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# 分析化学

## FENXI HUAXUE

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Supported by NSFC

### 目 次

#### 特 约 来 稿

- ★复杂样品质谱分析技术的原理与应用 ..... 陈焕文\* 胡斌 张燮 (1069)

#### 研 究 报 告

- 高效液相色谱-电喷雾串联四级杆质谱法检测小鼠组织中花生四烯酸及其代谢产物 ..... 谷艳 石先哲\* 赵素敏 顾群 路鑫 许国旺 (1089)
- 荧光纳米粒子 Ru(bpy)<sub>3</sub>/SiO<sub>2</sub> 的制备及其应用于蛋白质微阵列芯片检测 HIV p24 抗原 ..... 尹东光\* 刘斌虎 张礼 谢春娟 张乐 (1095)
- 自由溶液和筛分介质条件下芯片 DNA 瞬间等速电泳预浓缩的比较 ..... 刘大渔 梁广铁 雷秀霞 周小棉\* (1100)
- 三聚氰胺-Cu<sup>2+</sup>-ANS 三元络合物荧光光谱法检测超痕量三聚氰胺 ..... 张银堂 张彦峰 张丽娟 张富强 陈芳 徐茂田\* (1105)
- 流动注射化学发光法测定中药材中没食子酸 ..... 方卢秋\* 李海芳 郑国金 (1110)
- ★基于新型可视化学传感阵列的氨基酸快速识别 ..... 霍丹群 张国平 候长军\* 董家乐 张玉婵 刘振 罗小刚 法焕宝 张宿义 (1115)
- 虚拟模板/硅胶表面分子印迹材料的制备及其在海水溶液中的吸附行为研究 ..... 王江涛\* 宋兴良 (1121)
- 氧化乐果的振动光谱及其表面增强拉曼散射研究 ..... 吉芳英\* 黎司 虞丹尼 周光明 何强 (1127)
- ★纳米探针芯片技术用于微量乙肝病毒 DNA 的检测 ..... 汪毅 毛红菊\* 臧国庆 张宏莲 金庆辉 赵建龙 (1133)
- 气溶胶直接进样电感耦合等离子体-质谱法快速测定环境气溶胶中<sup>239</sup>Pu ..... 粟永阳 李志明 董宏波 徐江 任向军 翟利华 周国庆 李梅 伊小伟 朱凤蓉\* (1139)
- 平行因子分析在赤潮藻滤液三维荧光光谱特征提取中的应用 ..... 吕桂才 赵卫红\* 王江涛 (1144)
- 毛细管电泳在线电推扫测定蔬菜中 3 种氯化烟碱类农药残留 ..... 孙娟 陈冠华\* 王坤 董敏 代永佳 (1151)
- 搅拌棒吸附萃取结合气相色谱/质谱/质谱法同时测定饮料和果酱中的 7 种防腐剂 ..... 陈琦 凌云 张峰 黄峻榕 储晓刚\* 吴永宁 (1156)
- 毛细管凝胶电泳紫外检测核酸灵敏度 ..... 连冬生\* 张相年 贺宝霞 赵树进 韩丽萍 (1161)
- 改性超文化聚硅碳烷物理吸附涂层毛细管柱的分离性能研究 ..... 徐文超 初永杰 林栋 杨文 刘冰 寿崇琦\* (1167)

#### 研 究 简 报

- 电喷雾质谱法研究 12-氨基乙酰脱氧核糖核酸与脱氧核糖核酸的相互作用 ..... 管小虹 邓慧敏\* 林中祥 (1172)
- 固相萃取衍生气相色谱-负化学源质谱法检测水中酸性除草剂 ..... 桂建业 张莉\* 刘继华 张永涛 左海英 李小亚 张琳 李桂香 (1177)
- 红外光谱结合线阵列检测技术研究聚合物分散液晶膜分子取向 ..... 孙国恩 腾红 张春玲 奚艳丽\* 徐经伟 (1182)

