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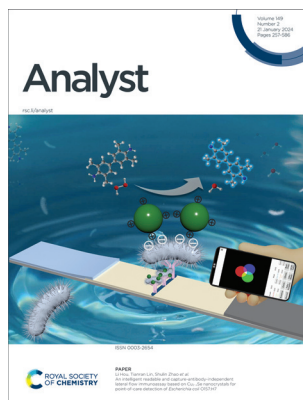
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See Jan Halánek *et al.*,
pp. 350–356.

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Inside cover
See Li Hou, Tianran Lin,
Shulin Zhao *et al.*,
pp. 357–365.

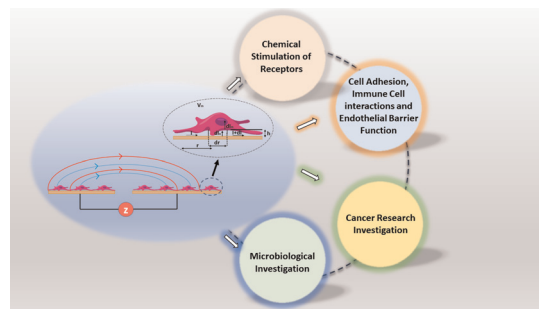
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CRITICAL REVIEWS

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A review of electrochemical impedance as a tool for examining cell biology and subcellular mechanisms: merits, limits, and future prospects

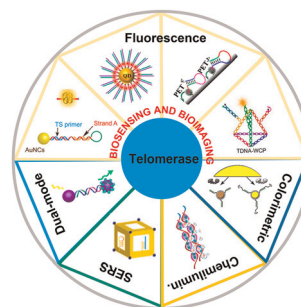
Seyedyousef Arman, Richard D. Tilley and J. Justin Gooding*



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Recent advances in optical biosensing and imaging of telomerase activity and relevant signal amplification strategies

Ruining Yang, Junbo Hu, Longsheng Zhang, Xingfen Liu,* Yanqin Huang, Lei Zhang and Quli Fan



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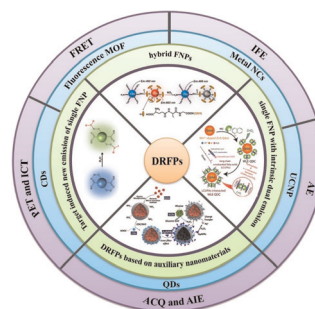
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CRITICAL REVIEWS

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The construction of dual-emissive ratiometric fluorescent probes based on fluorescent nanoparticles for the detection of metal ions and small molecules

Yaxin Li, Hongzhi Lu and Shoufang Xu*

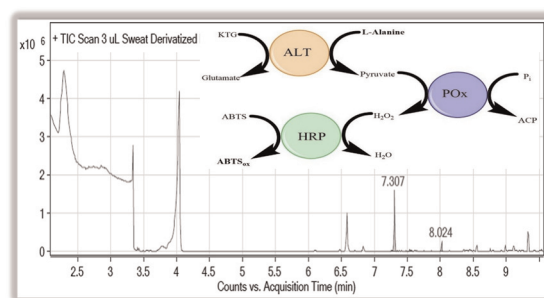


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Metabolite monitoring concept for the biometric identification of individuals from the skin surface

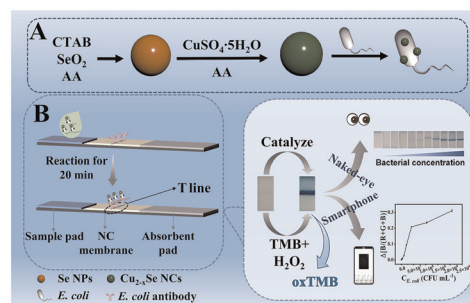
Mindy Greco, Morgan Eldridge, Emilynn Banks, Lenka Halámková and Jan Halánek*



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An intelligent readable and capture-antibody-independent lateral flow immunoassay based on Cu_{2-x}Se nanocrystals for point-of-care detection of *Escherichia coli* O157:H7

