

# Curriculum Vitae

## **Demetrius G. Themelis**

### **Emeritus Professor of Analytical Chemistry**



Laboratory of Analytical Chemistry

Chemistry Department

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### Education

- *Emeritus Professor of Analytical Chemistry*, Chemistry Department, Thessaloniki Aristotle University, Greece.
- *Professor of Analytical Chemistry*, Chemistry Department, Laboratory of Analytical Chemistry, Thessaloniki Aristotle University, Greece.
- *Visiting Postdoctoral Research Associate* at Miami University, Chemistry Department, Oxford, Ohio, USA, doing research in “Flow Injection Analysis-FIA” at the project: “Development of new automatic analytical methods for determining traces of oxychloride species ( $\text{ClO}_2^-$ ,  $\text{ClO}_3^-$ ,  $\text{ClO}_2$ ,  $\text{Cl}_2$ ) and Chloramines using flow injection analysis”.
- PhD in “Catalytic microdetermination of Fe (III) and Cu (II) ions”, Chemistry Department, Thessaloniki Aristotle University, Greece.
- B.Sc., Chemistry Department, Thessaloniki Aristotle University, Greece.

### Research Interests

- *Kinetic Methods of Analysis*
- *Flow and Sequential Injection Analysis (FIA, SIA)*
- *Sequential Injection Chromatography (SIC)*
- *Separation Techniques (HPLC, HILIC, CZE, MEKC)*

## Current Research Activities

- Development of Analytical methods using separation techniques (HPLC, HILIC, CZE, MEKC).
- Applications of new stationary phases (monolithic and core-shell columns) in *Liquid Chromato-graphy* (LC) separations and *Sequential Injection Chromatography* (SIC).
- Automated sample preparation coupled to separation techniques (SIA/ZF-HPLC).
- Development of new methods for the determination of thiols and amines in various matrices, after derivatization.

## Teaching

### **Bachelor Level**

- *Basic Principles of Analytical Chemistry*
- *Instrumental Chemical Analysis*
- *Specific Methods of Analysis*
- *Analytical Chemistry*

### **Master Level**

- *Modern Methods of Chemical Analysis*
- *Research Methodology and Advanced Analytical Chemistry*

## International Scientific Auctorial Activities

- Review, “*Sequential Injection Analysis: The Second Generation of Flow Injection Techniques*”, Scirus Topic Pages, Elsevier, 2009.
- Chapter 10, “*Sulphur Dioxide in Wines: Automated Determination Using Flow Injection Analysis*”, in “*Red Wine and Health*”, ISBN: 978-1-60692-718-2, Editor: Paul O' Byrne, Nova Science Publishers, Inc., 2009.
- Chapter 8, “*Determination of Cadmium by Flow Injection Analysis: A Review of Recent Applications*”, in “*Cadmium in the Environment*”, ISBN: 978-1-60741-934-1, Editor: Reini G. Parvau, Nova Science Publishers, Inc., 2010.
- Chapter 15, “*Generic Preconcentration/Dilution Sequential Injection Manifold for the Automated Amperometric Determination of Free Cyanides from Sub-ppb to High ppm Levels*”, in “*Portable Chemical Sensors: Weapons Against Bioterrorism*”, NATO Science for Peace and Security Series A: Chemistry and Biology, ISBN 978-9-40072-874-5, Editor: D.P. Nikolelis, Springer Science + Business Media B.V., 2012.

