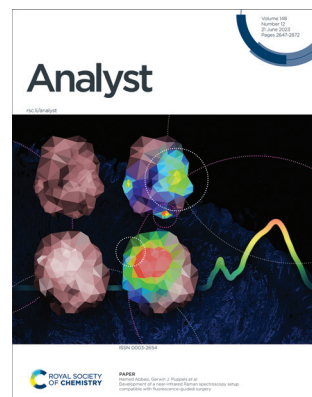


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Gerwin J. Puppels *et al.*,
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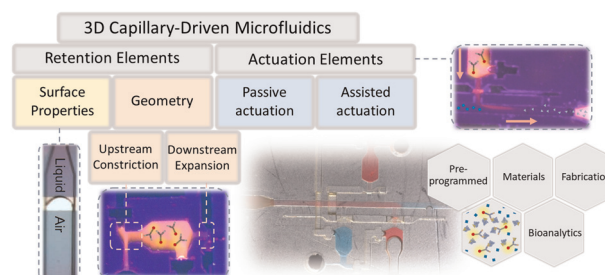
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CRITICAL REVIEW

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Capillary-driven microfluidics: impacts of 3D manufacturing on bioanalytical devices

Pooya Azizian, Jasmina Casals-Terré, Jordi Ricart and Joan M. Cabot*

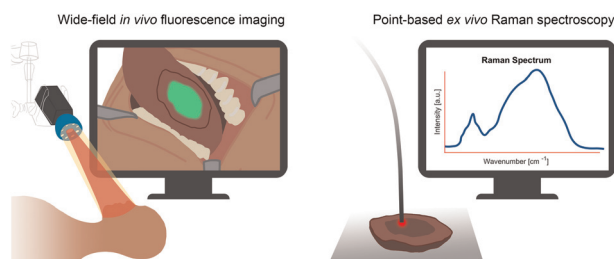


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Development of a near-infrared Raman spectroscopy setup compatible with fluorescence-guided surgery

Hamed Abbasi,* Lorraine J. Lauwerends,
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Jose A. U. Hardillo, Senada Koljenović,
Alexander L. Vahrmeijer, Robert J. Baatenburg de Jong,
Stijn Keereweere and Gerwin J. Puppels*



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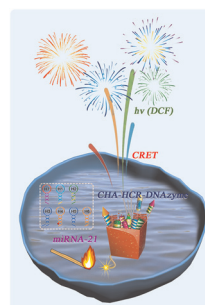


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Chemiluminescence resonance energy transfer-based multistage nucleic acid amplification circuits for MiRNA detection with low background

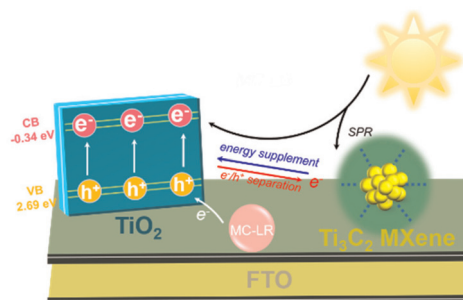
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Ti₃C₂ MXene improved photoelectrochemical anode assembly of titanium dioxide nanoarrays for microcystin-LR detection

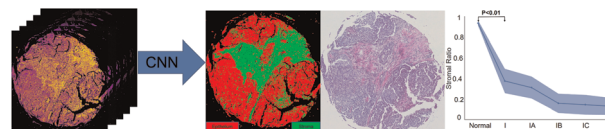
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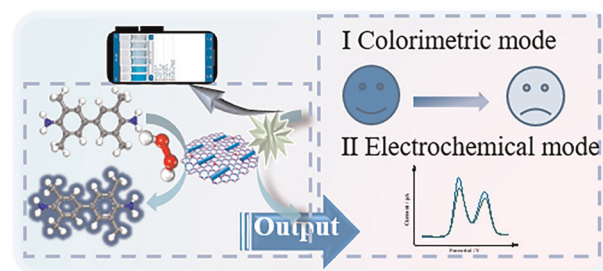
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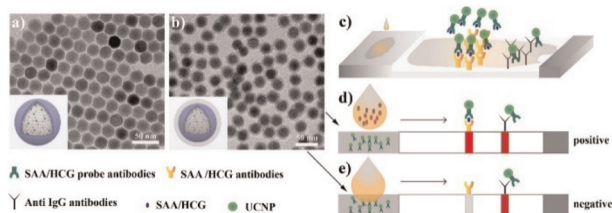
CuO nanorod-decorated hemin-graphene with enhanced peroxidase-mimicking performance for the colorimetric and electrochemical determination of 4-aminophenol with a smartphone

