

## IN THIS ISSUE

ISSN 0003-2654 CODEN ANALAO 148(23) 5777-6132 (2023)



### Cover

See Ke Xiong *et al.*,  
pp. 5790–5804.

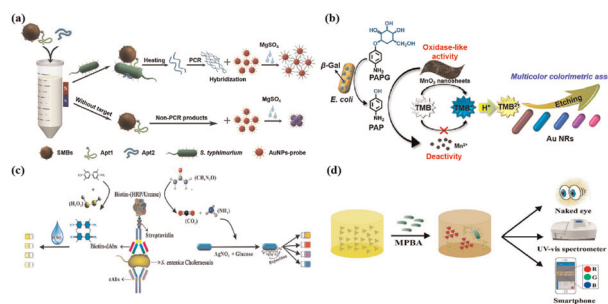
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Wen Jin, Ke Xiong, Hongmin  
Zhen, Mengmeng Li and  
Yumeng Hu from *Analyst*,  
2023, **148**, 5790.

## CRITICAL REVIEWS

5790

### Nanomaterial-based biosensors for the detection of foodborne bacteria: a review

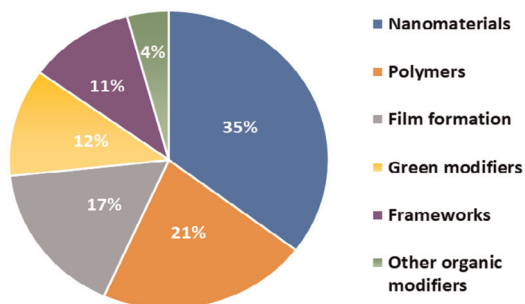
Lingyan Zheng, Wen Jin, Ke Xiong,\* Hongmin Zhen, Mengmeng Li and Yumeng Hu



5805

### Recent advances in the modification of electrodes for trace metal analysis: a review

Klodian Khanari and Matjaž Finšgar\*



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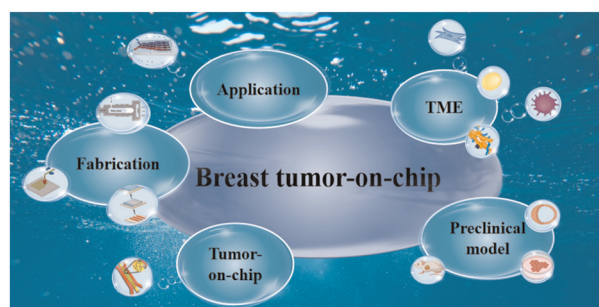


## CRITICAL REVIEWS

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**Breast tumor-on-chip: from the tumor microenvironment to medical applications**

Yiying Liu, Ruonan Liu, He Liu, Tong Lyu, Kun Chen, Kaiming Jin and Ye Tian\*

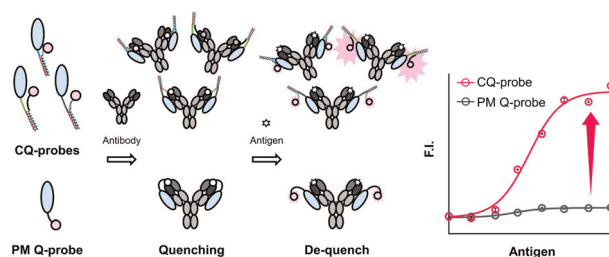


## COMMUNICATIONS

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**Efficient and rapid linker optimization with heterodimeric coiled coils improves the response of fluorescent biosensors comprising antibodies and protein M**

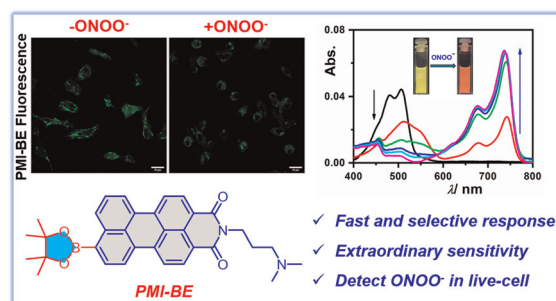
Kana Sasamoto, Takanobu Yasuda, Bo Zhu, Hiroshi Ueda and Tetsuya Kitaguchi\*