## Greek Textbooks

- **Themelis, D.G.**, “*Qualitative Analytical Chemistry-Theoretical Principles and Problems*”, pp. 136, A. Simoni-S. Hadjipantou Publications, Thessaloniki, Greece, 1990. 2<sup>nd</sup> ed., pp. 449, ISBN 960-317-022-4, Pigassos Publications, Thessaloniki, Greece, 1995.
- **Themelis, D.G., Zachariadis, G.A.**, “*Analytical Chemistry. Introduction- Qualitative and Quantitative Analysis*”, pp. 226, ISBN 960-317-013-5, Simoni-S. Hadjipantou Publications, Thessaloniki, Greece, 1994.
- **Themelis, D.G.**, “*Automatic Methods of Chemical Analysis*”, pp. 118, ISBN 960-243-050-8, Thessaloniki Aristotle University Publications, Thessaloniki, Greece, 1996.
- **Themelis, D.G., Zachariadis, G.A.**, “*Analytical Chemistry*”, pp. 412, ISBN 960-431-424-6, Ziti Publications, Thessaloniki, Greece, 1997.
- **Themelis, D.G.**, “*Principles of Analytical Chemistry*”, pp. 464, ISBN 960-431-493-9, Ziti Publications, Thessaloniki, Greece, 1998. 2<sup>nd</sup> ed., pp. 574, ISBN 960-431-666-4 Ziti Publications, Thessaloniki, Greece, 2000.
- **Themelis, D.G.**, “*Basic Principles of Analytical Chemistry*”, pp. 599, ISBN 960-431-934-5, Ziti Publications, Thessaloniki, Greece, 2004. 2<sup>nd</sup> ed. pp. 645, ISBN 978-960-456-068-4, Ziti Publications, Thessaloniki, Greece, 2007. 3<sup>rd</sup> ed. pp. 663, ISBN 978-960-456-357-9, Ziti Publications, Thessaloniki, Greece, 2012 (Corrected reprinting, pp. 663, ISBN 978-960-456-357-9, Ziti Publications, Thessaloniki, Greece, 2015). 4<sup>th</sup> ed. pp. 779, ISBN 978-960-456-444-6, Ziti Publications, Thessaloniki, Greece, 2015. 5<sup>th</sup> ed. pp. 801, ISBN 978-960-456-503-0, Ziti Publications, Thessaloniki, Greece, 2018.
- **Stratis, J., Themelis, D.G., Zachariadis, G.A., Anthemidis, A., Economou A.**, “*Instrumental Chemical Analysis II*”, pp. 485, ISBN 960-431-940-X, Ziti Publications, Thessaloniki, Greece, 2004.
- **Themelis, D.G., Zotou, A-S.**, “*Analytical Chemistry*”, pp. 784, ISBN 978-960-456-484-2, Ziti Publications, Thessaloniki, Greece, 2017 (Corrected reprinting, pp. 784, ISBN 978-960-456-484-2), Ziti Publications, Thessaloniki, Greece, 2019).

### **Editorial Board Member of International Scientific Journals**

- *American Journal of Analytical Chemistry* (2011-)
- *Asian Chemistry Letters* (2007-)
- *Journal of Analytical Methods in Chemistry* (2010-2017)
- *Mediterranean Journal of Chemistry* (2010-)
- *Talanta* (2007-2014)

### **PhD Adjudication Member of International University**

- *S.V.University*, Tirupati, India

### **Reviewer of Scientific International Journals**

• *American Journal of Analytical Chemistry*, • *Analytica Chimica Acta*, • *Analytical Letters*, • *Analytical Methods*, • *Analytical Sciences*, • *Chemical Industry and Chemical Engineering Quarterly*, • *Chinese Journal of Chemistry*, • *Chemical Papers*, • *Clinical Chemistry*, • *Collection of Czechoslovak Chemical Communications*, • *Environmental Monitoring and Assessment*, • *Green Chemistry Letters and Reviews*, • *Journal of Analytical Methods in Chemistry*, • *Journal of Hazardous Materials*, • *Journal of Saudi Chemical Society*, • *Journal of Sulfur Chemistry*, • *Journal of the Serbian Chemical Society*, • *International Journal of Environmental Analytical Chemistry*, • *Internationally Scholarly Research Network Analytical Chemistry*, • *Measurement Science and Technology*, • *Monatshefte fur Chemie-Chemical Monthly*, • *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, • *Spectroscopy Letters*, • *Talanta*, • *The Canadian Journal of Analytical Sciences and Spectroscopy*, • *Toxicological and Environmental Chemistry*.

### **Reviewer of International Scientific Electronic Book**

E-Book “*Reviews in Pharmaceutical and Biomedical Analysis*”, pp. 291, Bentham Science Publishers Ltd, 2010.