Miaomiao Li, Xiuying Peng, Zhiguang Liu, Yan Dai, Yujie Han, Lifang Fan and Yujing Guo*



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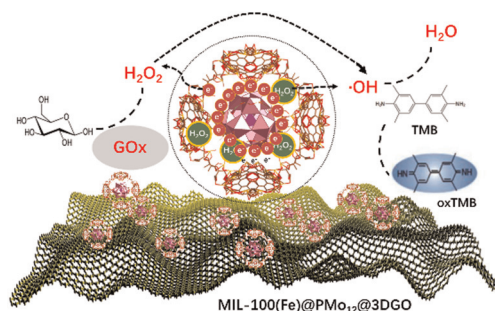
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Rapid determination of serum amyloid A using an upconversion luminescent lateral flow immunochromatographic strip

Xinwen Sun, Xiaoru Dai, Shisheng Ling, Wenkun Dong, Dong Chen, Mengting Li, Xvsheng Qiao,* Zhiyu Wang, Xianping Fan and Guodong Qian

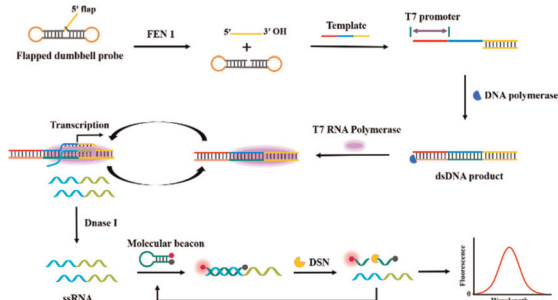
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Yuhan Ji, Yupu Wei, Jinghui Shen, Jinlong Zhuo, Mingqi Xu, Yunliang Wang* and Jingquan Sha*

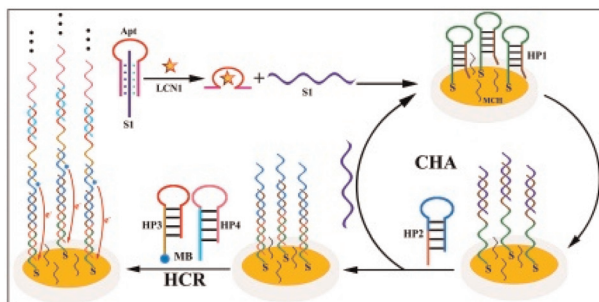
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Target-activated T7 transcription circuit-mediated multiple cycling signal amplification for monitoring of flap endonuclease 1 activity in cancer cells

Jin-zhi Zhang, Ning-ning Zhao, Zi-yue Wang, Juan Hu* and Chun-yang Zhang*

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An aptamer triple helix molecular switch for sensitive electrochemical assay of lipocalin 1 biomarker via dual signal amplifications

Jianglong Yao, Yujie Liu, Bingying Jiang,* Ruoyuan and Yun Xiang*

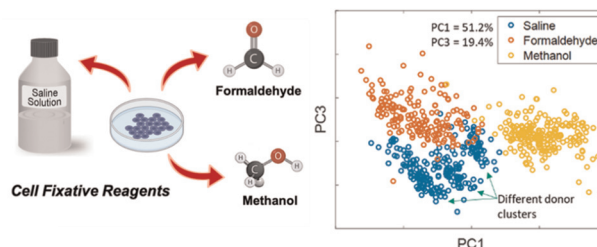


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Saline dry fixation for improved cell composition analysis using Raman spectroscopy