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**A perylenemonoimide-based fluorescent probe: ultrasensitive and selective tracing of endogenous peroxynitrite in living cells**

Aasif Khan, Vinod Kumar Meena, Akshay Silswal and Apurba Lal Koner\*

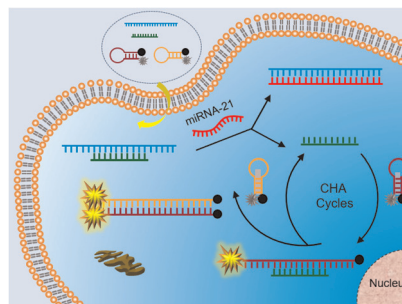


## PAPERS

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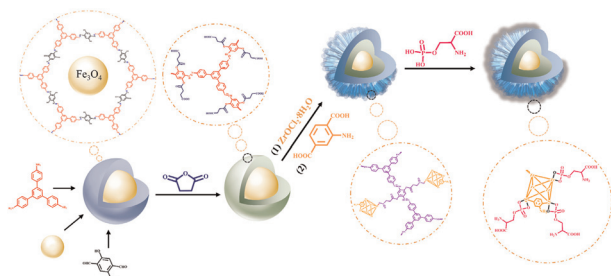
**Robust nontarget DNA-triggered catalytic hairpin assembly amplification strategy for the improved sensing of microRNA in complex biological matrices**

Ruining Yang, Xingfen Liu,\* Junbo Hu, Hui Xu, Jixiang Song, Huiyu Zhou, Meixing Li, Yanqin Huang, Lei Zhang and Quli Fan\*



## PAPERS

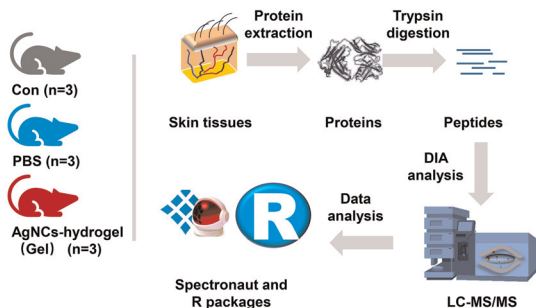
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### *In situ* grown magnetic COF@MOF with a phosphoserine anchor for in-depth N-glycopeptide analysis in serum

Yimin Guo, Shuwen Hua, Baichun Wang, Bing Wang, Chuan-Fan Ding\* and Yinghua Yan\*

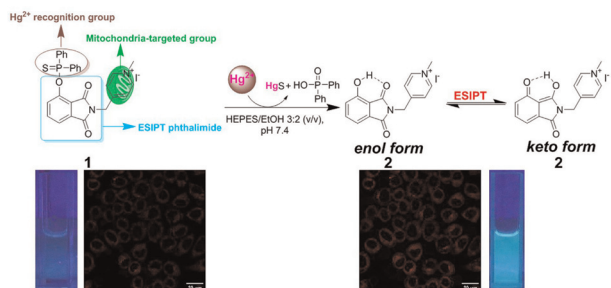
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### Potential mechanism of the AgNCs-hydrogel in promoting the regeneration of diabetic infectious wounds

Ruoqing Li, Chengshi Wang, Liping Gou, Ye Zhou, Linrui Peng, Fang Liu and Yong Zhang\*

