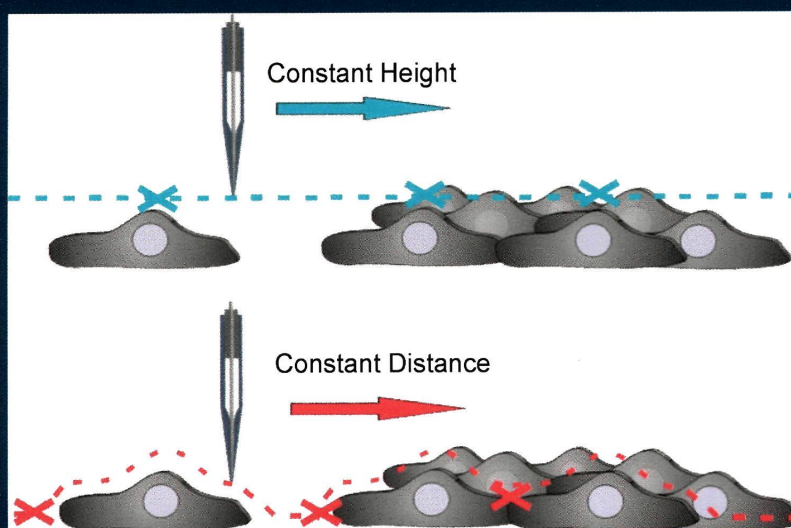


# ANALYTICA CHIMICA ACTA

AN INTERNATIONAL JOURNAL DEVOTED TO ALL BRANCHES OF ANALYTICAL CHEMISTRY



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## Review Article

Recent advances in high resolution scanning electrochemical microscopy of living cells – A review

Stefan Bergner, Preeti Vatsyayan and Frank-Michael Matysik

*(Published on pp. 1–13 of this issue)*

# Analytica Chimica Acta

Volume 775, Pages 1-114 (2 May 2013)

## Editorial Board

Page iii

Review articles

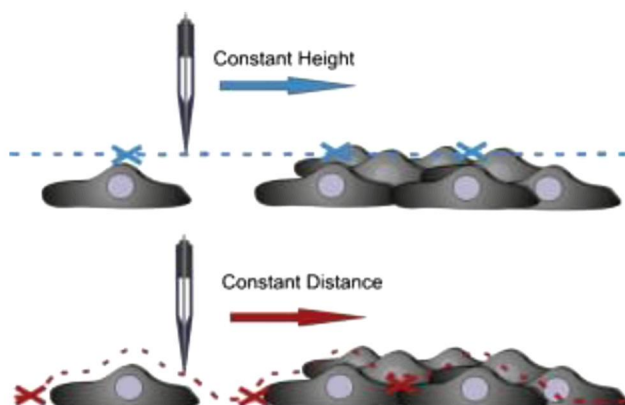
### **Recent advances in high resolution scanning electrochemical microscopy of living cells – A review**

Review Article

Pages 1-13

Stefan Bergner, Preety Vatsyayan, Frank-Michael Matysik

#### Graphical abstract



#### Highlights

► We discuss recent advances in high resolution SECM of living cells. ► Advantages and disadvantages of the various imaging techniques are compared. ► New horizons in high resolution SECM studies of cellular processes are discussed.

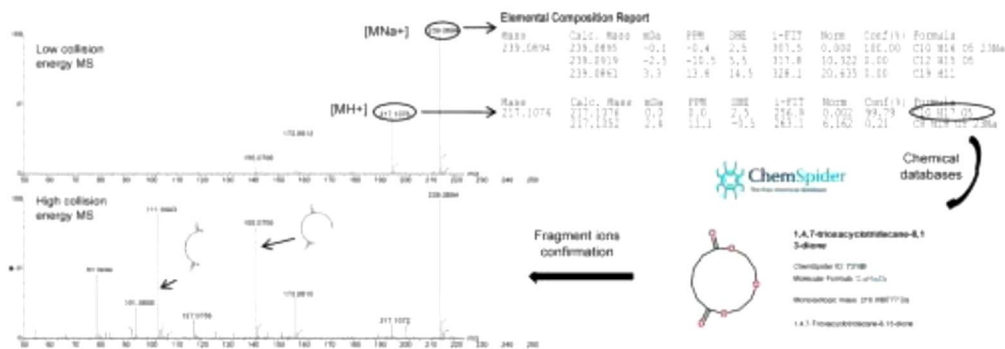
### **The challenge of identifying non-intentionally added substances from food packaging materials: A review**

