

分析化学

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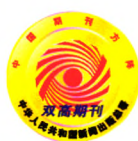


汪尔康院士是我国著名
分析化学家电分析化学
和极谱分析的开拓者
和奠基人之一……
他的科学精神
严谨学风和
高尚品质
是青年学
子的楷模

徐光宪

庆贺汪尔康院士80华诞专辑

中国化学会 主办
中国科学院长春应用化学研究所 出版
科学出版社



分析化学

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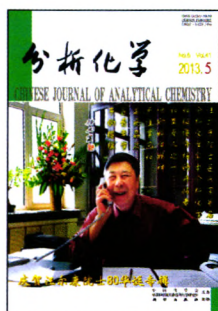
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(本期责任编辑:王重洋 编排:潘文革)

* 联系人

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Professor Erkang Wang, member of Chinese academy of Sciences, is a famous electrical analytical chemist. This is a special issue in honor of the 80th birthday of Professor Erkang Wang.

Invited Papers

Nanopore Analytical Chemistry

YIN Xiao-Hong, ZHU Xin-Yu, GU Jing,
ZHANG Xin, ZHU Zhi-Wei, SHAO Yuan-Hua*
Chinese J. Anal. Chem., 2013, 41(5): 633–640

Nanopore Analytical Chemistry designed based on these nano-devices are important for biosensors, nanofluidic devices, molecular filtration, synthetic biology, detection of single molecules and DNA sequence. In this paper, the history, classification, fundamental, applications and respects of nanopore analytical chemistry, especially recent advances of nanopore applications in DNA sequence and detection of proteins have been reviewed.

Application of Graphene Based Nanomaterials in Enzymatic Electrochemical Biosensor

ZHANG Qian, ZHANG Ling, LI Jing-Hong*
Chinese J. Anal. Chem., 2013, 41(5): 641–649

Being a novel two-dimensional carbonous nanomaterial, graphene has recently attracted considerable attention because of its unique structure and distinct properties. This review presents a general description of the functionalization of graphene. In particular, the recent application of graphene nanomaterial in the field of enzymatic biosensors is summarized.

Progress of Short Capillary-based High Speed Capillary Electrophoresis Systems

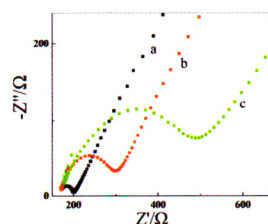
LI Qi, ZHANG Ting, FANG Qun*
Chinese J. Anal. Chem., 2013, 41(5): 650–657

An overview is presented on the development of short capillary-based high speed capillary electrophoresis systems. The progress and application of various sample injection approaches suitable for high-speed capillary electrophoresis are mainly introduced, including optical-gating injection, flow-gating injection, electrokinetic injection, spontaneous injection, hydrodynamic injection and diffusion injection.

★ **Fabrication of Electrochemical Immunosensor Using Gold Nanoclusters as Signal Amplification Labels**

LIU Hong-Ying, ZHU Jun-Jie *

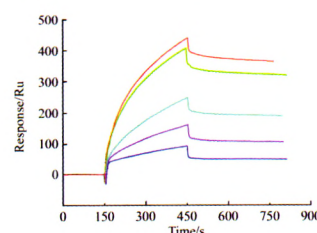
Chinese J. Anal. Chem., 2013, 41(5): 658–663



★ **Kinetic Analysis of Interaction Between Tumor Necrosis Factor and Soluble Receptors**

YANG Fan, YANG Xiu-Rong *

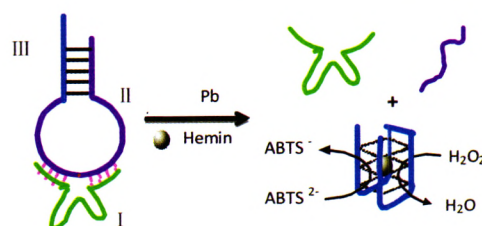
Chinese J. Anal. Chem., 2013, 41(5): 664–669



