

CURRICULUM VITAE
Dr. Kyriakos Papadopoulos
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I. Personal

Place and date of birth Kilkis, Greece, March 11, 1955
Marital Status Married, two children
Nationality Greek
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II. Studies - Degrees earned

1. Degree in Chemistry, University of Bonn, October 1981.
2. Doctorate in Organic Chemistry, University of Bonn, January 1986. Thesis titled: Asymmetric Synthesis of β - and β,γ -disubstituted δ -ketoesters via Michael Addition of SAMP-/RAMP-hydrazones to α,β -unsaturated Esters (in German).

III. Languages: German, English

IV. Teaching Experience

1. 1982 to 1985: Courses on General and Organic Chemistry for medical students at the University of Bonn, Germany.
2. 1986 to 1989: Courses on Advanced Organic Chemistry for chemistry students at the Technical University of Aachen, Germany.
3. 1990 - 2005: Courses on Organic Chemistry for PhD students at the National Research Center "Demokritos".

V. Career

1. Researcher, member of the group of "Asymmetric Organic Synthesis" at the Universities of Bonn and Aachen (1982-1985 and 1986 - 1989).
2. Researcher, member of the group of Photochemistry at the National Research Center "Demokritos" (1989 - today).

VI. Other Activities

1. Member of Examining Committees at the above Institutes.
2. Member of Research Council of Institute of Physical Chemistry of NCSR Demokritos, 2000-2001 and 2003-2005.
3. Reviewer of scientific proposals of the General Secretariat of Research and Technology of Greece and the Research Promotion foundation of Cyprus.
4. Reviewer of scientific papers of the Journals: Analytica Chimica Acta, Talanta, Polymer European Journal, Journal of Organic Chemistry, Luminescence, Journal of Photochemistry and Photobiology A: Chemistry.
5. Supervision of 15 Diploma works, 4 Master theses and 4 Doctoral theses.

VII. Citations: About 500 citations in international journals.

VIII. Participation in Research Projects

1. Participation in a Joint Research and Technology Program between Czech Republic and Greece entitled Sensitized chemiluminescence based immunoassays in micellar media, John Nikokavouras, Kyriakos Papadopoulos, Dimitra Dimotikali. The project was funded with 12000 euros by the General Secretariat of Research and Technology for the period 1997-1998.
2. Participation in a research project entitled "Radiochemiluminescence of azaaromatics and phthalhydrazides-prospects for analytical applications and radiation dosimeters", John Nikokavouras, Kyriakos Papadopoulos, Dimitra Dimotikali and Theodoros Triantis, funded by the International Atomic Energy Agency with 12000 euros. Research Contract No. GRE-10581. Period of Contract 1999-2001.
3. Participation in a Joint Research and Technology Program between Romania and Greece entitled "Pro- and antioxidant effects in therapy - new methods for antioxidant evaluation". Kyriakos Papadopoulos, John Nikokavouras, Dimitra Dimotikali, Theodoros Triantis, funded by General Secretariat of Research and Technology of Greece with 12000 euros. Period of Contract: 2000-2002.
4. NATO Fellowship Program for Partner Countries, 2002, Ministry of Economy and Finance, Directorate for International Organizations and Policies, Research Contract DOO 850, K. Papadopoulos (supervisor), M. Merlani (Tbilisi, Georgia). Title of the project: Synthesis and structure determination of some unknown hydrazones with supposed biological activity on the bases of steroidal sapogenin-tigogenin.
5. Participation in the project: "Photocatalysis for the mild and selective functionalization of non-activated C-H bonds", COST Action D29, Prof. Angelo Albini (Coordinator), 1/1/2004-31.12.2007.
6. Participation in the project: Excellence in the Research Institutes, Action 3.3.1 in the research field entitled "Advanced functional materials", EE 961, Period of Contract: 2002-2005, funded with 450.000 Euro.
7. Participation in a Joint Research and Technology Program between Serbia and Greece entitled "Development of novel methods for the preparation of optically active amino acids and amino alcohols". Kyriakos Papadopoulos (coordinator), Oriana Lanitou, K. Agiamarnioti, D. Dimotikali, Theodoros Triantis. Funded by General Secretariat of Research and Technology of Greece. Research Contract No. 2769. Period of Contract: 2004-2006, funded with 12.000 Euro.
8. Participation in two fellowship programs entitled "Evaluation of antioxidant activities of natural products by chemiluminescence techniques". Collaborating young scientists: Theodor Triantis and Aspasia Nikokavoura. Duration of each project 1 year (2003-2004 and 2009-2010), funded with 7.200 €.
9. Participation in a Joint Research and Technology Program between Czech Republic and Greece entitled "Sensitized chemiluminescence based on nanometer-sized ferric oxides - Prospects for Analytical Applications", Kyriakos Papadopoulos, K. Agiamarnioti, D. Dimotikali, Theodoros Triantis, funded by General Secretariat of Research and Technology of Greece with 12.000 Euro. Research Contract No., Period of Contract: 2006-2008.