Review Article

Pages 14-24

C. Nerin, P. Alfaro, M. Aznar, C. Domeño

#### Graphical abstract



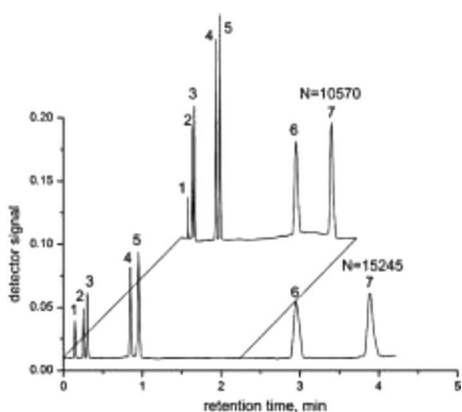
## Highlights

- ▶ Non intentionally added substances (NIAS) are frequently present in packaged food.
- ▶ In-depth review about the different NIAS origin is described.
- ▶ An analytical approach for sample treatment and NIAS identification is suggested.
- ▶ The analytical approach selected dictates which NIAS are identified.
- ▶ A risk assessment protocol for identified NIAS is presented.

## Monolithic column in gas chromatography

Review Article  
 Pages 25-40  
 A. Kurganov

## Graphical abstract

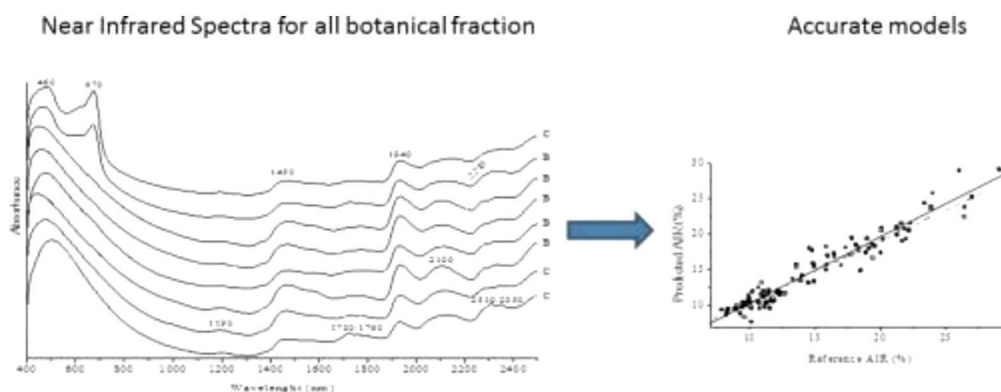


Chemometrics

## Potential of visible-near infrared spectroscopy combined with chemometrics for analysis of some constituents of coffee and banana residues

Original Research Article  
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## Graphical abstract



## Extraction and Sample Handling

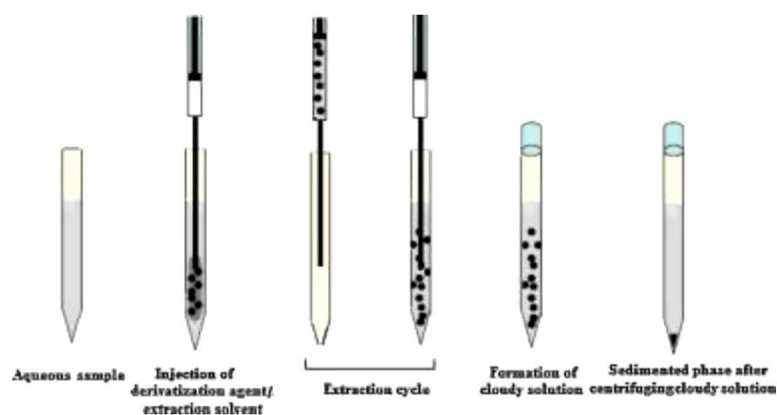
### Simultaneous derivatization and air-assisted liquid–liquid microextraction of some aliphatic amines in different aqueous samples followed by gas chromatography–flame ionization detection