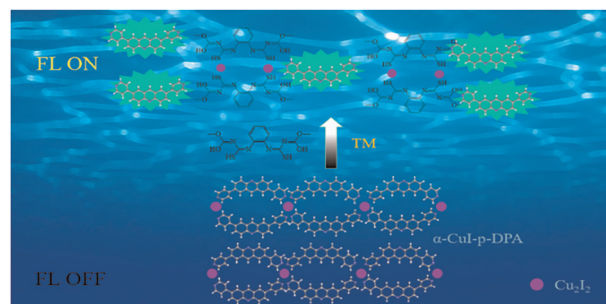
5882



### A mitochondrion-targeted fluorescent probe based on ESIPT phthalimide for the detection of Hg<sup>2+</sup> with large Stokes shift

Aishan Ren, Wenqin Yao and Dongjian Zhu\*

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### CuI-p-DPA coordination polymer isomers for "turn-on" fluorescence detection of thiophanate-methyl

Qian Zhou, Haili Zhao, Dan Chen, Haowei Sun, Ke Zhang, Chunqiong Wang,\* Qiue Cao\* and Liyan Zheng\*

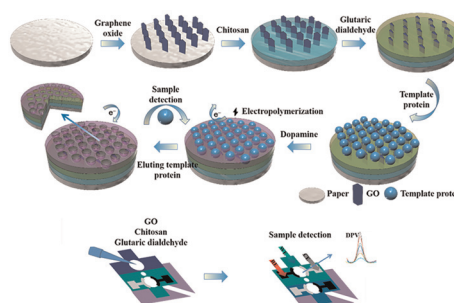


## PAPERS

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# An electrochemical molecularly imprinted microfluidic paper-based chip for detection of inflammatory biomarkers IL-6 and PCT

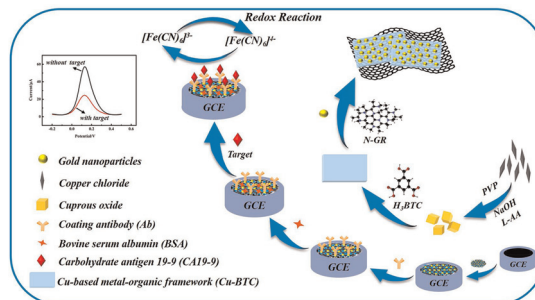
Wenpeng Li, Jiawen Xiang, Jinglong Han,\*  
Mingsan Man, Lingxin Chen\* and Bowei Li\*



5905

# A simple electrochemical strategy for the detection of the cancer marker CA19-9 by signal amplification using copper organic framework nanocomposite

Tingting Zhang, Yan Ma and Yuzhong Zhang\*



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# Multiplexing potential of NIR resonant and non-resonant Raman reporters for bio-imaging applications

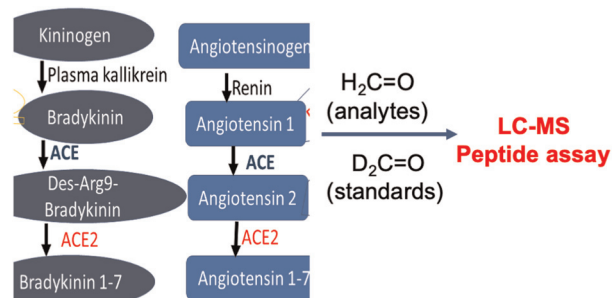
Olga E. Eremina, Sarah Schaefer, Alexander T. Czaja,  
Samer Awad, Matthew A. Lim and Cristina Zavaleta\*



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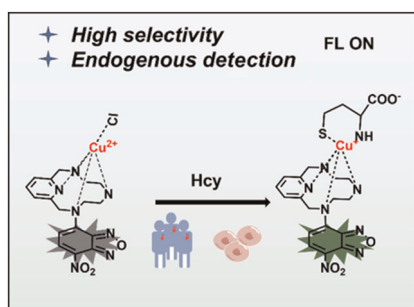
# Quantitative detection of RAS and KKS peptides in COVID-19 patient serum by stable isotope dimethyl labeling LC-MS

Ben K. Ahiadu, Thomas Ellis, Adam Graichen,  
Richard B. Kremer and James F. Rusling\*