★ **Design of DNA Enzyme Catalytic Amplification-based Biosensing Platform for Colorimetric Detection of Lead Ions**

GAO Xiao-Xia, JIA Yu-Hua, YANG Jin-Feng *,
LI Ji-Shan *, YANG Rong-Hua

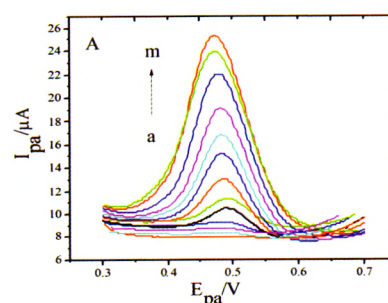
Chinese J. Anal. Chem., 2013, 41(5): 670–674



★ **Electrochemical Determination of 4-Nonylphenol Based on Graphene-Chitosan Modified Glassy Carbon Electrode**

ZHOU Wen-Shu, ZHAO Bo, HUANG Xiao-Hua,
YANG Xiao-Di *

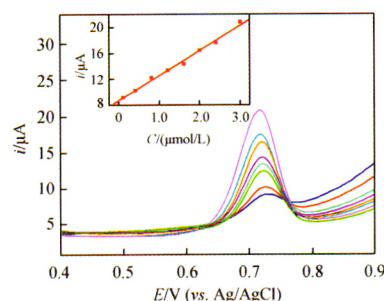
Chinese J. Anal. Chem., 2013, 41(5): 675–680



★ **A Sensitive Voltammetric Sensor for Amaranth Based on Ordered Mesoporous Carbon**

JU Jian, GUO Li-Ping *

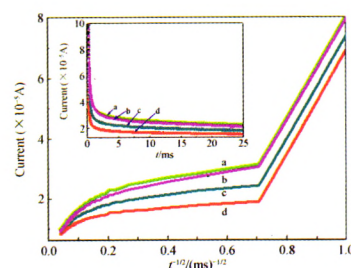
Chinese J. Anal. Chem., 2013, 41(5): 681–686



★ **Study on Electron Transfer Across Nucleobases Terminated Surface Assembly**

ZHANG Wei, MENG Fan-Jun, ZHOU Mei-Juan,
LI Peng, ZHAO Jing-Jing, WANG Huai-Sheng,
LIU Ji-Feng *, ZHANG Chong *

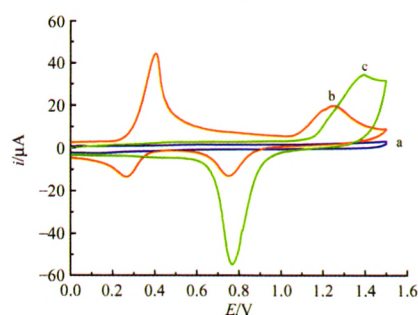
Chinese J. Anal. Chem., 2013, 41(5): 687–692



★ **Synthesis of Nanoporous Gold Electrode and Its Application in Electrochemical Sensor**

ZHU Xiao-Ting, ZHANG Lu-Jia, TAO Hong,
DI Jun-Wei *

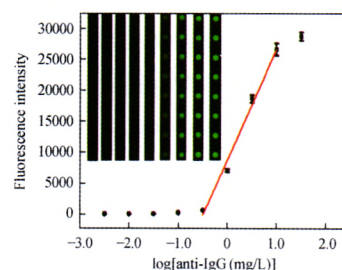
Chinese J. Anal. Chem., 2013, 41(5): 693–697



★ **Preparation of Porous Silicon Substrate for Protein Microarray Fabrication by Double-Cell Electrochemical Etching Method**

JI Jian-Ming, HE Xiu-Xia, DUAN Qian *,
WANG Zhen-Xin *

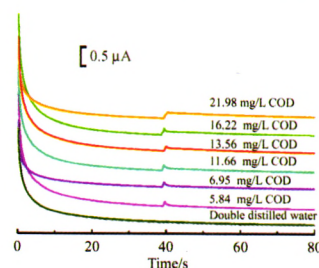
Chinese J. Anal. Chem., 2013, 41(5): 698–703



