# CURRICULUM VITAE – GEORGIOS C. VOUGIOUKALAKIS

**January 2014**


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| *Date and place of birth:* | Rethimno-Crete (Greece), 17/05/1976 |
| *Nationality:* | Greek |
| *Marital status:* | Married (2005) with a child (2010) |
| *Official address:* | University of Athens<br>Department of Chemistry<br>Laboratory of Organic Chemistry<br>Panepistimiopolis Zografou, 15771, Athens, Greece<br>Tel.: +30-210-6503634<br>Fax: +30-210-6511766<br>E-mail: vougiouk@chem.uoa.gr |


## PROFESSIONAL EXPERIENCE / POSITIONS

- **Jan. 2014 – today** **Lecturer in Organic Chemistry**
  National and Kapodistrian University of Athens, Department of Chemistry, Athens (Greece). Lecturer in Organic Chemistry (Laboratory of Organic Chemistry): Head of the Catalysis and Advanced Materials Group.

- **April 2012 – July 2012** **Visiting Scholar**
  University of California - Irvine, Department of Chemical Engineering and Materials Science, Irvine, California (USA): Bottom-up synthesis of graphene nanoribbons and research in the field of fullerene chemistry.

- **Oct. 2008 – Dec. 2013** **Research Associate**
  National Centre of Scientific Research "Demokritos", IAMPPNM, Department of Physical Chemistry, Athens (Greece): Design, synthesis, and characterization of organic and coordination compounds with applications in dye-sensitized solar cells. Research in the field of organocatalysis.

- **Oct. 2007 – Oct. 2008** **Postdoctoral Scholar**
  National and Kapodistrian University of Athens, Department of Chemistry, Athens (Greece). Collaboration with Prof. N. Hadjichristidis: Design, synthesis, and characterization of organometallic polymerization catalysts. Synthesis and characterization of organic homo- and copolymers with well-defined macromolecular architecture and narrow molecular weight distribution.

- **Oct. 2005 – Oct. 2007** **Postdoctoral Scholar**
  California Institute of Technology, Division of Chemistry and Chemical Engineering, Pasadena, California (USA). Collaboration with Prof. R. H. Grubbs (Nobel Prize in Chemistry 2005) in the field of organic and organometallic chemistry: Design, synthesis, and mechanistic studies of organometallic complexes that catalyze useful chemical transformations. Applications in the field of organic and polymer chemistry.

- **July 2005 – Oct. 2005** **Postdoctoral Researcher**
  University of Crete, Department of Chemistry, Heraclion (Greece). Collaboration with Prof. M. Orfanopoulos: Research in the field of fullerene chemistry, photochemistry, and physical organic chemistry.

- **Sept. 2004 – June 2005 Military Service (Compulsory)**
  Greek Air Force. Chemist – Sergeant (Scientific Officer): Quality control of fuels, oils, hydraulics, and fibers used by the Greek Air Force. Platoon leader during the basic training.

- **May 2003 – Aug. 2003 Visiting Researcher**
  University of Sussex, Department of Chemistry, Brighton (UK). Collaboration with Prof. K. Prassides in the field of fullerene and materials chemistry.

- **June 2001 – July 2001 Visiting Researcher**
  Consiglio Nazionale delle Ricerche (Italian National Research Council), Institute for the Organic Synthesis and Photoreactivity, Bologna (Italy). Collaboration with Dr. C. Chatgilialoglu: Synthesis and characterization of modified nucleosides for the study of DNA oxidative cleavage.

## EDUCATION

- **Oct. 2004** **D.Phil. in Chemistry:** University of Crete, Department of Chemistry, Heraclion (Greece). Research Advisor: Prof. M. Orfanopoulos. Thesis title: "New Functionalization Methods and Mechanistic Studies on the Reactions of Fullerene $C_{60}$ and Azafullerene $(C_{59}N)_2$. Application of the new $C_{60}/Al_2O_3$ and $C_{60}/SiO_2$ Surfaces in Heterogeneous Photo-Oxidations."

- **Apr. 2002** **M.Sc. in Organic Chemistry:** University of Crete, Department of Chemistry, Heraclion (Greece). Research in the field of fullerene chemistry, organic photochemistry, and physical organic chemistry. Synthesis and characterization of modified nucleosides for the study of DNA oxidative cleavage.

- **Nov. 1999** **B.Sc. in Chemistry:** University of Crete, Department of Chemistry, Heraclion (Greece). Second highest graduation grade of the Chemistry Department class of 1999.

## AWARDS / DISTINCTIONS / FELLOWSHIPS

- **Greek Representative in the 2013 Young Investigator Workshop of EuCheMs (July 2013 - Invited)**
  The main goal of EuCheMs (European Association for Chemical and Molecular Sciences) workshops is to promote and recognize academic excellence. This workshop was organized in Marseille, France, under the hospice of the Organic Division of EuCheMs. Each National Chemical Society (European countries, USA, Canada, Japan, and China) nominates one young investigator to participate to this workshop, for which a total of not more than 30 can be chosen. Selected by the Association of Greek Chemists to represent Greece.

- **Foundation for Education and European Culture Research Scholarship (Sept. 2012 – Aug. 2013)**
  Twelve-month research fellowship; awarded on the basis of individual research proposals.

- **Commendation from the Academy of Athens (2012)**
  Commendation for the work "Radical reactivity of aza[60]fullerene: Preparation of monoadducts and limitations", awarded during the panegyric session of December 28$^{th}$ 2012. The Academy of Athens awards and commendations are one of the most important distinctions in the fields of research and literature.

- **Foundation for Education and European Culture Research Scholarship (Sept. 2011 – Aug. 2012)**
  Twelve-month research fellowship; awarded on the basis of individual research proposals.

- **Alexander Onassis Foundation Scholarship for Participation in the 60$^{th}$ Meeting of Nobel Laureates in Lindau (Germany) as Young Scientist (June - July 2010)**

The aim of this globally recognized forum is the exchange of knowledge between Nobel Laureates and promising Young Scientists. Young Scientists, who have to belong to the top 5% of their class internationally, are nominated and selected through a multistage international selection procedure. In total, five Greek Young Scientists working in the fields of Physics, Chemistry, Medicine, or Physiology were chosen to participate in this interdisciplinary meeting.

- **Greek National Scholarships Foundation Research Fellowship (Feb. 2009 – Jan. 2010)**
  Twelve-month research fellowship; granted on the basis of individual research proposals.

- **Research Scholarship from Research and Technology Greek Secretariat (Oct. 2008 – Sept. 2012)**
  Research scholarship funded by the Greek Ministry of Education.

- **Marie Curie Outgoing International Fellowship (Oct. 2005 – Oct. 2008)**
  Three-year postdoctoral fellowship financed by the European Commission. This fellowship is awarded to experienced European researchers on the basis of their individual research proposals. About 10% of the proposals were funded in the specific call.

- **Leonidas Zervas Foundation Award for Young Researchers (2004)**
  Prize awarded to young researchers working in the field of organic chemistry.

- **Socrates / Erasmus Fellowship (May 2003 – Aug. 2003)**
  Three-month postgraduate fellowship funded by the European Commission under the Socrates / Erasmus Programme.

