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Analyst

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Cover
See Haitang Yang, Chongzhao Wu *et al.*, pp. 3800–3811.

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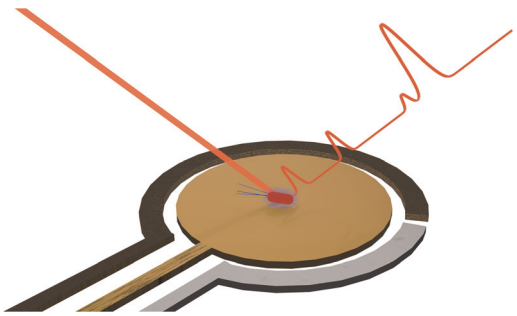
MINIREVIEW

3762

Bacterial detection with electrochemical, SERS, and electrochemical SERS sensors

Kyriaki Karagianni, Tina Leontidou, Marios Constantinou and Chrysafis Andreou*

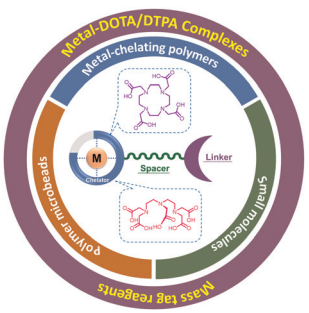


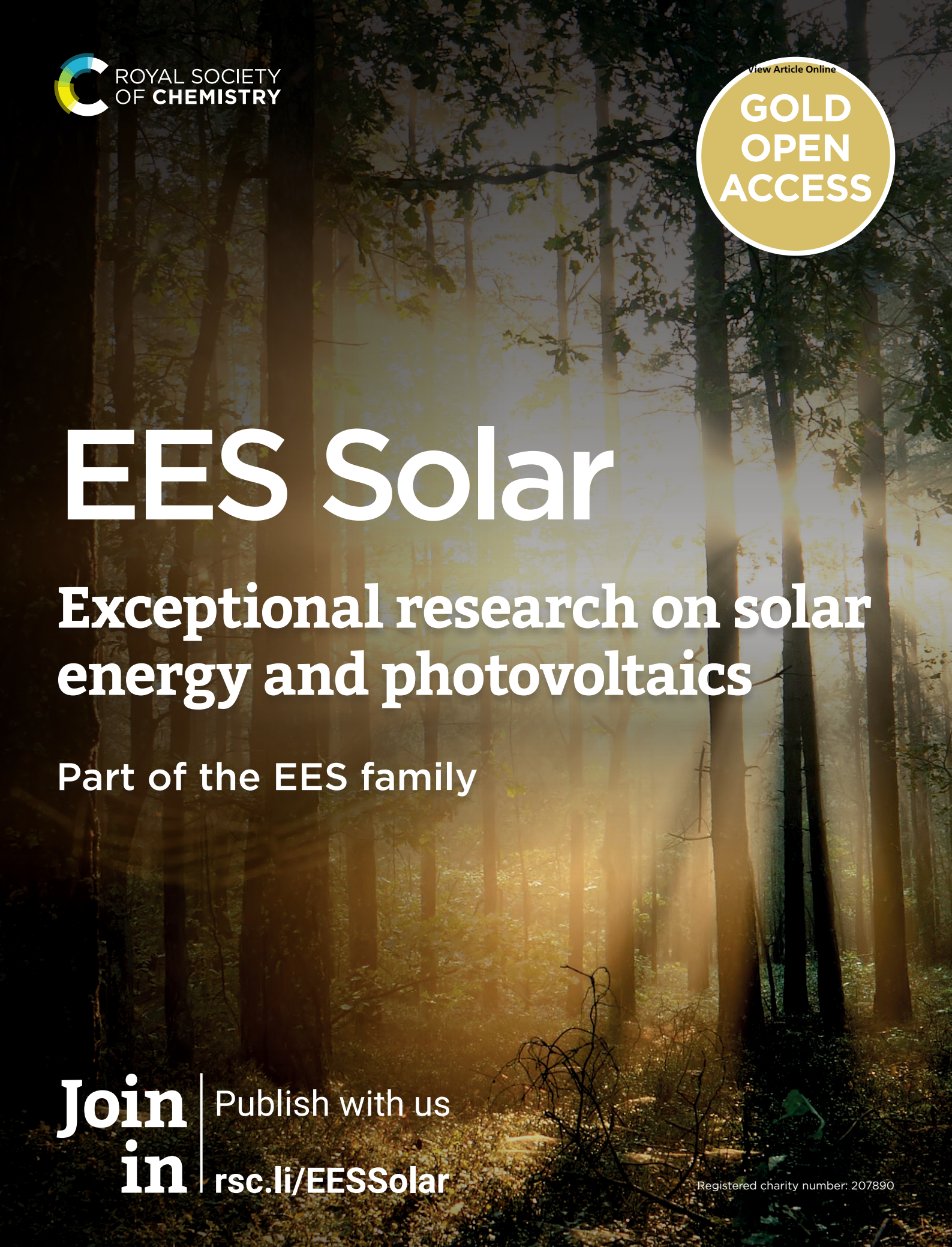
TUTORIAL REVIEW

3788

Advances in metal-DOTA/DTPA complexes for mass cytometry

Yin-Feng Wang,* Wenying Wu and Guojun Han

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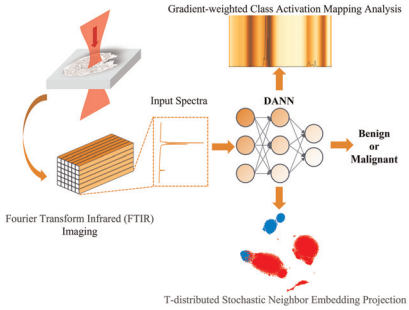
PAPERS

3800

Label-free diagnosis of lung cancer by Fourier transform infrared microspectroscopy coupled with domain adversarial learning

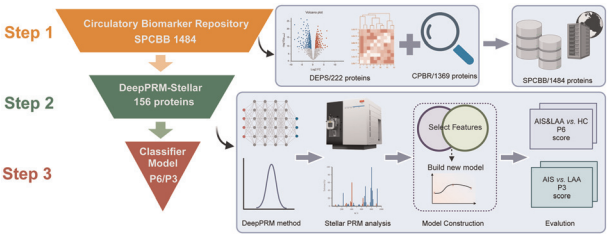