★ **Preparation of Electrochemical Sensor Based on Morphology-Controlled Platinum Nanoparticles for Determination of Chemical Oxygen Demand**

WU Can, WU Kang-Bing *

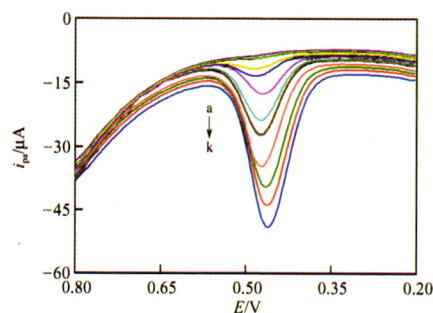
Chinese J. Anal. Chem., 2013, 41(5): 704–708



★ **Electrodeposited Graphene and Gold Nanoparticle Modified Carbon Ionic Liquid Electrode for Sensitive Detection of Rutin**

SUN Wei *, WANG Dan, ZHANG Yuan-Yuan,
JU Xiao-Mei, YANG Hai-Xu, CHEN Yi-Xin,
SUN Zhen-Fan

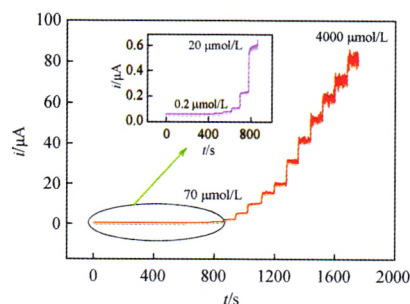
Chinese J. Anal. Chem., 2013, 41(5): 709–713



★ **Synthesis and Application of Graphene-poly (styrene sulfonate)-Pt Nanocomposite in Amperometric Determination of Dopamine**

LIU Wei-Lu, LI Cong, TANG Liu, GU Yue,
ZHANG Zhi-Quan *

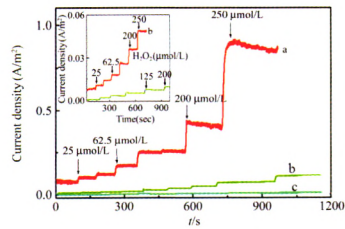
Chinese J. Anal. Chem., 2013, 41(5): 714–718



H₂O₂ Electrochemistry Biosensor Based on Graphene and Gold Nanorods Composites

LI Li, LU Hong-Mei*, DENG Liu*

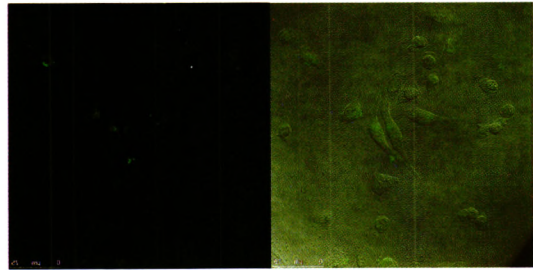
Chinese J. Anal. Chem., 2013, 41(5): 719–724



★ **Optimization of Quantum Dot System of CdTe and Transferrin by Capillary Electrophoresis-Laser Inductive Fluorescence and Verification in Cell Labeling**

MEI Fang, ZHAO Xin-Ying, ZHANG Lu, QU Feng*

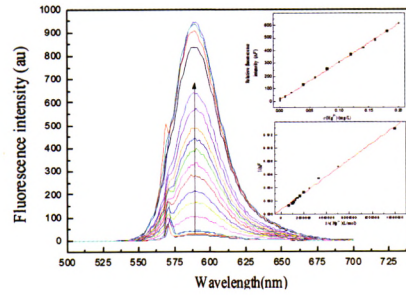
Chinese J. Anal. Chem., 2013, 41(5): 725–731



Synthesis and Application of a Novel Fluorescent Probe Based on Rhodamine B Thiohydrazide Derivatives for Determination of Hg(II)