- **Greek National Scholarships Foundation Fellowship (Nov. 2001 – Oct. 2004)**
  Three-year D.Phil. fellowship, attained by taking a highly competitive set of exams in a national level. Five chemistry fellowships were awarded that year.

- **Greek National Scholarships Foundation Award for Academic Excellence (2000)**
  Award scholarship for the academic year 1999 – 2000 (Ranked first in average grade at the postgraduate courses in the Chemistry Department of the University of Crete).

- **Research Fellowship from Research and Technology Greek Secretariat (Oct. 1999 – Dec. 2001)**
  Two-year research fellowship for graduate studies.

## TEACHING / TUTORING EXPERIENCE

- **Since 2010** *Instructor*: Graduate course "Organic Transformations in Polymer Synthesis: Principles and Applications" in the graduate program "Polymer Science and Applications" (National and Kapodistrian University of Athens, Department of Chemistry)

- **Since 2010** *Instructor*: Graduate course "Transition Metal Organometallic Catalysts in Organic Synthesis" in the graduate program "Organic Synthesis and Applications in Chemical Industry" (National and Kapodistrian University of Athens, Department of Chemistry)

- ***Autonomous supervision of undergraduate, postgraduate, and postdoctoral students***

  Argyro T. Papastavrou (D.Phil. Candidate / Feb. 2014 – today)

  Afroditi Pinaka (Post Doctoral Research / Nov. 2013 – today)

  Alexandros Sklavounos (M.Sc. Candidate / July 2013 – today / co-supervision with Prof. A. C. Calokerinos)

  Natalie Marie Frangi (D.Phil. Candidate / Apr. 2013 – today / co-supervision with Dr. P. Falaras)

  Victoria Manthou (M.Sc. Candidate / Dec. 2012 – today)

  Antonis N. Kabanakis (D.Phil. Candidate / Oct. 2012 – today / co-supervision with Dr. P. Falaras)

  Eleftherios K. Pefkianakis (Post Doctoral Research / Jan. 2012 – today)

- **2001 – 2002 (1 Semester):** *Teaching Assistant*: "Organic Chemistry II" (University of Crete, Department of Chemistry)

- **2001 – 2003 (2 Semesters):** *Teaching Assistant*: "Organic Chemistry I" (University of Crete, Department of Chemistry)

- **2000 – 2001 (1 Semester):** *Teaching Assistant*: "Laboratory Course in Inorganic Chemistry II" (University of Crete, Department of Chemistry)

- **Ancillary guidance and supervision of postgraduate and postdoctoral students:** University of Crete: Manolis M. Roubelakis (M.Sc. and D.Phil.), Mariza N. Alberti (M.Sc. and D.Phil.), Panagiotis D. Sarafis (M.Sc.). National and Kapodistrian University of Athens: Nikolaos Petzetakis (M.Sc.), Maria Kourti (M.Sc.). National Centre of Scientific Research "Demokritos": Georgia Konti (D.Phil.), Afroditi Pinaka (D.Phil.). University of California – Irvine: Anthony Burke (Post Doc.), Amir Mazaheripour (D.Phil.), Josh Dibble (Post Doc.).

## PRINCIPAL RESEARCH INTERESTS

- Design, synthesis, and mechanistic studies of organometallic complexes and organocatalysts that catalyze useful chemical and photochemical transformations.
- Synthesis of nanostructures, typically containing organic sensitizers, coordination compounds, graphene nanoribbons, fullerenes, and/or carbon nanotubes, mostly related to energy issues and nanotechnology.
- Design, synthesis, and characterization of organic and coordination compounds of biological relevance and potential applications (photodynamic therapy, cellular immunology, etc).
- Development of synthetic and functionalization methodologies for graphene nanoribbons, carbon nanotubes, fullerene $C_{60}$, and heterofullerenes.
- Synthesis of novel polymeric systems. Development of stimuli-responsive polymeric materials.

## RESEARCH PUBLICATIONS

**(43)** Pefkianakis, E. K.; Theodossiou, T. A.;* Toubanaki, D. K.; Karagouni, E.; Falaras, P.; Papadopoulos, K.; Vougioukalakis, G. C.* to be submitted to *J. Med. Chem*. "A Highly-Phototoxic Family of Ru(II) Photosensitizers in the Destruction of Human Prostate Carcinoma Cell Line DU145"

**(42)** Konti, G.; Vougioukalakis, G. C.;* Bidikoudi, M.; Kontos, A. G.; Methenitis, C.; Falaras, P.* to be submitted to *Polyhedron* "A Ru(II) Molecular Antenna Bearing a Novel Bipyridine-Acrylonitrile Ligand: Synthesis and Applications in Dye-Sensitized Solar Cells" *Invited Article*

**(41)** Vougioukalakis, G. C.;* Konstantakou, M.; Pefkianakis, E. K.; Kabanakis, A. N.; Stergiopoulos, T.; Kontos, A. G.; Andreopoulou, A. K.; Kallitsis, J. K.; Falaras, P.* to be submitted to *Chem. Asian J.* "A Novel Ruthenium-Based Light-Harvesting Antenna Bearing an Anthracene Moiety in Dye-Sensitized Solar Cells"

**(40)** Konstantakou, M.; Stergiopoulos, T.;* Likodimos, V.; Vougioukalakis, G. C.; Sygellou, L.; Kontos, A. G.; Tserepi, A.; Falaras, P.* submitted to *J. Phys. Chem. C* "Influence of Fluorine Plasma Treatment of $TiO_2$ Films on the Behavior of Dye Solar Cells Employing the Co(II)/(III) Redox Couple" *Invited Article*

**(39)** Aluicio-Sarduy, E.; Baidak, A.; Vougioukalakis, G. C.; Keivanidis, P. E.* *J. Phys. Chem. C* **2014**, *118*, in press. "Phosphorimetric characterization of solution-processed polymeric oxygen-barriers for the encapsulation of organic electronics"

**(38)** Vougioukalakis, G. C.* *Curr. Organic Chem.* **2013**, *17*, 2559. "Recent Developments in Olefin Metathesis" *Editorial Article of a Special Issue on Olefin Metathesis (Guest Editor)*

**(37)** Pinaka, A.; Dimotikali, D.; Chankvetadze, B.; Papadopoulos, K.;* Vougioukalakis, G. C.* *Synlett*. **2013**, *24*, 2401-2406. "Catalytic Asymmetric Reduction of Prochiral Ketones with Chiral *β*-Amino Alcohol *N*-Boranes and their Corresponding tris-(Oxazaborolidine) Borazines" *Invited Article (Invited Author)*

**(36)** Pefkianakis, E. K.; Christodouleas, D.; Giokas, D. L.; Papadopoulos, K.;* Vougioukalakis, G. C.* *Eur. J. Inorg. Chem.* **2013**, 4628-4635. "A New Family of Ru(II) Photosensitizers with High Singlet Oxygen Quantum Yield: Synthesis, Characterization, and Evaluation"

**(35)** Vougioukalakis, G. C.;* Stergiopoulos, T.; Kontos, A. G.; Pefkianakis, E. K.; Papadopoulos, K.; Falaras, P.* *Dalton Trans.* **2013**, *42*, 6582-6591. "Novel Ru(II) Sensitizers bearing an Unsymmetrical Pyridine-Quinoline Hybrid Ligand with Extended *π*-Conjugation: Synthesis and Application in Dye-Sensitized Solar Cells"