Yudong Tian, Xiangyu Zhao, Jingzhu Shao, Bingsen Xue, Lianting Huang, Yani Kang, Hanyue Li, Gang Liu, Haitang Yang* and Chongzhao Wu*



3812

High-throughput DeepPRM-Stellar proteomics coupled with machine learning enables precise quantification of atherosclerosis-stroke progression biomarkers and risk prediction

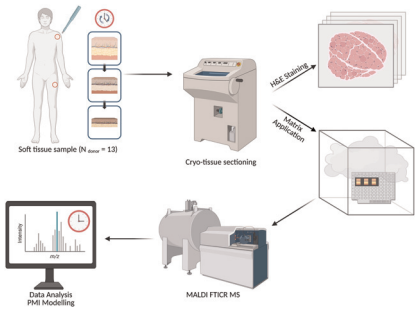
Ye Liu, Ouyang Hu, Zhenxin Wang, Jingyi Wang, Yijie Qiu, Jin Xiao, Xin Cheng, Pengyuan Yang, Ningshao Xia, Yueting Xiong* and Quan Yuan*



3825

A holistic approach to understanding biochemical degradation of human tissues using high resolution MALDI MS

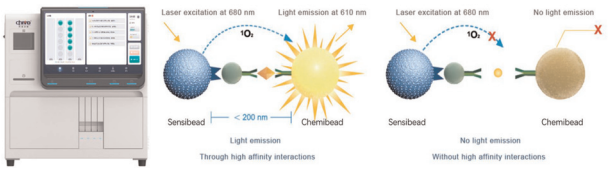
Jerika Ho, Naomi L. Stock, Vaughn Mangal, Shari L. Forbes and Theresa E. Stotesbury*



3838

Development of a light-initiated chemiluminescence system for the detection of human plasma p-tau181

Yang Yang and Xu Wang*



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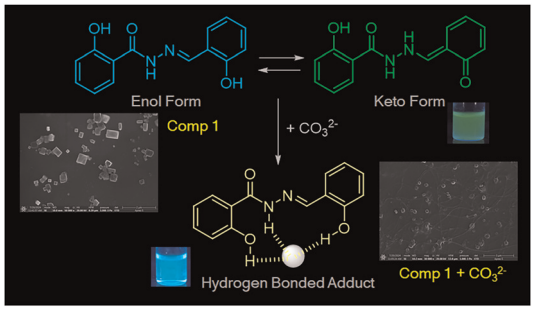
PAPERS