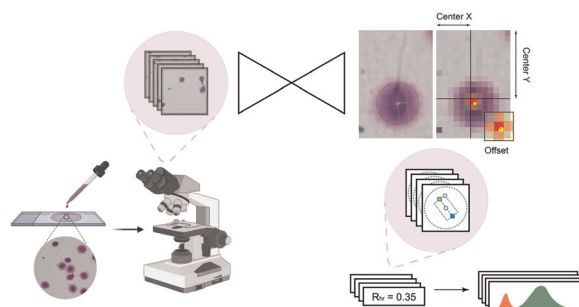
Yiyun Yao, Li Hou,* Fenghuang Wei, Tianran Lin* and Shulin Zhao*



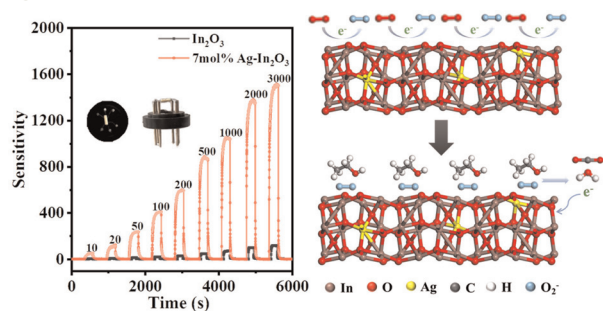
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Gaussian clustering and quantification of the sperm chromatin dispersion test using convolutional neural networks

Zheng Yang, Lei Zhang, Heng Fan, Bei Yan, Yaoqin Mu, Yue Zhou, Chengbin Pei, Longjie Li* and Xianjin Xiao*



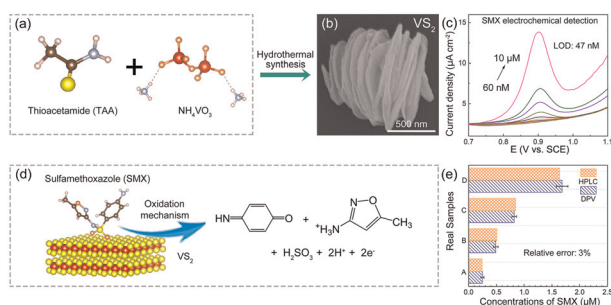
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Facile synthesis of Ag lattice doped mesoporous In_2O_3 nanocubes for high performance ethanol sensing

Xinyu Liu, Cuiping Jia,* Xin liu, Jiabing Luo, Yan Zhou, Wenle Li, Shutao Wang and Jun Zhang*

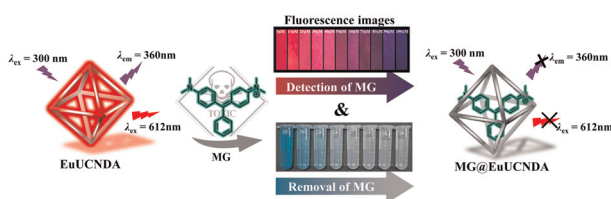
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A promising electrochemical sensor based on PVP-induced shape control of a hydrothermally synthesized layered structured vanadium disulfide for the sensitive detection of a sulfamethoxazole antibiotic

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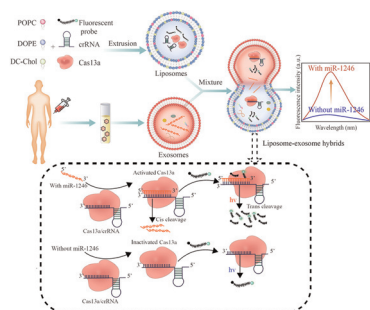
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A recyclable Eu^{3+} -functionalized dual-emissive metal-organic framework for portable, rapid detection and efficient removal of malachite green

Hou-Qun Yuan, Wei Li, Yi-Fan Xia, Si-Yi Liu, Yu-Fei Zhong, Zhen-Chong Dou, Xia Wei, Ran Wang, Peiyao Chen, Yan-Xia Li and Guang-Ming Bao*