**(34)** Pefkianakis, E. K.; Vougioukalakis, G. C.* *Organic Chem. Curr. Res.* **2013**, *2*, e118 (Open Access Journal). "Purification of Olefin Metathesis Reaction Products via Straightforward and Low-Cost Protocols" *Invited Editorial Article (Invited Author). Most viewed article of the journal (November 2013 – January 2014) - Views count from each article's publication date.*

**(33)** Pinaka, A.; Vougioukalakis, G. C.;* Dimotikali, D.; Yannakopoulou, E.; Chankvetadze, B.; Papadopoulos, K.* *Chirality* **2013**, *25*, 119-125. "Green Asymmetric Synthesis: *β*-Amino Alcohol-Catalyzed Direct Asymmetric Aldol Reactions in Aqueous Micelles"

**(32)** Vougioukalakis, G. C.* *Chem. Eur. J.* **2012**, *18*, 8868-8880. "Removing Ruthenium Residues from Olefin Metathesis Reaction Products" *Featured in the "Sustainable Chemistry" section of the "Hot Topics" list of Wiley-VCH (June 2012 – January 2014). Featured in the web site "all things METATHESIS". Featured in the "Preview" of the 29/2012 issue of Chem. Eur. J. published in the 28/2012 issue of the journal (Chem. Eur. J.* **2012**, *18*, 8847*). Featured in the blog "Tew Group Literature" (August 2012).*

**(31)** Pinaka, A.; Vougioukalakis, G. C.;* Dimotikali, D.; Psyharis, V.; Papadopoulos, K.* *Synthesis* **2012**, *44*, 1057-1062. "A Convenient One-Step Synthesis of Stable *β*-Amino Alcohol *N*-Boranes from *α*-Amino Acids"

**(30)** Kourti, M. E.; Vougioukalakis, G. C.; Hadjichristidis, N.; Pitsikalis, M.* *J. Polym. Sci. Part A: Polym. Chem.* **2011**, *49*, 2520-2527. "Metallocene-Mediated Cationic Ring-Opening Polymerization of 2-Methyl- and 2-Phenyl-oxazoline"

**(29)** Vougioukalakis, G. C.; Philippopoulos, A. I.; Stergiopoulos, T.; Falaras, P.* *Coord. Chem. Rev.* **2011**, *255*, 2602-2621. "Contributions to the Development of Ruthenium-Based Sensitizers for Dye-Sensitized Solar Cells" *In the "top 25 hottest articles" list of Coord. Chem. Rev. (July 2011 through March 2012).*

**(28)** Roubelakis, M. M.; Vougioukalakis, G. C.; Nye, L. C.; Drewello, T.; Orfanopoulos, M.* *Tetrahedron* **2010**, *66*, 9363-9369. "Exploring the Photoinduced Electron Transfer Reactivity of Aza[60]fullerene Iminium Cation"

**(27)** Vougioukalakis, G. C.; Stergiopoulos, T.; Kantonis, G.; Kontos, A. G.; Papadopoulos, K.; Stublla, A.; Potvin, P. G.; Falaras, P.* *J. Photochem. Photobiol. A: Chem.* **2010**, *214*, 22-32. "Terpyridine- and 2,6-Dipyrazinylpyridine-Coordinated Ruthenium(II) Complexes: Synthesis, Characterization and Application in $TiO_2$-based Dye-Sensitized Solar Cells" *In the "top 25 hottest articles" lists of J. Photochem. Photobiol. A: Chem. during the first six months of its publication.*

**(26)** Vougioukalakis, G. C.; Roubelakis, M. M.; Orfanopoulos, M.* *J. Org. Chem.* **2010**, *75*, 4124-4130. "Radical Reactivity of Aza[60]fullerene: Preparation of Monoadducts and Limitations"

**(25)** Vougioukalakis, G. C.; Grubbs, R. H.* *Chem. Rev*. **2010**, *110*, 1746-1787. "Ruthenium-Based Heterocyclic Carbene-Coordinated Olefin Metathesis Catalysts" *In the "most read articles" list of Chem. Rev. during the first three months of its publication. In the "most cited articles" list of Chem. Rev. (April 2011 through April 2012). Featured in the web site "all things METATHESIS". Cited in the Protocols & Papers section of the Sigma-Aldrich website with regards to both Grubbs and Hoveyda-Grubbs 1st and 2nd generation catalysts.*

**(24)** Vougioukalakis, G. C.;* Roubelakis, M. M.; Orfanopoulos, M.* *Chem. Soc. Rev.* **2010**, *39*, 817-844. "Open-Cage Fullerenes: Towards the Construction of Nanosized Molecular Containers"

**(23)** Vougioukalakis, G. C.; Stamatopoulos, I.; Petzetakis, N.; Raptopoulou, C. P; Psycharis, V.; Terzis, A.; Kyritsis, P.;* Pitsikalis, M.; Hadjichristidis, N.* *J. Polym. Sci. Part A: Polym. Chem.* **2009**, *47*, 5241-5250. "Controlled Vinyl-Type Polymerization of Norbornene with a Nickel(II) Diphosphinoamine Methylaluminoxane Catalytic System"

**(22)** Alberti, M. N.; Vougioukalakis, G. C.; Orfanopoulos, M.* *J. Org. Chem.* **2009**, *74*, 7274-7282. "Photosensitized Oxidations of Substituted Pyrroles: Unanticipated Radical-Derived Oxygenated Products"

**(21)** Vougioukalakis, G. C.; Roubelakis, M. M.; Alberti, M. N.; Orfanopoulos, M.* *Chem. Eur. J.* **2008**, *14*, 9697-9705. "Solvent Depended Changes in the Triazolinedione-Alkene Ene Reaction Mechanism"

**(20)** Vougioukalakis, G. C.; Grubbs, R. H.* *Chem. Eur. J.* **2008**, *14*, 7545-7556. "Ruthenium-Based Olefin Metathesis Catalysts Coordinated with Unsymmetrical *N*-Heterocyclic Carbene Ligands: Synthesis, Structure, and Catalytic Activity"

**(19)** Vougioukalakis, G. C.; Grubbs, R. H.* *J. Am. Chem. Soc.* **2008**, *130*, 2234-2245. "Synthesis and Activity of Ruthenium Olefin Metathesis Catalysts Coordinated with Thiazol-2-ylidene Ligands"

**(18)** Roubelakis, M. M.; Vougioukalakis, G. C.; Orfanopoulos, M.* *J. Org. Chem.* **2007**, *72*, 6526-6533. "Open-Cage Fullerene Derivatives Having 11-, 12- and 13-Membered-Ring Orifices: Chemical Transformations of the Organic Addends on the Rim of the Orifice"

**(17)** Vougioukalakis, G. C.; Grubbs, R. H.* *Organometallics* **2007**, *26*, 2469-2472. "Ruthenium Olefin Metathesis Catalysts Bearing an *N*-fluoroaryl-*N*-mesityl-Substituted Unsymmetrical *N*-Heterocyclic Carbene" *In the most-accessed articles list of Organometallics in 2007.*

**(16)** Lykakis, I. N; Vougioukalakis, G. C.; Orfanopoulos, M.* *J. Org. Chem.* **2006**, *71*, 8740-8747. "Homogeneous Decatungstate-Catalyzed Photooxygenation of Tetrasubstituted Alkenes: A Deuterium Kinetic Isotope Effect Study"