- 基于傅里叶变换红外光声光谱的包膜控释肥料聚合物膜疏水性的表征 ..... 赵聪 申亚珍 周健民 杜昌文\* 王火焰 陈小琴 (1186)
- 淋洗液浓度对痕量低分子量脂肪族胺离子色谱分离度的影响 ..... 孔露露 郭晓燕\* 周启星 胡万里 云海兰 陈昌振 鲁金凤 (1191)
- 聚硅氧烷键合的离子液体用作高温气相色谱固定相的研究 ..... 孙晓杰 朱玉玲 韩灿贤 吴采樱 邢钩\* (1195)
- 代谢组学方法研究奶牛注射氯霉素后牛奶中的生物标志物 ..... 王世成 李国琛 王颖红\* 胡小燕 张红 (1199)
- 快速高分离液相色谱-串联质谱法检测原乳中活性 $\beta$ -内酰胺酶 ..... 孙汉文\* 李挥 张敬轩 周正 (1203)
- 中药致肾毒性成分马兜铃酸A单抗制备及酶联免疫分析方法的建立 ..... 南铁贵 何素平 谭桂玉 李刚 王保民\* 黄璐琦\* (1206)

## 评述与进展

- ★半抗原的设计、修饰及人工抗原的制备 ..... 宋娟 王榕妹 王悦秋 唐雨榕 邓安平\* (1211)
- 电化学发光免疫检测技术研究进展 ..... 张军瑞 陈健\* 刘仲明 (1219)

## 仪器装置与实验技术

- 二氧化钛纳米管阵列光电催化测定地表水化学需氧量 ..... 董超平 张嘉凌 李金花 陈红冲 周保学\* (1227)

NEWS——东华理工大学质谱研究再次在国际权威杂志发表封面文章 (I)

### 会议消息

2010 中日韩分析化学研讨会征文通知(第一轮)(1166)

### 书刊征订

《中药红外光谱分析与鉴定》(1120)、《有机农药及中间体质谱手册》(1132)、《英汉·汉英分析检测词汇》(1150)、《原子发射光谱分析技术及应用》(1198)、《近红外光谱法快速分析药品》(1218)

《分析化学》电子导刊创刊、《分析化学》电子期刊在线订阅开通(1176)

《分析化学》SCI 影响因子攀升至 0.790(1181)

中国大陆化学学科期刊 2009 年 SCI 指标列表(1190)

(本期责任编辑:于桂红 编排、制图:潘文革)

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\* 联系人

★ 该篇文章的英文电子版由 Elsevier 出版社在 ScienceDirect 上出版(<http://www.sciencedirect.com/science/journal/18722040>)

*Chinese Journal of Analytical Chemistry*

## CONTENTS

Vol. 38 No. 8 (1069 - 1230) August 2010

Invited Paper

## ★ Fundamental Principles and Practical Applications of Ambient Ionization Mass Spectrometry for Direct Analysis of Complex Samples

CHEN Huan-Wen\*, HU Bin, ZHANG Xie

*Chinese J. Anal. Chem.*, 2010, 38(8): 1069–1088

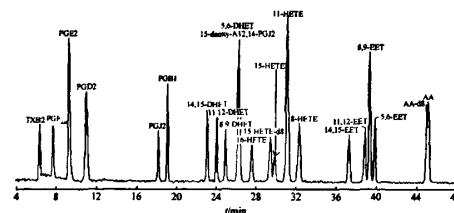
Ambient mass spectrometry is of increasing interest due to its remarkable features for direct analysis of complex samples with high sensitivity, high specificity and high throughput. Actual samples, even raw biological samples, can be directly analyzed with no or minimal sample pretreatment by using the advanced ambient ionization techniques. The perspectives of these techniques have been exemplified using cases demonstrated in the literature.

Scientific Papers

# Determination of Arachidonic Acid and Its Endogenous Eicosanoid Metabolites in Mice Tissues Using Liquid Chromatography/Electrospray Ionization Tandem Mass Spectrometry

GU Yan, SHI Xian-Zhe\*, ZHAO Su-Min,  
GU Qun, LIU Xin, XU Guo-Wang

*Chinese J. Anal. Chem.*, 2010, 38(8): 1089 - 1094

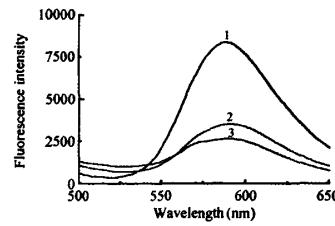


## Preparation of Fluorescent Nanoparticle

# **Ru(bpy)<sub>3</sub>/SiO<sub>2</sub> and Its Application in Protein Microarray for Human Immunodeficiency Virus p24 Detection**

