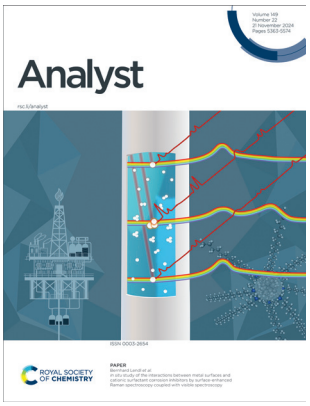
Analyst

rsc.li/analyst

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 0003-2654 CODEN ANALAO 149(22) 5363–5574 (2024)



Cover
See Bernhard Lendl *et al.*, pp. 5372–5380.

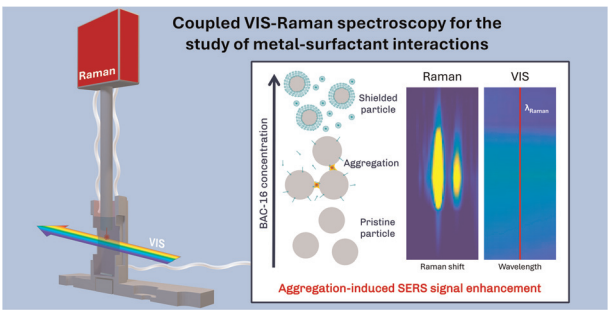
Image reproduced by permission of Bernhard Lendl from *Analyst*, 2024, **149**, 5372.

PAPERS

5372

***In situ* study of the interactions between metal surfaces and cationic surfactant corrosion inhibitors by surface-enhanced Raman spectroscopy coupled with visible spectroscopy**

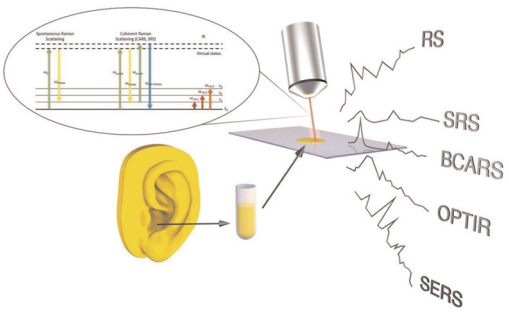
Felix Frank, Daniela Tomasetig, Peter Nahringbauer, Wolfgang Ipsmiller, Gerd Mauschitz, Karin Wieland and Bernhard Lendl*