LIU Shi-Kun, ZHOU Chun-Yan, DU Jian-Hua, GAO Ji-Gang*, ZHOU Jie*

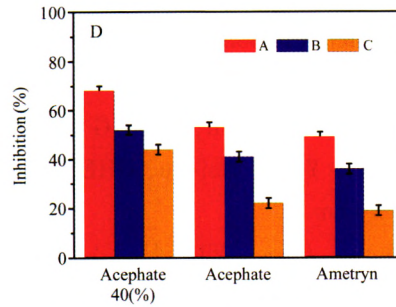
Chinese J. Anal. Chem., 2013, 41(5): 732–737



Development of a Whole Cells Microbial Biosensor Based on E. coli and Its Application to Acute Biototoxicity Determination

QIAN Jun, LI Jiu-Ming, ZHI Jin-Fang*, QIN Shi-Dong*

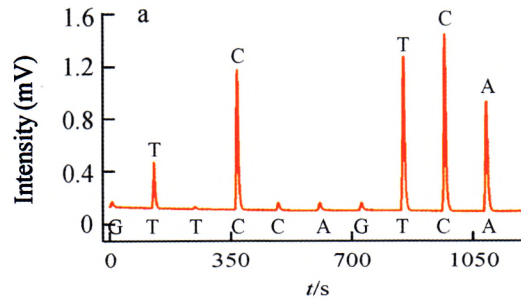
Chinese J. Anal. Chem., 2013, 41(5): 738–743



Design of Polymerase Chain Reaction Primers and Sequencing Primers in Pyrosequencing

YE Hui, LIU Yun-Long, ZOU Bing-Jie, WU Hai-Ping, ZHOU Guo-Hua*

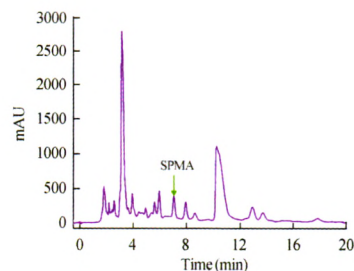
Chinese J. Anal. Chem., 2013, 41(5): 744–748



Mixed Extractant-Dispersive Liquid Phase Microextraction Based on Solidification of Floating Organic Drop for Determination of S-phenylmercapturic Acid in Urine

WANG Yu, ZOU Xiao-Li*, ZHANG Wen-Tao, ZENG Hong-Yan, ZHANG Long-Fei

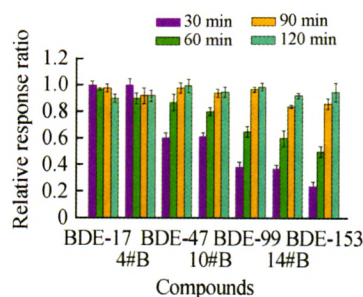
Chinese J. Anal. Chem., 2013, 41(5): 749–753



Determination of Polybrominated Diphenyl Ethers and Its Methoxylated Derivative in Water Samples Using Optical Fiber-Solid Phase Microextraction Couple with Gas Chromatography

SU Guan-Yong, YU Yi-Jun, LIU Hong-Ling, YU Hong-Xia*

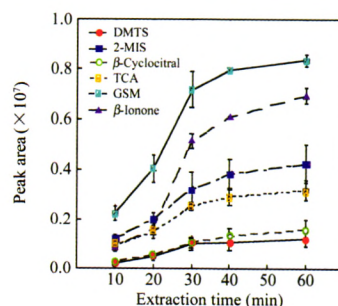
Chinese J. Anal. Chem., 2013, 41(5): 754–759



Determination of Six Typical Taste and Odor Compounds Using Large Volume Concentration, Solid Phase Micro-extraction and Gas Chromatography-Mass Spectrometry

