

# Anastasios Economou

Assistant Professor in Analytical Chemistry  
and Chemical Instrumentation



## Education

- BSc at the Department of Chemistry, University of Athens, Greece (1988).
  - MSc in Analytical Chemistry and Chemical Instrumentation at the Department of Instrumentation and Analytical Science, UMIST (1989).
- PhD in Analytical Chemistry at the Department of Instrumentation and Analytical Science, UMIST, UK (1993).
- Postdoctoral studies in the Department of Instrumentation and Analytical Science, UMIST, UK (1993-1996), the Laboratory of Analytical Chemistry, Department of Chemistry, University of Athens, Greece (1997 and 1999-2000) and the Athens Wine Institute, National Agricultural Research Foundation, Greece (1999-2000).



## Research Field of Interest

- Electrochemistry
- Chemiluminescence
- Automated methods of analysis
- Chemical Instrumentation
- Separation techniques
- Chemometrics



## Teaching

### Undergraduate

- Instrumental Analysis (Electrochemistry, Course and Lab)
- Chemical Instrumentation (Course and Lab)
- Classical Analytical Chemistry (Lab)
- Instrumental Analysis (Department of Pharmaceutical Sciences, Lab)
- Modern Analytical Techniques (Course and Lab)

### Postgraduate

- Analytical Chemistry



## Book Authorship

"Instrumental Analysis II" (4co-authors), Editions "Ziti", 2004, Thessaloniki (ISBN 960-431-940-X)



## Selected Papers

- 1) "Simultaneous Determination of Ni(II) and Co(II) by Square Wave Adsorptive Stripping Voltammetry on a Rotating Disk Mercury Film Electrode", A. Economou and P.R. Fielden\*, Analyst, 118, 1993, 47-51.
- 2) "Adsorptive Stripping Voltammetry on Mercury Film Electrodes in the Presence of Surfactants", A. Economou and P.R. Fielden, Analyst, 118, 1993, 1399-1403.
- 3) "Data Enhancement in Adsorptive Stripping Voltammetry by the Application of Digital Signal Processing Techniques", A. Economou, P.R. Fielden, P.A. Gaydecki and A.J. Packham, Analyst, 119, 1994, 847-853.
- 4) "Digital Filtering in Stripping Analysis", A. Economou and P.R. Fielden, Anal. Chim. Acta, 305, 1995, 165-175.
- 5) "Deconvolution of Analytical Peaks by Means of the Fast Hartley Transform", A. Economou, P.R.

Fielden and A.J. Packham, *Analyst*, 121, 1996, 1015-1018.

6) "Applications, Potentialities and Limitations of Adsorptive Stripping Analysis on Mercury-Film Electrodes", A. Economou and P.R. Fielden, *TrAC*, 16, 1997, 286-292

7) "FIA Determination of Cr(III) in Tapwater with Chemiluminescence Detection", A. Economou, A.K. Clark and P.R. Fielden, *Anal. Commun.*, 35, 1998, 389-390.

8) "Virtual Instrumentation for Electroanalytical Measurements", A. Economou, C.E. Efstathiou and G. Volikakis, *J. Autom. Method. Manag. Chem.*, 21, 1999, 33-38

9) "Phenolic and Volatile Composition of Wines Made from *Vitis Vinifera* Cv. Muscat Lefko Grapes from the Island of Samos", S. Karagiannis, A. Economou and P. Lanaridis, *J. Agricult. Food Chem.*, 48, 2000, 5369-5375

10) "Determination of Co(II) by Chemiluminescence after in situ Electrochemical Pre-Separation on a Flow-Through Mercury Film Electrode", A. Economou, P.R. Fielden and A.K. Clark, *Analyst*, 126, 2001, 109-113

11) "Sensitive determination of captopril by flow injection analysis with chemiluminescence detection based on the enhancement of the luminol reaction", A. Economou, D.G. Themelis, G. Theodoridis and P.D. Tzanavaras, *Anal. Chim. Acta*, 463, 2002, 249-255