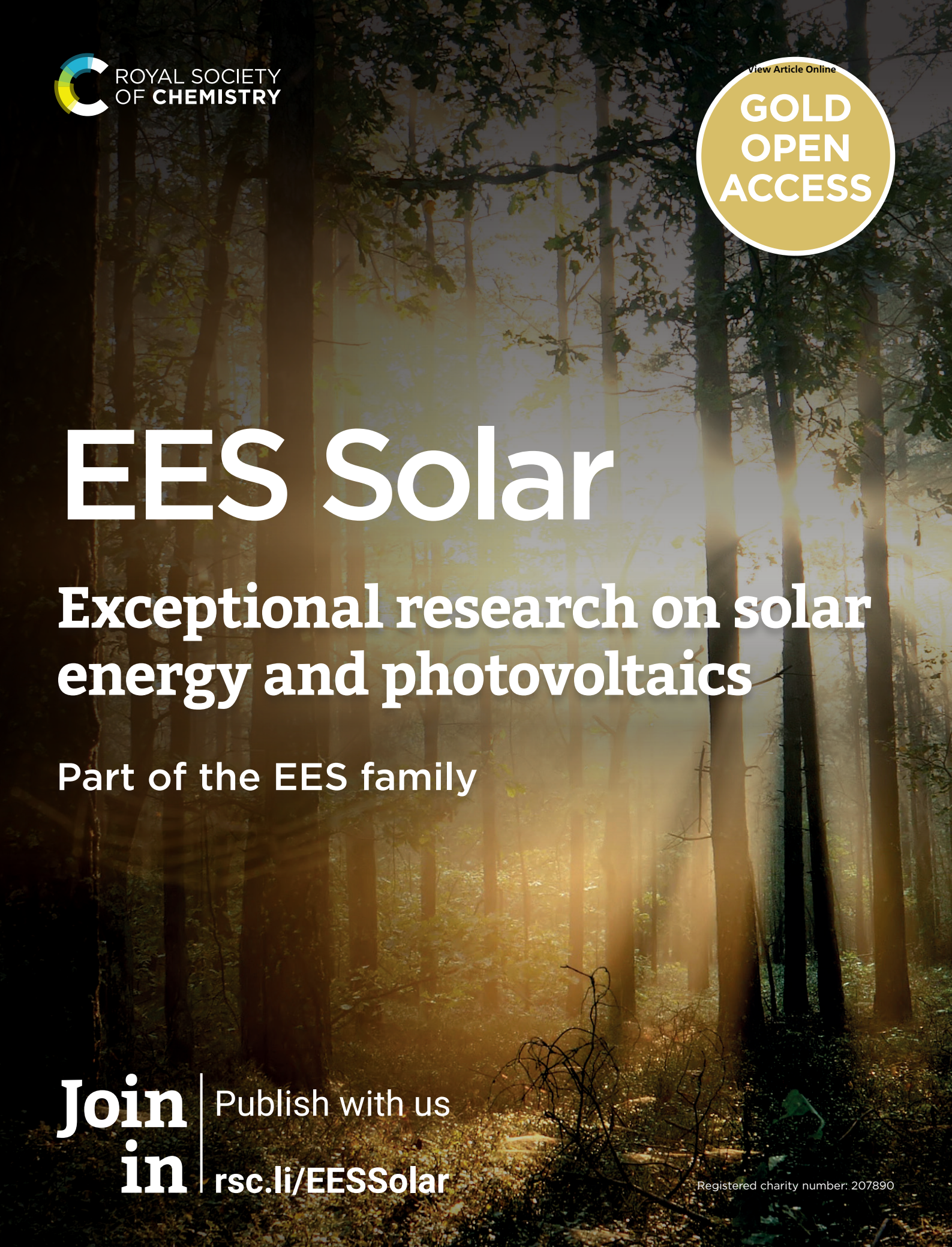


5381

Advancing cerumen analysis: exploring innovative vibrational spectroscopy techniques with respect to their potential as new point-of-care diagnostic tools

Edoardo Farnesi, Matteo Calvarese, Chen Liu, Carl Messerschmidt, MohammadSadegh Vafaeinezhad, Tobias Meyer-Zedler, Dana Cialla-May, Christoph Krafft, Jonas Ballmaier, Orlando Guntinas-Lichius, Michael Schmitt and Jürgen Popp*



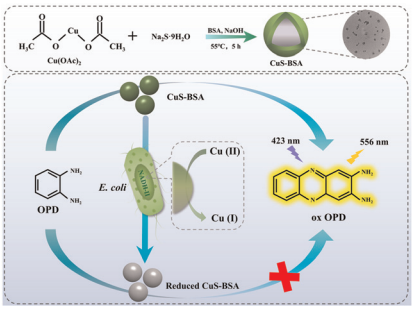

ROYAL SOCIETY OF CHEMISTRY
View Article Online
GOLD OPEN ACCESS
EES Solar
Exceptional research on solar energy and photovoltaics
Part of the EES family
Join in
Publish with us
rsc.li/EESSolar
Registered charity number: 207890

PAPERS

5394

A nano-biosensing platform based on CuS-BSA for label-free fluorescence detection of *Escherichia coli*

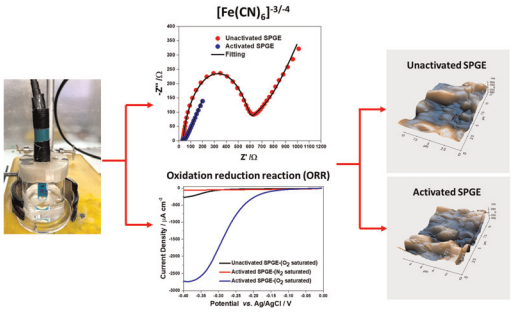
Xiaoqing Zhang, Shanglin Li and Mei Liu*