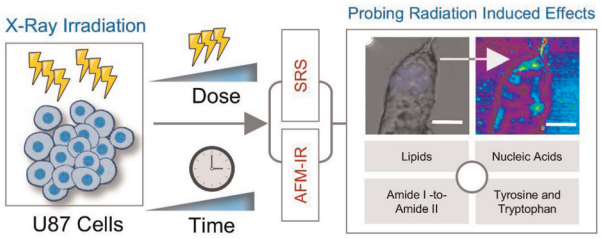
3849



ESIPT-active fluorescent probes for ratiometric analysis of carbonate ions in aqueous media: structural modifications for enhanced selectivity and response

M. Gayathri, Sourav Mondal, D. Sriram and Nilanjan Dey*

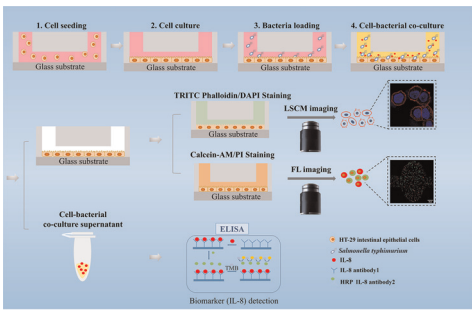
3860



X-ray induced modifications in U87 glioma cells probed by Raman- and infrared-based spectromicroscopy

T. Senapati, M. R. Bittermann, R. Nadar, A. van der Meer, B. Kästner, A. G. Denkova and E. Rühl*

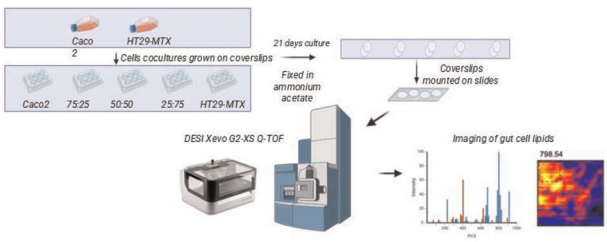
3871



Secretion analysis during the invasion process of *Salmonella typhimurium* into HT-29 intestinal epithelial cells on a microfluidic chip

Hong He, Haolan Tan, Chuang Ge and Yi Xu*

3880



Mass spectrometry imaging of lipids in a gut epithelial cell model

Qianying Xu, Hadeer Mattar, Emmanuelle Claude, Lee Gethings and E. N. Clare Mills*

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PAPERS

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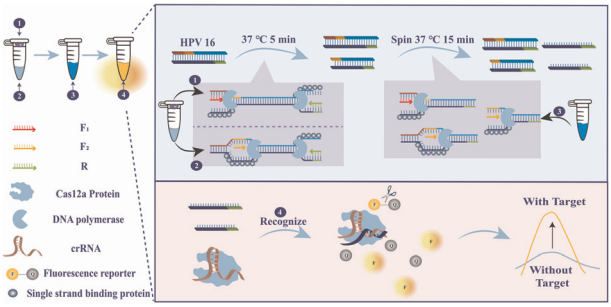
PAM-free activation of CRISPR/Cas12a *via* semi-nested asymmetric RPA: highly specific detection of HPV16 dsDNA

Xiaozhi Zou, Tao Gu, Xuheng Li, Liyuan Deng, Shuyu Zhu, Jiangbo Dong, Fei Deng, Changjun Hou* and Danqun Huo*



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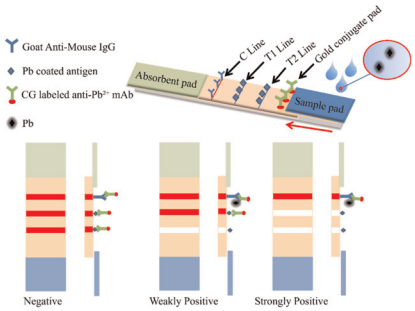
A colloidal gold immunochromatographic assay for on-site lead detection in vegetable oil

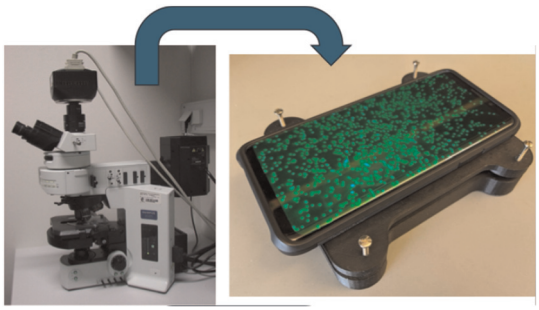
Jiaxun Li, Liuping Zhang, Guoping Qian, Aihong Wu, Liqiang Liu, Lingling Guo,* Lili Cheng, Chuanlai Xu and Hua Kuang*



