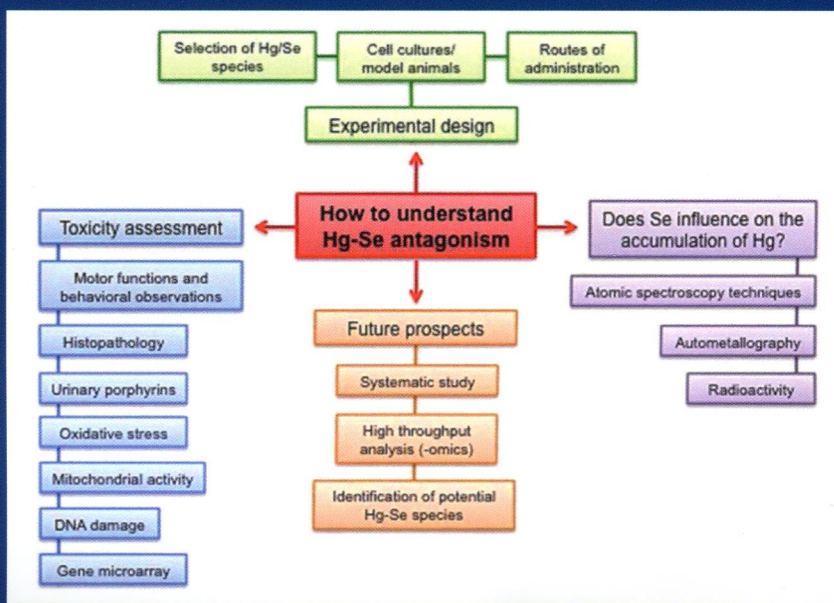


114  
A53/3



# ANALYTICA CHIMICA ACTA

AN INTERNATIONAL JOURNAL DEVOTED TO ALL BRANCHES OF ANALYTICAL CHEMISTRY



## EDITORS:

RICHARD P. BALDWIN  
NEIL W. BARNETT  
WOLFGANG BUCHBERGER  
LUTGARDE BUYDENS  
PURNENDU K. DASGUPTA  
ULRICH J. KRULL  
JAMES P. LANDERS  
LIANG LI  
JANUSZ PAWLISZYN  
PAUL J. WORSFOLD

## REVIEW EDITOR:

MANUEL MIRÓ

## Review Article

Analytical and bioanalytical approaches to unravel the selenium–mercury antagonism: A review

Jose L. Luque-Garcia, Pablo Cabezas-Sancheza,  
Daniela S. Anunciação and Carmen Camara

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



## CONTENTS

Abstracted/indexed in: Aluminium Abstracts; Anal. Abstr.; Biol. Abstr.; BIOSIS; Chem. Abstr.; Curr. Contents Phys. Chem. Earth Sci.; Engineered Materials Abstracts; Excerpta Medica; Index Med.; Life Sci.; Mass Spectrum. Bull.; Material Business Alerts; Metals Abstracts; Sci. Citation Index Full texts are incorporated in CJELSEVIER, a file in the Chemical Journals Online database available on STN International. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®.

### Review articles

- Analytical and bioanalytical approaches to unravel the selenium-mercury antagonism: A review  
J.L. Luque-Garcia, P. Cabezas-Sanchez (Madrid, Spain), D.S. Anunciação (Madrid, Spain and Bahia, Brazil) and C. Camara (Madrid, Spain) ..... 1
- Matrix enhancement effect: A blessing or a curse for gas chromatography?—A review  
Md.M. Rahman (Gwangju, Republic of Korea), A.M. Abd El-Aty (Gwangju, Republic of Korea and Giza, Egypt) and J.-H. Shim (Gwangju, Republic of Korea) ..... 14

### Chemometrics

- Merits of random forests emerge in evaluation of chemometric classifiers by external validation  
I.M. Scott, W. Lin, M. Liakata, J.E. Wood, C.P. Vermeer (Aberystwyth, UK), D. Allaway (Slough, UK), J.L. Ward (Harpenden, UK), J. Draper (Aberystwyth, UK), M.H. Beale, D.I. Corol, J.M. Baker (Harpenden, UK) and R.D. King (Aberystwyth, UK) ..... 22
- A new approach to untargeted integration of high resolution liquid chromatography-mass spectrometry data  
F.M. van der Kloet, M. Hendriks, T. Hankemeier and T. Reijmers (Leiden, The Netherlands) ..... 34
- A novel algorithm for linear multivariate calibration based on the mixed model of samples  
X. Wu, Z. Liu and H. Li (Xi'an, PR China) ..... 43

### Extraction and Sample Handling

- Conversion to isothiocyanates via dithiocarbamates for the determination of aromatic primary amines by headspace-solid phase microextraction and gas chromatography  
A. Jain, K. Reddy-Noone, A.K.K.V. Pillai and K.K. Verma (Jabalpur, India) ..... 48

### Flow Analysis

- Flow methods in chiral analysis  
M. Trojanowicz and M. Kaniewska (Warsaw, Poland) ..... 59

### Molecular Spectrometry

- Detection of hexavalent chromium using gold/4-(2-mercaptoethyl) pyridinium surface enhanced Raman scattering-active capture matrices  
P.A. Mosier-Boss and M.D. Putnam (San Diego, CA, USA) ..... 70

### Sensors and Bioselective Reagents

- Automatic polymerase chain reaction product detection system for food safety monitoring using zinc finger protein fused to luciferase  
W. Yoshida, A. Kezuka, Y. Murakami, J. Lee, K. Abe (Koganei, Japan), H. Motoki, T. Matsuo, N. Shimura (Hachioji, Japan), M. Noda, S. Igimi (Setagaya-ku, Japan) and K. Ikebukuro (Koganei, Japan) ..... 78
- Use of Cdse/ZnS quantum dots for sensitive detection and quantification of paraquat in water samples  
G.M. Durán, A.M. Contento and Á. Ríos (Ciudad Real, Spain) ..... 84
- Magnetic-particle-based, ultrasensitive chemiluminescence enzyme immunoassay for free prostate-specific antigen  
R. Liu (Tianjin, China), C. Wang (Tianjin, China and New York, USA), Q. Jiang (Wuhan, China), W. Zhang, Z. Yue and G. Liu (Tianjin, China) ..... 91

### Corrigendum

- Corrigendum to "A new method for precise determination of iron, zinc and cadmium stable isotope ratios in seawater by double-spike mass spectrometry" [Anal. Chim. Acta 793 (2013) 44-52]  
T.M. Conway, A.D. Rosenberg (Columbia, SC, USA), J.F. Adkins (Pasadena, CA, USA) and S.G. John (Columbia, SC, USA) ..... 97