YIN Dong-Guang\*, LIU Bin-Hu, ZHANG Li,  
XIE Chun-Juan, ZHANG Le

*Chinese J. Anal. Chem.*, 2010, 38(8): 1095 – 1099

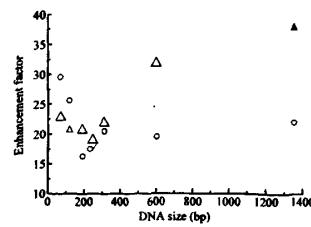


## Comparison of On-chip Transient

## **Isotachophoresis Deoxyribonucleic Acid Preconcentration in Free-solution and Gel Buffer**

LIU Da-Yu, LIANG Guang-Tie, LEI Xiu-Xia,  
ZHOU Xiao-Mian \*

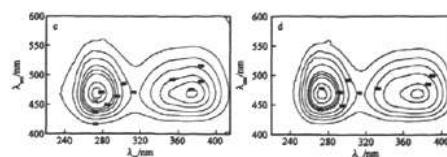
*Chinese J. Anal. Chem.*, 2010, 38(8): 1100–1104



**Determination of Ultratrace Melamine by Fluorescence Spectroscopy Using Melamine-Cu<sup>2+</sup>-ANS Ternary Complex**

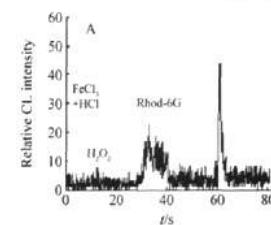
ZHANG Yin-Tang, ZHANG Yan-Zheng,  
ZHANG Li-Juan, ZHANG Fu-Qiang, CHEN Fang,  
XU Mao-Tian\*

*Chinese J. Anal. Chem.*, 2010, 38(8): 1105–1109



**Determination of Gallic Acid in Chinese Herbal Medicine with Flow Injection Chemiluminescence Method**

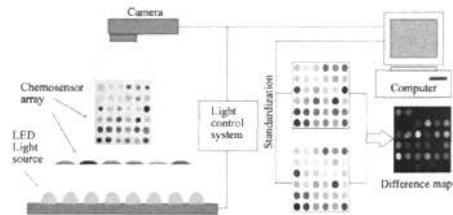
FANG Lu-Qiu\*, LI Hai-Fang, ZHENG Guo-Jin  
*Chinese J. Anal. Chem.*, 2010, 38(8): 1110–1114



**★ A Colorimetric Sensor Array for Identification of Natural Amino Acids**

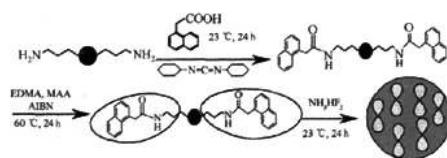
HUO Dan-Qun, ZHANG Guo-Ping,  
HOU Chang-Jun\*, DONG Jia-Le,  
ZHANG Yu-Chang, LIU Zhen, LUO Xiao-Gang,  
FA Huan-Bao, ZHANG Su-Yi

*Chinese J. Anal. Chem.*, 2010, 38(8): 1115–1120



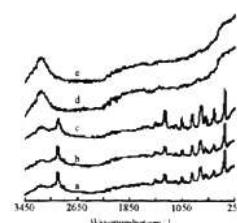
**Synthesis, Evaluation and Adsorption Behavior of Naphthalene Analog-Imprinted Polymer by Immobilized Template on Modified Silica Gel in Seawater**

WANG Jiang-Tao\*, SONG Xing-Liang  
*Chinese J. Anal. Chem.*, 2010, 38(8): 1121–1126



**Study of Omethoate by Vibrational and Surface Enhanced Raman Spectroscopy**

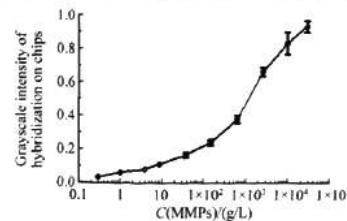
JI Fang-Ying\*, LI Si, YU Dan-Ni,  
ZHOU Guang-Ming, HE Qiang  
*Chinese J. Anal. Chem.*, 2010, 38(8): 1127–1132



