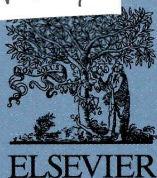


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# ANALYTICA CHIMICA ACTA

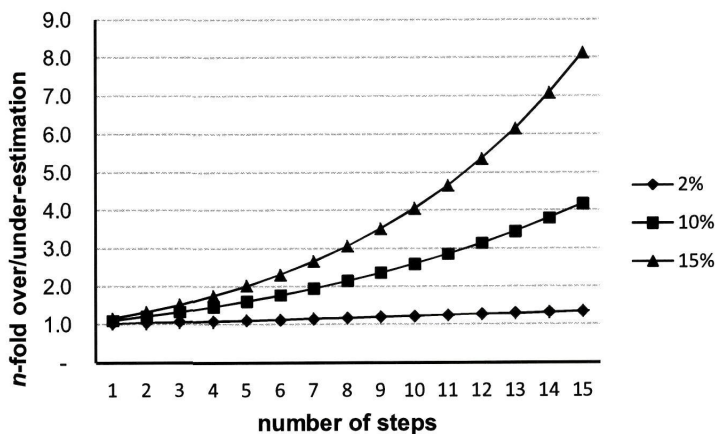
AN INTERNATIONAL JOURNAL DEVOTED TO ALL BRANCHES OF ANALYTICAL CHEMISTRY

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## Review Article

Effect of quality characteristics of single sample preparation steps in the precision and coverage of proteomic studies—A review

Thomas Krüger, Thomas Lehmann and Heidrun Rhode

(Published on pp. 1–10 of this issue)



# Analytica Chimica Acta

Volume 776, Pages 1-86 (7 May 2013)

## Editorial Board

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Review article

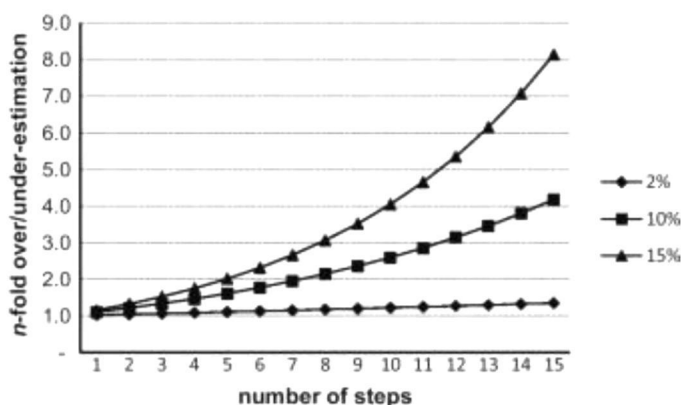
### Effect of quality characteristics of single sample preparation steps in the precision and coverage of proteomic studies—A review

Review Article

Pages 1-10

Thomas Krüger, Thomas Lehmann, Heidrun Rhode

#### Graphical abstract



#### Highlights

- ▶ In contrast to usual analytics exorbitant numbers of steps are combined in proteomics. ▶ Overall precision and yield are virtually impossible to be determined experimentally. ▶ We estimated overall bias using published values of various singular procedures. ▶ Unexpectedly, calculated overall bias is in the range of aberrations of many candidate biomarkers. ▶ Proposals to improve precision and yield include hyphenation, parallelization and automation.

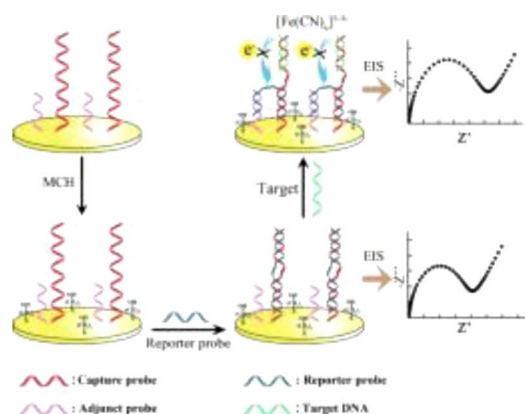
Electrochemistry

### A sensitive and label-free impedimetric biosensor based on an adjunct probe

Original Research Article

### Graphical abstract

Using an adjunct probe for highly sensitive and label-free detection of DNA sequence based on electrochemical impedance spectroscopy was achieved.



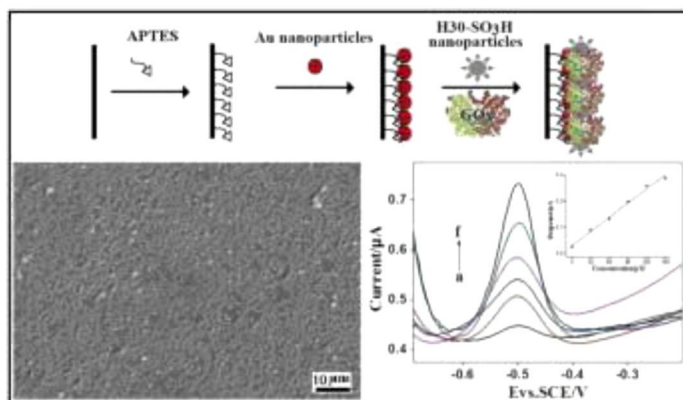
### Fabrication of glucose biosensor for whole blood based on Au/hyperbranched polyester nanoparticles multilayers by antibiofouling and self-assembly technique

Original Research Article

Pages 17-23

Chong Sun, Xiaohan Chen, Qiaorong Han, Min Zhou, Chun Mao, Qinshu Zhu, Jian Shen

### Graphical abstract



### Highlight

•

A novel method for detection of glucose in whole blood has been developed.