10. Participation in a research project entitled: "Development of innovative bioactive magnetic nanomaterials for diagnosis and follow-up pathological situations by magnetic tomography", PEP Attikis 2000-2006, F.Tsilimbari (coordinator), Subwork: "Synthesis and characterization of paramagnetic gadolinium complexes, K. Papadopoulos, K. Agiamarnioti, E. Yannakopoulou, 9.900 €, duration 18 months, Start of the project 1/9/2006.
11. Participation in a research project entitled "Sensitized chemiluminescence by nanostructured catalysts - Prospects for analytical applications in Analytical Chemistry», «DEMOEREVNA» NCSR «Demokritos», K. Papadopoulos, K. Agiamarnioti, E. Yannakopoulou, D. Petridis, Ch. Trapalis, B. Tzitzios, D. Christodouleas, 15.000 €, Duration 2 years, Start of the project 1/1/2007.

VIII. Supervision and guidance of graduate and undergraduate students

Doctoral Theses

1. S. Spartalis, Investigations on chemiluminescence of novel lucigenin derivatives in homogeneous and micellar media, Department of Chemistry, University of Athens, 1999.
2. T. Triantis, Photo- and radiostoragechemiluminescence of aromatic compounds - Prospects for analytical applications, Department of Chemical Engineering, Technical University of Athens, 2002.
3. K. Agiamarnioti, Synthesis and chemiluminescent properties of novel functionalized biotinylated acridinium esters, University of Athens, 2006.
3. O. Lanitou, Design and development of novel chiral phase-transfer catalysts for asymmetric synthesis of organic compounds, Technical University of Athens, in progress.
4. A. Pinaka, Synthesis, characterization and applications of chiral organo-inorganic hybrid catalysts for asymmetric synthesis of organic compounds, Technical University of Athens, in progress.

Master Theses

1. J. Schizas, Effect of γ -irradiation on 9-cyanoacridine", University of Athens, 1998.
2. S. Kamari, Chemiluminescence of acridinium esters in micellar solutions, University of Athens, 1998.
3. K. Agiamarnioti, Synthesis and chemiluminescent properties of novel functionalized biotinylated acridinium esters, University of Athens, 2003.
4. D. Christodouleas, Development of a novel chemiluminescent method for the evaluation of the antioxidant activity of natural products, University of Athens, 2007.

Diploma Theses

1. Theodoros Triantis, Chemiluminescence of radiolyzed aza-aromatics, Technical University of Athens, 1996.
2. John Lignos, Radiochemiluminescence of acridones - Prospects for the development of novel chemical dosimeters for ionizing radiations, Technical University of Athens, 1998.