**(15)** Vrantza, D.; Kaloudis, P.; Leondiadis, L.; Gimisis, T.;* Vougioukalakis, G. C.; Orfanopoulos, M.; Gasparutto, D.; Cadet, J.; Encinas, S.; Paris, C.; Miranda, M. A.* *Helv. Chim. Acta* **2006**, *89*, 2371-2386. "Modification of the Guanine Base with Photolabile *N*-Hydroxypyridine-2(1H)-thione: Monomer Synthesis, Oligonucleotide Elaboration and Photochemical Studies" *In the "most accessed articles" list of Helv. Chim. Acta for the year 2006.*

**(14)** Chatgilialoglu, C.;* Caminal, C.; Altieri, A.; Vougioukalakis, G. C.; Mulazzani, Q. G.; Gimisis, T.; Guerra, M.* *J. Am. Chem. Soc.* **2006**, *128*, 13796-13805. "Tautomerism in the Guanyl Radical"

**(13)** Vougioukalakis, G. C.; Hatzimarinaki, M.; Lykakis, I. N; Orfanopoulos, M.* *J. Org. Chem.* **2006**, *71*, 829-832. "Reaction of an Aza[60]fullerene Radical with Diphenylmethanes and Fluorenes: A Mechanistic Approach"

**(12)** Roubelakis, M. M.; Vougioukalakis, G. C.; Angelis, Y. S.;Orfanopoulos, M.* *Org. Lett.* **2006**, *8*, 39-42. "Solvent-Dependent Changes in the Ene Reaction of RTAD with Alkenes: The Cyclopropyl Group as a Mechanistic Probe"

**(11)** Vougioukalakis, G. C.; Orfanopoulos, M.* *Synlett*. (*Account*) **2005**, 713-731. "Mechanistic Studies in Triazolinedione Ene Reactions"

**(10)** Vougioukalakis, G. C.; Orfanopoulos, M.* *J. Am. Chem. Soc.* **2004**, *126*, 15956-15957. "Photoinduced Electron Transfer Reactivity of Aza[60]fullerene: Three Discrete Functionalization Pathways with a Single Substrate"

**(9)** Vougioukalakis, G. C.; Prassides, K.;* Campanera, J. M.; Heggie, M. I.; Orfanopoulos, M.* *J. Org. Chem.* **2004**, *69*, 4524-4526. "Open-Cage Fullerene Derivatives with 15-Membered-Ring Orifices"

**(8)** Vougioukalakis, G. C.; Angelis, Y.; Panagiotou, G.; Vakros, J.; Kordulis, C.; Lycourgiotis, A.; Orfanopoulos, M.* *Synlett.* **2004**, 971-974. "[60]Fullerene Supported on Silica and *γ*-Alumina Sensitized Photooxidation of Olefins. Chemical Evidence for Singlet Oxygen and Electron Transfer Mechanism"

**(7)** Vougioukalakis, G. C.; Prassides, K.;* Orfanopoulos, M.* *Org. Lett.* **2004**, *6*, 1245-1247. "Novel Open-Cage Fullerenes Having a 12-Membered-Ring Orifice: Removal of the Organic Addends from the Rim of the Orifice"

**(6)** Vougioukalakis, G. C.; Chronakis, N.; Orfanopoulos, M.* *Org. Lett*. **2003**, *5*, 4603-4606. "Addition of Electron Rich Aromatics to Azafullerenium Carbocation. A Stepwise Electrophilic Substitution Mechanism"

**(5)** Vougioukalakis, G. C.; Orfanopoulos, M.* *Tetrahedron Lett.* **2003**, *44*, 8649-8652. "Functionalization of Azafullerene $C_{59}N$. Radical Reactions with 9-substituted Fluorenes"

**(4)** Vakros, J.; Panagiotou, G.; Kordulis, C.;* Lycourghiotis, A.; Vougioukalakis, G. C.; Angelis, Y.; Orfanopoulos, M. *Catalysis Letters* **2003**, *89*, *3-4*, 269-273. "Fullerene $C_{60}$ supported on silica and γ-alumina catalyzed photooxidations of alkenes"

**(3)** Adam, W.; Krebs, O.;* Orfanopoulos, M.; Stratakis, M.; Vougioukalakis, G. C. *J. Org. Chem.* **2003**, *68*, 2420-2425. "Intermolecular and Intramolecular Kinetic Isotope Effects (KIE) in the Nitrosoarene Ene Reaction: Experimental Evidence for Reversible Intermediate Formation"

**(2)** Alberti, M. N.; Vougioukalakis, G. C.; Orfanopoulos, M.* *Tetrahedron Lett.* **2003**, *44*, 903-905. "Electronic effects in the regioselectivity of the singlet oxygen and 4-methyl-1,2,4-triazoline-3,5-dione ene reactions with isobutenylarenes"

**(1)** Chronakis, N.; Vougioukalakis, G. C.; Orfanopoulos, M.* *Org. Lett.* **2002**, *4*, 945-948. "Synthesis and Self Photooxygenation of Alkenyl-Linked [60]Fullerene Derivatives. A Regioselective Ene Reaction"

*According to ISI, Web of Science, the above publications have been cited 1081 times (h index = 15), while according to Scopus 1128 times (h index = 15).*

## PATENTS

**(1)** Vougioukalakis, G. C.; Grubbs, R. H. *US Patent 8039566B2; European Patent Application EP2104566; Chinese Patent Application 200780050108.X*: "Olefin Metathesis Initiators Bearing Thiazol-2-ylidene Ligands"

## BOOK CHAPTERS

**(4)** Vougioukalakis, G. C.* "Ruthenium-Benzylidene Catalysts" in *Olefin Metathesis - Theory and Practice*, Grela, K., Ed., John Wiley & Sons, Inc. *in press*. *(Invited Author)*

**(3)** Vougioukalakis, G. C.; Orfanopoulos, M.* "Open-Cage Fullerene Derivatives" in *Fullerene – Related Materials*, *Volume 1,* Margadonna, S., Ed., Kluwer Academic Publishers, *in press*. *(Invited)*

**(2)** Roubelakis M. M.; Vougioukalakis, G. C.* "Surgery at the Molecular Level: Synthesis and Modifications of Open-Cage Fullerene Derivatives" in *Handbook of Carbon Nano Materials*, *Volume 3 (Medicinal and Bio-related Applications)*, D'Souza, F.; Kadish, K. M., Eds., World Scientific Publishing, **2012**, p. 233-294. *(Invited Author)*

**(1)** Orfanopoulos, M.;* Vougioukalakis, G. C.; Stratakis, M. "Selective Formation of Allylic Hydroperoxides via Singlet Oxygen Ene Reaction" in *The Chemistry of Peroxides, Volume 2, Part 1*, *Patai series: The Chemistry of Functional Groups,* Rappoport, Z., Ed., Wiley-InterScience, **2006**, p. 831-898. *(Invited)*

## REVIEWER FOR JOURNALS / BOOKS / BOOK CHAPTERS

- Chemical Reviews
- Organic Letters
- Organometallics
- Synlett
- European Polymer Journal
- Molecules
- Current Bioactive Compounds
- The Scientific World JOURNAL
- Open Journal of Advanced Materials Research
- Books in Wiley-Blackwell
- Book chapters in Wiley-InterScience

## EDITORIAL ACTIVITY

- **Guest Editor in a Hot Topic Thematic Issue on Olefin Metathesis published in the journal Current Organic Chemistry (Volume 17, Issue 22, November 2013)**
  This editorial activity included: i) inviting leading scientists in the field to contribute to this special issue; ii) inviting other experts in the field to act as referees; iii) management of the peer-review and revisions process; and iv) preparing the editorial of the special issue.