## PAPERS

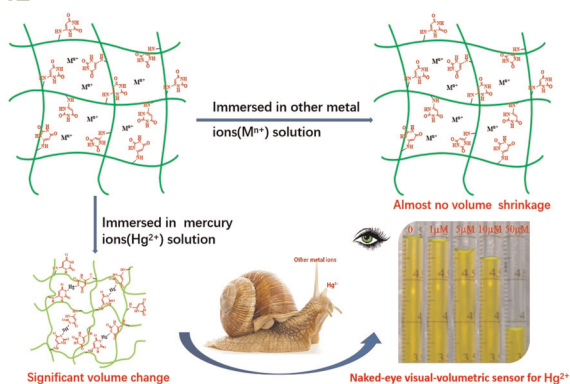
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### Sensitively detecting endogenous homocysteine in human serum and cardiomyocytes with a specific fluorescent probe

Huan Li, Qiwei Wang, Lili Shi\* and Tao Li\*

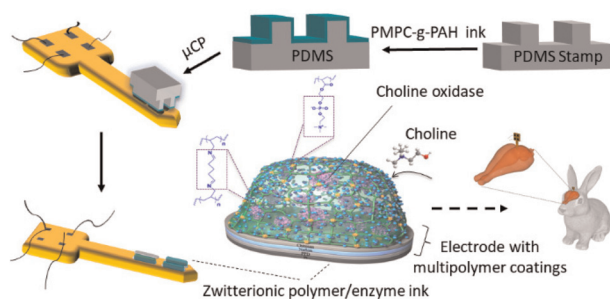
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### A specific visual-volumetric sensor for mercury ions based on smart hydrogel

Shenghai Zhang,\* Wenzhong Qu, Simeng Chen, Dian Guo, Kaixi Xue, Run Li, Jidong Zhang and Lingjian Yang

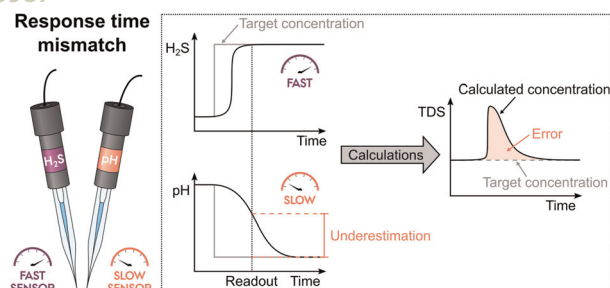
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### Microcontact printing of choline oxidase using a polycation-functionalized zwitterionic polymer as enzyme immobilization matrix

Ming Zhao, Yan Cao, I-wen Huang and Harold G. Monbouquette\*

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### Timing matters: the overlooked issue of response time mismatch in pH-dependent analyte sensing using multiple sensors

Fabian Steininger, Silvia E. Zieger\* and Klaus Koren\*

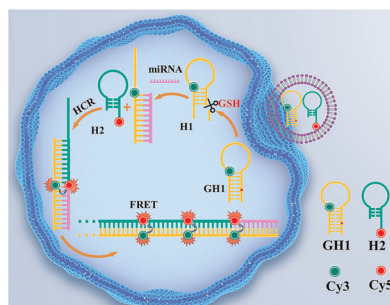


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### Target-triggered enzyme-free amplification for highly efficient AND-gated bioimaging in living cells

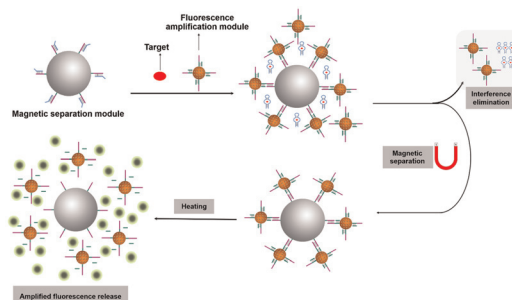
Jia Chen, Shengrong Yu,\* Zhiling Qian, Kangdi He, Bingqian Li, Yuting Cao, Keqi Tang, Shengjia Yu\* and Yong-Xiang Wu\*