Original Research Article

Pages 50-57

Mir Ali Farajzadeh, Nina Nouri

## Graphical abstract

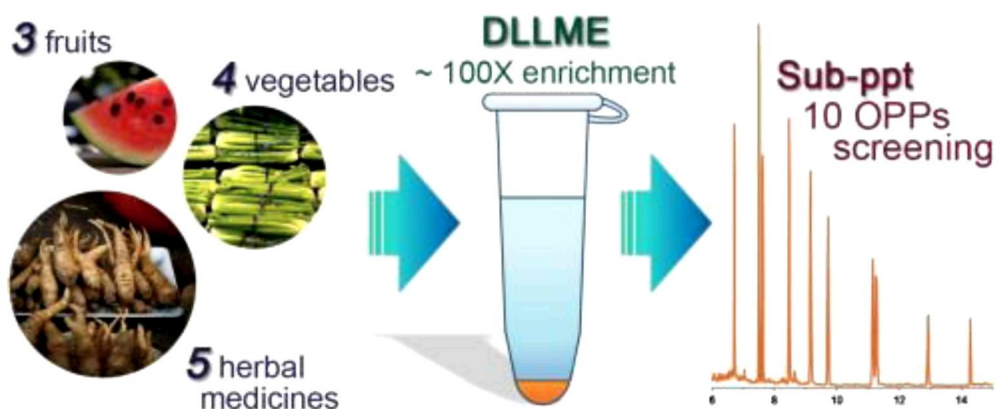


### Highly sensitive and selective organophosphate screening in twelve commodities of fruits, vegetables and herbal medicines by dispersive liquid–liquid microextraction

Original Research Article

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### Graphical abstract



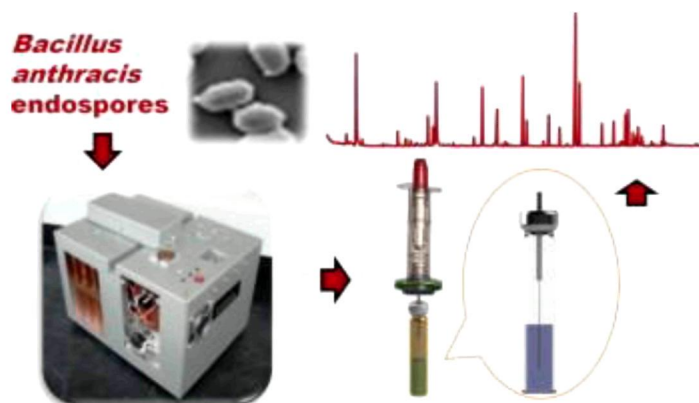
### Automated thermochemolysis reactor for detection of *Bacillus anthracis* endospores by gas chromatography–mass spectrometry

Original Research Article

Pages 67-74

Dan Li, Anthony D. Rands, Scott C. Losee, Brian C. Holt, John R. Williams, Stephen A. Lammert, Richard A. Robison, H. Dennis Tolley, Milton L. Lee

### Graphical abstract



Mass Spectrometry

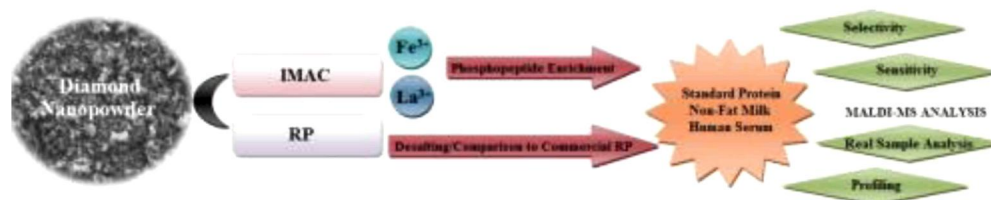
### Functionalized diamond nanopowder for phosphopeptides enrichment from complex biological fluids

Original Research Article

Pages 75-84

Dilshad Hussain, Muhammad Najam-ul-Haq, Fahmida Jabeen, Muhammad N. Ashiq, Muhammad Athar, Matthias Rainer, Christian W. Huck, Guenther K. Bonn

## Graphical abstract



Sensors and Bioselective Reagents

## Ultrasensitive electrochemical immunoassay for carcinoembryonic antigen based on three-dimensional macroporous gold nanoparticles/graphene composite platform and multienzyme functionalized nanoporous silver label

