication to biosensing applications

Anjum Qureshi,* Tayyaba Shaikh and Javed H. Niazi*



TUTORIAL REVIEW

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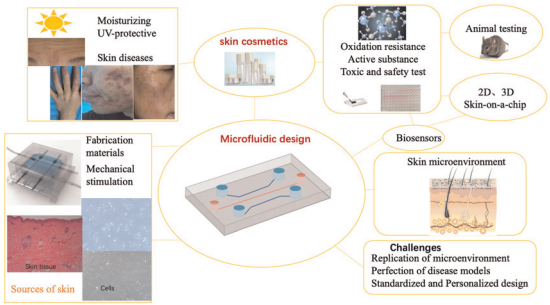
Advancements in microfluidics for skin cosmetic screening

Nianfang Hu, Kerun Cheng, Shuhan Zhang, Shan Liu, Lijun Wang, Xiaoxin Du, Yong Li* and Chenzhong Li*



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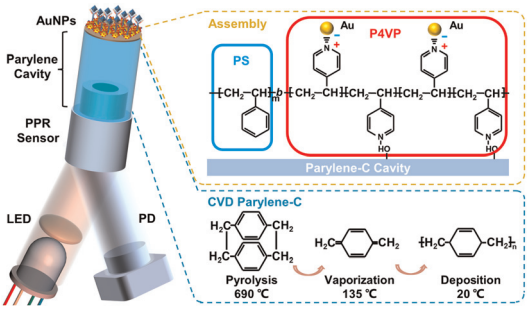
A parylene-mediated plasmonic–photonic hybrid fiber-optic sensor and its instrumentation for miniaturized and self-referenced biosensing

Xin Li, Nanxi Wang, Fei Wang, Jinlong Liu, Yimin Shi, Jiahong Jiang, Hongyao Liu, Mingxiao Li, Lina Zhang, Wenchang Zhang, Yang Zhao, Lingqian Zhang* and Chengjun Huang*



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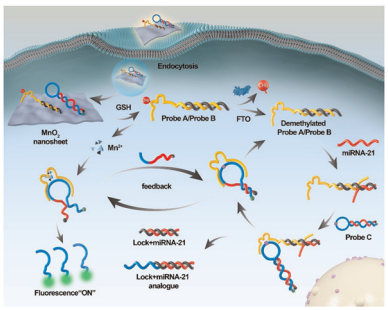
High-fidelity imaging of intracellular microRNA *via* a bioorthogonal nanoprobe

Hengyi Chen, Xiaohui Chen, Yi Chen, Chong Zhang, Zixin Sun, Jiaxi Mo, Yongzhong Wang, Jichun Yang,* Dongsheng Zou* and Yang Luo*



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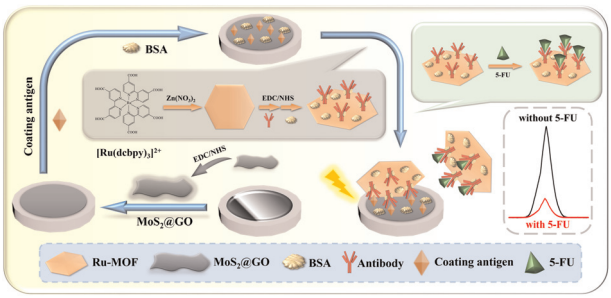
Electrochemiluminescence immunoassay strategies based on a hexagonal Ru-MOF and MoS_2@GO nanosheets: detection of 5-fluorouracil in serum samples

Guoyu Ma, Lu Peng, SunXiaoYi Zhang, Kang Wu,* Anping Deng* and Jianguo Li*



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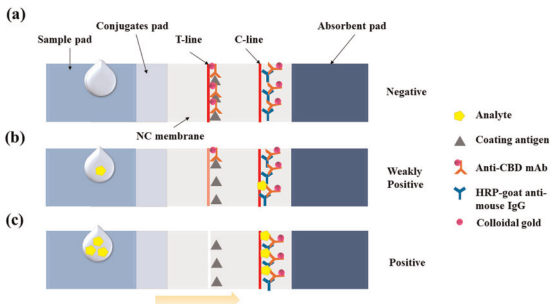
Development of a gold nanoparticle-based lateral-flow strip for the detection of cannabidiol in functional beverages

Shuai Lv, Xinxin Xu, Lingling Guo, Liguang Xu, Liqiang Liu,* Hua Kuang and Chuanlai Xu*