- **Member of the Editorial Board of the journal "Open Journal of Organic Chemistry" (since Nov. 2013 / Invited)**

- **Member of the Editorial Board of the journal "Organic Chemistry: Current Research" (since Dec. 2012 / Invited)**

- **Member of the Editorial Board of "The Scientific World JOURNAL" (since Aug. 2011 / Invited)**

## INVITED LECTURES

**(13)** "2-Amino Alcohols and their Aminoborane Derivatives in Asymmetric Organocatalysis" 18th European Symposium on Organic Chemistry - Young Investigators Workshop, Marseille, France (July 5, **2013**).

**(12)** "A Quick Tour in Fullerene Chemistry, Olefin Metathesis, and Dye-Sensitized Solar Cells" Demokritos National Centre for Scientific Research - Distinguished Lectures Series, Athens, Greece (June 27, **2013**).

**(11)** "Fullerenes, Polymers, Dye-Sensitized Solar Cells and Other Fairy Tales" Italian Institute of Technology, Centre for Nanoscience and Technology, Milan, Italy (November 14, **2011**).

**(10)** "Fullerene Chemistry, Olefin Metathesis and Other Fairy Tales" National and Kapodistrian University of Athens, Department of Chemistry, Athens, Greece (March 3, **2011**).

**(9)** "From Fullerene Chemistry to Olefin Metathesis" National and Kapodistrian University of Athens, Department of Chemistry, Athens, Greece (June 2, **2010**).

**(8)** "From Fullerene Chemistry to Olefin Metathesis" Aristotle University of Thessaloniki, Department of Chemistry, Thessaloniki, Greece (March 12, **2010**).

**(7)** "Fullerene Chemistry, Olefin Metathesis and Other Fairy Tales" University of Cyprus, Department of Chemistry, Nicosia, Cyprus (December 2, **2009**).

**(6)** "From Fullerene Chemistry to Olefin Metathesis" University of Patras, Department of Chemistry, Rio, Greece (November 26, **2009**).

**(5)** "Research in Greece and Abroad: Examples – Differences and Similarities – Challenges" National and Kapodistrian University of Athens, Department of Chemistry, Athens, Greece (March 27, **2009**).

**(4)** "From Fullerene Chemistry to Olefin Metathesis: A Fascinating Trip" National Hellenic Research Foundation, Institute of Organic and Pharmaceutical Chemistry, Athens, Greece (May 13, **2008**).

**(3)** "From Fullerene Chemistry to Olefin Metathesis: A Fascinating Trip" Demokritos National Centre for Scientific Research, Institute of Physical Chemistry, Athens, Greece (February 29, **2008**).

**(2)** "Functionalization and Mechanistic Studies on Reactions of Fullerenes and Azafullerenes. Synthesis and Catalytic Activity of Ruthenium-Based Olefin Metathesis Initiators" University of Crete, Materials Science and Technology Department, Heraclion, Greece (June 8, **2007**).

**(1)** "Functionalization and Mechanistic Studies on Reactions of Fullerenes and Azafullerenes. Synthesis and Catalytic Activity of Ruthenium-Based Olefin Metathesis Initiators" Michigan State University, Chemistry Department, East Lansing, Michigan, USA (March 20, **2007**).

## ORGANIZATION OF CONFERENCES / MEETINGS / SCHOOLS

- **Jan. 2014** Organizer and Lead Tutor of the five-days school "Principles of Chemical Synthesis" of the Marie Curie Initial Training Network DESTINY - Dye sensitized solar cells with enhanced stability (7-11 January 2014).
- **Jan. 2014** Co-organizer of the first Annual Meeting (7-11 January 2014) and the one-day school "Solar Cell Fabrication" (10 January 2014) of the Marie Curie Initial Training Network DESTINY - Dye sensitized solar cells with enhanced stability.
- ***Scientists that have visited our group for research collaboration and/or lectures:*** Prof. T. D. Anthopoulos (Imperial College London), Dr. T. A. Theodossiou (Oslo University Hospital), Prof. M. Girtan (Angers University), Dr. E. Karagouni (Pasteur Institute - Greece), Dr. P. E. Keivanidis (Italian Institute of Technology).

## PRESENTATIONS IN CONFERENCES / MEETINGS / SCHOOLS

**(30)** Vougioukalakis, G. C. "Basic Principles of Chemical Reactivity and Organic Chemistry" in the framework of the school "Principles of Chemical Synthesis" of the Marie Curie Initial Training Network DESTINY - Dye sensitized solar cells with enhanced stability, Athens, Greece, January **2014** (*Oral Presentation*).

**(29)** Pefkianakis, E. K.; Papadopoulos, K.; Kokotos, G.; Vougioukalakis, G. C. "A New Family of Ru(II) Photosensitizers with High Singlet Oxygen Quantum Yield: Synthesis, Characterization, and Evaluation" 8th International Conference on Instrumental Methods of Analysis Modern Trends and Applications, Thessaloniki, Greece, September **2013** (*Poster Presentation*).

**(28)** Papadopoulos, K.; Pefkianakis, E. K.; Vougioukalakis, G. C.; Christodouleas, D.; Dimotikali, D. "A Novel Fluorometric Assay for the Determination of Hydrogen Peroxide in Water Samples Using the Reaction of Ferrous Ions with 9,10-Dihydroacridine" 8th International Conference on Instrumental Methods of Analysis Modern Trends and Applications, Thessaloniki, Greece, September **2013** (*Poster Presentation*).

**(27)** Pinaka, A.; Vougioukalakis, G. C.; Dimotikali, D.; Yannakopoulou, E.; Chankvetadze, B.; Papadopoulos, K. "β-Amino Alcohol-Catalyzed Direct Aymmetric Aldol Reactions in Aqueous Micelles" 1st Portuguese-Brazilian Organic Chemistry Symposium, Lisbon, Portugal, September **2013** (*Poster Presentation*).

**(26)** Vougioukalakis, G. C.; Kabanakis, A. N.; Pefkianakis, E. K.; Stergiopoulos, T.; Falaras, P. "A Novel Ru(II) Sensitizer Bearing a Terpyridine Ligand with an Anthracene Moiety: Synthesis and Application in Dye-Sensitized Solar Cells" European Materials Research Society (E-MRS) 2013 Spring Meeting, Strasbourg, France, May **2013** (*Poster Presentation*).

**(25)** Konstantakou, M.; Stergiopoulos, T.; Vaenas, N.; Vougioukalakis, G. C.; Kontos, A. G.; Tserepi, A.; Falaras, P. "Tailoring the Surface Properties and Porosity of $TiO_2$ Films with Plasma Treatment for Efficient Dye-Sensitized Solar Cells based on the Co(II)/Co(III) Redox Shuttle" European Materials Research Society (E-MRS) 2013 Spring Meeting, Strasbourg, France, May **2013** (*Poster Presentation*).