### **Distinctions**

- **Invitation from *Onassis Foundation***, academic collaborator and *Principal Donor* of the institution *Lindau Nobel Laureate Meetings*, to nominate Greek students candidates to represent Greece in the 63<sup>rd</sup> *Lindau Nobel Laureate Meetings*, 30 June-5 July 2013, Lindau, Germany.
- **Top referee in the year 2006** for the international scientific journal *Analytica Chimica Acta*.
- **1<sup>st</sup> researcher in Greece and 11<sup>th</sup> universally** among 5631 researchers according to Eva Rodenas-Torralba et al. “*Scientometric Picture of the Evolution of the Literature of Automation in Spectroscopy and its Current State-Active Research Groups in the 21<sup>st</sup> Century*”, *Spectroscopy Letters*, 39, 513-532, 2006.
- **1<sup>st</sup> most productive researcher in Greece and 18<sup>th</sup> universally** since 2000 according to “*Advances in Flow Injection Analysis and Related Techniques*, Kolev D.S. and McKelvie D.I. (Editors), Chalk S, Chapter 5 “*Bibliometrics*”, *Comprehensive Analytical Chemistry* 54, 111-125, 2008.
- **Top 25 (14<sup>th</sup>/25) Hottest Articles, Chemistry**, for *Analytica Chimica Acta* (January-March, Elsevier).  
“*Development and validation of a high-throughput HPLC assay for the determination of caffeine in food samples using a monolithic column*”.  
P.D. Tzanavaras and D.G. Themelis  
*Anal. Chim. Acta*, 581, 89-94, 2007.

- **Top 25 (3<sup>rd</sup>/25, January-March and 20<sup>th</sup>/25, April-May) Hottest Articles, Chemistry**, for *Analytica Chimica Acta* (Elsevier).

“Review of recent applications of flow injection spectrophotometry to pharmaceutical analysis”.

P.D. Tzanavaras and D.G. Themelis

*Anal. Chim. Acta*, **588**, 1-9, 2007.

- **Recommendation** of the following article to be included among the suitable methods for the determination of fluoride ion in dentifrices “*Dentistry-Dentifrices-Requirements, Test Methods and Markings*”. Scientific committee of international standard of ISO 11609 (N8), Rome, Italy, 2005.

“Simultaneous spectrophotometric determination of fluoride and monofluoro-phosphate ions in toothpastes using a reagent-injection manifold”.

D.G. Themelis\* and P.D. Tzanavaras.

*Anal. Chim. Acta*, **429**, 111-116, 2001.

## **Research Programmes**

### **Principle investigator in the research programmes:**

- “*Herakleitos I: Research Scholarships with Priority in Basic Research*”, EPEAEK II, 31,740 €, Greek Ministry of Education.
- “*Heracleitus II. Investing in Knowledge Society Through the European Social Fund*”, Operational Program “*Education and Lifelong Learning*”. European Social Fund–ESF, Greek National Funds, 45,000 €, ESPA 2007-2013.

## **Association Memberships**

- *Royal Society of Chemistry* (UK)
- *Greek Chemists Association*
- *Northern Greece Chemical Association*

## **Research Articles in Refereed Journals**

- **Citations:** 1515 (Self citations are excluded)
- **h-index:** 23
- **g-index:** 34

### **77) “Automated derivatization and fluorimetric determination of biogenic amines in milk by zone fluidics coupled to liquid chromatography”.**

M. Notou, A. Zotou\*, P. D. Tzanavaras, D.G. Themelis

*J. Chromatogr. A*, **1356**, 272, 2014.

### **76) “Zwitterionic hydrophilic interaction chromatography coupled with post-column derivatization for the analysis of glutathione in wine samples”.**