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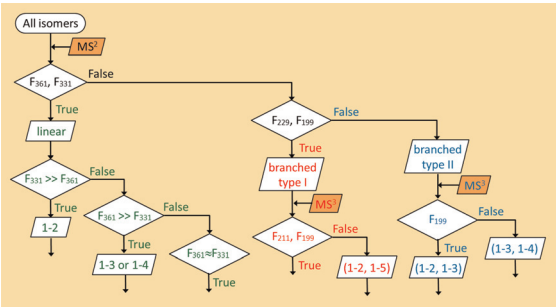

A simple tandem mass spectrometry method for structural identification of pentose oligosaccharides

Shang-Ting Tsai, Hsu-Chen Hsu and Chi-Kung Ni*

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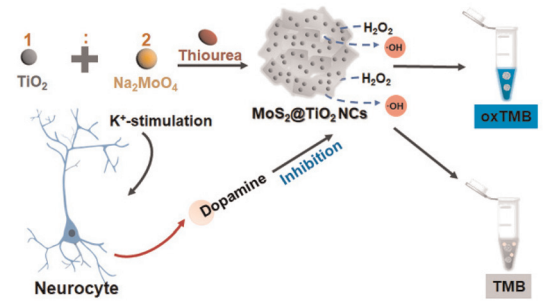

Controllable synthesis of MoS_2@TiO_2 nanocomposites for visual detection of dopamine secretion with highly-efficient enzymatic activity

Chonghui Wei, Xuan Xie, Yue Mou, Shiqi Cheng, Jin Yang, Kaixin Xue, Kewei Yu, Xinru Lin, Chunfen Zhang, Yujie Zhao,* Xingyu Luo* and Yilin Wang

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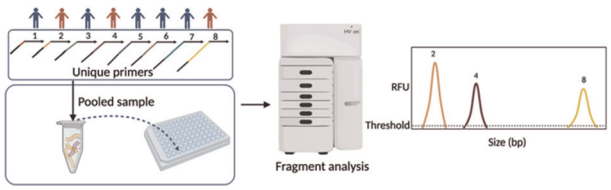

Efficient large-scale screening of viral pathogens by fragment length identification of pooled nucleic acid samples (FLIPNAS)

Xianzhen Feng, Xinyu Zhuang, Grace Lui and I-Ming Hsing*

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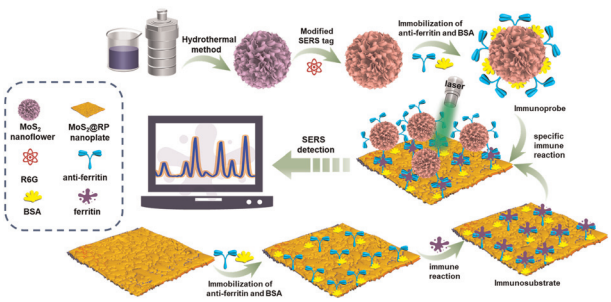

A non-metallic SERS-based immunoassay founded by light-harvesting effect and strengthened chemical enhancement

Jiali Ma, Wenxin Dong, Tao Xu, Guodong Wei, Chenjie Gu* and Tao Jiang*

PAPERS

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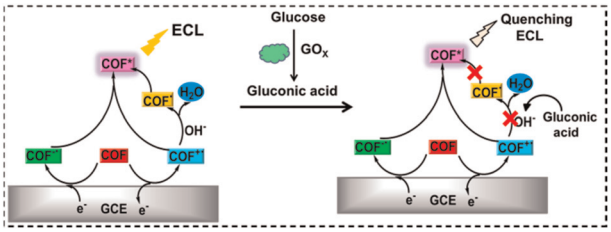
Development of an exogenous coreactant-free electrochemiluminescent sensor for sensing glucose

Maoding Zuo, Lin Cui,* Shuangwen Wang, Wengui Wei, Wenqiang Gao* and Chun-yang Zhang*



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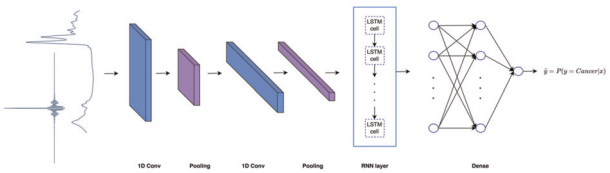
Recurrent neural networks for time domain modelling of FTIR spectra: application to brain tumour detection

Georgios Antoniou, Justin J. A. Conn, Benjamin R. Smith, Paul M. Brennan, Matthew J. Baker and David S. Palmer*



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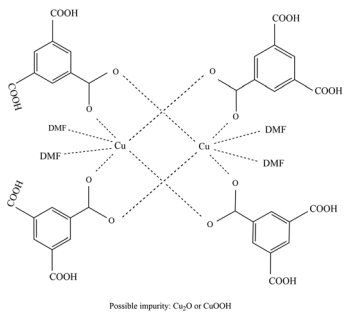
Sensing interface based on electrodeposited Cu-BTC microporous film for electrochemical detection of the painkiller paracetamol