•

The method based on antibiofouling and self-assembly technology was investigated.

•

The antibiofouling technique utilized for sensor is significant for diagnostics.

## Polyphosphonate induced coacervation of chitosan: Encapsulation of proteins/enzymes and their biosensing

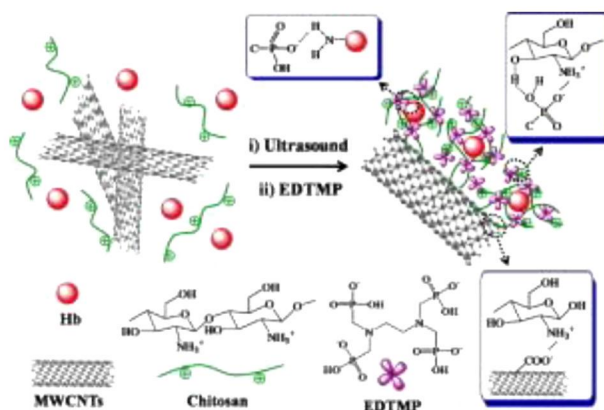
Original Research Article

Pages 24-30

Hailing Liu, Yanyun Cui, Pan Li, Yiming Zhou, Yu Chen, Yawen Tang, Tianhong Lu

### Graphical abstract

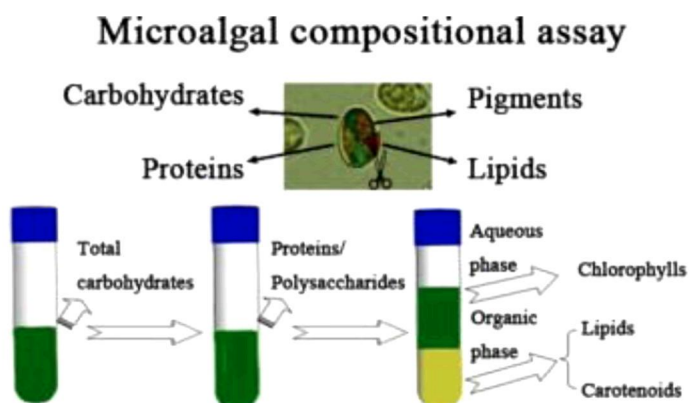
Based on the coacervation of chitosan via the ionotropic crosslinking interaction, proteins/enzymes can be encapsulated *in situ* into chitosan matrix.



Extraction and Sample Handling

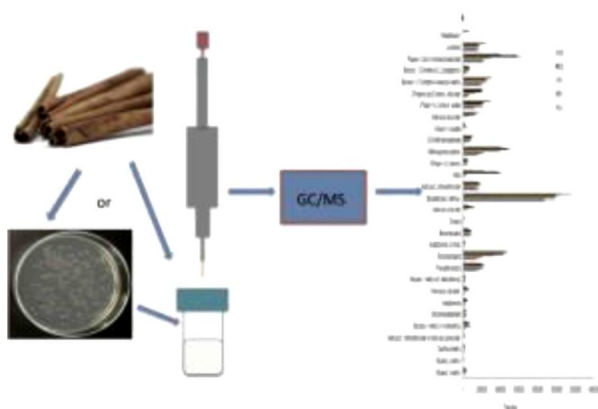
### Simultaneous assay of pigments, carbohydrates, proteins and lipids in microalgae

### Graphical abstract



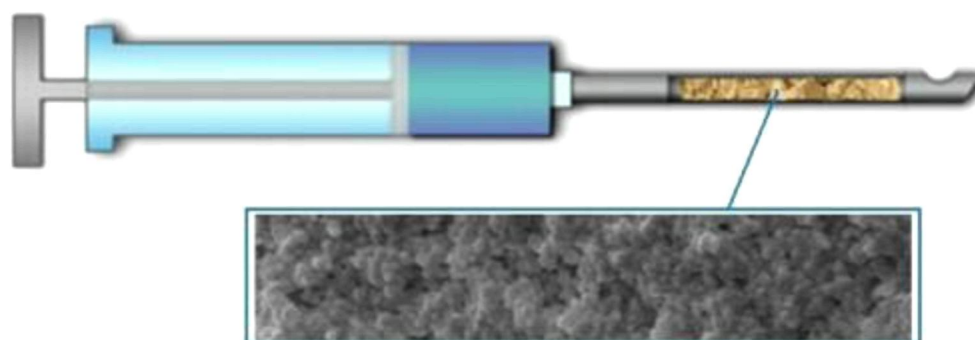
### Automated SPME–GC–MS monitoring of headspace metabolomic responses of *E. coli* to biologically active components extracted by the coating

