Volume 139 | Number 3 | 7 February 2014 | Pages 519–678

Analyst

www.rsc.org/analyst

ISSN 0003-2654

ROYAL SOCIETY OF CHEMISTRY

COMMUNICATION
Jan Halámek, Evgeny Katz *et al.*
Biocatalytic analysis of biomarkers for forensic identification of gender

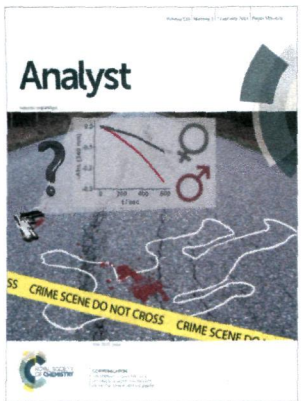
Analyst

www.rsc.org/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.

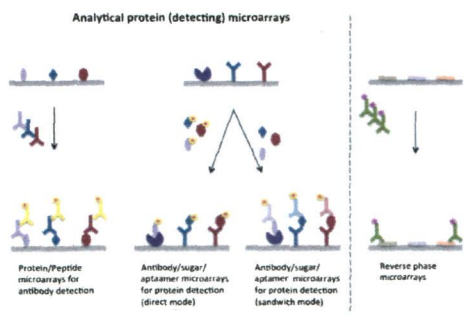
IN THIS ISSUE

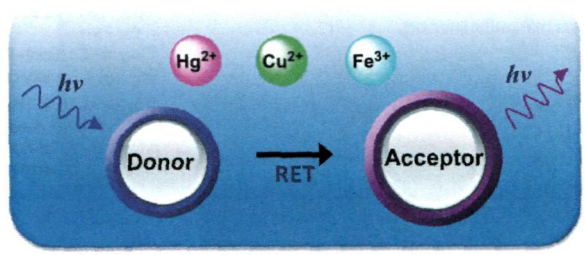
ISSN 0003-2654 CODEN ANALAO 139(3) 519–678 (2014)



Cover
See Jan Halámek, Evgeny Katz *et al.*, pp. 559–563.
Image reproduced by permission of Jan Halámek from *Analyst*, 2014, **139**, 559.

CRITICAL REVIEWS



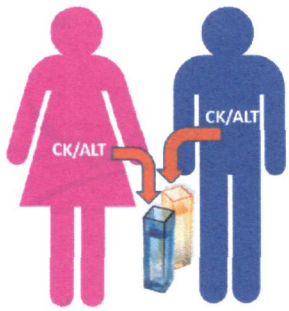


559

Biocatalytic analysis of biomarkers for forensic identification of gender

Saira Bakshi, Lenka Halámková, Jan Halámek* and Evgeny Katz*

A biocatalytic assay analyzing the simultaneous presence of creatine kinase (CK) and alanine transaminase (ALT) recognizes biofluids of different gender for forensic applications.

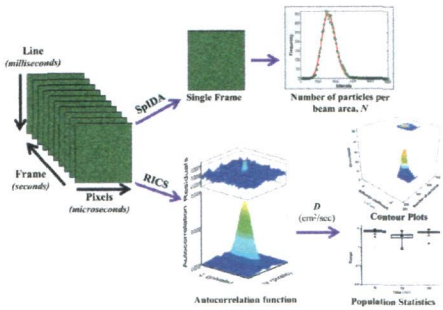


564

Real-time evaluation of aggregation using confocal imaging and image analysis tools

Zahra Hamrang,* Egor Zindy, David Clarke and Alain Pluen*

Real-time confocal imaging was utilised to monitor the *in situ* loss of BSA monomers and aggregate formation using Spatial Intensity Distribution Analysis (SpIDA) and Raster Image Correlation Spectroscopy (RICS).

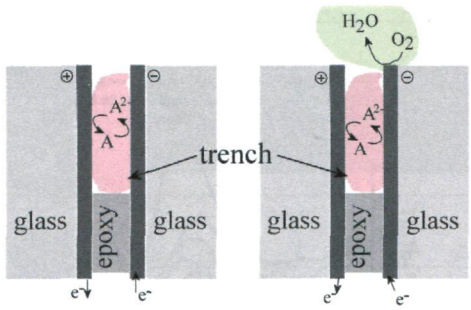


569

A dual-plate ITO–ITO generator–collector microtrench sensor: surface activation, spatial separation and suppression of irreversible oxygen and ascorbate interference

Mohammad A. Hasnat, Andrew J. Gross, Sara E. C. Dale, Edward O. Barnes, Richard G. Compton and Frank Marken*

A dual-plate micro-trench electrode system under bipotentiostatic control is shown to remove interferents such as oxygen or ascorbate *in situ* during electroanalysis.