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### Magnetic separation-assisted cluster-amplified versatile fluorescent aptasensors for the sensitive detection of target biomolecules

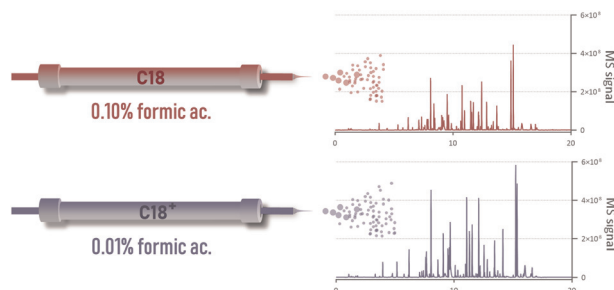
Ailing Kan, Shengyong Ding, Aimei Ouyang, Nan Zhang\* and Wei Jiang\*



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### A stationary phase with a positively charged surface allows for minimizing formic acid concentration in the mobile phase, enhancing electrospray ionization in LC-MS proteomic experiments

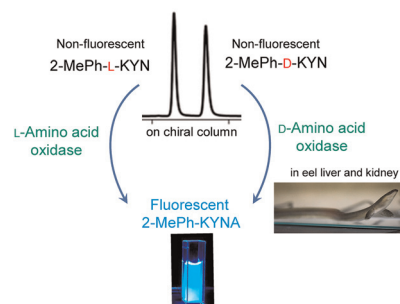
Siddharth Jadeja, Rudolf Kupcik, Ivo Fabrik, Hana Sklenářová and Juraj Lenčo\*



5991

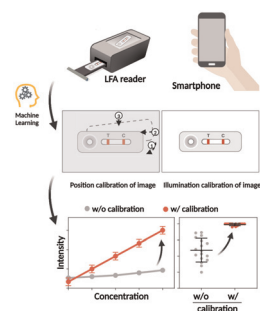
### Substituted kynurenic acid derivatives as fluorophore-based probes for D- and L-amino acid oxidase assays and their *in vitro* application in eels

Tatsuya Sakamoto, Mayu Onozato, Hiroshi Sugawara and Takeshi Fukushima\*



## PAPERS

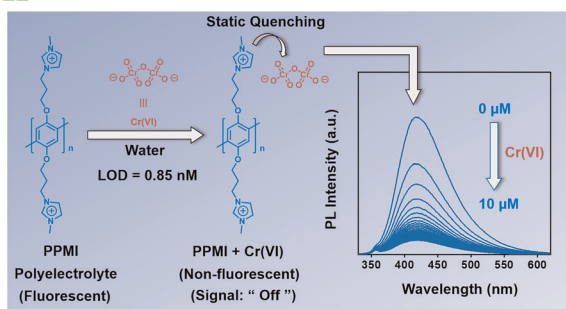
6001



### Advancing diagnostic efficacy using a computer vision-assisted lateral flow assay for influenza and SARS-CoV-2 detection

Seungmin Lee, Yong Kyoung Yoo, Sung Il Han, Dongho Lee, Sung-Yeon Cho, Chulmin Park, Dongtak Lee, Dae Sung Yoon\* and Jeong Hoon Lee\*

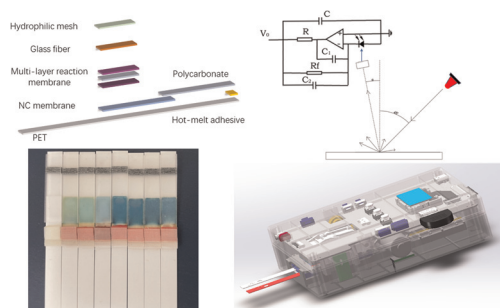
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### A water-soluble conjugated polyelectrolyte for selective and sensitive detection of carcinogenic chromium(VI)

Arvin Sain Tanwar, Mst Nasima Khatun, Moirangthem Anita Chanu, Tapashi Sarmah, Yeon-Ho Im\* and Parameswar Krishnan Iyer\*

