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ISSN 0003-2654 CODEN ANALAO 149(1) 1–256 (2024)

Cover
See Mingyu Han, Paul R. Stoddart, George W. Greene *et al.*, pp. 63–75.

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MINIREVIEW

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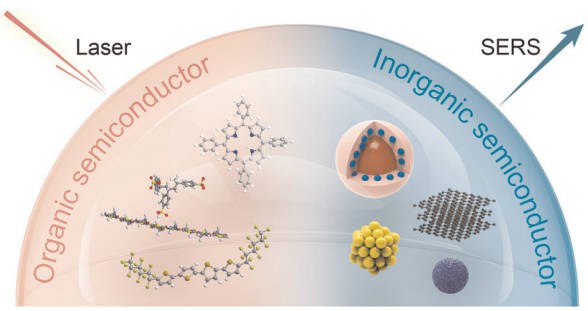
Noble metal-free SERS: mechanisms and applications

Sila Jin, Daxin Zhang, Bo Yang,* Shuang Guo, Lei Chen and Young Mee Jung*



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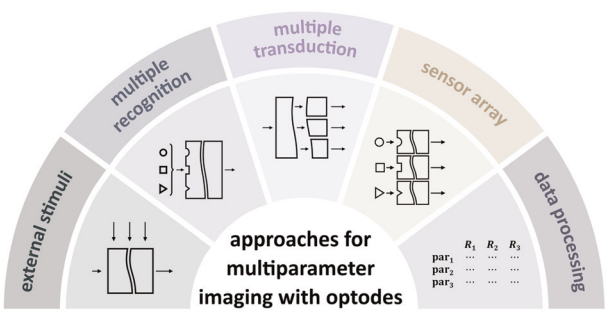
Optical sensors (optodes) for multiparameter chemical imaging: classification, challenges, and prospects

Andrey V. Kalinichev, Silvia E. Zieger and Klaus Koren*



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CRITICAL REVIEWS

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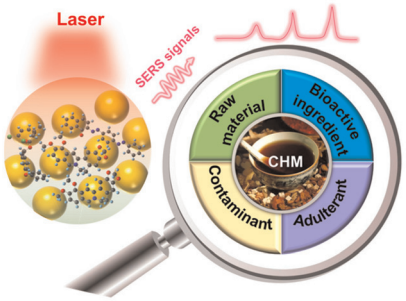
Surface-enhanced Raman spectroscopy as a powerful method for the analysis of Chinese herbal medicines

Cai-Xia Xu, Pei Song,* Zhou Yu and Ya-Hao Wang*



COMMUNICATION

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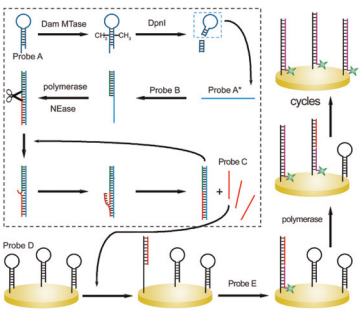
Ultrasensitive electrochemical detection and inhibition evaluation of DNA methyltransferase based on cascade strand displacement amplification

Ruizhi Liu, Yuge Wang, Hua Chai and Peng Miao*



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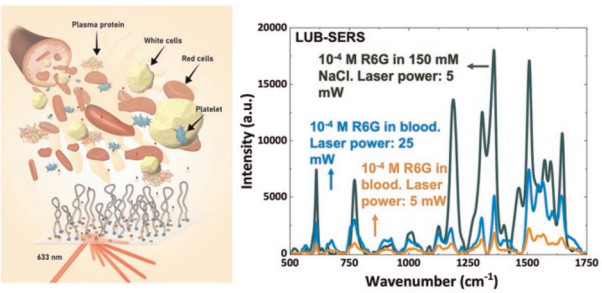
Lubricin (PRG-4) anti-fouling coating for surface-enhanced Raman spectroscopy biosensing: towards a hierarchical separation system for analysis of biofluids

Mingyu Han,* Saimon M. Silva, Matthew J. Russo, Pauline E. Desroches, Weiwei Lei, Anita F. Quigley, Robert M. I. Kapsa, Simon E. Moulton, Paul R. Stoddart* and George W. Greene*



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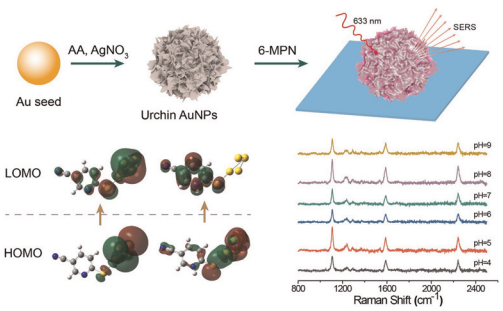
Design and performance of pH-responsive cyano-Raman label SERS probes based on single urchin Au nanoparticles