12) "A "virtual" electroanalytical instrument for square wave voltammetry", A. Economou, S.D. Bolis, C.E. Efstathiou and G.J. Volikakis, *Anal. Chim. Acta*, 467, 2002, 179-188

13) "A study of bismuth-film electrodes for the detection of trace metals by anodic stripping voltammetry and their application to the determination of Pb and Zn in tapwater and human hair", G. Kefala, A. Economou, A. Voulgaropoulos and M. Sofoniou, *Talanta*, 61, 2003, 603-610

14) "LabVIEW-based sequential-injection analysis system for the determination of trace metals by square-wave anodic and adsorptive stripping voltammetry on mercury-film electrodes", A. Economou, A. Voulgaropoulos, *J. Autom. Meth. Manag. Chem.*, 25, 2003, 133-140

15) "Sequential injection method for the direct spectrophotometric determination of bismuth in pharmaceutical products", P. Tzanavaras, D. Themelis, A. Economou, *Anal. Chim. Acta*, 505, 2004, 167-171

16) "Automated sample preparation based on the sequential injection principle. Solid phase extraction on a molecularly imprinted polymer coupled on-line to high-performance liquid chromatography " G. Theodoridis, C.K. Zacharis, P.D. Tzanavaras, D.G. Themelis and A. Economou, *J. Chromatog. A*, 1030, 2004, 69-76

17) "Automated Flow-Injection Instrument for Chemiluminescence Detection using a Low-cost Photodiode Detector", A. Economou, D. Papargyris and J. Stratis, *J. Chem. Educ.*, 81, 2004, 406-410

18) "Direct determination of phosphate in urine by sequential injection analysis with single on-line dilution-calibration method and photometric detection", D. G. Themelis, A. Economou, A. Tsiomlektis, P. D. Tzanavaras, *Anal. Biochem.*, 330, 2004, 193-198

19) "A study of pencil-lead bismuth-film electrodes for the determination of trace metals by anodic stripping voltammetry", D. Demetriades, A. Economou, A. Voulgaropoulos  
*Anal. Chim. Acta*, 519, 2004, 167-172

20) "Bismuth-film electrodes: recent developments and potentialities for electroanalysis", A. Economou, *TrAC*, 24, 2005, 334-340

21) "Sequential-injection analysis (SIA): A useful tool for on-line sample handling and pre-treatment", A. Economou, *TrAC*, 24, 2005, 416-425

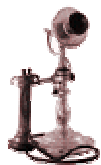
22) "Sequential-Injection Analysis: Principles, Construction of a SIA Analyzer and Demonstration by a Simple Experiment", A. Economou, P.D. Tzanavaras and D.G. Themelis  
*J. Chem. Edu.*, 82, 2005, 1820-1822

23) "A fully automated sequential-injection analyser for dual electrogenerated chemiluminescence/ampereometric detection", A. Economou and M. Nika, *J. Autom. Method. Manag. Chem.*, 2006, 1-9

24) "Rapid enzymatic chemiluminescent assay of glucose by means of a hybrid flow-injection/sequential-injection method", P. Panoutsou, A. Economou, *Talanta*, 67, 2005, 603-609

25) "On-line stripping voltammetry of trace metals at a flow-through bismuth-film electrode by means of a hybrid flow-injection/sequential-injection system", A. Economou, A. Voulgaropoulos,

Talanta, 71, 2007, 758–765



### Contact

Dr. Anastasios Economou  
Assistant Professor  
Laboratory of Analytical Chemistry  
Department of Chemistry, University of Athens  
Panepistimiopolis Zografou  
157 71 Athens, Greece  
Tel: +30 210 727 4298  
Fax: +30 210 727 4750  
Office: 4th floor, Wing E, Office 7  
Email: [aeconomou@chem.uoa.gr](mailto:aeconomou@chem.uoa.gr)