5401

Electrochemical and imaging evaluations of electrochemically activated screen-printed gold electrodes

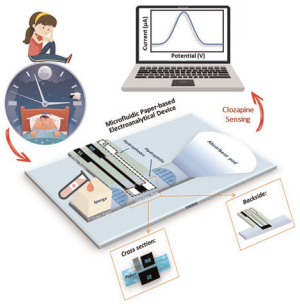
Nor Dyana Zakaria, Ibrahim Luqman Salih, Hairul Hisham Hamzah,* Turgut Sönmez, Muhamad Huzaifah Omar, Noorhashimah Mohamad Nor, Khairunisak Abdul Razak and Venugopal Balakrishnan



5411

Screen printed 3D microfluidic paper-based and modifier-free electroanalytical device for clozapine sensing

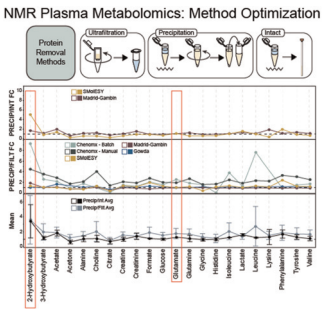
Mohammad Hossein Ghanbari, Markus Biesalski, Oliver Friedrich and Bastian J. M. Etzold*



5423

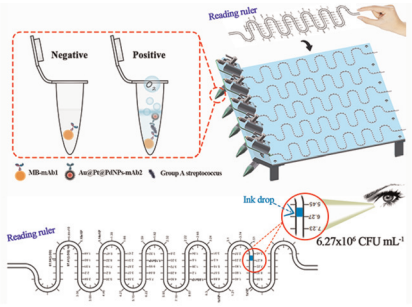
Evaluating protocols for reproducible targeted metabolomics by NMR

Darcy Cochran, Panteleimon G. Takis,* James L. Alexander, Benjamin H. Mullish, Nick Powell, Julian R. Marchesi and Robert Powers*



PAPERS

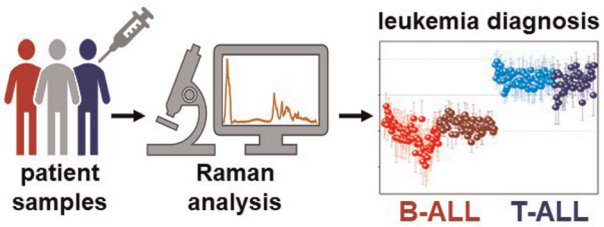
5433



Nanozyme linked multi-array gas driven sensor for real-time quantitative detection of *Group A streptococcus*

Qi Wang, Pei Liu, Ke Xiao, Wenying Zhou, Jinfeng Li* and Yun Xi*

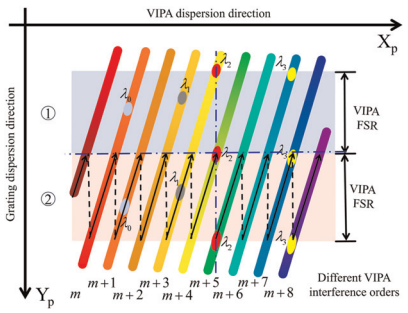
5443



Advancing triage of acute lymphoblastic leukaemia subtypes diagnosis: label-free Raman spectroscopy for precise single-cell phenotyping and subtype classification

Patrycja Leszczenko, Anna M. Nowakowska, Patrycja Dawiec, Karolina Czuja, Justyna Jakubowska, Marta Zabczynska, Agata Pastorczak, Kinga Ostrowska,* Szymon Tott, Wojciech Mlynarski, Malgorzata Baranska and Katarzyna Majzner*

