

SHORT CURRICULUM VITAE



Gerasimos Tsivgoulis, PhD

Associate Professor

Department of Chemistry

University of Patras

GR 26504, Patras, Greece

Tel: +302610996025

Fax: +302610997118

e-mail: tsivgoulis@chemistry.upatras.gr

Short Presentation

Associate Professor Gerasimos Tsivgoulis was born in 1966 in Athens, Greece. He obtained his diploma (Chemistry) in 1987 (grade excellent 9.44/10) and Ph.D. (Bioinorganic Chemistry) in 1991 from the University of Patras (grade Excellent). During his studies he was honored with 5 scholarships as the best student in his class and one special award as the best student in the School of Science.

He spent three and a half years at College de France (Paris, France) as a postdoctoral fellow under the supervision of Jean Marie Lehn (Nobel Prize 1987) working on subjects related to Supramolecular Chemistry and Photochromic Compounds. The following three and a half years (1997-2000) was appointed as Independent researcher at the University of Groningen (Groningen, Netherlands) and his research area was related to the synthesis and study of rigid Polymers and Supramolecular Polymers. In September 2000 he was appointed as Lecturer at the University of Patras (Greece). The period 2006-2016 was an Assistant Professor at the University of Patras and since 2016 he holds the position of Associate Professor at the same University. He is co-author of more than 41 original publications in peer review international journals and in one patent. His work has been cited >890 times.

The research interests of G. Tsivgoulis are related to: a) the synthesis and study of organic compounds b) Supramolecular Chemistry and c) the synthesis and study of organoarsenic compounds mainly of biological interest and their studies by NMR spectroscopy.

The teaching experience of G. Tsivgoulis started in 1997 with courses on Principles of Polymerization in the University of Groningen. As a member of the Academic staff of the Department of Chemistry in the University of Patras he is responsible for a number of courses and laboratories at the graduate and post graduate level with subjects related to Organic Chemistry, Spectroscopy of Organic Compounds and Supramolecular Chemistry.

Research Interests

Main topics:

ORGANIC CHEMISTRY AND NMR SPECTROSCOPY

SUPRAMOLECULAR CHEMISTRY

- Synthesis and Study of Organic Compounds of Biological or Technological Interest
- Synthesis and Study of Photochromic Compounds (Diarylethene and Diazobenzene Systems)
- Synthesis and Study of Inclusion Compounds (Cyclodextrins, Rotaxanes, Crown ethers)
- Synthesis and Study of Arsonolipids
- NMR of Organoarsenic Compounds

Teaching experience

I. Undergraduate teaching.

Lectures in:

1. "Principles of Polymerization", (Dept. of Chemistry, University of Groningen, 1996-1999),
2. "Spectroscopy of Organic Compounds" (Dept. of Chemistry, University of Patras),
3. "Experimental Organic Chemistry" (Dept. of Chemistry, University of Patras),
4. "Chemistry of Heterocyclic compounds" (Dept. of Chemistry, University of Patras),
5. "NMR Spectroscopy" (Dept. of Chemistry, University of Patras),

Practical Courses:

- "Experimental Organic Chemistry I" - Department of Chemistry
- "Experimental Organic Chemistry II" - Department of Chemistry

II. Graduate teaching.

Lectures in:

1. "Supramolecular Chemistry", (Master diploma in "Organic synthesis and Applications in the Chemical Industry", Dept. of Chemistry, University of Athens 2002-2009)
2. "Supramolecular Chemistry", (Master diploma in "Medicinal Chemistry: Design and Development of new Pharmaceutical Products", Dept. of Chemistry, Pharmacy, Biology and Medicine, University of Patras)
3. "Nanochemistry and Chemistry of Fullerenes", (Master diploma in "Synthetic Chemistry", Dept. of Chemistry, University of Patras),
4. "Spectroscopy of Organic Compounds" (Master diploma in "Chemical Biology", Dept. of Chemistry, Pharmacy, Biology and Medicine, University of Patras)

Practical Courses:

- "Synthetic Organic Chemistry", (Master diploma in "Medicinal Chemistry: Design and Development of new Pharmaceutical Products", Dept. of Chemistry, Pharmacy, Biology and Medicine, University of Patras).