Nguyen Tien Dat, Nguyen Ngoc Tien, Nguyen Thi Thanh Ngan and Vu Thi Thu*



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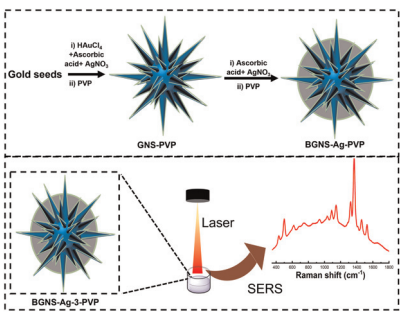
A hybrid plasmonic nanoprobe using polyvinylpyrrolidone-capped bimetallic silver–gold nanostars for highly sensitive and reproducible solution-based SERS sensing

Supriya Atta and Tuan Vo-Dinh*



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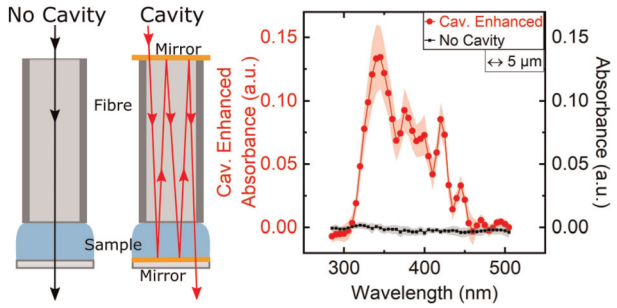

Broadband cavity enhanced UV-VIS absorption spectroscopy for picolitre liquid samples

Imogen M. Fermor-Worth and Catalin Chimerel*

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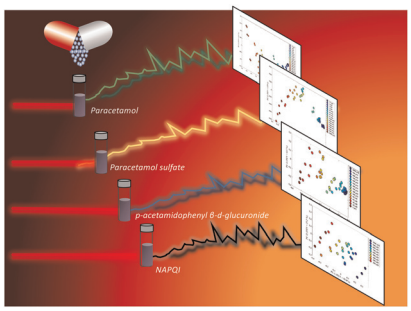

Rapid detection and quantification of paracetamol and its major metabolites using surface enhanced Raman scattering

Najla AlMasoud, Taghrid S. Alomar, Yun Xu, Cassio Lima and Royston Goodacre*

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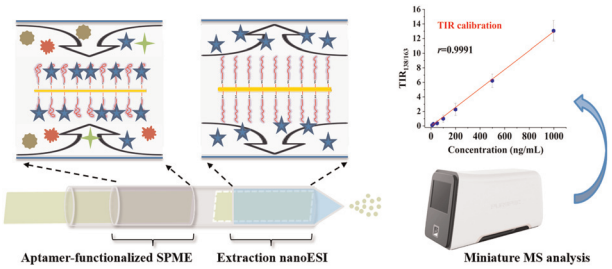

Online hyphenation of in-capillary aptamer-functionalized solid-phase microextraction and extraction nanoelectrospray ionization for miniature mass spectrometry analysis

Yueguang Lv, Yuhan Shang, Linsen Li, Ying Zhang and Qiang Ma*

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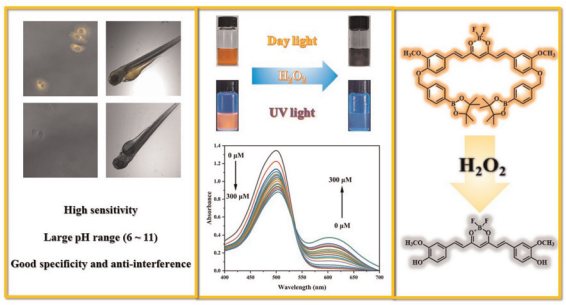

A highly effective "naked eye" colorimetric and fluorimetric curcumin-based fluorescent sensor for specific and sensitive detection of H_2O_2 *in vivo* and *in vitro*

Wenhao Du, Zheyu Shen, Yueying Liang, Shuai Gong, Zhiyuan Meng, Mingxing Li, Zhonglong Wang* and Shifa Wang*

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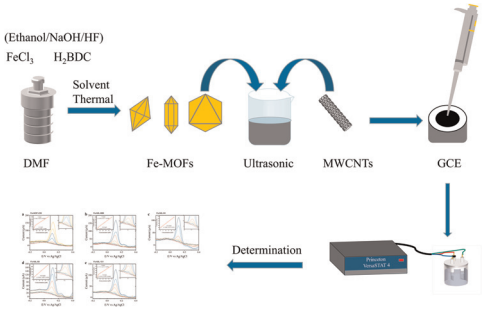
A series of ultrasensitive electrocatalysts Fe-MOF/MWCNTs for fentanyl determination