- C.K. Zacharis, P.D. Tzanavaras\*, T.D. Karakosta, D.G. Themelis  
*Anal. Chim. Acta*, **795**, 75, 2013.
- 75) **“High-throughput determination of quinine in beverages and soft drinks based on zone-fluidics coupled to monolithic liquid chromatography”**.  
P. D. Tzanavaras\*, C. K. Zacharis, T. D. Karakosta, A. Zotou, D. G. Themelis  
*Anal. Lett.*, **46**, 1718, 2013.
- 74) **“Determination of glutathione and cysteine in yeasts by hydrophilic interaction liquid chromatography followed by on-line post-column derivatization”**.  
T.D. Karakosta, P.D. Tzanavaras, D.G. Themelis\*  
*J. Sep. Sci.*, **36**, 1877, 2013.
- 73) **“Selective fluorimetric method for the determination of histamine in seafood samples based on the concept of zone fluidics”**  
P.D. Tzanavaras\*, O. Deda, T.D. Karakosta, D.G. Themelis  
*Anal. Chim. Acta*, **778**, 48, 2013.
- 72) **“Chromatographic behavior of the biologically active proline derivative captopril on particulate, monolithic and core-shell narrow bore columns”**.  
C.K. Zacharis, T.D. Karakosta, P.D. Tzanavaras\*, P.G. Rigas, D.G. Themelis  
*Anal. Methods*, **4**, 4373, 2012.
- 71) **“Generic preconcentration/dilution sequential injection manifold for the automated amperometric determination of free cyanides from sub-ppb to high ppm levels”**.  
C.K. Zacharis, P. Tzanavaras\*, D.G. Themelis  
*NATO Science for Peace and Security Series A: Chemistry and Biology*, **279**, 2012.
- 70) **“Isocratic liquid chromatographic determination of three paraben preservatives in hygiene wipes using a reversed phase core-shell narrow-bore column”**.  
P. D. Tzanavaras\*, T. D. Karakosta, P. G. Rigas, D. G. Themelis, A. Zotou  
*Cent. Eur. J. Chem.*, **10**, 1459, 2012.
- 69) **“On-line cleavage of disulfide bonds by soluble and immobilized tris-(2-carboxyethyl) phosphine using sequential injection analysis”**.  
P. D. Tzanavaras\*, C. Mitani, A. Anthemidis, D. G. Themelis  
*Talanta*, **96**, 21, 2012.
- 68) **“Automated determination of total captopril in urine by liquid chromatography with post-column derivatization coupled to on-line solid phase extraction in a sequential injection manifold”**.  
T. D. Karakosta, P. D. Tzanavaras, D. G. Themelis\*  
*Talanta*, **88**, 561, 2012.

- 67) **“Automated pre-column derivatization of thiolic fruit-antibrowning agents by sequential injection coupled to highperformance liquid chromatography using a monolithic stationary phase and an in-loop stopped-flow approach”.** (Invited).  
T. D. Karakosta, P. D. Tzanavaras and D. G. Themelis\*  
*J. Sep. Sci.*, **34**, 2240, 2011.
- 66) **“On-line derivatization of N-acetylcysteine using ethyl-propiolate as a novel advantageous reagent and sequential injection analysis”.**  
P.D. Tzanavaras\*, C.K. Zacharis and D.G.Themelis  
*Anal. Lett.*, **43**, 1889, 2010.
- 65) **“Rapid determination of methylxanthines in real samples by high performance liquid chromatography using the new FastGradient® narrow-bore monolithic column”.**  
P. D. Tzanavaras\*, C. K. Zacharis and D. G. Themelis  
*Talanta*, **81**, 1494, 2010.
- 64) **“Generic automated fluorimetric assay for the quality control of gamma aminobutyric acid-analogue anti-epileptic drugs using sequential injection analysis”.**  
D. G. Themelis\*, P. D. Tzanavaras and E. A.Boulimari  
*Anal. Lett.*, **43**, 905, 2010.
- 63) **“Automated zone-sampling dilution by coupling sequential injection analysis to high-throughput HPLC for the direct determination of gemfibrozil”.**  
P. D. Tzanavaras\*, D. G. Themelis and P. Rigas  
*J. Sep. Sci.*, **32**, 2819, 2009.
- 62) **“Ethyl-propiolate as a novel and promising analytical reagent for the derivatization of thiols: study of the reaction under flow conditions”.**  
C. K. Zacharis\*, P. D. Tzanavaras and D. G. Themelis  
*J. Pharm. Biomed. Anal.*, **50**, 384, 2009.
- 61) **“Automated sample preparation coupled to sequential injection chromatography: on-line filtration and dilution protocols prior to separation.”**  
C. K. Zacharis, A. Verdoukas, P. D. Tzanavaras\* and D.G. Themelis  
*J. Pharm. Biomed. Anal.*, **49**, 726, 2009.
- 60) **“Separation and determination of nimesulide related substances for quality control purposes by micellar electrokinetic chromatography”.**  
C. K. Zacharis, P. D. Tzanavaras\*, M. Notou, A. Zotou and D. G. Themelis  
*J. Pharm. Biomed. Anal.*, **49**, 201, 2009.

