

MU
C51/2r

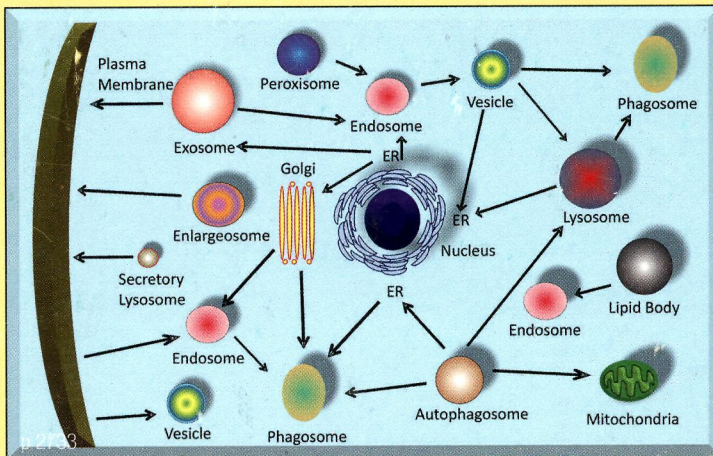
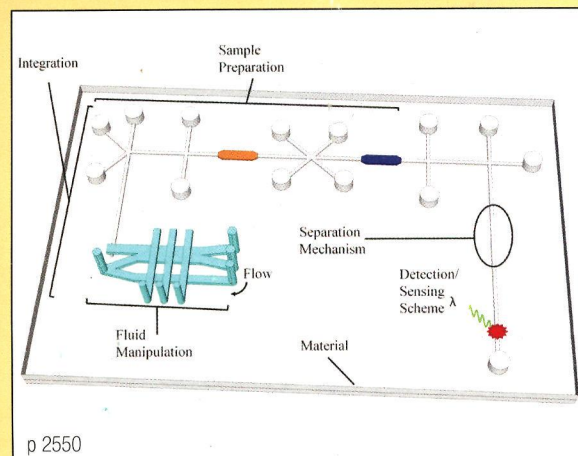
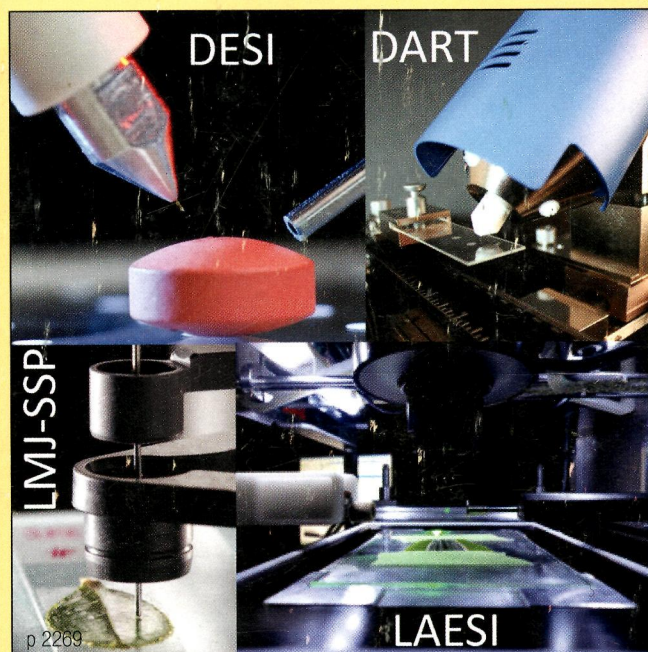
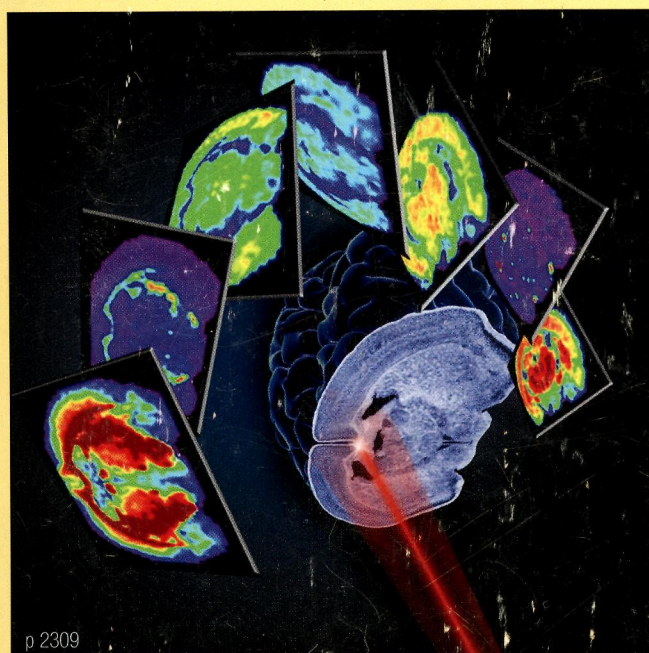
CHEMICAL REVIEWS

APRIL 2013

VOLUME 113 NUMBER 4

pubs.acs.org/CR

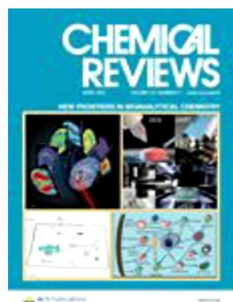
NEW FRONTIERS IN BIOANALYTICAL CHEMISTRY