Yang Zhou, Zejie Yu, Qirong Zhou, Jiachang Chen, Miaomiao Cai, Yi Wang* and Lei Zhang*



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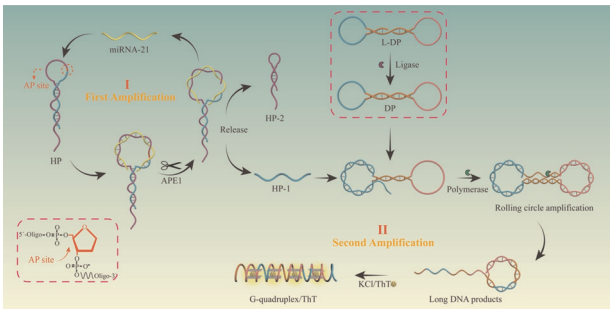

A cascade signal-amplified fluorescent biosensor combining APE1 enzyme cleavage-assisted target cycling with rolling circle amplification

Zirui Liu, Hongqun Yang, Beibei Zhang, Xinhao Li, Hong Wang* and Yingwei Zhang*

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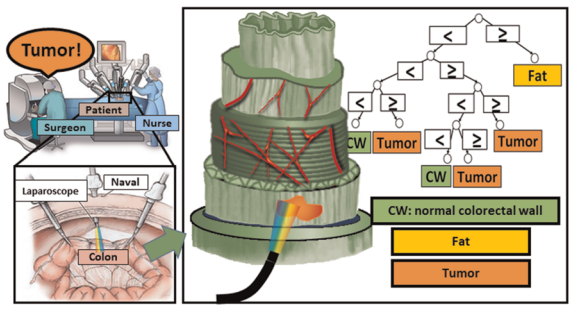

Diffuse reflectance spectroscopy for colorectal cancer surgical guidance: towards real-time tissue characterization and new biomarkers

Marcelo Saito Nogueira,* Siddra Maryam, Michael Amissah, Shane Killeen, Micheal O'Riordain and Stefan Andersson-Engels

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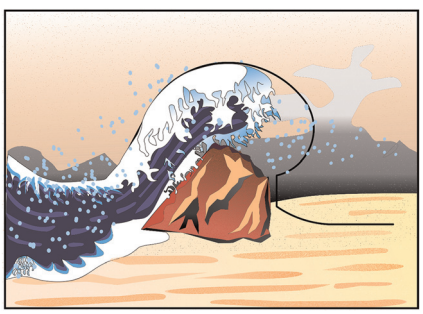

Robust and rapid partitioning in thermoplastic

Phenix-Lan Quan, Maria Alvarez-Amador, Yuhe Jiang, Martin Sauzade and Eric Brouzes*

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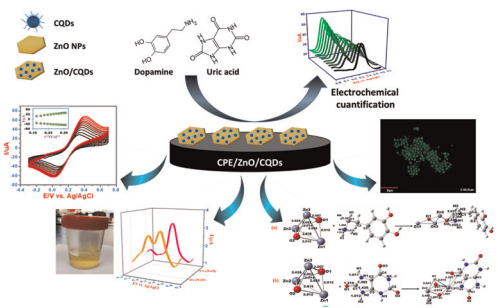

Simultaneous recognition of dopamine and uric acid in real samples through highly sensitive new electrode fabricated using ZnO/carbon quantum dots: bio-imaging and theoretical studies

Eduardo D. Tecuapa-Flores, Cristian B. Palacios-Cabrera, Alan J. Santiago-Cuevas, José G. Hernández, Jayanthi Narayanan and Pandiyan Thangarasu*

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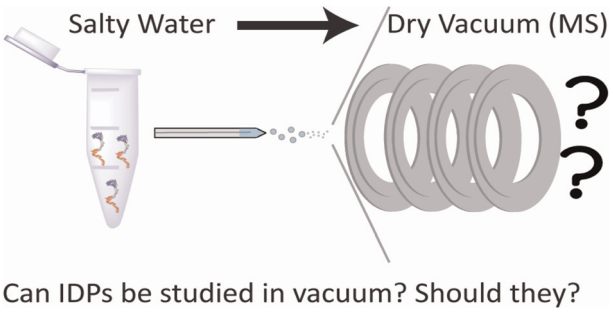
The role of solvation on the conformational landscape of α-synuclein

Melanie Cheung See Kit, Tyler C. Cropley, Christian Bleiholder, Christopher D. Chouinard, Frank Sobott and Ian K. Webb*