- 59) **“Hybrid sequential injection-flow injection manifold for the spectrophotometric determination of total sulfite in wines using o-phthal-aldehyde and gas-diffusion”**.  
P. D. Tzanavaras\*, E. Thiakouli and D. G. Themelis  
*Talanta*, **77**, 1614, 2009.
- 58) **“Selective determination of cyanides by gas diffusion-stopped flow-sequential injection analysis and on-line standard addition approach”**.  
D. G. Themelis\*, S. Karastogianni and P. D. Tzanavaras\*  
*Anal. Chim. Acta*, **632**, 93, 2009.
- 57) **“Optimization and validation of a dissolution test for selegiline hydrochloride tablets by a novel rapid HPLC assay using a monolithic stationary phase”**.  
P. D. Tzanavaras\*, D. G. Themelis, A. Zotou, J. A. Stasis and Bo Karlberg  
*J. Pharm. Biomed. Anal.*, **46**, 670, 2008.
- 56) **“Sequential-injection analysis: A useful tool for clinical and biochemical analysis”**.  
A. Economou\*, P. D. Tzanavaras and D. G. Themelis  
*Curr. Pharm. Anal.*, **3**, 249, 2007.
- 55) **“Automated determination of flutamide by a validated flow-injection method. Application to dissolution studies of pharmaceutical tablets”**.  
P. D. Tzanavaras\* and D. G. Themelis  
*J. Pharm. Biomed. Anal.*, **43**, 1820, 2007.
- 54) **“Highly selective flow injection spectrophotometric determination of gold based on its catalytic effect on the oxidation of variamine blue by potassium iodate in aqueous N, N' dimethylformamide medium”**.  
D. G. Themelis\*, A. V. Trellopoulos, P. D. Tzanavaras and M. C. Sofoniou  
*Talanta*, **72**, 277, 2007.
- 53) **“Review of recent applications of flow injection spectrophotometry to pharmaceutical analysis”**. (Review).  
P. D. Tzanavaras\* and D. G. Themelis\*  
*Anal. Chim. Acta*, **588**, 1, 2007.
- 52) **“Review of analytical methods for the determination of chlorine dioxide”**. (Invited).  
P. D. Tzanavaras\*, D. G. Themelis\* and F. S. Kika  
*Cent. Eur. J. Chem.*, **5**, 1, 2007.
- 51) **“High-throughput HPLC assay of acyclovir and its major impurity guanine using a monolithic column and a flow gradient approach”**.  
P. D. Tzanavaras\* and D. G. Themelis



- J. Pharm. Biomed. Anal.*, **43**, 1526, 2007.
- 50) “Validated high-throughput HPLC assay for nimesulide using a short monolithic column”.  
P. D. Tzanavaras\* and D. G. Themelis  
*J. Pharm. Biomed. Anal.*, **43**, 1483, 2007.
- 49) “Selective stopped-flow sequential injection method for the spectrophotometric determination of titanium in dental implant and natural Moroccan phosphate rock”.  
F. S. Kika and D. G. Themelis\*  
*Talanta*, **71**, 1405, 2007.
- 48) “Development and validation of a high-throughput high-performance liquid chromatographic assay for the determination of caffeine in food samples using a monolithic column”.  
P. D. Tzanavaras\* and D. G. Themelis  
*Anal. Chim. Acta*, **581**, 89, 2007.
- 47) “Enzymatic chemiluminescent assay of glucose by sequential-injection analysis with soluble enzyme and on-line sample dilution”.  
A. Economou\*, P. Panoutsou and D. G. Themelis  
*Anal. Chim. Acta*, **572**, 140, 2006.
- 46) “Flow and sequential injection methods for the spectrofluorimetric determination of aluminium in pharmaceutical products using chromotropic acid as chromogenic reagent”.  
D. G. Themelis\* and F. S. Kika  
*J. Pharm. Biomed. Anal.*, **41**, 1179, 2006.
- 45) “Gas-diffusion flow injection assay for the selective determination of chlorine dioxide based on the fluorescence quenching of chromotropic acid”.  
D. G. Themelis\* and F. S. Kika  
*Microchem. J.*, **82**, 108, 2006.
- 44) “Flow injection direct spectrophotometric assay for the speciation of trace chromium(III) and chromium(VI) using chromotropic acid as chromogenic reagent”.  
D. G. Themelis\*, F. S. Kika and A. Economou  
*Talanta*, **69**, 615, 2006.
- 43) “Sequential injection analysis: Principles, instrument construction, and demonstration by a simple experiment”.