**(24)** Vougioukalakis, G. C.; Stergiopoulos, T.; Falaras, P. "Ru Dyes bearing Pyridine-Quinoline Hybrid Ligands for Dye-Sensitized Solar Cells" 40th International Conference on Coordination Chemistry, Valencia, Spain, September **2012** (*Oral Presentation*).

**(23)** Papadopoulos, K.; Pinaka, A.; Vougioukalakis, G. C.; Terzis, A.; Dimotikali, D. "Synthesis of Stable 2-Aminoalcohol N-Boranes Obtained via the Reduction of α-Amino Acids with Sodium Borohydride" 21st Greek National Conference on Chemistry, Thessaloniki, Greece, December **2011** (*Oral Presentation*).

**(22)** Pinaka, A.; Vougioukalakis, G. C.; Papadopoulos, K.; Triantis, T.; Yannakopoulou, E.; Dimotikali, D. "Catalytic Asymmetric Synthesis of a-Aminoacids in Micellar Systems" 11th Hellenic Symposium on Catalysis, Athens, Greece, October **2010** (*Poster Presentation*).

**(21)** Anousakis, K.; Pinaka, A.; Vougioukalakis, G. C.; Papadopoulos, K.; Igglessi-Markopoulou, O.; Dimotikali, D. "Catalytic Asymmetric Synthesis of δ-Ketoesters in Phase-Transfer Systems" 11th Hellenic Symposium on Catalysis, Athens, Greece, October **2010** (*Poster Presentation*).

**(20)** Vougioukalakis, G. C.; Konti, G.; Falaras, P. "Fine-Tuning Ruthenium Sensitizers: Enhancement of the Electron Flow Directionality in Dye-Sensitized Solar Cells" COST D35 Workshop: Controlling Photophysical Properties of Metal Complexes: Toward Molecular Photonics, Prague, Czech Republic, May **2010** (*Poster Presentation*).

**(19)** Vougioukalakis, G. C.; Grubbs, R. H. "Ruthenium-Based Metathesis Catalysts Coordinated with Heterocyclic Carbene Ligands: Synthesis, Structure, and Catalytic Activity" 3rd Hellenic Symposium on Organic Synthesis, Athens, Greece, October **2009** (*Oral Presentation*).

**(18)** Vougioukalakis, G. C.; Petzetakis, N.; Pitsikalis, M.; Hadjichristidis, N.; Stamatopoulos, I.; Kyritsis, P.; Terzis, A.; Raptopoulou, C. "Vinyl Polymerization of Norbornene with a Novel Nickel(II) Diphosphinoamine / Methylaluminoxane Catalytic System" 7th Hellenic Polymer Conference, Ioannina, Greece, September **2008** (*Oral Presentation*).

**(17)** Vougioukalakis, G. C.; Grubbs, R. H. "Synthesis, Structure, and Catalytic Activity of Ruthenium-Based Metathesis Catalysts Coordinated with Thiazol-2-ylidene and Unsymmetrical *N*-

Heterocyclic Carbene Ligands" NATO Advanced Study Institute: New Smart Materials via Metal Mediated Macromolecular Engineering: from Complex to Nano Structures, Antalya, Turkey, September **2008** (*Oral Presentation*).

**(16)** Vougioukalakis, G. C.; Grubbs, R. H. "Ruthenium-Based Olefin Metathesis Catalysts Coordinated with Thiazol-2-ylidene Ligands" 234th American Chemical Society National Meeting, Boston, Massachusetts, USA, August **2007** (*Oral Presentation*).

**(15)** Vougioukalakis, G. C.; Grubbs, R. H. "Synthesis and Activity of Ruthenium Olefin Metathesis Initiators Bearing Thiazol-2-ylidene Ligands" 17th International Symposium on Olefin Metathesis, Pasadena, California, USA, July **2007** (*Poster Presentation*).

**(14)** Roubelakis, M. M.; Vougioukalakis, G. C.; Orfanopoulos, M. "Open-cage Fullerenes Having 11-, 12- and 13-membered-ring Orifices. Chemical Transformations of the Organic Addends on the Rim of the Orifice" 2nd Hellenic Symposium on Organic Synthesis, Athens, Greece, April **2007** (*Poster Presentation*).

**(13)** Vougioukalakis, G. C.; Grubbs, R. H. "Synthesis and Activity of Ruthenium Olefin Metathesis Initiators Bearing Unsymmetrical *N*-Heterocyclic Carbene Ligands" 232th American Chemical Society National Meeting, San Francisco, California, USA, September **2006** (*Oral Presentation*).

**(12)** Vougioukalakis, G. C.; Grubbs, R. H. "Ruthenium Olefin Metathesis Initiators Bearing Unsymmetrical *N*-Heterocyclic Carbene Ligands" 37th International Conference on Coordination Chemistry, Cape Town, South Africa, August **2006** (*Poster Presentation*).

**(11)** Nye, L. C.; Vougioukalakis, G. C.; Streletskii, A. V.; Boltalina, O. V.;Orfanopoulos, M,; Drewello, T. "Cage-open Fullerenes Studied by Laser-based Mass Spectrometry: Fragmentation-free Analysis, Cage Closure and Coalescence" 17th International Mass Spectrometry Conference, Prague, Czech Republic, August **2006** (*Poster Presentation*).

**(10)** Vougioukalakis, G. C.; Grubbs, R. H. "Ruthenium Olefin Metathesis Initiators Bearing Unsymmetrical *N*-Heterocyclic Carbene Ligands" Robert H. Grubbs Nobel Prize Symposium, Pasadena, California, USA, July **2006** (*Poster Presentation*).

**(9)** Vougioukalakis, G. C.; Orfanopoulos, M,; Streletskii, A. V.; Boltalina, O. V.; Drewello, T. "Cage-open Fullerenes Studied by Laser-based Mass Spectrometry: Fragmentation-free Analysis, Cage Closure and Coalescence" 209th Meeting of The Electrochemical Society, Denver, Colorado, USA, May **2006** (*Poster Presentation*).

**(8)** Vougioukalakis, G. C.; Roubelakis, M. M.; Orfanopoulos, M. "Synthesis, Isolation and Characterization of Open-Cage [60]Fullerene Derivatives. Isolation of the First Adduct without any Organic Addends on the Rim of its Orifice" 20th Greek National Conference of Chemistry, Ioannina, Greece, September **2005** (*Poster Presentation*).

**(7)** Vougioukalakis, G. C.; Hatzimarinaki, M.; Orfanopoulos, M. "Radical Functionalization of Aza[60]fullerene: New Monoadducts and Mechanistic Studies" The 14th European Symposium on Organic Chemistry, Helsinki, Finland, July **2005** (*Oral Presentation*).

**(6)** Roubelakis, M.; Vougioukalakis, G. C.; Orfanopoulos, M. "Reactive Intermediates: The Cyclopropyl Group as a Mechanistic Probe in the Ene Reaction of N-phenyl-1,2,4-triazoline-3,5-dione (PTAD) with Alkenes" Reaction Mechanisms VII, Dublin, Ireland, July **2004** (*Poster Presentation*).