MAO Min-Min, ZHANG Ke-Jia*, ZHANG Tu-Qiao, LI Cong

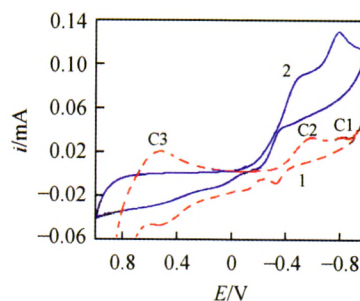
Chinese J. Anal. Chem., 2013, 41(5): 760–765



Preparation of Nano-Cu/Ionic Liquid-Polyaniline Modified Glassy Carbon Electrode and Its Application in Electrochemical Analysis of H₂O₂

HE Shi-Wei, WU Hong-Wei, XI Ling-Ling*

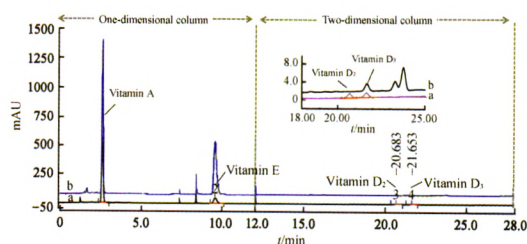
Chinese J. Anal. Chem., 2013, 41(5): 766–770



Simultaneous Qualification of Vitamins A, D₃ and E in Fortified Infant Formulae by Liquid Chromatography Coupled with Fully Automated Online Two-dimensional Column Switching Method

ZHANG Yan-Hai, ZHU Xiao-Yan, CAO Guo-Zhou, YANG Xin-Lei, ZHANG Li-Juan, JIN Yan*

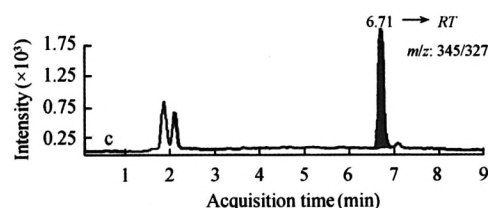
Chinese J. Anal. Chem., 2013, 41(5): 771–775



**Determination of Phenylethanolamine A in
Livestock Urine by High Performance Liquid
Chromatography Tandem Mass Spectrometry**

XU Su-Bin, ZHAO Li-Jun, BAI Lin, LI Yun,
ZHANG Jing, DING Xue-Mei, ZHENG Ping,
WANG Yu-Ping, GAO Qing-Jun, BAI Fan*,
ZHANG Ke-Ying*

Chinese J. Anal. Chem., 2013, 41(5): 776–780

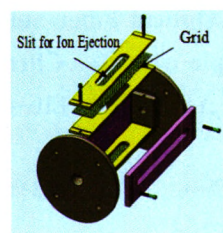


Experimental Technique and Instrument

**Structure and Performance of Mesh Electrode
Ion Trap Mass Analyzer**

XU Fu-Xing, WANG Liang, WANG Yuan-Yuan,
DING Chuan-Fan*

Chinese J. Anal. Chem., 2013, 41(5): 781–786



Review and Progress

**Applications of Disease Makers Molecularly
Imprinting Technology in Separation and
Sensing**

WANG Ying, HUANG Chun-Fang,
LIANG Ru-Ping, QIU Jian-Ding*

Chinese J. Anal. Chem., 2013, 41(5): 787–794

Molecularly imprinting polymers (MIPs) based on molecularly imprinting technology (MIT) can serve as crude mimics of native receptors. This review is meant to focus on overviews of MIT, with a particular focus on the imprinting methods, imprinting materials and applications of disease makers MIPs in separation and sensing.

★ **Progress in Optical Colorimetric/
Fluorometric Sensor Array**

JIA Ming-Yan, FENG Liang*

Chinese J. Anal. Chem., 2013, 41(5): 795–802

Optical colorimetric/fluorometric sensor array has been widely applied in many fields due to its advantages such as low-cost, easy-operation, and rapid-response. This review described the recent progress in optical colorimetric/fluorometric sensor array and summarizes its applications in the detection of toxic gases, biological samples, ions and small molecules in solution, and complex mixtures in recent years. The potential directions of future research for colorimetric/fluorometric sensor array were discussed.

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