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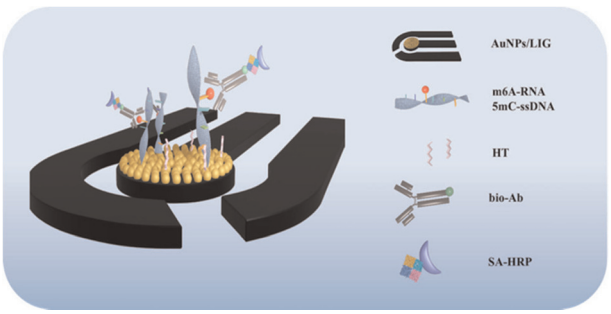
A laser-induced graphene-based electrochemical immunosensor for nucleic acid methylation detection

Jingyi Guo, Mei Zhao, Chen Chen, Fang Wang* and Zilin Chen



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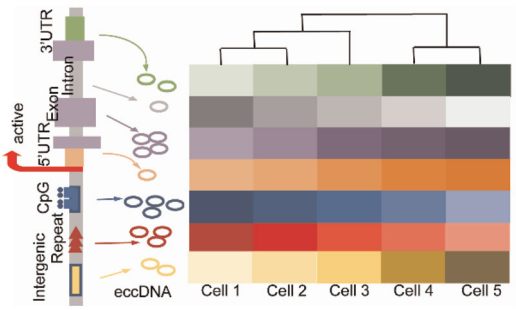
A comprehensive analysis of library preparation methods shows high heterogeneity of extrachromosomal circular DNA but distinct chromosomal amount levels reflecting different cell states

Wenxiang Lu, Fuyu Li, Yunfei Ouyang, Yali Jiang, Weizhong Zhang* and Yunfei Bai*



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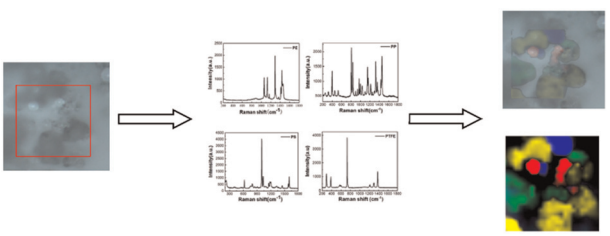
Visual detection of microplastics using Raman spectroscopic imaging

Kaili Liu, Xu Pang, Huacai Chen* and Li Jiang



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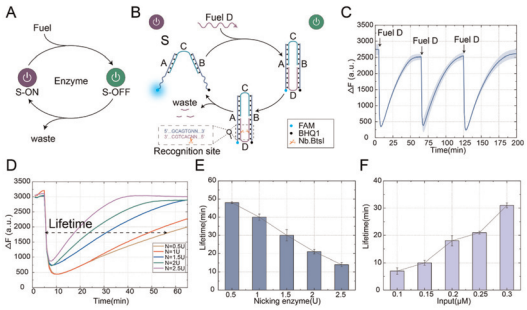

A nicking enzyme-assisted allosteric strategy for self-resetting DNA switching circuits

Haoliang Wang, Xiaokang Zhang, Yuan Liu and Shihua Zhou*

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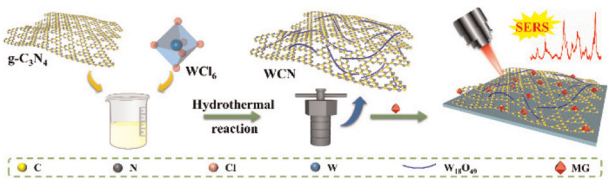

Enhancing charge transfer in a $W_{18}O_{49}$/g-C_3N_4 heterostructure *via* band structure engineering for effective SERS detection and flexible substrate applications

Lu Tan, Shuzhen Yue, Yongbing Lou* and Jun-Jie Zhu*

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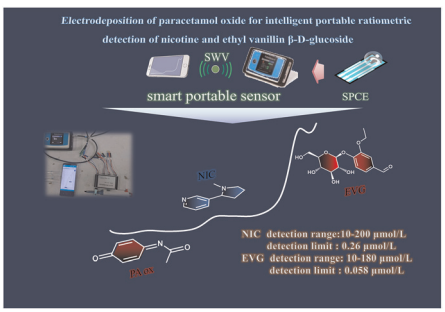

Electrodeposition of paracetamol oxide for intelligent portable ratiometric detection of nicotine and ethyl vanillin β-D-glucoside

Zhaohong Su, Shiyu Hu, Yuhang Zhang, Zhanning Liang, Yi Peng, Qinyi Cao, Xia Yu, Zhiyang Zhu,* Pei He* and Zhenjie Li*

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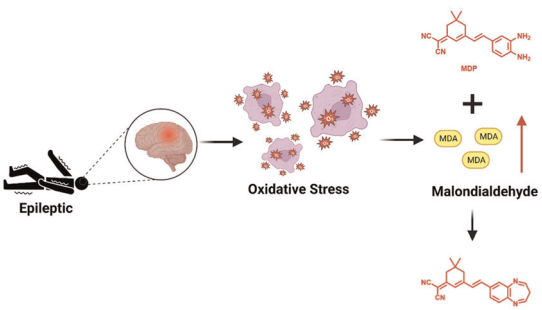