**(5)** Vrantza, D.; Gimisis, T.; Vougioukalakis, G. C.; Orfanopoulos, M.; Perea, S. E.; Miranda, M.; Gasparutto, D.; Cadet, J., "Independent Photochemical Generation of Guanosine Base Radicals" 9th International Symposium on Organic Free Radicals, Corsica, France, June **2004** (*Oral Presentation*).

**(4)** Sarafis, P. D.; Vougioukalakis, G. C.; Orfanopoulos, M. "Mechanistic Study of Proton Transfer Reactions Between Triphenylmethanes" 19th Greek National Conference on Chemistry, Heraclion, Greece, November **2002** (*Poster Presentation*).

**(3)** Vougioukalakis, G. C.; Hatzimarinaki, M.; Orfanopoulos, M. "Synthesis and Functionalization of Heterofullerene $(C_{59}N)_2$. A Mechanistic Study on its Radical Reactions" 19th Greek National Conference on Chemistry, Heraclion, Greece, November **2002** (*Poster Presentation*).

**(2)** Orfanopoulos, M.; Vougioukalakis, G. C. "Changes in Triazolinedione-Alkene Ene Reaction Mechanisms. Intra- and Intermolecular Isotope Effects" 8th European Symposium on Organic Reactivity, ESOR-8, Dubrovnic, Croatia, September **2001** (*Oral Presentation*).

**(1)** Birikaki, L.; Angelis, Y. S.; Vougioukalakis G. C.; Orfanopoulos, M. "γ-Cyclodextrin/$C_{60}$-Sensitized Photooxygenations of Alkenes in Polar and Non Polar Solvents" The 12th European Symposium on Organic Chemistry, Groningen, The Netherlands, July **2001** (*Oral Presentation*).

## PARTICIPATION IN RESEARCH PROGRAMS

- **2013-2015** Tailor-made Metal-Organic Frameworks as Trace Gas Detectors for Food Quality Control (Greek-German bilateral collaboration program financed by the Greek Ministry of Education and the European Commission). *Principal co-Investigator* (with Assistant Professor G. S. Papaefstathiou, Department of Chemistry, University of Athens). *Pre-submission role: Key co-author.* Principal Investigator of the German team: Professor S. Kaskel, Department of Chemistry and Food Chemistry, Technical University Dresden. Participating Greek Enterprise: G. Kallimanis S.A., Aigio, Greece. Funding for the University of Athens Research Groups: 210,000 €. Funding for the Vougioukalakis Research Group: 104,400 €.

- **2013-2017** Catalytic Routines for Small Molecule Activation - CARISMA (COST Action CM1205 funded by the intergovernmental framework for European Cooperation in Science and Technology). *Participation as Management Committee Member. Participation in Working Group 2: $CO_x$ activation and transformation.* Action Chair: Prof. M. Albrecht, University College Dublin, Ireland.

- **2013-2015** Optimal heterojunction organic photovoltaics bearing self-organized active layers (Greek-French bilateral collaboration program Platon financed by the Greek Ministry of Education and the European Commission). *Principal co-Investigator* (with Lecturer G. Sakellariou, Department of Chemistry, University of Athens). *Pre-submission role: Key co-author.* Principal Investigator of the French team: Associate Professor M. Girtan, Department of Physics, Angers University. Funding for the University of Athens Research Groups: 30,000 €. Funding for the Vougioukalakis Research Group: 15,000 €.

- **2013-2015** Advanced materials and devices for energy collection and administration (Research Program "KRIPIS" financed by the Greek Ministry of Education and the European Commission). *Participation as Researcher. Pre-submission role: Co-author.* Project Coordinator: Director of IAMPPNM, NCSR Demokritos. Funding: 883,200 €.

- **2013-2015** Optimal heterojunction organic photovoltaics bearing self-organized active layers (Greek National Scholarships Foundation post-doctoral research fellowship financed by SIEMENS. Fellow: Eleftherios K. Pefkianakis). *Post-doctoral co-Advisor and Host Group* (with Lecturer G. Sakellariou, Department of Chemistry, University of Athens). Funding: 39,000 €.

- **2013** Development of next generation oxygen-barrier materials for organic electronic and dye-sensitized solar cell applications (Scientific Project funded by John S. Latsis Public Benefit Foundation. Only 18 out of the 802 submitted proposals were funded in that call). *Principal Investigator and Project Coordinator. Pre-submission role: Main author.* Team Members: Professor T. Anthopoulos (Department of Physics, Imperial College London), Dr. P. Falaras (IAMPPNM, NCSR Demokritos), Dr. P. Keivanidis (CNST, Italian Institute of Technology), Dr. T. Stergiopoulos (IAMPPNM, NCSR Demokritos). Funding: 12,000 €.

- **2013-2014** Organocatalysis - ORCA (COST Action CM0905 funded by the intergovernmental framework for European Cooperation in Science and Technology). *Participation as Management Committee Substitute. Participation in Working Groups 1 and 3: Catalysts and Reactions.* Action Chair: Prof. P. Pihko, University of Jyvskyl, Finland.

- **2012-2016** Dye sensitized solar cells with enhanced stability - DESTINY (Marie Curie Initial Training Network financed by the European Commission: FP7-PEOPLE-2012). *Participation as lead co-Investigator and PhD co-supervisor (1 Student). Lead Tutor and Organizer of a five-days school on the "Principles of Chemical Synthesis". Co-organizer of the first Annual Meeting of the Network. Participation in the Network meetings (Supervisory Board, etc). Pre-submission role: Established the contacts between the Greek team and the network. Key author of the Greek team.* Network Coordinator: Professor A. B. Walker, Department of Physics, University of Bath. Greek Team Coordinator: Dr. P. Falaras. Funding for the Greek Research Group: 468,338 €.

- **2012-2015** Advanced materials for highly efficient dye-sensitized solar cells - AdMatDSC (Research Program "ΑΡΙΣΤΕΙΑ" - EXCELLENCE - financed by the Greek Ministry of Education and the European Commission). *Participation as Researcher and PhD co-supervisor (1 Student). Pre-submission role: Key co-author.* Principal Investigator: Dr. P. Falaras. Total Funding: 350,000 €.

- **2012-2013** Novel electrolytes for dye-sensitized solar cells: Synthesis and utilization of innovative cobalt-based redox couples (Foundation for Education and European Culture Research Scholarship). *Principal Investigator. Pre-submission role: Author.* Host Laboratory: Dr. P. Falaras. Total Funding: 4,000 €.

- **2012-2014** Study of novel chemiluminescent systems and elaboration of their applications on the development of new automated analytical methods for the determination of food constituents, environmental pollutants, and active pharmaceutical compounds - LUMEN (Research Program "Thales" financed by the Greek Ministry of Education and the European Commission). *Participation as Researcher and Postdoctoral Advisor (1 Postdoctoral Fellow).* Project Coordinator: Associate Prof. A. G. Vlessidis, Department of Chemistry, University of Ioannina. Total Funding: 584,775 €.

- **2012-2014** Innovative materials for nanocrystalline solar cells - NANOSOLCEL (Research Program "Thales" financed by the Greek Ministry of Education and the European Commission). *Participation as Research Advisor in Synthetic Chemistry.* Project Coordinator: Prof. P. Lianos, Department of Engineering Science, University of Patras. Total Funding: 521,740 €.