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Liposome-exosome hybrids for *in situ* detection of exosomal miR-1246 in breast cancer

Xuting Zhou, Wenting Tang, Yan Zhang, Aidong Deng, Yuehua Guo* and Li Qian*

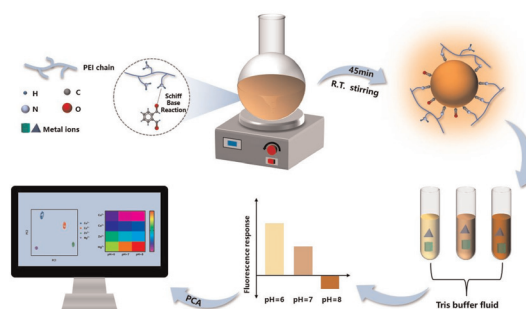


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Room temperature cost-effective synthesis of carbon quantum dots for fluorescence pattern recognition of metal ions

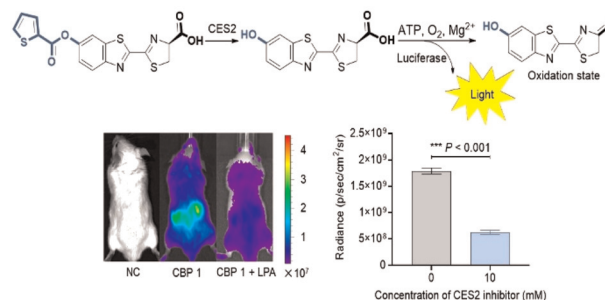
Yifan Lu, Wenbang Yu,* Guoyue Shi and Min Zhang*



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Identification of the first selective bioluminescent probe for real-time monitoring of carboxylesterase 2 *in vitro* and *in vivo*

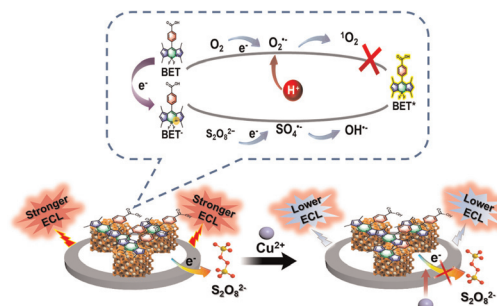
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Palladium nanospheres-embedded metal-organic frameworks to enhance the ECL efficiency of 2,6-dimethyl-8-(3-carboxyphenyl)4,4'-difluoroboradiazene in aqueous solution for ultrasensitive Cu²⁺ detection

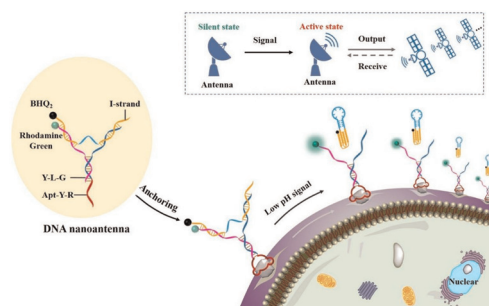
Shu-Shu Song, Jiale Zhan, Hao-Tian Zhu, Jing-Yi Bao, Ai-Jun Wang, Pei-Xin Yuan* and Jiu-Ju Feng*



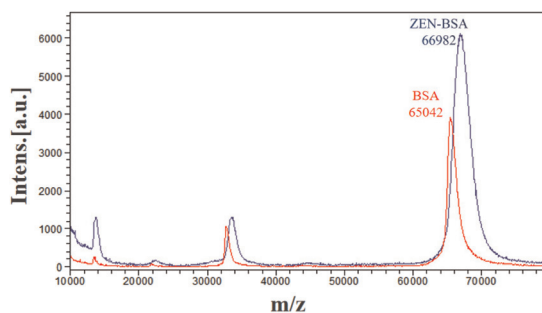
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A hairpin-contained i-motif guided DNA nanoantenna for sensitive and specific sensing of tumor extracellular pH gradients