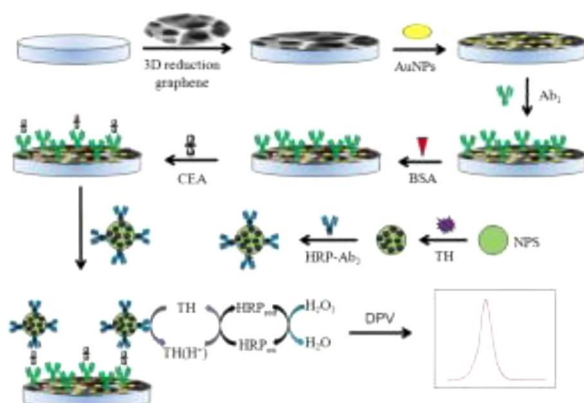
Original Research Article

Pages 85-92

Guoqiang Sun, Juanjuan Lu, Shenguang Ge, Xianrang Song, Jinghua Yu, Mei Yan, Jiadong Huang

## Graphical abstract

Three-dimensional macroporous AuNPs/graphene complex (3D-AuNPs/GN) and functionalized NPS were prepared to immobilize  $Ab_1$  and  $Ab_2$  respectively and combined to fabricate a sandwich-type ultrasensitive electro-chemical immunosensor for detecting CEA.



## BODIPY-based fluorometric sensor array for the highly sensitive identification of heavy-metal ions

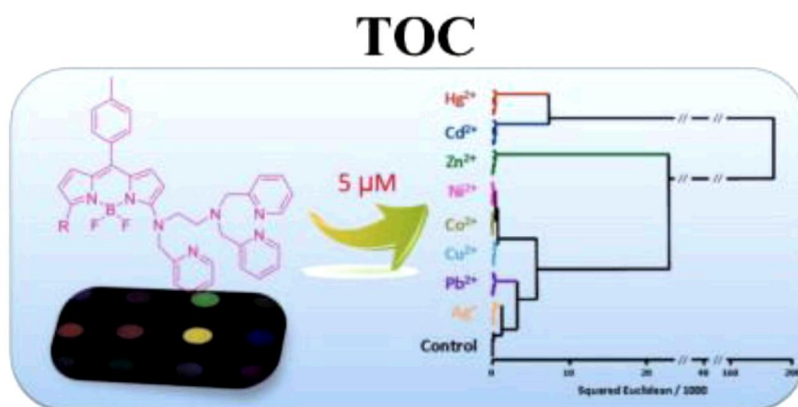
Original Research Article

Pages 93-99

Li-Ya Niu, Hui Li, Liang Feng, Ying-Shi Guan, Yu-Zhe Chen, Chun-Feng Duan, Li-Zhu Wu, Ya-Feng Guan, Chen-Ho Tung, Qing-Zheng Yang

### Graphical abstract

A BODIPY-based fluorometric sensor array has been developed for the highly sensitive detection of eight heavy metal ions at micromolar concentration. 12 cross-reactive BODIPY fluorescent indicators provide facile identification of the heavy metal ions using a standard chemometric approach (hierarchical clustering analysis); no misclassifications were found over 45 trials. Clear differentiation among heavy metal ions as a function of concentration was also achieved, even down to  $10^{-7}$  M.



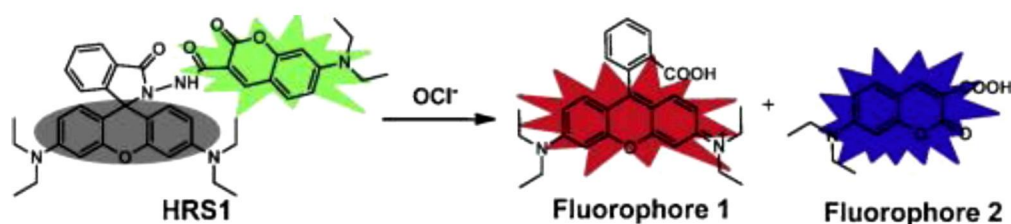
### A fluorescence ratiometric sensor for hypochlorite based on a novel dual-fluorophore response approach

Original Research Article

Pages 100-105

Lingliang Long, Dongdong Zhang, Xiufen Li, Jinfang Zhang, Chi Zhang, Liping Zhou

### Graphical abstract



Separation Methods

### A solvent extraction technique for the isotopic measurement of dissolved

# copper in seawater

Original Research Article

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## Graphical abstract