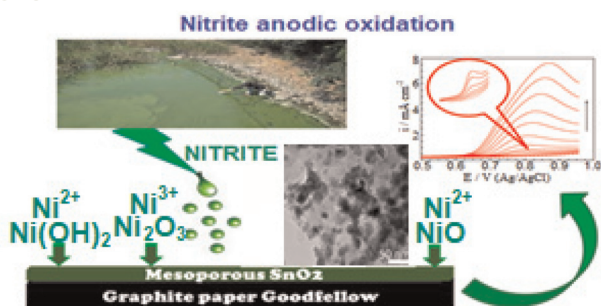
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### Portable dual-channel blood enzyme analyzer for point-of-care liver function detection

Jingwei Sang, Jie Cheng, Honghua Hu, Ke Liu, Jiuchuan Guo and Jinhong Guo\*

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### Nitrite anodic oxidation at Ni(II)/Ni(III)-decorated mesoporous SnO<sub>2</sub> and its analytical applications

Marius Alexandru Mihai, Tanta Spataru, Simona Somacescu, Olivia Georgeta Moga, Loredana Preda, Mihaela Florea, Andrei Kuncser and Nicolae Spataru\*

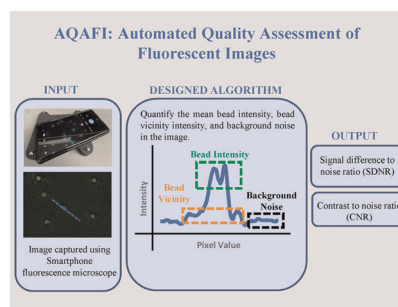


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# AQAFI: a bioanalytical method for automated KPIs quantification of fluorescent images of human leukocytes and micro–nano particles

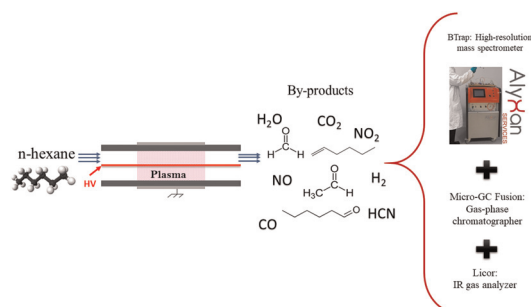
Muhammad A. Sami, Muhammad Nabeel Tahir and Umer Hassan\*



6050

# Monitoring of *n*-hexane degradation in a plasma reactor by chemical ionization mass spectrometry

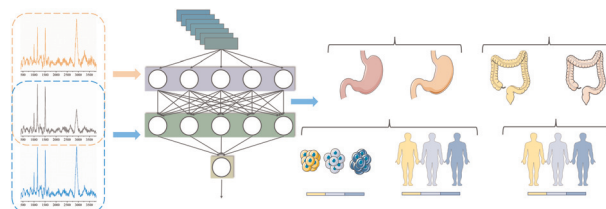
Perla Trad,\* Nicole Blin-Simiand, Pascal Jeanney, Stéphane Pasquiers, Joel Lemaire, Essyllt Louarn, Hélène Mestdagh and Michel Heninger



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# Evaluation of Raman spectroscopy combined with the gated recurrent unit serum detection method in early screening of gastrointestinal cancer

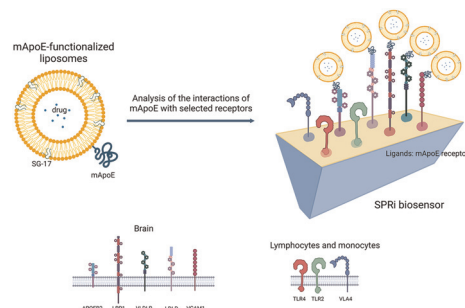
Kunxiang Liu, Bo Liu, Yu Wang, Qi Zhao, Qian Wu\* and Bei Li\*



