



Georgios Papadogianakis

Title: Associate Professor on Industrial Chemistry and Catalysis

Sector: Organic Chemistry, Organic Chemical Technology, Food Chemistry, Biochemistry, Clinical Chemistry

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Academic Qualifications:

- Ph.D. in Industrial Chemistry (1990) Dept. of Chemistry, Aachen University of Technology (RWTH Aachen), Germany
- B.Sc. in Chemistry (1987) Dept. of Chemistry, Aachen University of Technology (RWTH Aachen), Germany

Appointments:

- February 2010-today: Associate Professor, Dept. of Chemistry, University of Athens
- February 2010-October 2000: Tenured Assistant Professor, Chemistry Department, University of Athens
- October 2000-July 1997: Assistant Professor, Chemistry Department, University of Athens
- June 1997-August 1993: Post-doctoral Researcher, Laboratory of Organic Chemistry and Catalysis, Delft University of Technology, The Netherlands
- July 1993-May 1992: Post-doctoral Researcher, Institute of Industrial Chemistry and Petrochemistry, Aachen University of Technology (RWTH Aachen), Germany
- October 1990-April 1987: Scientific Assistant, Institute of Industrial Chemistry and Petrochemistry, Aachen University of Technology (RWTH Aachen), Germany.

Teaching Activities: (current)

Undergraduate courses

- Chemical Industrial Processes
- Chemistry and Technology of Petroleum -Petrochemicals

Postgraduate courses

- Introduction to Catalysis
- Catalysis in Two-phase Systems

Research Interests/Activities: (last 10 years)

- Catalysis in homogeneous and aqueous/organic two-phase systems in a broad spectrum of catalytic reactions
- Micellar catalysis
- Design and synthesis of novel highly active and selective organic- and water-soluble transition- and main-group metal catalytic complexes
- Mechanistic investigations of catalytic reactions
- Catalytic conversions of renewables – Biorefinery
- Development of a novel catalytic industrial process
- Green/Sustainable Chemistry

Scientific Publications/Citations:

- 30 publications in refereed journals
- 9 European and World patents
- 3 chapters in books of Wiley-VCH
- 3 book reviews
- 3 papers of others exclusively devoted to our work
- More than 700 citations. (H-index 15)

Top five publications

- "Rhodium-catalyzed micellar two-phase hydroformylation of 1-tetradecene with surface active sulfobetaine derivatives of

tris(2-pyridyl)phosphine as water-soluble complex ligands", B. Fell and G. Papadogianakis, *J. Mol. Catal.*, 66 (1991) 143.

- "Catalytic conversions in aqueous media. Part 2. A novel and highly efficient biphasic hydrogenation of renewable methyl esters of linseed and sunflower oils to high quality biodiesel employing Rh/TPPTS complexes", A. Bouriazos, K. Mouratidis, N. Psaroudakis and G. Papadogianakis, *Catal. Lett.*, 121 (2008) 158.
- "Catalytic conversions in green aqueous media: Part 4. Selective hydrogenation of polyunsaturated methyl esters of vegetable oils for upgrading biodiesel", A. Bouriazos, S. Sotiriou, C. Vangelis and G. Papadogianakis, *J. Organomet. Chem.*, 695 (2010) 327.
- "Process for the homogeneous hydrogenation of (poly)unsaturated hydrocarbons", G. Papadogianakis and A. Bouriazos, *EP 2 426 191 (02.08.2010)* and *WO 2012/016849 (21.07.2011)* to Cognis IP Management GmbH and National & Kapodistrian University of Athens. *This patent discloses the first example of a main-group metal catalyzed homogeneous reaction in aqueous media.*
- "Catalytic conversions in green aqueous media: Highly efficient biphasic hydrogenation of benzene to cyclohexane catalyzed by Rh/TPPTS complexes", C. Vangelis, A. Bouriazos, S. Sotiriou, M. Samorski, B. Gutsche and G. Papadogianakis, *J. Catal.*, 274 (2010) 21.

Distinctions:

- Scholarship of the Dr. Jost Henkel Stiftung, Henkel KGaA Company, Germany, due to excellent results in my studies, 1979-1984
- "Scholarship of DAAD (Deutscher Akademischer Austausch Dienst) 1985-1986
- Fellowships: Dutch National Innovation Oriented Programme on Catalysis (IOP-k), Aug. 1993-Jul. 1994; Delft University of Technology, Aug. 1998 and Aug. 2000; Royal Society of Chemistry, Aug. 1999
- Cambridge Isotope Laboratories, Massachusetts, 5 I of ¹³CO, 2nd Worldwide Grand Programme, 1996

Other Activities:

- Guest Editor in Special Issue of *Catalysis Today* entitled "Recent Advances in Catalysis in Green Aqueous Media", 2014.
- Director of the Post-Graduate Studies Programme "Catalysis an Integrated Approach" of the Dept. of Chemistry, University of Athens
- Scientist in Charge in 14 Research Projects
- Referee for the COST European Programs, of the 7th European Congress on Catalysis (EUROPACAT-VII) and the following journals: *J. Mol. Catal. A: Chem.*, *Appl. Catal. A: Gen.*, *Eur. Polym. J.*, and *React. Funct. Polym.*
- Member of 2 International Examination Committees for Ph. D. Theses, The Netherlands
- 33 talks in International and National Conferences, Universities, Research Institutes and in Workshops
- Supervisor for 23 Diploma Theses, 15 Master Theses and 1 Ph.D. Thesis