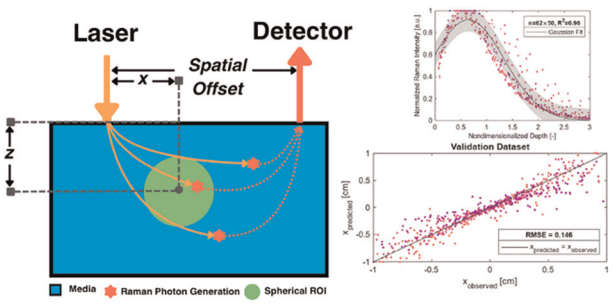
5455



A simple spectrogram model for high-accuracy spectral calibration of VIPA spectrometers

Hao Zhou, Weixiong Zhao,* Weihua Cui, Bingxuan Lv, Bo Fang, Nana Yang, Guangfeng Xiang, Weijun Zhang,* Lunhua Deng and Weidong Chen

5463



Material-agnostic characterization of spatially offset Raman spectroscopy in turbid media *via* Monte Carlo simulations

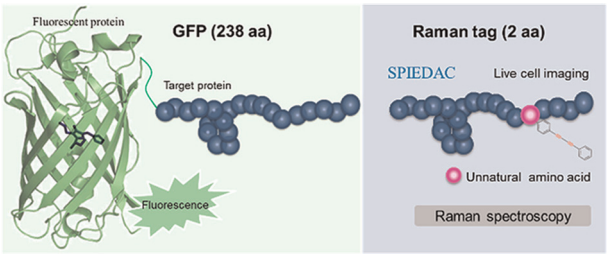
Zuriel Erikson Joven, Piyush Raj and Ishan Barman*

PAPERS

5476

Imaging specific proteins in living cells with small unnatural amino acid attached Raman reporters

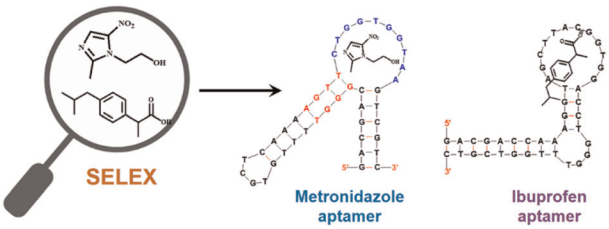
Erli Cai, Yage Chen, Jing Zhang, Haozheng Li, Yiran Li, Shuai Yan, Zhiyong He,* Quan Yuan* and Ping Wang*



5482

Selection of DNA aptamers for detecting metronidazole and ibuprofen: two common additives in soft drinks

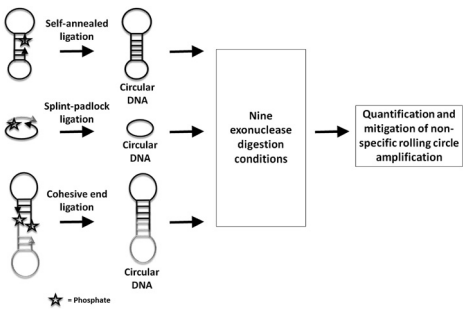
Jin Wang, Xiangmei Li, Hongtao Lei* and Juewen Liu*



5491

Probing the role of ligation and exonuclease digestion towards non-specific amplification in bioanalytical RCA assays

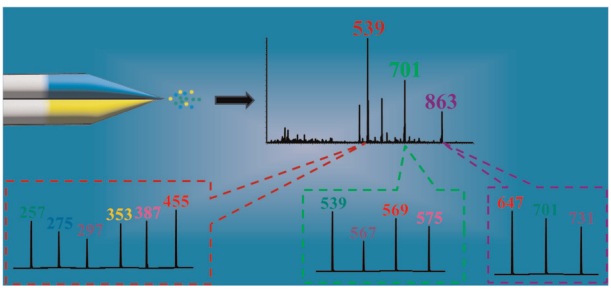
Vandana Kuttappan Nair,* Chandrika Sharma, Shrawan Kumar, Mrittika Sengupta and Souradyuti Ghosh*



