

In this issue

Jing Wang and Heyou Han

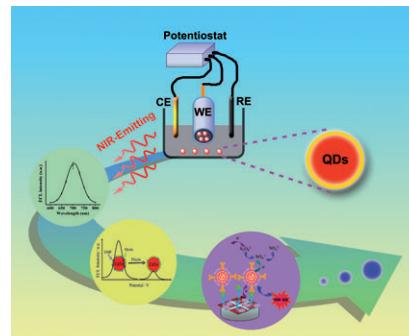
Near-infrared electrogenerated chemiluminescence from quantum dots

DOI 10.1515/revac-2012-0043

Rev Anal Chem 2013; 32(2): 91–101

Review: This review presents a general picture of the latest advances and developments related to the synthetic strategies of NIR QDs, the QD-based NIR ECL, and related bio-sensing methodologies.

Keywords: biosensor; electrogenerated chemiluminescence; near-infrared; quantum dots; synthesis.



Douglas B. Craig

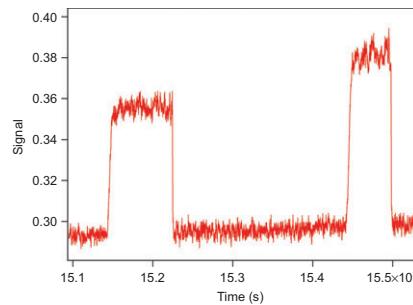
Single enzyme molecule assay with time resolution using capillary electrophoresis

DOI 10.1515/revac-2012-0040

Rev Anal Chem 2013; 32(2): 103–112

Review: Single molecule enzymology of β -galactosidase using capillary electrophoresis.

Keywords: β -galactosidase; capillary electrophoresis; heterogeneity; laser-induced fluorescence; single molecule.



Juan Zhang, Sheng-Zi Liu, Jing Yang, Mi Song, Jing Song, Hai-Li Du and Zeng-Ping Chen

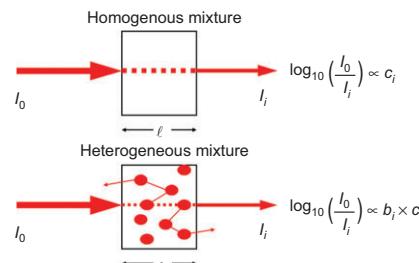
Quantitative spectroscopic analysis of heterogeneous systems: chemometric methods for the correction of multiplicative light scattering effects

DOI 10.1515/revac-2012-0037

Rev Anal Chem 2013; 32(2): 113–125

Review: This paper reviews currently available techniques for the correction of multiplicative light scattering perturbations in the quantitative analysis of heterogeneous samples using absorption spectroscopy.

Keywords: chemometrics; heterogeneous samples; multiplicative light scattering; quantitative spectroscopic analysis.



Clifton K. Fagerquist

Top-down proteomic identification of bacterial protein biomarkers and toxins using MALDI-TOF-TOF-MS/MS and post-source decay

DOI 10.1515/revac-2012-0035

Rev Anal Chem 2013; 32(2): 127–133

Review: The article briefly summarizes the current state of bacterial identification using MALDI-TOF as well as highlights the use of MALDI-TOF-TOF for top-down proteomic identification bacterial proteins and toxins.

Keywords: matrix-assisted laser desorption/ionization time-of-flight time-of-flight (MALDI-TOF-TOF); post-source decay; top-down proteomic identification.

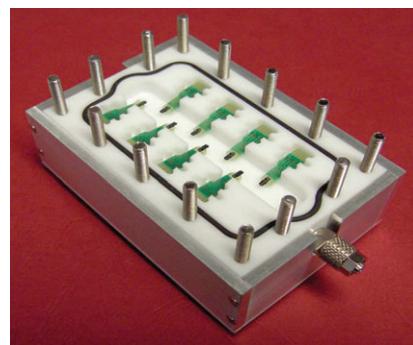
Zhou Long, Lu Kou, Michael J. Sepaniak and Xiandeng Hou

Recent advances in gas phase microcantilever-based sensing

DOI 10.1515/revac-2012-0034
Rev Anal Chem 2013; 32(2): 135–158

Review: Recent advances in MC-based gas sensors since 2005 in terms of theory, detection and sensing scheme, sensor design, and applications are critically reviewed.

Keywords: MC-based gas phase sensing; MC sensor array; microcantilever.



Paul D. Schumacher, Jamie L. Doyle, James O. Schenk and Sue B. Clark
Electroanalytical chemistry of lanthanides and actinides

DOI 10.1515/revac-2012-0032
Rev Anal Chem 2013; 32(2): 159–171

Review: The electrochemical behavior of the f-elements as studied through multiple electrode compositions and configurations.

Keywords: electrochemistry; electrodes; f-elements; plutonium; pre-concentration.