**★ Detection of Hepatitis B Virus Deoxyribonucleic Acid Based on Gold Nanoparticle Probe Chip**

WANG Yi, MAO Hong-Ju\*, ZHANG Guo-Qing,  
ZHANG Hong-Lian, JIN Qing-Hui,  
ZHAO Jian-Long

*Chinese J. Anal. Chem.*, 2010, 38(8): 1133–1138

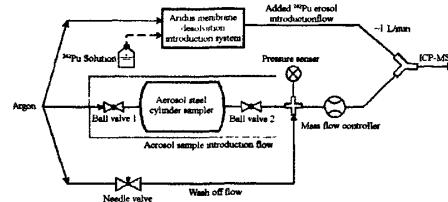


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**Fast Determination of Pu-239 Concentration in Environmental Radioactive Aerosols by Inductively Coupled Plasma Mass Spectrometry**

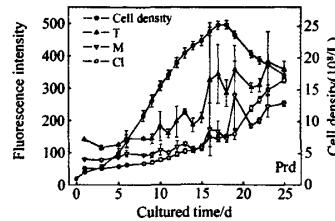
SU Yong-Yang, LI Zhi-Ming, DONG Hong-Bo,  
XU Jiang, REN Xiang-Jun, ZHAI Li-Hua,  
ZHOU Guo-Qing, LI Mei, YI Xiao-Wei,  
ZHU Feng-Rong \*

*Chinese J. Anal. Chem.*, 2010, 38(8): 1139–1143



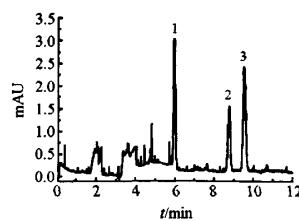
**Applications of Parallel Factor Analysis in Feature Extraction of Excitation-Emission Matrix Spectrum of Dissolved Organic Matter in Red Tide Algae Growth Process**

LÜ Gui-Cai, ZHAO Wei-Hong \*, WANG Jiang-Tao  
*Chinese J. Anal. Chem.*, 2010, 38(8): 1144–1150



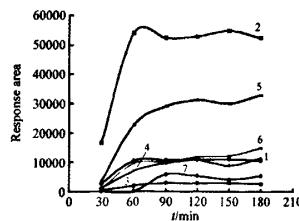
**Determination of Three Chloronicotinyl Insecticide Residues by Capillary Electrophoresis with Sweeping**

SUN Juan, CHEN Guan-Hua \*, WANG Kun,  
DONG Min, DAI Yong-Jia  
*Chinese J. Anal. Chem.*, 2010, 38(8): 1151–1155



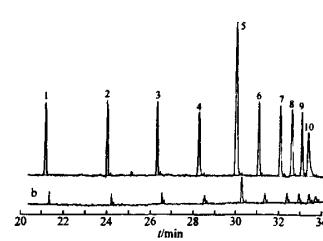
**Simultaneous Determination of Seven Preservatives in Beverage and Jam Using Stir Bar Sorptive Extraction and Gas Chromatography-Tandem Mass Spectrometry**

CHEN Qi, LING Yun, ZHANG Feng,  
HUANG Jun-Rong, CHU Xiao-Gang \*,  
WU Yong-Ning  
*Chinese J. Anal. Chem.*, 2010, 38(8): 1156–1160



**Investigation of Capillary Gel Electrophoresis-Ultraviolet Detection Sensitivity for Deoxyribonucleic Acid**

LIAN Dong-Sheng \*, ZHANG Xiang-Nian,  
HE Bao-Xia, ZHAO Shu-Jin, HAN Li-Ping  
*Chinese J. Anal. Chem.*, 2010, 38(8): 1161–1166

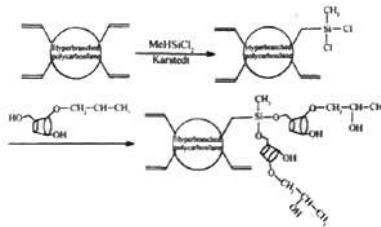


## **Study on Separation Performance of Capillary Column Coated Physically with Modified Hyper-branched Polycarbosilane**