Wenjie Ma, Yuchen Wu, Jinyan Li, Mei Yang, He Zhang, Chang Liu and Xiaoxiao He*



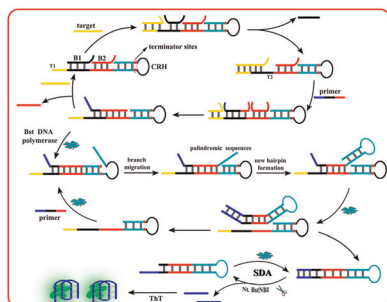
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A sensitive monoclonal antibody-based ELISA integrated with immunoaffinity column extraction for the detection of zearalenone in food and feed samples

Ting Wang, Ting Zhou, Kang Wu,* Junlin Cao, Yuze Feng, Jianguo Li* and Anping Deng*

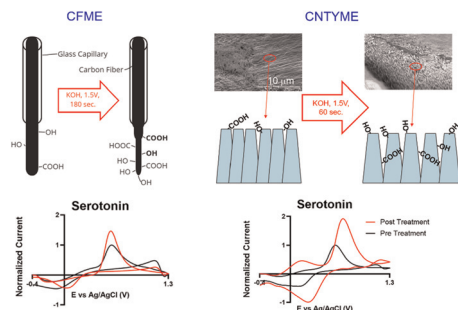
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Target-initiated triplex signal amplification cascades for non-label and sensitive fluorescence sensing of microRNA

Lei Liao, Tingting Gong, Bingying Jiang,* Ruo Yuan and Yun Xiang*

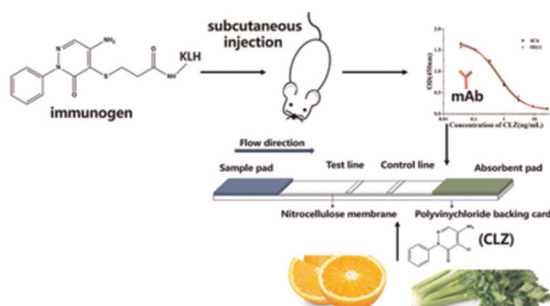
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Electrochemical treatment in KOH improves carbon nanomaterial performance to multiple neurochemicals

Samuel M. Hanser, Zijun Shao, He Zhao and B. Jill Venton*

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Development of an ic-ELISA and immunochromatographic assay strip for the rapid detection of chloridazon in oranges and celery

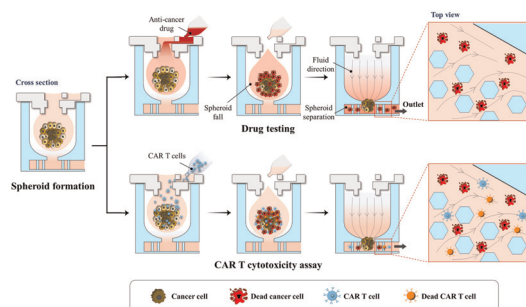
Qing Zhang, Aihong Wu, Jinyan Li, Liqiang Liu, Hua Kuang, Chuanlai Xu and Lingling Guo*



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A 3D hanging spheroid-filter plate for high-throughput drug testing and CAR T cell cytotoxicity assay

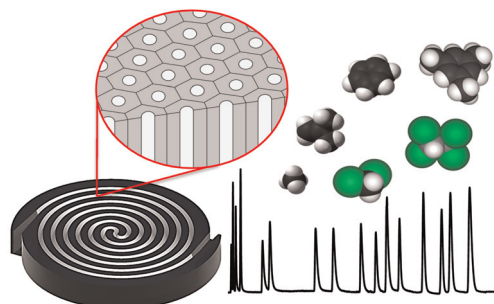
Zhenzhong Chen, Seokgyu Han, Sein Kim, Chanyang Lee, Arleen Sanny, Andy Hee-Meng Tan and Sungsu Park*