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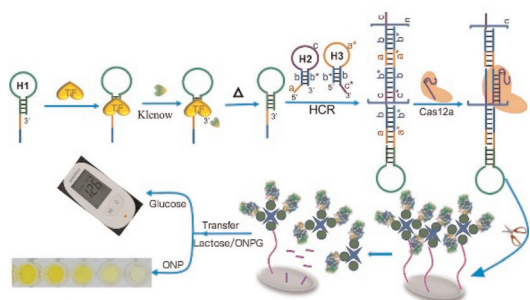
# SPRi analysis of molecular interactions of mApoE-functionalized liposomes as drug delivery systems for brain diseases

Silvia Picciolini, Francesca Rodà, Alice Gualerzi, Valentina Mangolini, Luana Forleo, Aurora Mangolini, Silvia Sesana, Antonia Antoniou, Francesca Re, Pierfausto Seneci and Marzia Bedoni\*



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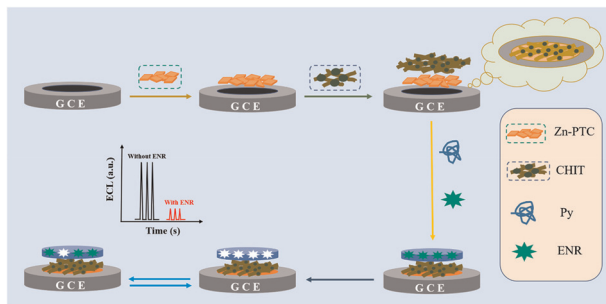
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### A dual-mode strategy based on $\beta$ -galactosidase and target-induced DNA polymerase protection for transcription factor detection using colorimetry and a glucose meter

Xinmei Qian, Heng Zhang, Mingyu Zheng, Chunxiang Li, Jinglun Wang, Haowen Huang and Keqin Deng\*

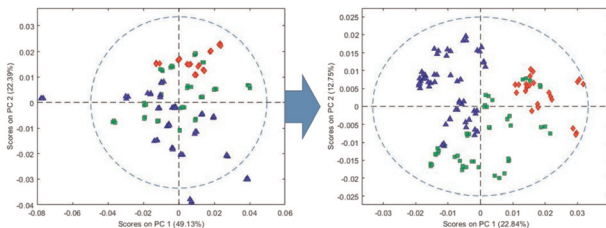
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### A molecularly imprinted polypyrrole electrochemiluminescence sensor based on a novel zinc-based metal–organic framework and chitosan for determination of enrofloxacin

Liyin Bu, Chang Su, Qingyuan Song, Ding Jiang, Xueling Shan, Wenchang Wang and Zhidong Chen\*

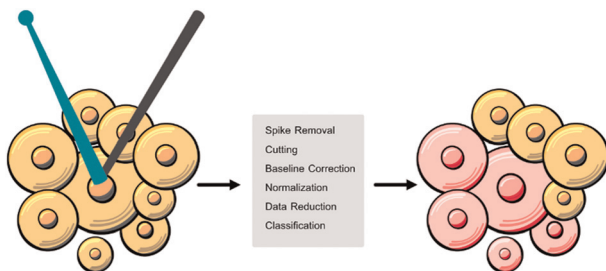
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### Supervised discretization for decluttering classification models

James A. Jordan, Caelin P. Celani, Michael Ketterer, Barry K. Lavine and K. S. Booksh\*

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### Rapid, label-free classification of glioblastoma differentiation status combining confocal Raman spectroscopy and machine learning

Lennard M. Wurm, Björn Fischer, Volker Neuschmelting, David Reinecke, Igor Fischer, Roland S. Croner, Roland Goldbrunner, Michael C. Hacker, Jakub Dybaś and Ulf D. Kahlert\*



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## A reusable fiber-embedded microfluidic chip for rapid and sensitive on-site detection of kanamycin residues in water environments

Dan Chen, Wenjuan Xu, Ziqin Huang, Jiayuan Liu and Feng Long\*