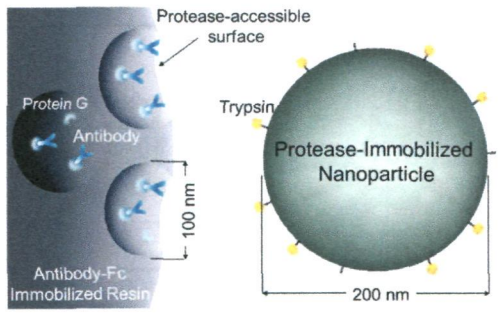


576

Selective detection of complementarity-determining regions of monoclonal antibody by limiting protease access to the substrate: nano-surface and molecular-orientation limited proteolysis

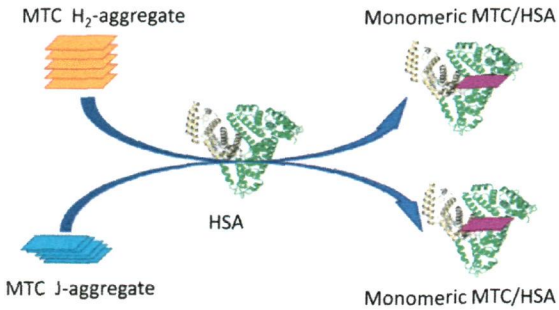
Noriko Iwamoto, Takashi Shimada,* Yukari Umino, Chikage Aoki, Yutaka Aoki, Taka-Aki Sato, Akinobu Hamada and Hitoshi Nakagama

Limited proteolysis of CDR-derived peptides in monoclonal antibody by nano-surface and molecular-orientation limited proteolysis: nSMOL proteolysis.



COMMUNICATIONS

581



A colorimetric and fluorometric dual-modal supramolecular chemosensor and its application for HSA detection

Hongxia Sun,* Junfeng Xiang, Xiufeng Zhang, Hongbo Chen, Qianfan Yang, Qian Li, Aijiao Guan, Qian Shang, Yalin Tang* and Guangzhi Xu

A colorimetric and fluorometric dual-modal supramolecular chemosensor has been designed for HSA detection.

585

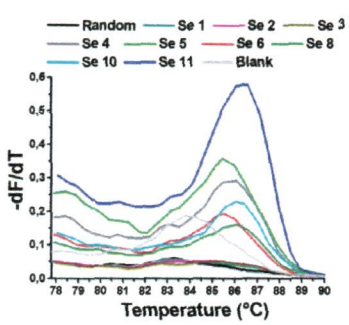
A simple and novel system for colorimetric detection of cobalt ions

Zhimin Liu, Xinle Jia, Pingping Bian and Zhanfang Ma*

A simple method for colorimetric detection of Co^{2+} is developed based on controlling the oxidation level of methylene blue, showing high selectivity and sensitivity.

PAPERS

589

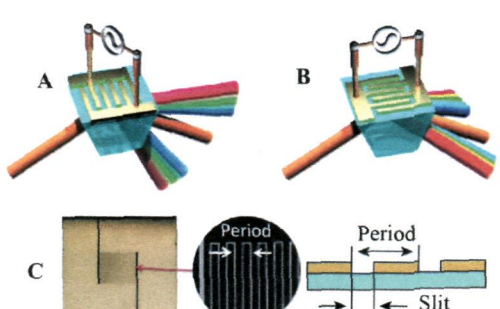


reMelting curve analysis as a tool for enrichment monitoring in the SELEX process

Jeroen Vanbrabant,* Karen Leirs, Katrijn Vanschoenbeek, Jeroen Lammertyn and Luc Michiels*

reMelting curve analysis of amplified ssDNA SELEX pools indicates decreasing diversity or aptamer enrichment by increased remelting temperature, regardless of SELEX design and target properties.

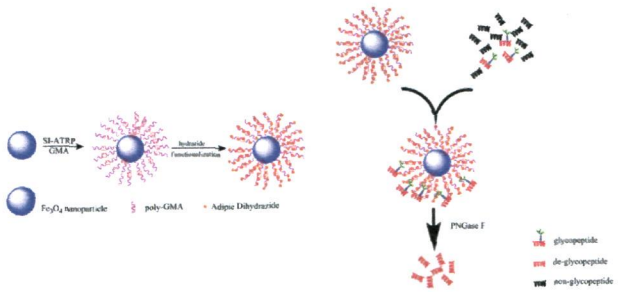
596

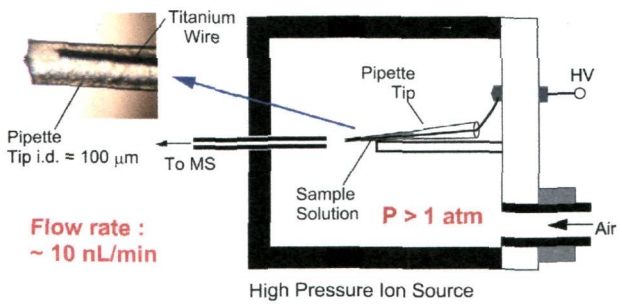


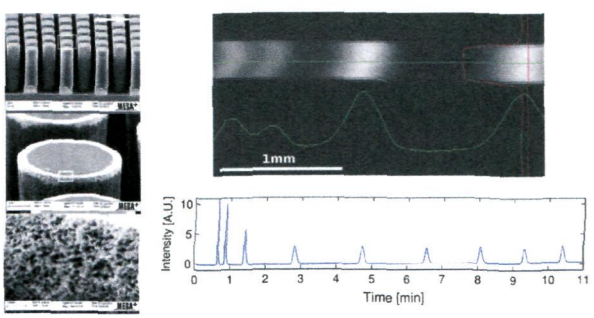
Combined surface plasmon resonance and impedance spectroscopy systems for biosensing