A. Economou\*, P. D. Tzanavaras and D. G. Themelis  
*J. Chem. Educ.*, **82**, 1820, 2005.

42) **“Development and validation of a flow-injection assay for dissolution studies of the anti-depressant drug venlafaxine”.**

P. D. Tzanavaras\*, A. Verdoucas and D. G. Themelis  
*Anal. Sci.*, **21**, 1515, 2005.

41) **“Validated flow injection spectrophotometric assay for the quality and stability control of gemfibrozil tablets”.**

P. D. Tzanavaras\* and D. G. Themelis  
*Anal. Lett.*, **38**, 2165, 2005.

40) **“Assay of the synthetic estrogen fosfestrol in pharmaceutical formulations using capillary electrophoresis”.**

D. G. Themelis\*, A. Trellopoulos, P. D. Tzanavaras and Bo Karlberg  
*J. Pharm. Biomed. Anal.*, **39**, 559, 2005.

39) **“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. Tsiomlektsis and P. D. Tzanavaras  
*Anal. Biochem.*, **330**, 193, 2004.

38) **“Rapid spectrofluorometric determination of lisinopril in pharmaceutical tablets using sequential injection analysis”.**

C. K. Zacharis, P. D. Tzanavaras, D. G. Themelis\*, G. Theodoridis, A. Economou and P. G. Rigas  
*Anal. Bioanal. Chem.*, **379**, 759, 2004.

37) **“Determination of boron in water and pharmaceuticals by sequential-injection analysis and fluorimetric detection”.**

A. Economou\*, D. G. Themelis, H. Bikou, P. D. Tzanavaras and P. G. Rigas  
*Anal. Chim. Acta*, **510**, 219, 2004.

36) **“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. Chromatogr. A*, **1030**, 69, 2004.

35) **“Determination of methimazole and carbimazole by flow injection with chemiluminescence detection based on the inhibition of the Cu(II)-catalysed luminol-hydrogen peroxide reaction”.**

- A. Economou\*, P. D. Tzanavaras, M. Notou and D. G. Themelis  
*Anal. Chim. Acta*, **505**, 129, 2004.
- 34) **“Sequential injection method for the direct spectrophotometric determination of bismuth in pharmaceutical products”**.  
P. D. Tzanavaras, D. G. Themelis\* and A. Economou  
*Anal. Chim. Acta*, **505**, 167, 2004.
- 33) **“Novel flow injection spectrophotometric determination of fosinopril using UV-assisted digestion and an orthophosphates calibration graph”**.  
P. D. Tzanavaras and D. G. Themelis\*  
*Anal. Chim. Acta*, **481**, 321, 2003.
- 32) **“Flow and sequential injection manifolds for the spectrophotometric determination of captopril based on its oxidation by Fe(III)”**.  
P. D. Tzanavaras, D. G. Themelis\*, A. Economou and G. Theodoridis  
*Microchim. Acta*, **142**, 55, 2003.
- 31) **“Flow injection spectrophotometric determination of fosfestrol, following on-line thermal induced digestion and using an ortho-phosphate calibration graph”**.  
P. D. Tzanavaras and D. G. Themelis\*  
*Talanta*, **59**, 207, 2003.
- 30) **“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**, 249, 2002.
- 29) **“Rapid spectrophotometric determination of fosfestrol following on-line hydrolysis by alkaline phosphatase using flow injection and chasing zones”**.  
P. D. Tzanavaras, D. G. Themelis\* and Bo Karlberg  
*Anal. Chim. Acta*, **462**, 119, 2002.
- 28) **“Flow injection spectrophotometric determination of the antibiotic fosfomicin in pharmaceutical products and urine samples after on-line thermal-induced digestion”**.  
P. D. Tzanavaras and D. G. Themelis\*  
*Anal. Biochem.*, **304**, 244, 2002.
- 27) **“Reversed flow-injection manifold for the spectrophotometric determination of captopril based on its inhibitory effect on the Co(II)-2,2'-dipyridyl-2-pyridyl-hydrazone complex formation”**.  
P. D. Tzanavaras, D. G. Themelis\*, A. Economou and G. Theodoridis

*Talanta*, **57**, 575, 2002.

- 26) “Simultaneous flow-injection determination of fluoride, monofluorophosphate and orthophosphate ions using alkaline phosphatase immobilized on a cellulose nitrate membrane and an open-circulation approach”.