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A stamped aluminium gas chromatographic column disk employing directly grown anodic aluminium oxide stationary phase for the separation of aromatic and chlorinated compounds

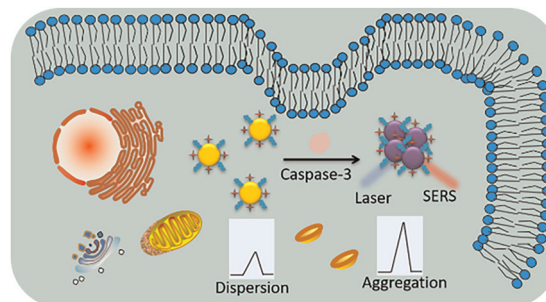
Chih-Chieh Fan, Chih-Chia Wang* and Chia-Jung Lu*



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Highly sensitive and selective SERS detection of caspase-3 during cell apoptosis based on the target-induced hotspot effect

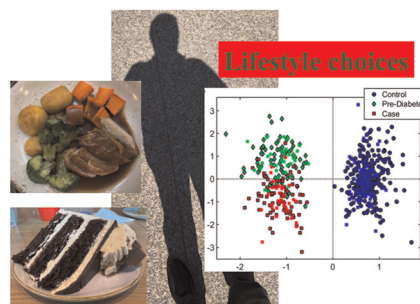
Yueyuan Zhuang, Han Dong, Tianqing Liu, Yongmei Zhao, Yan Xu, Xiaojuan Zhao* and Dan Sun*



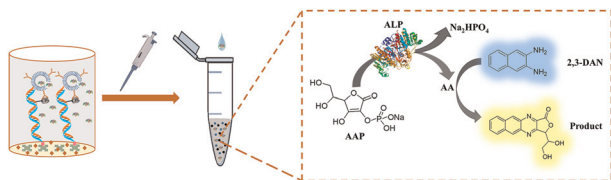
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Serum-based ATR-FTIR spectroscopy combined with multivariate analysis for the diagnosis of pre-diabetes and diabetes

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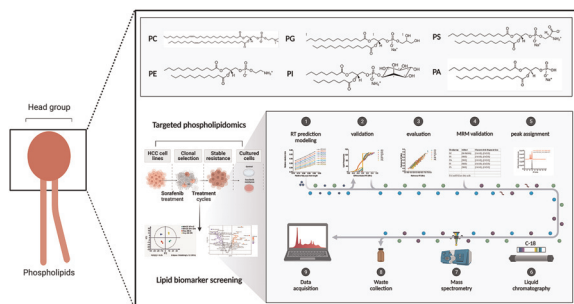
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A ratiometric fluorescence assay for the detection of DNA methylation based on an alkaline phosphatase triggered *in situ* fluorogenic reaction

Hongding Zhang,* Yinhui Su, Jiamiao Zhao, Huixi Song and Xiaohong Zhou

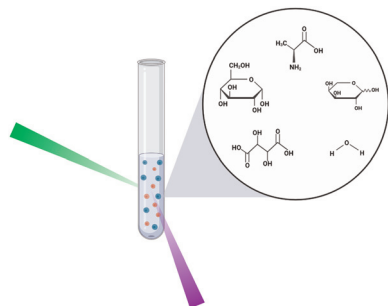
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Retention time prediction and MRM validation reinforce the biomarker identification of LC-MS based phospholipidomics

Jiangang Zhang, Yu Zhou, Juan Lei, Xudong Liu, Nan Zhang, Lei Wu and Yongsheng Li*

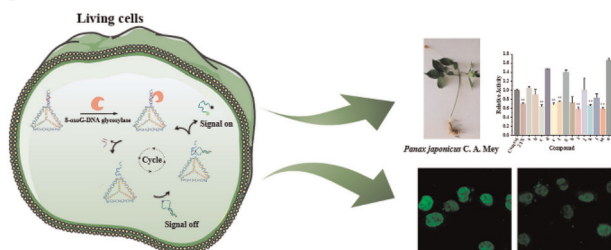
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Hyper-Raman spectroscopy of biomolecules