Zhidong Zhao, Yuan He, Xingrui Qi, Nian Li, Zijian He, Yufang Chen and Tao Jin*



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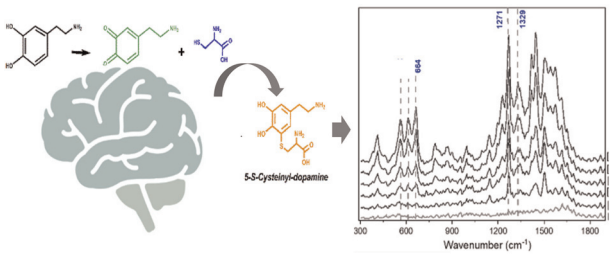
SERS-based detection of 5-*S*-cysteinyl-dopamine as a novel biomarker of Parkinson's disease in artificial biofluids

Isidro Badillo-Ramírez,* Bruno Landeros-Rivera, José M. Saniger, Jürgen Popp and Dana Cialla-May



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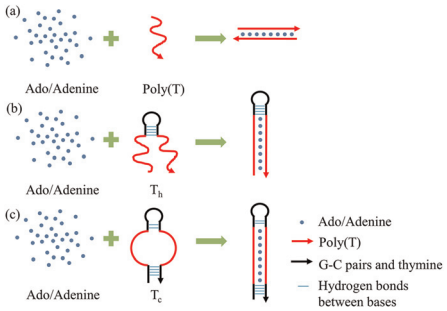
Enriching adenosine by thymine-rich DNA oligomers

Mingchun Liu, Huaiqing Chen, Yuhan Huang, Jian Liu, Qianfeng Chen, Hua Zuo, Liang Fang* and Chengde Mao*



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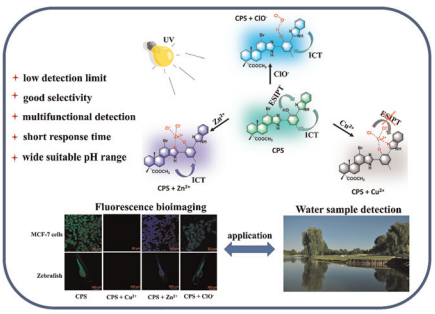
A novel dehydroabietic acid-based multifunctional fluorescent probe for the detection and bioimaging of $Cu^{2+}/Zn^{2+}/ClO^{-}$

Lu Sun, Zhonglong Wang, Linlin Chen, Xuebao Sun, Zihui Yang and Wen Gu*



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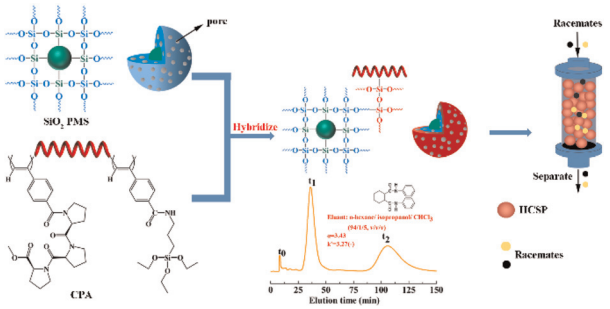

Hybridization of helical poly(phenylacetylene)s bearing L-proline tripeptide pendants into porous silica microspheres as a solvent-tolerable chiral stationary phase for liquid chromatography

Jiahe Huang, Zhengjin Zhou, Chunhong Zhang,* Chao Wang, Yanli Zhou, Lijia Liu,* Junqing Li,* Toshifumi Satoh and Yoshio Okamoto

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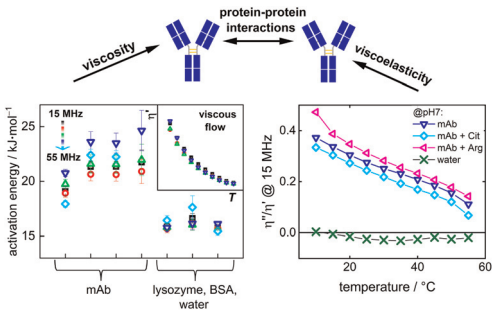

Protein–protein interactions in solutions of monoclonal antibodies probed by the dependence of the high-frequency viscosity on temperature and concentration

Emily Rott, Christian Leppin,* Tim Diederichs, Patrick Garidel and Diethelm Johannsmann