3. Emanuel Stamatakis, Radiochemiluminescence of benzylacridines - Prospects for the development of novel chemical dosimeters for ionizing radiations, Technical University of Athens, 1998.
4. Arnaud Chantron, Current research on sensitized chemiluminescence, University of Dijon, France, 1998.
5. Johanna Dousgou, Synthesis and Radiochemiluminescence of 4, 4'-Dicarboxy-2, 2'-bis-quinolinium salts - Prospects for Analytical Applications, Technical University of Athens, 1999.
6. Katerina Tsaggaraki, Studies on the photostoragechemiluminescence of aromatic ketones with reactive oxygen species, Technical University of Athens, 2001.
7. Christoforos Tzikis, Investigations of the adulteration of extra virgin olive oils with seed oils using their weak chemiluminescence, Technical University of Athens, 2002.
8. Athanasios Stelakis, Evaluation of antioxidant activities of phenolic compounds using the lucigenin chemiluminescence, Technical University of Athens, 2004.
9. Johanna Katsavou, Investigations on the antioxidant activity of α -amino acids by chemiluminescence, Technical University of Athens, 2005.
10. Pagona Pavli, Estimation of antioxidant activities by spectroscopic techniques, Technical University of Athens, 2005.
12. John Tsakopoulos, Estimation of antioxidant activities of α -amino acids by luminol chemiluminescence, Technical University of Athens, June 2008.
13. Elias Papaelias, Evaluation of antioxidant activities of phenolic compounds by fluorescence techniques, Technical University of Athens, November 2008.
14. Nikolaos Menegas, Application of nanostructured cerium oxide for the determination of hydroquinidine hydrochloride in pharmaceutical formulations by chemiluminescence, Technical University of Athens, 2009.
15. Konstantinos Anousakis, Catalytic asymmetric synthesis of optically active alcohols and α -ketoesters under phase-transfer conditions, Technical University of Athens, 7/2010.

Outstanding achievements

1. The PhD Thesis was evaluated with the mark *Ausgezeichnet (Excellent)*, 2/1986.
2. The paper No 38 was included in the *TOP25 Hottest articles* in the Journal of Analytica Chimica Acta in the year 2005.

IV. PUBLICATIONS LIST

1. Asymmetric synthesis of β -substituted δ -ketoesters via Michael additions of SAMP/RAMP-hydrazones to α,β -unsaturated esters. Virtually complete 1,6-asymmetric induction, D. Enders and K. Papadopoulos, *Tetrahedron Lett.* 24 (1983) 4967-4970.
2. Synthesis of diastereo- and enantiomerically pure α -amino γ -oxocarboxylates by reaction of acyliminoacetates with enamines derived from 6-membered ketones, R. Kober, K. Papadopoulos, W. Miltz, D. Enders, W. Steglich, *Tetrahedron* 41 (1985) 1693-1701.
3. Asymmetric Michael additions via SAMP/RAMP-hydrazones. Anti-diastereo- and enantioselective synthesis of 3,4-disubstituted 5-oxoalkanoates, D. Enders, K. Papadopoulos, B. Rendenbach, *Tetrahedron Lett.* 27 (1986) 3491-3494.
4. Chemiluminescence in organized molecular assemblies. Chemiluminescence of lucigenin in Lyso-PAF (C16). E. Varveri, A.E. Mantaka-Marketou, K. Papadopoulos, J. Nikokavouras, *J. Photochem. Photobiol. A: Chem.*, 66 (1992) 113-118.
5. Enzyme catalyzed highly stereoselective C-C bond forming reactions, D. Enders, B. Bockstiegel, H. Dyker, U. Jegelka, D. Kownatka, H. Kuhlmann, D. Mannes, J. Tiebes and K. Papadopoulos, *DECHEMA Monographie*, 129 (1993) 209 -223.
6. Asymmetric Michael additions via SAMP-/RAMP-hydrazones. Enantioselective synthesis of 2-substituted 4-oxosulfones. D. Enders, K. Papadopoulos and E. Herdtweck, *Tetrahedron*, 49 (1993) 1821-1830.
7. Synthesis of novel protected hemiaminal N-methoxymethyl-N'-methyl- 9,9'-biacridylidene from Lucigenin. K. Papadopoulos and J. Nikokavouras, *Tetrahedron Lett.*, 34 (1993) 1371-1372.
8. Synthesis of novel N,N'-dialkyl-9,9'-biacridylidenes and 9,9'-biacridinium nitrates containing long alkyl chains. K. Papadopoulos and J. Nikokavouras, *J. Prakt. Chemie-Chem. Zeitung*, 335 (1993) 633-636.
9. Chemiluminescence of N, N'-dialkyl-9,9'-biacridinium nitrates in aqueous and non aqueous systems, K. Papadopoulos, J. Hadjianestis and J. Nikokavouras, *J. Photochem. Photobiol. A: Chem.*, 75 (1993)91-96.
10. Chemiluminescence in organized molecular assemblies. Chemiluminescence of lucigenin derivatives containing long alkyl chains in micellar media. K. Papadopoulos, S. Spartalis and J. Nikokavouras, *Anal. Chim. Acta*, 290 (1994) 179-185.
11. Chemiluminescence of N,N'-dialkyl-9,9'-biacridylidenes in homogeneous and micellar media. K. Papadopoulos, S. Spartalis, J. Nikokavouras, D. Dimotikali and K. Mitsoulis, *J. Photochem. Photobiol. A: Chem.* 83 (1994) 15-19.
12. Reactions of lucigenin in protic solvents in the presence of amines, K. Papadopoulos, J. Nikokavouras, D. Dimotikali, *J. Prakt. Chemie-Chem. Zeitung*, 336 (1994) 506-508.