Fluorescence probe for real-time malonaldehyde detection in epilepsy model

Yongtao Duan,* Zhenling Liu, Yi-Fan Liao, Mingzhu Wang, Yongfang Yao* and Hai-Liang Zhu*

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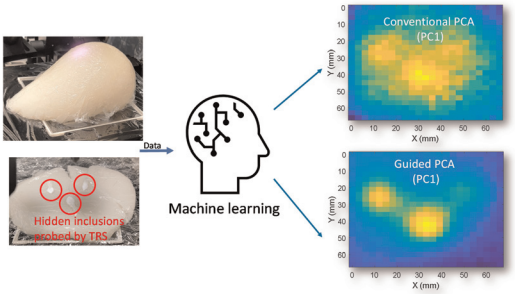
Guided principal component analysis (GPCA): a simple method for improving detection of a known analyte

Benjamin Gardner, Jennifer Haskell, Pavel Matousek* and Nicholas Stone*



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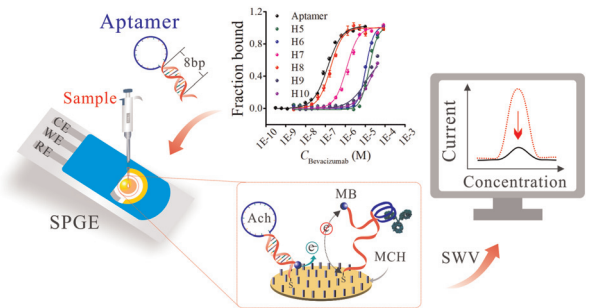
A chimeric hairpin DNA aptamer-based biosensor for monitoring the therapeutic drug bevacizumab

Shengfeng Huang, Mengyun Zhang, Feng Chen, Huihui Wu, Minyi Li, Jacques Crommen, Qiqin Wang* and Zhengjin Jiang*



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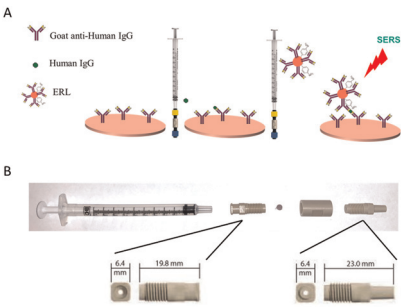
SERS-based immunoassay on a plasmonic syringe filter for improved sampling and labeling efficiency of biomarkers

Eunice Ebbah, Anthony Amissah, Jun-Hyun Kim* and Jeremy D. Driskell*



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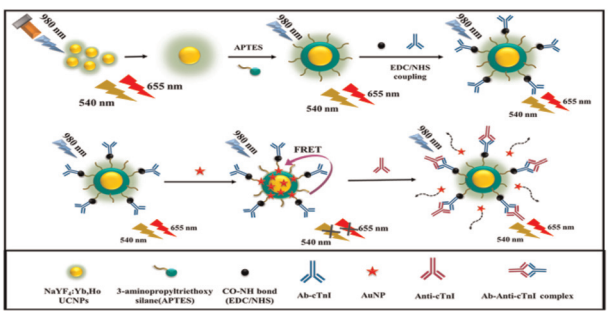
$NaYF_4$:Yb/Ho upconversion nanoprobe incorporated gold nanoparticle (AuNP) based FRET immunosensor for the "turn-on" detection of cardiac troponin I

Merin K. Abraham, Anju S. Madanan, Susan Varghese, Ali Ibrahim Shkhair, Geneva Indongo, Greeshma Rajeevan, N. S. Vijila and Sony George*



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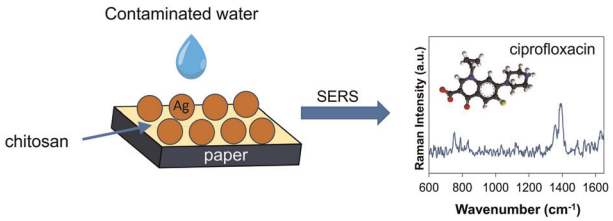

Surface-enhanced Raman scattering detection of thiram and ciprofloxacin using chitosan–silver coated paper substrates

Natércia C. T. Martins,* Sara Fateixa, Helena I. S. Nogueira and Tito Trindade

CORRECTION

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Correction: Quantitative assessment of cardiomyocyte mechanobiology through high-throughput cantilever-based functional well plate systems

Jongyun Kim, Arunkumar Shanmugasundaram, Dong-Su Kim, Yun-Jin Jeong, Pooja P. Kanade, Eung-Sam Kim, Bong-Kee Lee and Dong-Weon Lee*

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