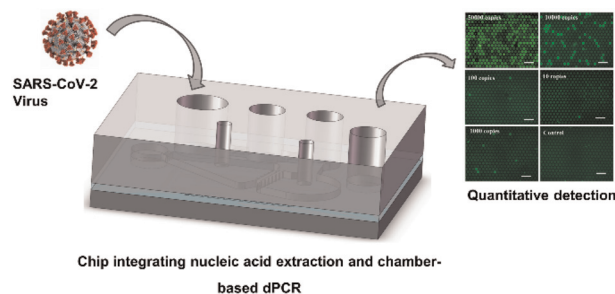
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An integrated microfluidic chip for nucleic acid extraction and continued cdPCR detection of pathogens

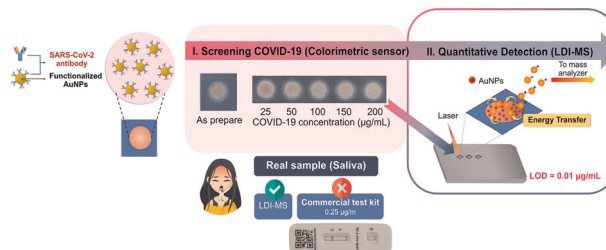
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Alternative platform for COVID-19 diagnosis based on AuNP-modified lab-on-paper

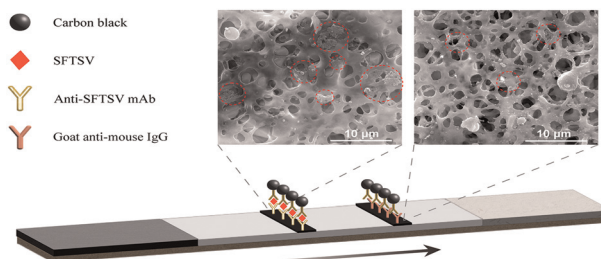
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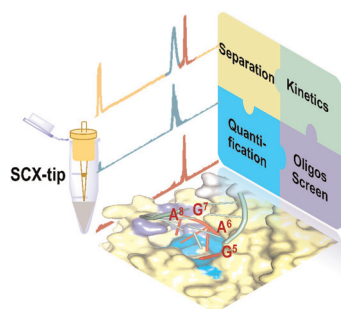
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Carbon black as a colorimetric label for an immunochromatographic test strip for severe fever with thrombocytopenia syndrome virus detection

Hao Liu, Fang Ji and Shou-Nian Ding*



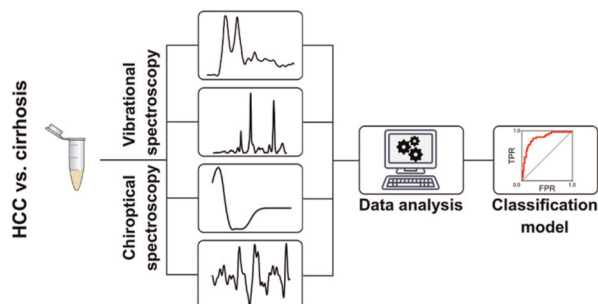
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SCX-tip-aided LC-MS detection of active ricin via oligonucleotide substrates for depurination kinetics

Zhifang Yang, Chenyu Wang, Lan Xiao, Chuang Wang, Li Tang,* Lei Guo* and Jianwei Xie

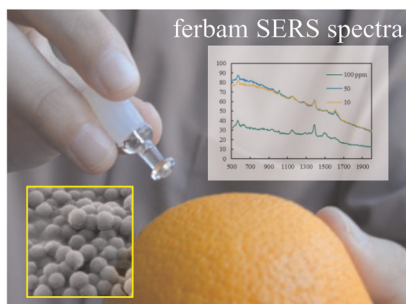
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Vibrational and chiroptical analysis of blood plasma for hepatocellular carcinoma diagnostics

Ondřej Vrtělka,* Kateřina Králová, Markéta Fousková, Lucie Habartová, Petr Hříbek, Petr Urbánek and Vladimír Setnička