P. D. Tzanavaras and D. G. Themelis\*

*Anal. Chim. Acta*, **467**, 83, 2002.

- 25) “Determination of mineral content of active dry yeast used in pharmaceutical formulations”.

G. A. Zachariadis\*, E. S. Raidou, D. G. Themelis and J. A. Stratis

*J. Pharm. Biomed. Anal.*, **28**, 463, 2002.

- 24) “Solvent extraction flow-injection manifold for the simultaneous spectrophotometric determination of free cyanide and thiocyanate ions based upon on-line masking of cyanides by formaldehyde”.

D. G. Themelis\* and P. D. Tzanavaras

*Anal. Chim. Acta*, **452**, 295, 2002.

- 23) “Direct and selective flow-injection method for the simultaneous spectrophotometric determination of calcium and magnesium in red and white wines using on line dilution based on “zone sampling”.

D. G. Themelis\*, P. D. Tzanavaras, A. V. Trellopoulos and M. C. Sofoniou

*J. Agric. Food Chem.*, **49**, 5152, 2001.

- 22) “Rapid flow injecton spectrophotometric determination of monofluorophosphates in toothpastes after on-line hydrolysis by alkaline phosphatase immobilized on a cellulose nitrate membrane”.

P. D. Tzanavaras and D. G. Themelis\*

*Analyst*, **126**, 1608, 2001.

- 21) “Flow-injection manifold for the simultaneous spectrophotometric determination of Fe(II) and Fe(III) using 2,2'-dipyridyl-2-pyridyl-hydrazone and a single-line double injection approach”.

D. G. Themelis\*, P. D. Tzanavaras, F. S. Kika and M. C. Sofoniou

*Fresenius' J. Anal. Chem.*, **371**, 364, 2001.

- 20) “On-line dilution flow injection manifold for the selective spectrophotometric determination of ascorbic acid based on the Fe(II)-2, 2-dipyridyl-2-pyridyl hydrazone complex formation”.

D. G. Themelis\*, P. D. Tzanavaras and F. S. Kika

*Talanta*, **55**, 127, 2001.

- 19) **“Simultaneous spectrophotometric determination of fluoride and monofluorophosphate ions in toothpastes using a reversed flow injection manifold”**.  
D. G. Themelis\* and P. D. Tzanavaras  
*Anal. Chim. Acta*, **429**, 111, 2001.
- 18) **“Flow injection manifold for the direct spectrophotometric determination of bismuth in pharmaceutical products using methylthymol blue as a chromogenic agent”**.  
D. G. Themelis\*, P. D. Tzanavaras and J. K. Papadimitriou  
*Analyst*, **126**, 247, 2001.
- 17) **“Stopped-flow injection liquid-liquid extraction spectrophotometric determination of palladium in airborne particulate matter and automobile catalysts”**.  
A. N. Anthemidis, D. G. Themelis and J. A. Stratis\*  
*Talanta*, **54**, 37, 2001.
- 16) **“Simple, rapid reagent-injection spectrophotometric determination of fluorides in pharmaceutical formulations”**.  
D. G. Themelis\*, P. D. Tzanavaras and H. D. Tzanavaras  
*J. Pharm. Biomed. Anal.*, **25**, 971, 2001.
- 15) **“Reagent-injection spectrophotometric determination of citric acid in beverages and pharmaceutical formulations based on its inhibitory effect on the iron(III) catalytic oxidation of 2,4-diaminophenol by hydrogen peroxide”**.  
D. G. Themelis\* and P. D. Tzanavaras  
*Anal. Chim. Acta*, **428**, 23, 2001.
- 14) **“Normal and differential demasking flow-injection manifold for the direct spectrophotometric determination of zinc(II) in biological materials and pharmaceutical formulations”**.  
D. G. Themelis\*, P. D. Tzanavaras, A. A. Liakou, H. D. Tzanavaras and J. K. Papadimitriou  
*Analyst*, **125**, 2106, 2000.
- 13) **“Selective stopped-flow injection spectrophotometric determination of palladium(II) in hydrogenation and automobile exhaust gas converter catalysts”**.  
A. N. Anthemidis, D. G. Themelis\* and J. Stratis  
*Anal. Chim. Acta*, **412**, 161, 2000.
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- 7) **“Determination of low concentrations of chlorite and chlorate ions by using a flow-injection system”**.  
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- 6) **“Designed study of the effect of different reaction parameters on the catalytic determination of iron (III)”**.  
V. Simeonov\*, D. G. Themelis and J. Stratis  
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- 5) **“Kinetic determination of trace amounts of copper (II) using its catalytic effect on the oxidation of chromotropic acid by hydrogen peroxide”**.  
D. G. Themelis and G. S. Vasilikiotis\*  
*Analyst*, **112**, 797, 1987.
- 4) **“Catalytic determination of nanogram amounts of iron(III) using its catalytic effect on the oxidation of chromotropic acid by hydrogen peroxide”**.  
D. G. Themelis and G. S. Vasilikiotis\*  
*Analyst*, **112**, 791, 1987.
- 3) **“Indirect kinetic microdetermination of oxalate, citrate, and fluoride ions”**.  
G. S. Vasilikiotis\*, C. Papadopoulos, D. G. Themelis and M. Sofoniou