3909

HIST-DIP: histogram thresholding and deep image priors assisted smartphone-based fluorescence microscopy imaging

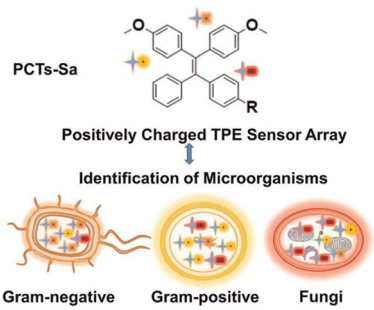
Harshitha Govindaraju, Muhammad Nabeel Tahir and Umer Hassan*



3918

A positively charged sensor array for identification of microorganisms using fluorescence response patterns

Yufan Ma, Guoyang Zhang, Xuefei Wang,* Sio-Long Lo* and Zhuo Wang*



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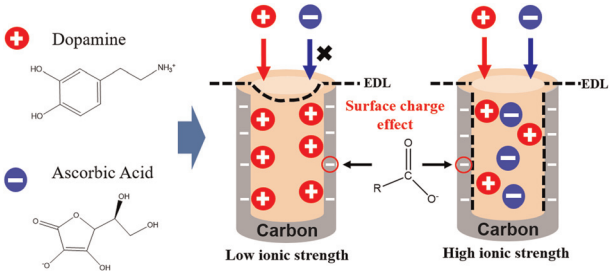

Electrochemical detection of dopamine using negatively charged ordered mesoporous carbon (CMK-3)

Junhee Yu, Hyo Chan Lee, Hyun Ju Yang, Sunyeong Hong and Je Hyun Bae*

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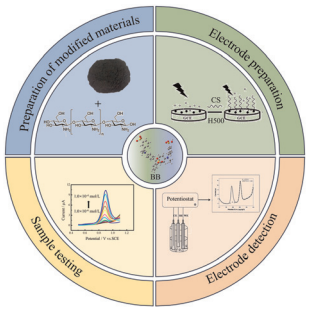
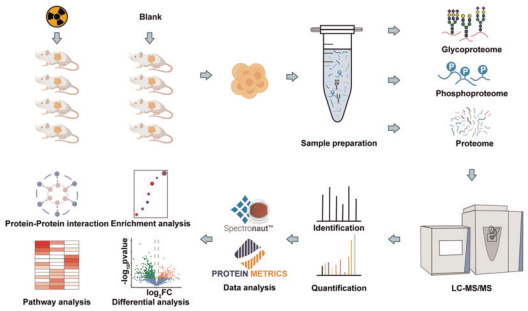


High-sensitivity detection of brilliant blue by disposable chitosan–biochar electrochemical sensors

Junbin Cao, Chengcheng Xu, Jianwei Zhao* and Wenmei Tao*

3946



Deciphering radiopharmaceutical mechanisms through integrated proteomic and PTM-proteomic profiling

Xuefang Dong, Xinlian Ding, Lingyan Yuan, Yun Cui, Zhitong Bing, Long Yu, Lei Yang,* Xiuling Li* and Xinmiao Liang

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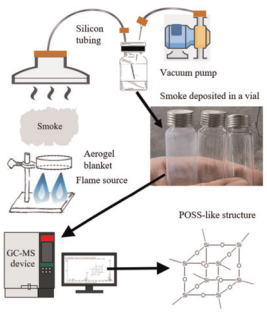

Identification of permethyloctasilsesquioxane by a novel method: collecting smoke formed by chemical changes in a methylsilsesquioxane blanket at 2000–2500 °C using gas chromatography-mass spectrometry

Abdullah Tav, Yahya Öz* and Halil İbrahim Akyıldız

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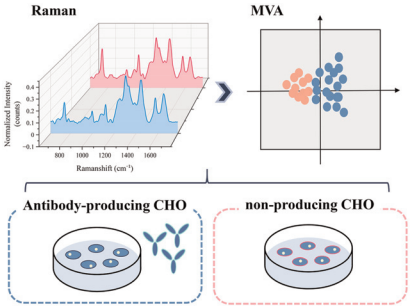
3974

Use of Raman spectroscopy for the label-free discrimination of CHO cells associated with antibody expression

Yusui Sato, Yukako Senga, Hiroshi Tateno* and Shinya Honda*



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