ACS Publications
MOST TRUSTED. MOST CITED. MOST READ.

www.acs.org

CHEMICAL REVIEWS



April 10, 2013

Volume 113, Issue 4

Pages 2267-2862

2013 NEW FRONTIERS IN BIOANALYTICAL CHEMISTRY EDITORIAL

Introduction to New Frontiers in Bioanalytical Chemistry

Michael T. Bowser

pp 2267-2268

Publication Date (Web): April 10, 2013 (Editorial)

DOI: 10.1021/cr400100b

REVIEWS

Mass Spectrometry: Recent Advances in Direct Open Air Surface Sampling/Ionization

María Eugenia Monge, Glenn A. Harris, Prabha Dwivedi, and Facundo M. Fernández

pp 2269-2308

Publication Date (Web): January 9, 2013 (Review)

DOI: 10.1021/cr300309q

Section:

Organic Analytical Chemistry

Analysis of Tissue Specimens by Matrix-Assisted Laser Desorption/Ionization Imaging Mass Spectrometry in Biological and Clinical Research

Jeremy L. Norris and Richard M. Caprioli

pp 2309-2342

Publication Date (Web): February 11, 2013 (Review)

DOI: 10.1021/cr3004295

Section:

Biochemical Methods

Protein Analysis by Shotgun/Bottom-up Proteomics

Yaoyang Zhang, Bryan R. Fonslow, Bing Shan, Moon-Chang Baek, and John R. Yates, III

pp 2343-2394

Publication Date (Web): February 26, 2013 (Review)

DOI: 10.1021/cr3003533

Section:

Biochemical Methods

Mass Spectrometry of Structurally Modified DNA

Natalia Tretyakova, Peter W. Villalta, and Srikanth Kotapati

pp 2395-2436

Publication Date (Web): February 26, 2013 (Review)

DOI: 10.1021/cr300391r

Section:

Biochemical Methods

New Advances in Separation Science for Metabolomics: Resolving Chemical Diversity in a Post-Genomic Era

Naomi L. Kuehnbaum and Philip Britz-McKibbin

pp 2437-2468

Publication Date (Web): March 18, 2013 **(Review)**

DOI: 10.1021/cr300484s

 **Section:**

Biochemical Methods

Single Cell Optical Imaging and Spectroscopy

Anthony S. Stender, Kyle Marchuk, Chang Liu, Suzanne Sander, Matthew W. Meyer, Emily A. Smith, Bhanu Neupane, Gufeng Wang, Junjie Li, Ji-Xin Cheng, Bo Huang, and Ning Fang

pp 2469-2527

Publication Date (Web): February 14, 2013 **(Review)**

DOI: 10.1021/cr300336e

 **Section:**

Biochemical Methods

Biocompatible Materials for Continuous Glucose Monitoring Devices

Scott P. Nichols, Ahyeon Koh, Wesley L. Storm, Jae Ho Shin, and Mark H. Schoenfisch

pp 2528-2549

Publication Date (Web): February 7, 2013 **(Review)**

DOI: 10.1021/cr300387j

 **Section:**

Biochemical Methods

Advances in Microfluidic Materials, Functions, Integration, and Applications

Pamela N. Nge, Chad I. Rogers, and Adam T. Woolley

pp 2550-2583

Publication Date (Web): February 14, 2013 (Review)

DOI: 10.1021/cr300337x

 **Section:**

Biochemical Methods

Beyond Gel Electrophoresis: Microfluidic Separations, Fluorescence Burst Analysis, and DNA Stretching

Kevin D. Dorfman, Scott B. King, Daniel W. Olson, Joel D. P. Thomas, and Douglas R. Tree

pp 2584-2667

Publication Date (Web): November 12, 2012 (Review)

DOI: 10.1021/cr3002142

 **Section:**

Biochemical Methods

High-sensitivity Analytical Approaches for the Structural Characterization of Glycoproteins

William R. Alley, Jr., Benjamin F. Mann, and Milos V. Novotny

pp 2668-2732

Publication Date (Web): March 27, 2013 (Review)

DOI: 10.1021/cr3003714

 **Section:**

Biochemical Methods

Bioanalysis of Eukaryotic Organelles

Chad P. Satori, Michelle M. Henderson, Elyse A. Krautkramer, Vratislav Kostal, Mark M. Distefano, and Edgar A. Arriaga

pp 2733-2811

Publication Date (Web): April 10, 2013 (Review)

DOI: 10.1021/cr300354g

 **Section:**

Biochemical Methods

DNA-Mediated Homogeneous Binding Assays for Nucleic Acids and Proteins

Hongquan Zhang, Feng Li, Brittany Dever, Xing-Fang Li, and X. Chris Le

pp 2812-2841

Publication Date (Web): December 11, 2012 (Review)

DOI: 10.1021/cr300340p

 **Section:**

Biochemical Methods

Aptamers from Cell-Based Selection for Bioanalytical Applications

Weihong Tan, Michael J. Donovan, and Jianhui Jiang

pp 2842-2862

Publication Date (Web): March 19, 2013 (Review)

DOI: 10.1021/cr300468w

 **Section:**

Biochemical Methods