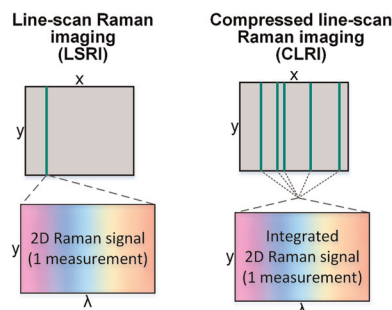
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Mass producible, robust SERS substrates based on metal film on nanosphere (MFON) on an adhesive substrate for detection of surface-adsorbed molecules and their evaluation by helium ion microscopy

H. Takei,* N. Saito, T. Okamoto, K. Watanabe, M. Westphal, R. Tomioka and A. Götzhäuser

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A critical evaluation of compressed line-scan Raman imaging

Yajun Yu,* Yichuan Dai, Xianli Wang, Kaiqin Chu and Zachary J. Smith*



Surfactant encapsulating N-doped carbon dots with enhanced optical properties as a selective sensor for Cr(VI) detection

Fe–N hollow mesoporous carbon spheres with high oxidase-like activity for sensitive detection of alkaline phosphatase

The diagram illustrates the synthesis and catalytic cycle of Fe-N HMCS.
Synthesis: Formaldehyde, FeCl₃, TEOS, and 3-aminophenol are stirred to form Fe/SiO₂/APF. This intermediate is then heated at 700 °C for 5 h in N₂ atmosphere, followed by 10% HF treatment, to produce Fe-N HMCS.
Catalytic Cycle: AAP (Ascorbic Acid Phosphate) is converted to AA (Ascorbic Acid) by the enzyme ALP. AA then reduces O₂ to ROS (Reactive Oxygen Species), which are used for catalysis. The cycle is regenerated as ROS are converted back to AAP.

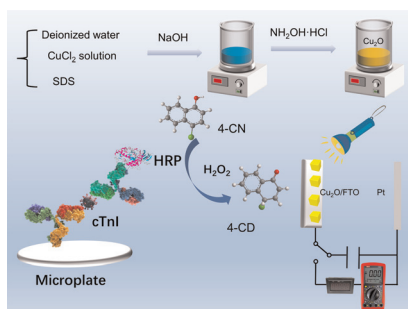
Charting and tracking the evolution of the SARS CoV-2 coronavirus variants of concern with protein mass spectrometry

Hollow structure molecularly imprinted ratiometric fluorescence sensor for the selective and sensitive detection of dopamine

The diagram illustrates the synthesis of ZIF-8/CdTe/MIPs with DA. It begins with CdTe nanoparticles and $\text{Zn}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ reacting under Himm conditions to form ZIF-8/CdTe. This intermediate is then reacted with CDs, DA, and 4-VPBA in the presence of AM, MBA, and AIBN to form ZIF-8/CdTe/CDs@MIPs with DA. A detailed inset shows the chemical structure of the MIP, featuring a central metal node (M) coordinated by ligands with amine and ether groups, and a cross-linked polymer network.

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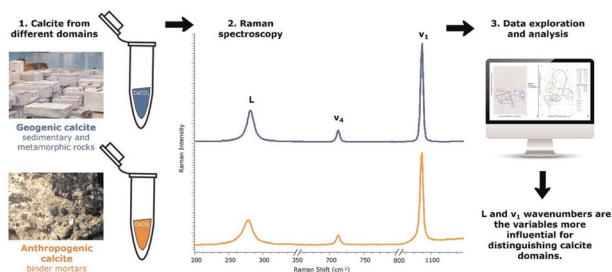
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A digital multimeter-based portable photoelectrochemical immunoassay for the detection of cardiac troponin I with enzymatic biocatalytic precipitation

Bizhen Huang, Jing Ran, Ruishen Li, Wei Zhuang, Jiabi Chen* and Haixin Guo*

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Non-destructive distinction between geogenic and anthropogenic calcite by Raman spectroscopy combined with machine learning workflow

Sara Calandra,* Claudia Conti, Irene Centauro and Emma Cantisani