### Graphical abstract



### Preparation and examination of monolithic in-needle extraction (MINE) device for the direct analysis of liquid samples

### Graphical abstract



Mass Spectrometry

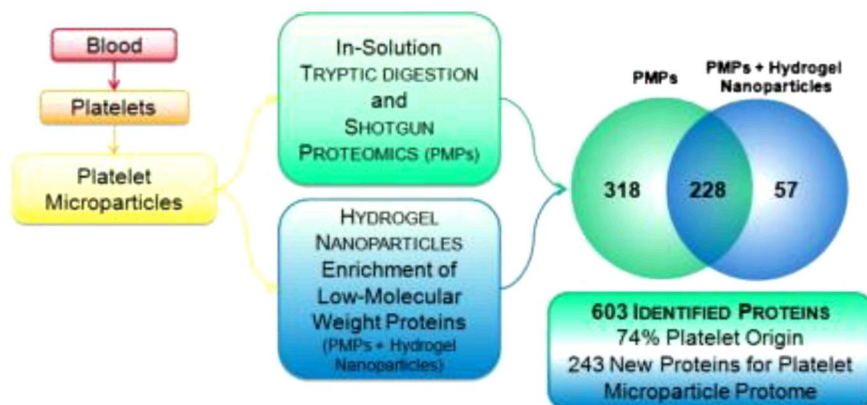
### Proteomic characterization of human platelet-derived microparticles

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### Graphical abstract



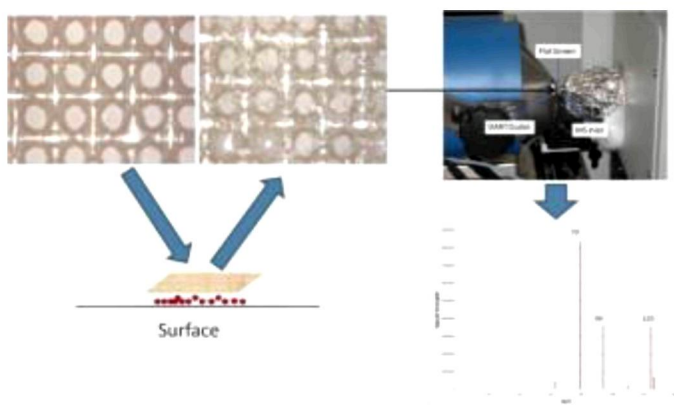
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### Graphical abstract



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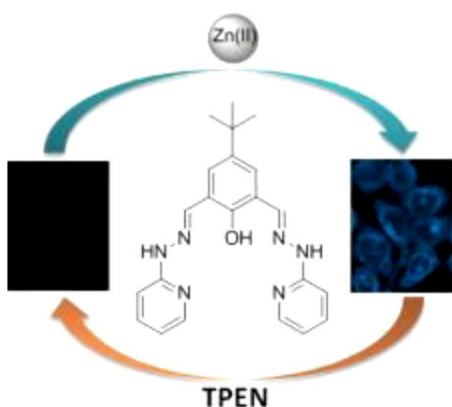
**A “turn-on” fluorescent chemosensor for zinc ion with facile synthesis and application in live cell imaging**

Original Research Article

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Kai Li, Xiaoyan Wang, Aijun Tong

**Graphical abstract**



Sensors and Bioselective Reagents

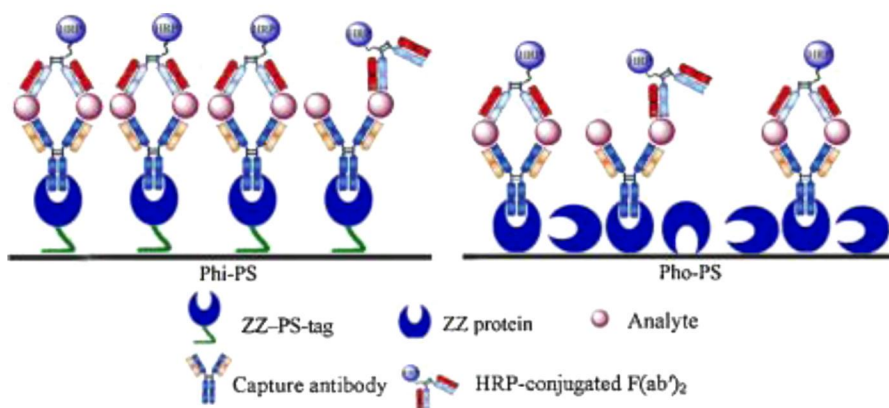
**Well-oriented ZZ-PS-tag with high Fc-binding onto polystyrene surface for controlled immobilization of capture antibodies**

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Jin-Bao Tang, Xi-Feng Sun, Hong-Ming Yang, Bao-Gang Zhang, Zhi-Jian Li, Zhi-Juan Lin, Zhi-Qin Gao

**Graphical abstract**



## Irregular-shaped platinum nanoparticles as peroxidase mimics for highly efficient colorimetric immunoassay

Original Research Article

Pages 79-86

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### Graphical abstract