- **2011-2012** Synthesis, characterization, and evaluation of the efficiency of new ruthenium photosensitizers in dye-sensitized solar cells (Foundation for Education and European Culture Research Scholarship). *Principal Investigator. Pre-submission role: Author.* Host Laboratory: Dr. P. Falaras. Total Funding: 4,000 €.

- **2011-2013** Sensitizer activated nanostructured solar cells - SANS (NMP Collaborative Project financed by the European Commission: FP7-NMP-2009 SMALL-3). *Participation as Researcher.* Project Coordinator: Prof. H. J. Snaith, Department of Physics, University of Oxford. Greek Team Coordinator: Dr. P. Falaras. Funding for the Greek Research Group: 466,000 €.

- **2009-2010** Development of novel asymmetric titanocene(IV) catalysts: Applications in the coordination polymerization of isocyanates (Greek National Scholarships Foundation Research Fellowship). *Principal Investigator. Pre-submission role: Author.* Host Laboratory: Prof. N. Hadjichristidis. Total Funding: 7,200 €.

- **2005-2008** Development of new catalysts for olefin metathesis: Applications in the synthesis of new polymeric systems - OLEFINMETCAT (Marie Curie Outgoing International Fellowship financed by the European Commission). *Principal Researcher. Pre-submission role: Author.* Project Coordinator: Prof. N. Hadjichristidis. Total Funding: 228,867 €.

- **2005** Synthesis and photochemical studies of novel fullerene $C_{60}$ adducts (Research Program "ΠΥΘΑΓΟΡΑΣ ΙΙ" financed by the Greek Ministry of Education). *Participation as Researcher. Pre-submission role: Co-author.* Principal Investigator: Prof. M. Orfanopoulos. Total Funding: 124,060 €.

- **1999-2001** Models for DNA oxidative cleavage via reactive oxygen species (Research Program "ΕΠΕΤ ΙΙ" financed by the Research and Technology Greek Secretariat and the European

Commission). *Participation as PhD Candidate - Researcher.* Project Coordinator: Prof. M. Orfanopoulos. Principal Researcher: Dr. T. Gimisis. Total Funding: 91,320 €.

## EVALUATOR FOR RESEARCH PROGRAMS AND FUNDING AGENCIES

- European Commission: *Reviewer-Evaluator in European Community's Seventh Framework Programme (FP7) Research Projects (Invited)*
- Portuguese Foundation for Science and Technology (The Portuguese Public Research Funding Agency that Selects and Distributes Research Funds for a Wide Range of Scientific Fields of Research): *External Reviewer-Evaluator in both Project Grant and Investigator Grant Schemes (Invited)*
- European Cooperation in Science and Technology (COST) intergovernmental framework actions: *External Reviewer-Evaluator (Invited)*

## COLLABORATING RESEARCH GROUPS

- Professor T. Anthopoulos, Department of Physics and Centre for Plastic Electronics, Imperial College London, UK: *Organic Light-Emitting Diodes, Field-Effect Transistors, and Photodetectors / Oxygen-Barrier Materials for Organic Electronics*
- Professor A. C. Calokerinos, Department of Chemistry, National and Kapodistrian University of Athens, Greece: *Analytical Chemistry Applications*
- Professor B. Chankvetadze, Institute of Physical and Analytical Chemistry, School of Exact and Natural Sciences, Tbilisi State University, Georgia / CEO, Enantiosep GmbH, Dortmund, Germany: *Chiral High Performance Liquid Chromatography Analyses*
- Dr. P. Falaras, Research Director, IAMPPNM, National Centre of Scientific Research "Demokritos", Greece: *Dye-Sensitized Solar Cells / Raman Spectroscopy / Photoelectrochemical Measurements*
- Dr. D. Giokas, Lecturer, Department of Chemistry, University of Ioannina, Greece: *Analytical and Materials Chemistry Applications*
- Associate Professor M. Girtan, Department of Physics, Angers University, France: *Organic Solar Cells / Nanofabricated Bulk Heterojunction Active Layers*
- Assistant Professor A. A. Gorodetsky, Department of Chemical Engineering and Materials Science, University of California – Irvine, USA: *Materials Synthesis and Characterization / Bottom-Up Synthesis of Graphene Nanoribbons / Organic Solar Cells*
- Associate Professor H. Iatrou, Department of Chemistry, National and Kapodistrian University of Athens, Greece: *Polymers Synthesis, Characterization, and Applications*
- Professor R. Jelinek, Department of Chemistry, Ben Gurion University, Israel: *Analytical and Materials Chemistry Applications*
- Dr. E. Karagouni, Researcher, Laboratory of Cellular Immunology, Hellenic Pasteur Institute, Greece: *Cellular Immunology Applications / DNA Intercalation Studies*
- Professor S. Kaskel, Department of Chemistry and Food Chemistry, Technical University Dresden, Germany: *Metal-Organic Frameworks / Gas Adsorption Studies / Devices*
- Dr. P. E. Keivanidis, Group Leader, Centre for Nanoscience and Technology, Italian Institute of Technology, Italy: *Phosphorimetry / Organic Solar Cells / Oxygen-Barrier Materials for Organic Electronics*
- Dr. G. E. Kostakis, Senior Lecturer, Department of Chemistry, University of Sussex, Brighton, UK: *Inorganic and Coordination Chemistry Applications / X-Ray Diffraction Studies*
- Dr. K. Papadopoulos, Research Director, IAMPPNM, National Centre of Scientific Research "Demokritos", Greece: *Analytical Chemistry Applications / Phase Transfer Organocatalysis*

- Assistant Professor G. S. Papaefstathiou, Department of Chemistry, National and Kapodistrian University of Athens, Greece: *Inorganic and Coordination Chemistry Applications / Metal-Organic Frameworks*
- Dr. A. Petrozza, Group Leader, Centre for Nanoscience and Technology, Italian Institute of Technology, Italy: *Time Resolved (fs to ms) and Quasi-cw Photoinduced Absorption and Photoluminescence Spectroscopy*
- Associate Professor M. Pitsikalis, Department of Chemistry, National and Kapodistrian University of Athens, Greece: *Polymers Synthesis, Characterization, and Applications*
- Professor K. Prassides, Department of Chemistry, Durham University, UK: *Materials Synthesis and Characterization / Fullerene Chemistry*
- Dr. G. Romanos, Research Director, IAMPPNM, National Centre of Scientific Research "Demokritos", Greece: *Structural Characterization of Membranes / Gas-Permeability, Gas-Separation, and Adsorption Studies*
- Assistant Professor G. Sakellariou, Department of Chemistry, National and Kapodistrian University of Athens, Greece: *Polymers Synthesis, Characterization, and Applications*
- Associate Professor J. S. M. Samec, Department of Biochemistry and Organic Chemistry, Uppsala University, Sweden: *Organometallic Catalysis and Renewable Energy Applications*
- Dr. T. A. Theodossiou, Researcher, Institute for Cancer Research, Oslo University Hospital, Norway: *Photodynamic Therapy Applications of Organic and Coordination Photosensitizers*
- Professor F. Verpoort, Department of Inorganic and Physical Chemistry, Faculty of Sciences, Ghent University, Belgium / State Key Laboratory of Advanced Technology for Material Synthesis and Processing, Wuhan University of Technology, PR China: *Inorganic Chemistry / Catalysis / $CO_2$ Activation*