Christopher B. Marble,* Kassie S. Marble, Ethan B. Keene, Georgi I. Petrov and Vladislav V. Yakovlev

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Repair-driven DNA tetrahedral nanomachine combined with DNAzyme for 8-oxo guanine DNA glycosylase activity assay, drug screening and intracellular imaging

Yun Qiu, Bin Liu, Wenchao Zhou, Xueqing Tao, Yang Liu, Linxi Mao, Huizhen Wang, Hanwen Yuan, Yupei Yang, Bin Li, Wei Wang* and Yixing Qiu*

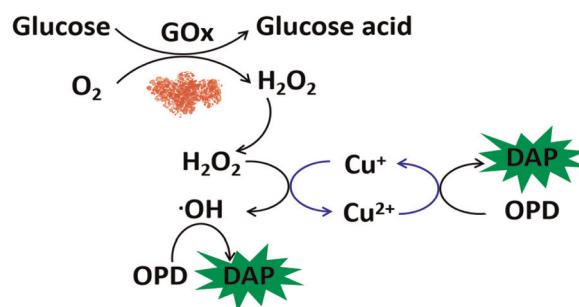


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Fenton-like reaction triggered chemical redox-cycling signal amplification for ultrasensitive fluorometric detection of H₂O₂ and glucose

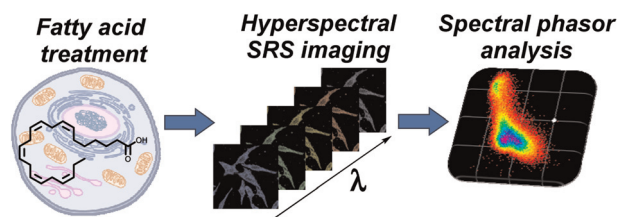
Lu Sun, Lin-Ge Chen and Hai-Bo Wang*



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Spectral fingerprinting of cellular lipid droplets using stimulated Raman scattering microscopy and chemometric analysis

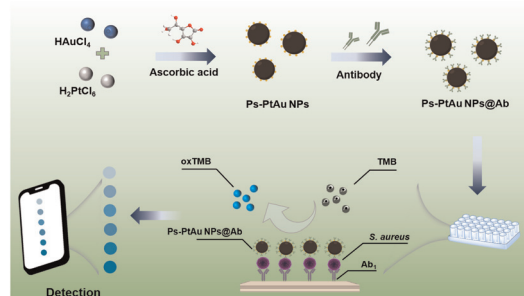
Aur lie Rensonnet, William J. Tipping, Cedric Malherbe, Karen Faulds, Gauthier Eppe and Duncan Graham*



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A pomegranate seed-structured nanozyme-based colorimetric immunoassay for highly sensitive and specific biosensing of *Staphylococcus aureus*

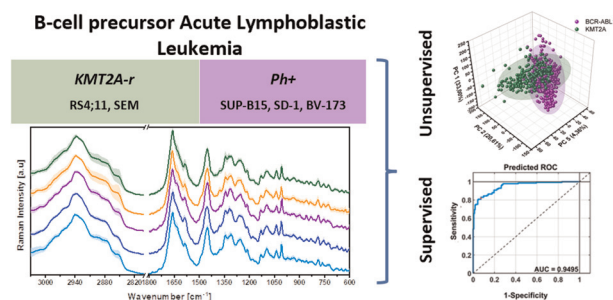
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Raman classification of selected subtypes of acute lymphoblastic leukemia (ALL)

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Correction: CannibiSenS: an on-demand rapid screen for THC in human saliva

Nathan Kodjo Mintah Churcher, Vikram Narayanan Dhamu and Shalini Prasad*

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Correction: A poly(thymine)-templated fluorescent copper nanoparticle hydrogel-based visual and portable strategy for an organophosphorus pesticide assay

Jihua Chen, Ting Han, Xiuyun Feng, Baojuan Wang and Guangfeng Wang*