13. Chemiluminescence of protected hemiaminal N-methoxymethyl-N'-methyl-9,9'-biacridylidene in organized molecular assemblies and organic solvents, K. Papadopoulos, K. Mitsoulis, J. Nikokavouras, D. Dimotikali, *Anal. Chim. Acta*, 304 (1995) 91-96.
14. Asymmetric Michael additions via SAMP/RAMP-hydrazones. Enantioselective synthesis of 2-substituted 4-oxophosphonates. D. Enders, H. Wahl and K. Papadopoulos, *Liebigs Ann. Chem.* 1995, 1177-1184.
15. Chemiluminescence of novel acridans. K. Papadopoulos, J. Nikokavouras, D. Dimotikali, *Chim. Chronika, N. Series*, 25 (1996) 35-39.
16. Chemiluminescence of photolyzed or radiolyzed acridine. K. Papadopoulos, J. Nikokavouras and D. Dimotikali, *J. Photochem. Photobiol. A: Chem.*, 103 (1997) 51-55.
17. Diastereo- and enantioselective synthesis of 2,3- and 1,2-disubstituted 4-oxophosphonates via asymmetric Michael-addition. D. Enders, H. Wahl and K. Papadopoulos, *Tetrahedron*, 53 (1997) 12961-12978.
18. Electrogenerated chemiluminescence of phthalic hydrazide in the presence of fluorescein and cetyltrimethylammonium halides and pseudohalides. J. Hrbáč, J. Lasovský, K. Papadopoulos, J. Nikokavouras, *J. Biolumin. Chemilumin.*, 13 (4) 222 (1998). Full text in: *Bioluminescence and chemiluminescence: Perspectives for the 21st century*. J. Wiley and Sons, Chichester, New York (1999)
19. Radiochemiluminescence of acridones and alkyl acridines. K. Papadopoulos, J. Lignos, M. Stamatakis, D. Dimotikali, J. Nikokavouras, *J. Photochem. Photobiol. A: Chem.*, 115, (1998) 137-142.
20. Sensitized chemiluminescence of long alkyl chain energy transfer donors and acceptors in micellar media, K. Papadopoulos, A. Chantron, J. Nikokavouras, J. Hrbac, J. Lasovsky, *J. Photochem. Photobiol. A: Chem.* 116 (1998) 153-157.
21. Chemiluminescence at liquid-liquid interfaces. Enhanced chemiluminescence of lucigenin and long alkyl Lucigenins. K. Papadopoulos, S. Spartalis and J. Nikokavouras, *J. Photochem. Photobiol. A: Chem.*, 119, (1998) 115-118.
22. Photo- and radiochemiluminescence: Reductive chemiluminescence of lucigenin by photo- or radiooxygenated amines and amides. K. Papadopoulos, T. Triantis, D. Dimotikali, J. Nikokavouras, *J. Photochem. Photobiol. A: Chem.* 124 (1999) 85-90.
23. Radiochemiluminescence of carboxyquinolines, K. Papadopoulos, T. Triantis, D. Dimotikali, J. Nikokavouras, *J. Photochem. Photobiol. A: Chem.* 131(2000) 55-60.
24. Radio- and photostoragechemiluminescence: Analytical Prospects, K. Papadopoulos, T. Triantis, D. Dimotikali, J. Nikokavouras, *Anal. Chim. Acta*, 423, (2000) 239-245.
25. Evaluation of antioxidant activity by photostoragechemiluminescence, K. Papadopoulos, T. Triantis, D. Dimotikali, J. Nikokavouras, *Anal. Chim. Acta*, 433, (2001) 263-268.