XU Wen-Chao, CHU Yong-Jie, LIN Dong,

YANG Wen, LIU Bing, SHOU Chong-Qi\*

*Chinese J. Anal. Chem.*, 2010, 38(8): 1167–1171



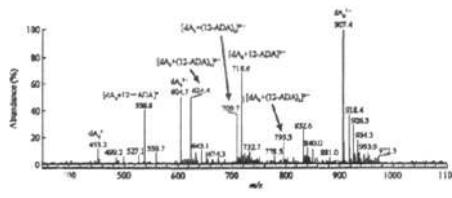
Research Notes

## **Studies on Interaction Between 12-Aminodehydroabietylamine Acetamide and Deoxyribonucleic Acid by Electrospray Ionization-Mass Spectrometry**

GUAN Xiao-Hong, DENG Hui-Min\*,

LIN Zhong-Xiang

*Chinese J. Anal. Chem.*, 2010, 38(8): 1172–1176



# Determination of Acidic Herbicide in Water by Derivatization Gas Chromatography-Negative Chemical Ionization Mass Spectrometry with Solid Phase Extraction

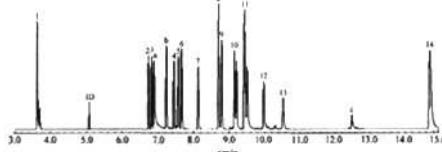
GUI Jian-Ye, ZHANG Li\*, LIU Ji-Hua,  
ZHANG Yong-Tao, ZUO Hai-Ying, LI Xiao-Ya,  
ZHANG Lin, LI Cui-Yang

ZHENG Lin, Li Gui-Xiang  
*Chinese J. Anal. Chem.* 2010, 38(8), 1173-1181

Chinese J. Anal. Chem., 2010, 38(8): 1177-1181

Infrared Spectroscopy with

## Investigation on Molecular Orientation of

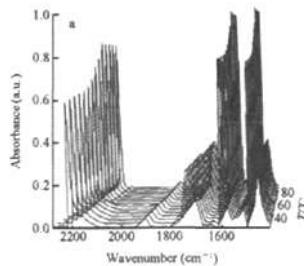


# Infrared Spectroscopy with Line Array Detection Investigation on Molecular Orientation of Polymer Dispersed Liquid Crystal

SUN Guo-En, TENG Hong, ZHANG Chun-Ling,

DOU Yan-Li\*, XU Jing-Wei

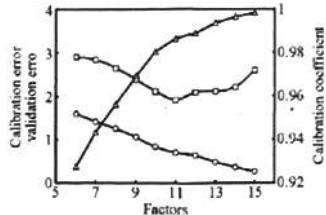
*Chinese J. Anal. Chem.*, 2010, 38(8): 1182–1185



# Hydrophobicity Characterization of Polymer Coating for Controlled-release Fertilizer Using Technique of Fourier Transform Infrared Photoacoustic Spectroscopy

ZHAO Cong, SHEN Ya-Zhen, ZHOU Jian-Min,  
Du Chang-Wen\*, WANG Huo-Yan,

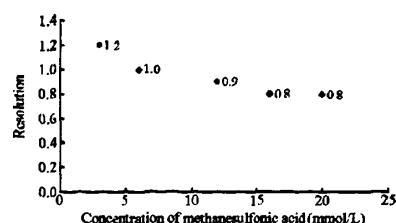
CHEN Xiao-Qin



**Impact of Eluent Concentration on Resolution of Low-molecular-weight Aliphatic Amine at Low Levels by Ion Chromatography**

KONG Lu-Lu, GUO Xiao-Yan\*, ZHOU Qi-Xing, HU Wan-Li, YUN Hai-Lan, CHEN Chang-Zhen, LU Jin-Feng

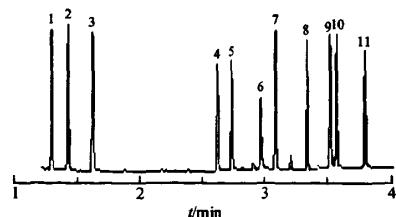
*Chinese J. Anal. Chem.*, 2010, 38(8): 1191–1194