5504

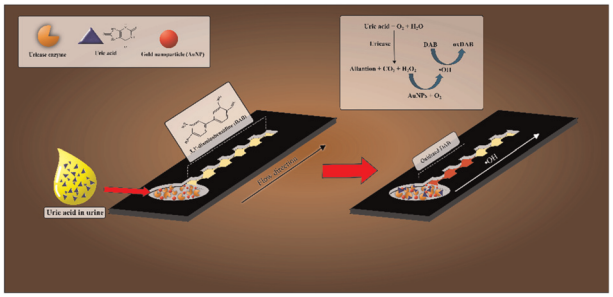
Differentiation of oligosaccharide isomers by direct infusion multidimensional mass spectrometry

Enoch Amoah, Taghi Sahraeian, Ayesha Seth and Abraham K. Badu-Tawiah*



PAPERS

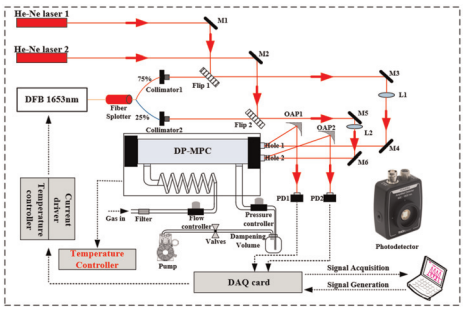
5518



A gold nanomaterial-integrated distance-based analytical device for uric acid quantification in human urine samples

Tapparath Leelasattarathkul, Thithawat Trakoolwilaiwan and Kawin Khachornsakkul*

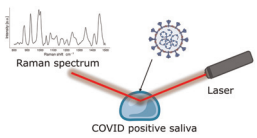
5527



Double-channel sensors for high precision measurement of methane based on a dual-path Herriott cell

Hongliang Ma, Shiqi Wang, Gaoxuan Wang, Qilei Zhang, Shenlong Zha, Xueyuan Cai, Lingli Li, Pan Pan, Qiang Liu* and Shengbao Zhan

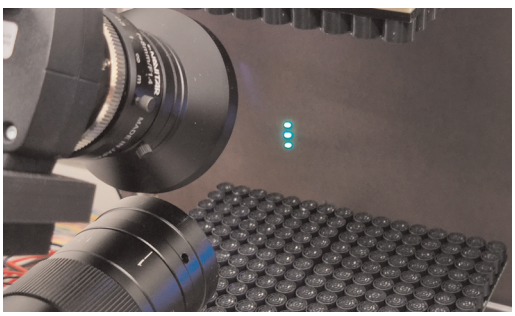
5535



Liquid saliva-based Raman spectroscopy device with on-board machine learning detects COVID-19 infection in real-time

Katherine J. I. Ember, Nassim Ksantini, Frédérick Dallaire, Guillaume Sheehy, Trang Tran, Mathieu Dehaes, Madeleine Durand, Dominique Trudel and Frédéric Leblond*

5546



Acoustic levitation and manipulation of columns of droplets with integrated optical detection for parallelisation of reactions

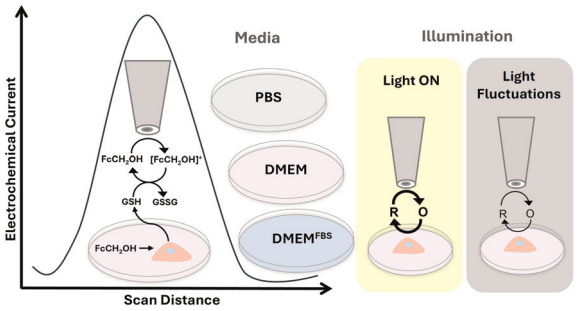
Ruchi Gupta* and Nicholas J. Goddard

PAPERS

5555

Effects of media composition and light exposure on the electrochemical current response during scanning electrochemical microscopy live cell imaging

Nikita Thomas, Mengzhen Lyu, Jadon Khouv, Dhésmon Lima and Sabine Kuss*



5563

Designing a novel paper-based microfluidic disc for rapid and simultaneous determination of multiple nutrient salts in water

Zhentao Sun, Youquan Zhao,* Yameng Liu, Chen Chen and Hao Chen