Fellowships

- a) Postgraduate fellowship given to Ph.D. students after selection (1987-1991)
- b) Marie Curie post doctoral fellowship under the program: "Human Capital and Mobility-Individual Fellowships" (1993-1995)

Awards

- a) Special award as the best student of the Faculty of Sciences (1984)
- b) Annual governmental awards as the best student in my class (1984-1986)

Grants

- 1993 :** Marie Curie post doctoral fellowship under the program: "Human Capital and Mobility-Individual Fellowships"
- 1999 :** Governmental (Materials Science Centre) financement for two positions (1 PhD and 1 post doc) under the title "Switchable Energy transfer in Supramolecular systems"
- 2000 :** Governmental (NWO) financement under the title "The development of alpha and beta cyclodextrin nanotubes and their use as one dimensional (1D) polymerization molecular reactors"
- 2002 :** "C.Karatheodoris" grant "Photoswithable Ion channels"
- 2004 :** Grant from Empirikion Fountation
- 2008 :** Participation in the FP7-2008-NMP, Large Scale Project " Nanoparticles for therapy and Diagnosis of Alzheimer disease", (2008 - 2013)
- 2011 :** Participation (collaborator) in a General Secretary of Research and Technology Project: "Pre-clinical and Toxicology Evaluation of Immunodominant Myelin Peptides/Mimetics Conjugated with Mannan towards Clinical Phase I-II Studies: A Potential Therapeutic Vaccine Drug in the Treatment of Multiple Sclerosis (MS)", (2011 - 2015)
- 2014 :** Participation (collaborator) in a General Secretary of Research and Technology Bilateral program between Greece and Israel Project: "A novel combined approach for the Immunotherapy of Multiple Sclerosis", (2014 - 2015)

Publications

1. **G. M. Tsivgoulis**, D. N. Sotiropoulos and P. V. Ioannou*, "Decomposition of Alkylarsonic Acids by Acylating Agents", *Phosphorus, Sulfur, and Silicon*, **1991**, 55, 165-168.
2. **G. M. Tsivgoulis**, D. N. Sotiropoulos and P. V. Ioannou*, "1,2- Dihydroxypropyl-3-Arsonic Acid: a Key Intermediate for Arsonolipids", *Phosphorus, Sulfur, and Silicon*, **1991**, 57, 189-193.

3. **G. M. Tsivgoulis**, D. N. Sotiropoulos and P. V. Ioannou*, "rac- (1,2- Diacyloxypropyl-3-Arsonic Acids: Arsonolipid Analogues of Phosphonolipids)", *Phosphorus, Sulfur, and Silicon*, **1991**, *63*, 329-334.
4. S. P. Serves, **G. M. Tsivgoulis**, D. N. Sotiropoulos, P. V. Ioannou* and M. K. Jain* , "Synthesis of (R) and (S) 1-2-Diacyloxypropyl-3-arsonic Acids: Optically active arsonolipids" *Phosphorus, Sulfur, and Silicon*, **1992**, *71*, 99-105.
5. **G. M. Tsivgoulis**, and J.-M. Lehn*, "Photonic Molecular Devices: Reversibly Photoswitchable Fluorophores for Nondestructive Readout for Optical Memory" *Angewandte Chemie International Edition English*, **1995**, *34*(10), 1119-1122.
6. J. Rogers, B.-Z. Yu, S. P. Serves, **G. M. Tsivgoulis**, D. N. Sotiropoulos, P. V. Ioannou* and M. K. Jain*, "Kinetic Basis for the Substrate Specificity during Hydrolysis of Phospholipids by Secreted Phospholipase A₂", *Biochemistry*, **1996**, *35*(29), 9375-9384.
7. **G. M. Tsivgoulis**, and J.-M. Lehn*, "Photoswitched and Functionalized Oligothiophenes: Synthesis, Photochemical and Electrochemical Properties ", *Chemistry: a European Journal*, **1996**, *2*(11) 1399-1406.
8. **G. M. Tsivgoulis**, and J.-M. Lehn*, "Photoswitched Sexithiophenes; Towards Switchable Molecular Wires", *Advanced Materials*, **1997**, *9*, 39-42.
9. **G. M. Tsivgoulis**, and J.-M. Lehn*, "Multiplexing Optical Systems; Multicolor - Bifluorescent - Biredox Photochromic Mixtures.", *Advanced Materials*, **1997**, *9*, 627-630. (Cover in the Journal)
10. J. Biteau, **G. M. Tsivgoulis**, F. Chaput, J.-P. Boilot*, S. L. Gilat, S. Kawai, J.-M. Lehn, B. Darracq, F. Martin and Y. Levy, "Photochromism of Dithienylethene Derivatives Trapped in Sol-Gel Matrices", *Mol. Cryst. Liq. Cryst.*, **1997**, *297*, 65-72.
11. I. K. Spiliopoulos, **G. M. Tsivgoulis** and J. A. Mikroyannidis*, "Rigid-Rod Polyamides And Polyimides Derived From 4,3''-Diamino-2',6'-Diphenyl- or Di(4-Biphenyl)-p-Terphenyl and 4-Amino-4''-Carboxy-2',6'-Diphenyl-p-Terphenyl", *Macromolecules*, **1998**, *31*, 522-529.
12. J. Biteau, F. Chaput, K. Lahlil, J.-P. Boilot*, **G. M. Tsivgoulis**, J.-M. Lehn, B. Darracq, C. Marois, and Y. Levy, "Large and Stable Refractive Index Change in Photochromic Hybrid Materials", *Chem. Mater.*, **1998**, *10*(7), 1945-1950.
13. J. C. Owrutsky, H. H. Nelson, A. P. Baronavski, O.-K. Kim*, **G. M. Tsivgoulis**, S. L. Gilat, and J.-M. Lehn, "Optical Properties and Dynamics of a Photochromic Bisthienylethene in Solution and in Polymer Film", *Chem. Phys. Lett.*, **1998**, *293*, 555-563.
14. **G. M. Tsivgoulis**, D. N. Sotiropoulos and P. V. Ioannou*, "On the Behaviour of Sulfonates towards As(III) Nucleophiles", *Phosphorus, Sulfur, and Silicon*, **1998**, *141*, 97-110.
15. J. A. Mikroyannidis* and **G. M. Tsivgoulis**, "Synthesis and Characterization of Soluble, Blue-Fluorescent Polyamides and Polyimides Containing Substituted p-Terphenyl as well as Long Aliphatic Segments in the Main Chain", *J. Polym. Sci. Part A: Polym. Chem.*, **1999**, *37*, 3646-3656.