26. Photo-, radio- and sonostoragechemiluminescence of buckminsterfullerenes, C₆₀. K. Papadopoulos, T. Triantis, S. Boyatzis, D. Dimotikali, J. Nikokavouras, J. Photochem. Photobiol. A: Chem. 143 (2001) 93-97.
27. Studies on the photostoragechemiluminescence of aromatic ketones with reactive oxygen species. Prospects for analytical applications, K. Papadopoulos, T. Triantis, K. Tsaggaraki, D. Dimotikali, N. Iftimie, A. Meghea, J. Photochem. Photobiol. A: Chem. 152 (2002) 11-16.
28. Investigations of the adulteration of extra virgin olive oils with seed oils using their weak chemiluminescence, K. Papadopoulos, T. Triantis, C. Tzikis, A. Nikokavoura and D. Dimotikali, Anal. Chim. Acta, 464, (2002) 135-140.
29. Comparative studies on the antioxidant activity of aqueous extracts of olive oils and seed oils using chemiluminescence, K. Papadopoulos, T. Triantis, E. Yannakopoulou, A. Nikokavoura, D. Dimotikali, Anal. Chim. Acta, 494 (2003) 41-47.
30. Oxidative stress quantifying in biosystems. Chemiluminescence testing of the antioxidant activity of some molecules of biological interest, A. Meghea, N. Iftimie, M. Giurginca, K. Papadopoulos, Rev. de Chimie, 54 (2003) 885 - 887.
31. The quantification of the oxidative stress in biosystems III. Behavior of vitamins during peroxidation and UV irradiation, N. Iftimie, M. Giurginca, A. Meghea, K. Papadopoulos, Rev. de Chimie, 55 (2004) 92-94.
32. Conversion of epiandrosterone into 17 β -amino-5 α -androstane, M.I. Merlani, M.G. Davitshvili, N. Sh. Nadaraia, M.I. Sikaharulidze, K. Papadopoulos, Chemistry of Natural Compounds. 40, 144 - 146 (2004).
33. Some derivatives of 5 α -ketosteroid hydrazones: Synthesis from Tigogenin and antituberculosis activity, M.I. Merlani, E.P. Kemertelidze, K. Papadopoulos, N.I. Menshova, Rus. J. Biorg. Chem, 30 (2004) 552 - 557.
34. Sensitized chemiluminescence in micellar mixtures of phthalhydrazide and selected dyes, Jan Hrbáč, Dana Sichertová, Martina Bancířová, Jan Lasovský, Kyriakos Papadopoulos, John Nikokavouras, J. Photochem. Photobiol. A: Chem., 167 (2004) 169-175.
35. Synthesis and chemiluminescent properties of novel biotinylated acridinium esters, K. Agiamarnioti, T. Triantis, K. Papadopoulos, D. Dimotikali, Acta Chim. Slov, 51 (2004) 67- 76.
36. Synthesis and fluorescent properties of novel biotinylated labels. Prospects for application in bioanalytical detections, K. Agiamarnioti, T. Triantis, K. Papadopoulos D. Dimotikali, J. Photochem. Photobiol. A: Chem 172 (2005) 215-221.
37. Novel Biotinylated Acridinium Derivatives: New Reagents for Fluorescence Immunoassays and Proteomics, A. Scorilas, K. Agiamarnioti, K. Papadopoulos, Clin. Chim. Acta, 357 (2005) 159-167.
38. Investigations on the antioxidant activity of aqueous extracts of fruits and vegetables on