*Microchem. J.*, **28**, 431, 1983.

2) **“Preliminary study of Thessaloniki bay for contamination by mercury and lead”.**

G. S. Vasilikiotis\*, N. A. Voulouvoutis, D. G. Themelis and M. C. Sofoniou  
*Chemosphere*, **11**, 479, 1982.

1) **“Catalytic microdetermination of iron”.**

G. S. Vasilikiotis\*, C. Papadopoulos, M. Sofoniou and D. G. Themelis  
*Microchem. J.*, **22**, 541, 1977.

### **International Conferences**

**1. Second International Symposium on Kinetics in Analytical Chemistry**

9-12 September 1986, Prevesa, Greece.

**2. Winter Conference on Flow-Injection Analysis**

5-7 January 1989, Orlando, Florida, USA.

**3. Pittsburgh Conference**

6-10 March 1989, Atlanta, GA, USA.

**4. 1<sup>st</sup> International Conference of the Chemical Societies of the South-East European Countries. Chemical Sciences and Industry**

1-4 June 1998, Halkidiki, Greece.

**5. International Conference. Instrumental Methods of Analysis. Modern Trends and Applications (IMA 1999)**

19-22 September 1999, Chalkidiki, Greece.

**6. 8<sup>th</sup> International Conference of Flow Analysis**

25-29 June 2000, Warsaw, Poland.

**7. International Conference. Instrumental Methods of Analysis. Modern Trends and Applications (IMA 2001)**

5-8 September 2001, Ioannina, Greece.

**8. 12<sup>th</sup> Euroanalysis (2002)**

8-13 September 2002, Dortmund, Germany.

**9. 3<sup>rd</sup> Aegean Analytical Chemistry Days (3<sup>rd</sup> AACD)**

29 september-2 October 2002, Lesbos, Greece.

**10. 27<sup>th</sup> Symposium on High Performance Liquid Phase Separations and Related Techniques (HPLC 2003)**

15-19 June 2003, Nice, France.

**11. 3rd International Conference. Instrumental Methods of Analysis. Modern Trends and Applications (IMA 2003)**

23-27 September 2003, Thessaloniki, Greece.

**12. 4<sup>th</sup> Aegean Analytical Chemistry Days (4<sup>th</sup> AACD)**

29 september-3 October 2004, Kusadasi/Aydin, Turkey.

**13. 5<sup>th</sup> Aegean Analytical Chemistry Days (5<sup>th</sup> AACD)**

29 september-3 October 2006, Thessaloniki, Greece.

**14. 6<sup>th</sup> International Conference. Instrumental Methods of Analysis. Modern Trends and Applications (IMA 2009)**

4-8 October 2009, Athens, Greece.

**15. 7<sup>th</sup> International Scientific Conference, Aegean Analytical Chemistry Days (AACD 2010)**

29 september-3 October 2010, Lesbos, Greece.

**Greek Conferences**

**1. Greek Wine Society Conference**

8-10 May 1998, EKEFE Dimokritos, Athens, Greece.

**2. 21<sup>th</sup> Pan-Hellenic Conference**

9-12 December 2011, Thessaloniki, Greece.

**3. 15<sup>th</sup> Hellenic Symposium on Medicinal Chemistry (HelMedChem)”**

8-10 May 2012, Athens, Greece.

**4. 8<sup>th</sup> Pan-Hellenic Conference on Free Radicals and Oxidative Stress**

12-14 October 2012, Thessaloniki, Greece.