16. M. P. L. Werts, M. van den Boogaard, G. Hadziioannou and **G. M. Tsivgoulis***, "Towards Mechanically Linked Polyrotaxanes by Sequential Deprotection - Coupling Steps of Bifunctional Rotaxanes", *Chemical Communications*, **1999**, 623-624.
17. E. Drakopoulou, **G. M. Tsivgoulis**, A. Mukhopadhyay, A. Brisson*, "Design and Synthesis of Multifunctional phospholipids", *Tetrahedron Letters*, **2000**, 41(21), 4131-4134.
18. M. P. L. Werts, M. van den Boogaard, **G. M. Tsivgoulis** and G. Hadziioannou*, "Mechanically Linked Polyrotaxanes: A stepwise approach", *Macromolecules*, **2003**, 36(19) 7004-7013.
19. M. N. Haikou, **G. M. Tsivgoulis** and P. V. Ioannou*, "On the Reaction of Triaryl Trithioarsenites (ArS)₃As with Octasulfur", *Z. Anorg. Allg. Chem.*, **2004**, (630), 1084-1089.
20. E. Ntararas, H. Matralis* and **G. M. Tsivgoulis***, "Easily Characterized systems of C₆₀ grafted on SiO₂", *Tetrahedron Letters*, **2004**, 45(22), 4389-4391.
21. **G. M. Tsivgoulis**, P. A. Afroudakis and P. V. Ioannou*, "Preparation of dehydro-L-(+)-ascorbic acid dimmer by oxidation of ascorbic acid with arsenic acid/iodine and formation of complexes between arsenious acid and ascorbic acid", *J. Inorg. Biochem.*, **2004**, (98), 649-656.
22. **G. M. Tsivgoulis**, T. C. Fotopoulou and P. V. Ioannou*, "The oxidation of Trialkyl Trithioarsenites (RS)₃As, by octasulfur/Triethylamine and Dioxygen", *Phosphorus, Sulfur, and Silicon*, **2006**, 181, 413-425.
23. M. A. Lala, **G. M. Tsivgoulis** and P. V. Ioannou*, "Preparation of 2,3,4-trihydroxybutylarsonic acid: A starting compounds for novel arsonolipids", *Phosphorus, Sulfur, and Silicon*, **2007**, 182(12) 2747-2760.
24. K. Prousalis, **G. M. Tsivgoulis**, T. Tsegenidis*, "Production of antibodies from chicken egg yolk to phenyl-N-methylcarbamate insecticides for analytical purposes", *International Journal of Environmental Analytical Chemistry*, **2007**, 87(13-14), 1065-1078.
25. **G. M. Tsivgoulis**, M. A. Lala and P. V. Ioannou*, "Preparation of DL-2,3,4-trihydroxybutylarsonic acid and DL-2,3-dihydroxybutane-1,4-bis(arsenic acid): starting compounds for novel arsonolipids", *Chem. Phys. Lip.*, **2007**, 148(2), 97-104.
26. **G. M. Tsivgoulis**, and P. V. Ioannou*, "A reinvestigation of the synthesis of arsonolipids (2,3-diacyloxypropylarsonic acids)", *Chem. Phys. Lip.*, **2008**, 152(2), 113-121.
27. P. V. Ioannou*, **G. M. Tsivgoulis***, D. G. Vachliotis, "The Lewis-base Behaviour of Bunsen's Cacodyl Disulfide, Me₂As(S)-S-AsMe₂, Towards Molecular Halides of Group 13", *Main Group Chemistry*, **2009**, 8 (3), 151-161.
28. T. D. Sideris, **G. M. Tsivgoulis**, D. G. Vachliotis and P. V. Ioannou*, "The Reactions of Triethylamine-activated Octasulfur with Thioarsenites, L₂As-SPh (L = Me, Ph), Bunsen's Cacodyl Disulfide, and Triphenylarsine", *Main Group Chemistry*, **2009**, 8 (3), 163-176.