- superoxide radicals using chemiluminescence techniques, K. Papadopoulos, T. Triantis, A. Stelakis, D. Dimotikali, *Anal. Chim. Acta*, 536 (2005) 101-105.
39. 10-(2-biotinyloxyethyl)-9-acridone. A novel fluorescent label for (strept)avidin-biotin based assays, K. Agiamarnioti, T. Triantis, K. Papadopoulos, A. Scorilas, J. Photochem. Photobiol. A: Chem, 181 (2006) 126-131.
 40. Synthesis of novel steroidal isonicotinoylhydrazones and thiosemicarbazones from tigogenin, M. I. Merlani, L. Sh. Amiranashvili, M. G. Davitishvili, E. P. Kemertelidze, K. Papadopoulos, and E. Yannakopoulou, *Chemistry of Natural Compounds*, 42 (2006) 194-197.
 41. Synthesis of 17 α -amino-5 α -androst-2-ene from epiandrosterone, M. I. Merlani, L. Sh. Amiranashvili, E. P. Kemertelidze, K. Papadopoulos and E. Yannakopoulou, *Chemistry of Natural Compounds*, Vol. 42 (2006) 313-315.
 42. Chemiluminescent studies on the antioxidant activity of amino acids, T.M. Triantis, E. Yannakopoulou, A. Nikokavoura, D. Dimotikali and K. Papadopoulos, *Anal. Chim. Acta*, 591 (2007) 106-111.
 43. Studies on the catalytic activity of novel hybridized chiral organo-inorganic catalysts for epoxidation and alkylation reactions, O. Lanitou, D. Dimotikali, E. Yannakopoulou and K. Papadopoulos, *Chem. Eng. J*, 134 (2007) 72-77.
 44. Carbon electrodes modified by nanoscopic Iron (III) Oxides to assemble chemical sensors for the hydrogen peroxide amperometric detection., Jan Hrbac, Vladimir Halouzka, Radek Zboril, Kyriakos Papadopoulos and Theodor Triantis, *Electroanalysis*, 19 (2007) 1850-1854.
 45. Synthesis and antioxidant activity of 3-(3,4-dihydroxyphenyl)glyceric acid. Monomer of a biologically active polyether isolated from *Symphytum asperum* and *S. caucasicum*, M. Merlani, V. Barbakadze, L. Gogilashvili, L. Amiranashvili, K. Mulkijanyan, E. Yannakopoulou, K. Papadopoulos, D. Christodouleas, *J. Planta Medica*, 74 (2008) 1167-1168.
 46. Sensitized chemiluminescence of luminol catalyzed by colloidal dispersions of nanometer-sized ferric oxides, T.M. Triantis, K. Papadopoulos, E. Yannakopoulou, D. Dimotikali, J. Hrbáč, R. Zbořil, *Chem Eng. J*, 144 (2008) 483-488.
 47. Development and validation of a chemiluminogenic method for the evaluation of antioxidant activity of hydrophilic and hydrophobic antioxidants, D. Christodouleas, C. Fotakis, K. Papadopoulos, E. Yannakopoulou, A.C. Calokerinos, *Anal. Chim. Acta*, 652 (2009) 295-302.
 48. Simulation of polyurathane activated carbon surface interactions, Tamara Travinskaya, A. Perekhrest, Y. Savelyev, N. Kanellopoulos, K. Papadopoulos, K. Agiamarnioti, *Appl Surf Sci* 256 (2010) 4391-4396.
 49. Enantioselective synthesis and antioxidant activity of 3-(3,4-dihydroxyphenyl)glyceric acid. Monomer of a biologically active polyether isolated from *Symphytum asperum* and

- S. caucasicum, M. Merlani, V. Barbakadze, L. Gogilashvili, L. Amiranashvili, K. Mulkijanyan, E. Yannakopoulou, K. Papadopoulos, *Chirality*, 22 (2010) 717-725.
50. Terpyridine- and 2,6-Dipyrazinylpyridine-Coordinated Ruthenium(II) Complexes: Synthesis, Characterization and Application in TiO₂-based Dye-Sensitized Solar Cells, G.C. Vougioukalakis, T. Stergiopoulos, G. Kantonis, A.G. Kontos, K. Papadopoulos, A. Stublla, P.G. Potvin, P. Falaras, *J. Photochem. Photobiol. A: Chem*, 214 (2010) 22-32.
51. Flow-based methods with chemiluminescence detection for food and environmental analysis, D. Christodouleas, Ch. Fotakis, A. Economou, K. Papadopoulos, A. Calokerinos, *Anal. Lett.* (2010) in press.

German Patent

Synthesis of optically active α -acylamino- γ -oxocarboxylates and oxophosphonates, D. Enders, K. Papadopoulos R. Kober, W. Steglich, W. Miltz, T. Schrader, German Patent, Pat. No. DE-3609972A1, BASF AG (1986).