**Polymeric Ionic Liquid as High Temperature Stationary Phase for Gas Chromatography**

SUN Xiao-Jie, ZHU Yu-Ling, HAN Chan-Hyon, WU Cai-Ying, XING Jun\*

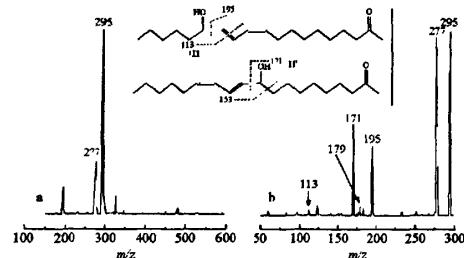
*Chinese J. Anal. Chem.*, 2010, 38(8): 1195–1198



**Study of Potential Biomarkers in Milk from Cows Treated with Chloramphenicol by Metabonomic Approach**

WANG Shi-Cheng, WANG Yan-Hong\*, LI Guo-Chen, HU Xiao-Yan, ZHANG Hong

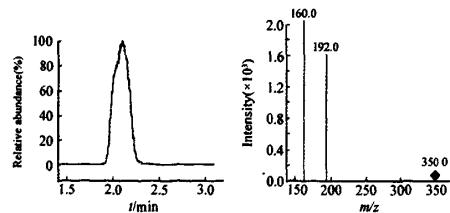
*Chinese J. Anal. Chem.*, 2010, 38(8): 1199–1202



**Qualitative Analysis of Active Beta-Lactamases in Milk Samples by Rapid Resolution Liquid Chromatography-Tandem Mass Spectrometry**

SUN Han-Wen\*, LI Hui, ZHANG Jing-Xuan, ZHOU Zheng

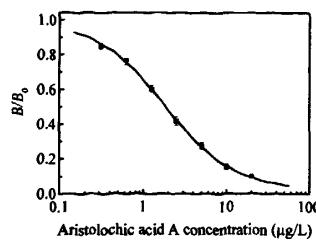
*Chinese J. Anal. Chem.*, 2010, 38(8): 1203–1205



**Development of Sensitive Monoclonal Antibody-based Enzyme-linked Immunosorbent Assay for Renal Toxicity Ingredient Aristolochic Acid A in Chinese Herb Medicine**

NAN Tie-Gui, HE Su-Ping, TAN Gui-Yu, LI Gang, WANG Bao-Min\*, HUANG Lu-Qi\*

*Chinese J. Anal. Chem.*, 2010, 38(8): 1206–1210



## Review and Progress

### ★ Hapten Design, Modification and Preparation of Artificial Antigens

SONG Juan, WANG Rong-Mei, WANG Yue-Qiu,  
TANG Yu-Rong, DENG An-Ping\*

*Chinese J. Anal. Chem.*, 2010, 38(8): 1211–1218

The key step to develop an immunoassay for small molecular compound is to synthesize artificial antigens with good immunogenicity. In this article, the hapten design and modification (e.g. the choice of modified sites, preparation of hapten derivative, choice of linking spacer), selection of carrier, coupling of hapten derivative to carrier (including coupling method, coupling conditions, the best coupling rate), purification and identification of artificial antigens were reviewed.

### Progresses of Electrochemiluminescence Immunoassay Technology

ZHANG Jun-Rui, CHEN Jian\*, LIU Zhong-Ming  
*Chinese J. Anal. Chem.*, 2010, 38(8): 1219–1226

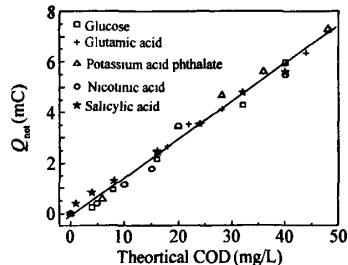
The article introduced the development status and research orientations of electrochemiluminescence (ECL), summarized the application and research progress for electrochemiluminescence immunoassay (ECLIA). And finally, the future prospect and outlook of ECLIA were also discussed.

## Experimental Technique and Instrument

### A Photoelectrocatalytic Method Using Highly Ordered TiO<sub>2</sub> Nanotube Array for Determination of Surface Water

DONG Chao-Ping, ZHANG Jia-Ling, LI Jin-Hua,  
CHEN Hong-Chong, ZHOU Bao-Xue\*

*Chinese J. Anal. Chem.*, 2010, 38(8): 1227–1230



\* The author to whom the correspondence should be addressed

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