29. **G. M. Tsivgoulis***, and P. V. Ioannou*, "A high yield procedure for the preparation of arsonolipids (2,3-diacyloxypropylarsonic acids)", *Chem. Phys. Lip.*, **2010**, *163*, 51-55.
30. **G. M. Tsivgoulis**, and P.V. Ioannou*, "The nucleophilicity of $M(SPh)_3$ ($M = P, As$) and $PhAs(SPh)_2$ towards carboxylic acid anhydrides", *Main Group Chemistry*, **2011**, *10*, 51-62.
31. P. V. Ioannou* and **G. M. Tsivgoulis**, "The nucleophilicity of $M(SPh)_3$ ($M = P, As$) and $L-As(SPh)_2$ ($L = Ph, 2-O_2N-Ph$) towards fatty acyl chlorides, $RCOCl$ ", *Main Group Chemistry*, **2011**, *10*, 177-185.
32. P. V. Ioannou* and **G. M. Tsivgoulis**, "On the use of organotin reagents for the preparation of partially esterified glycerol and meso-erythritol", *Main Group Chemistry*, **2011**, *10*, 115-125.
33. P. V. Ioannou*, M. A. Lala and **G. M. Tsivgoulis**, "Preparation and properties of fully esterified erythritol", *Eur. J. Lipid Sci. Technol.*, **2011**, *113*, 1357-1362.
34. **G. M. Tsivgoulis***, and P. V. Ioannou, "Esterification equilibrium constants of arsonic and arsinic acids", *Monatshefte fuer Chemie*, **2012**, *143*(12), 1603-1608.
35. P. V. Ioannou* and **G. M. Tsivgoulis**, "Preparation of thiolates of arsenic (III) and bismuth(III) with dithioerythritol, 2-mercaptoethanesulfonic acid and its sodium salt, 6-mercaptopurine and its riboside", *Main Group Chemistry*, **2012**, *11*, 89-102.
36. P. V. Ioannou*, **G. M. Tsivgoulis***, and M. A. Lala, "Racemic 2,3,4-Triacyloxybutylarsonic Acids: A New Class of Arsonolipids with Three Acyl Chains", *Phosphorus, Sulfur, and Silicon*, **2013**, *188*, 941-954.
37. P. V. Ioannou* and **G. M. Tsivgoulis***, "Thiolates of arsenic(III) and Bi(III) with the anti-hypertensive drug captopril", *Main Group Chemistry*, **2013**, *12*, 221-233.
38. P. V. Ioannou* and **G. M. Tsivgoulis***, "Thiolates of arsenic(III), antimony(III), and bismuth(III) with DL- α -dihydrolipoic acid", *Monatshefte fuer Chemie*, **2014**, *145*(6), 897-909.
39. P. V. Ioannou* and **G. M. Tsivgoulis**, "The reaction of dithioerythritol and dithiothreitol with As(III), Sb(III), and Bi(III) compounds", *Monatshefte fuer Chemie*, **2015**, *146*(2), 249-257.
40. G. G. Kordopati, T. V. Tselios, T. Kellici, F. Merzel, T. Mavromoustakos, S. G. Grdadolnik*, **G. M. Tsivgoulis***, "A novel synthetic luteinizing hormone-releasing hormone (LHRH) analogue coupled with modified β -cyclodextrin: Insight into its intramolecular interactions", *Biochim. Biophys. Acta, General*, **2015**, *1850*, 159-168.
41. P. V. Ioannou* and **G. M. Tsivgoulis**, "The reduction of p-arsanilic acid (p-aminophenylarsonic acid) to its arsonous acid or arsine oxide: a case study", *Main Group Chemistry*, **2015**, *14*, 237-253.

Memberships: Member of the Greek Chemist Companion.

Publications in Peer Reviewed Journals: 41

Conferences: 30

Citations: (self citations not included) >890