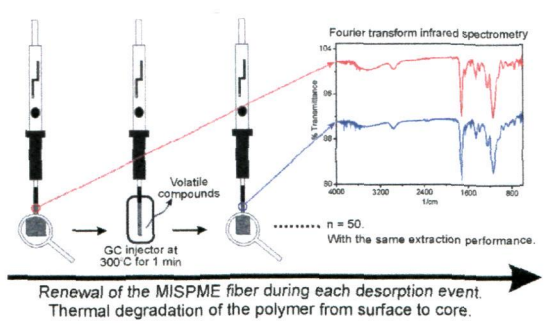
S. Patskovsky,* V. Latendresse, A.-M. Dallaire, L. Doré-Mathieu and M. Meunier

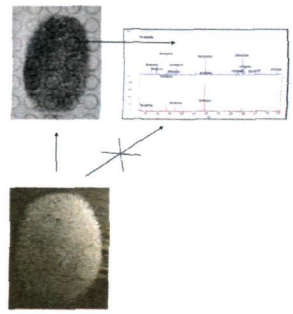
Combined surface plasmon resonance and electrochemical impedance spectroscopy (SP-EIS) biosensing systems have been developed.







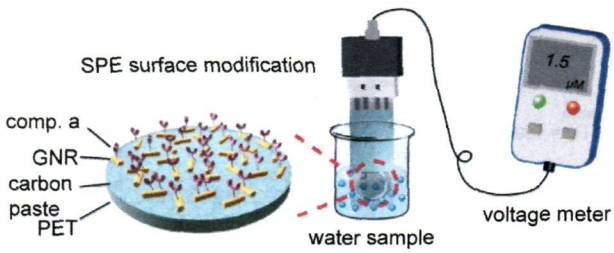




Detection of drugs in lifted cyanoacrylate-developed latent fingermarks using two laser desorption/ionisation mass spectrometric methods

Latha Sundar and Frederick Rowell*

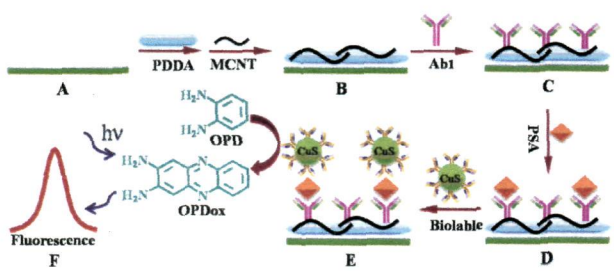
This paper describes a method for lifting cyanoacrylate (CNA)-developed latent fingermarks from a glass surface and the detection of five drugs in lifted marks from fingers that *had been in contact with the drugs, using Surface Assisted* Laser Desorption Ionisation Time of Flight Mass Spectrometry (SALDI-TOF-MS) or Matrix Assisted Laser Desorption Ionisation TOF-MS (MALDI-TOF-MS).



Ion-selective gold–thiol film on integrated screen-printed electrodes for analysis of Cu(II) ions

Meng Li, Hao Zhou, Lei Shi, Da-Wei Li and Yi-Tao Long*

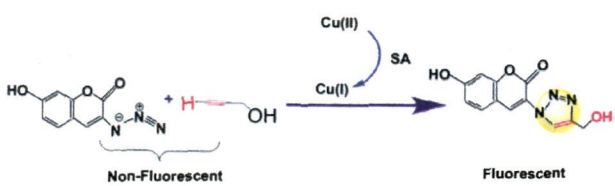
A novel type of ion-selective electrode, which applied integrated screen-printed electrodes as substrates, was prepared for the analysis of Cu(II) ions.



Fluorescent immunosensor based on CuS nanoparticles for sensitive detection of cancer biomarker

Ying-Di Zhu, Juan Peng, Li-Ping Jiang* and Jun-Jie Zhu

Fluorescent immunosensor based on the use of CuS nanoparticles as labels for the detection of human prostate cancer biomarker prostate specific antigen.



Fluorescence sensor for Cu(II) in the serum sample based on click chemistry

Chunmei Wang, Lijun Lu, Wenmei Ye, Ou Zheng,* Bin Qiu, Zhenyu Lin,* Longhua Guo and Guonan Chen

A simple and sensitive fluorescence sensor which combines the character of high selectivity of click chemistry and high sensitivity of fluorescence detection has been developed for Cu(II) detection.