

Professor Dr. I. Konstantinou, Short Curriculum Vitae



Dr. I. Konstantinou, Professor in Pollution Control and Environmental Protection Technologies, in the Department of Chemistry, University of Ioannina (DC-UOI). His scientific focus is on: a) Environmental catalysis and photocatalysis b) Environmental and Chemical Technologies for Pollution Control (Advanced Oxidation Processes (AOPs), adsorption, photolysis, separation processes; c) Synthesis and characterization of catalytic and adsorbent materials; d) Fate, physicochemical behaviour of pollutants in the environment (transport, adsorption,

photodegradation, hydrolysis, etc.) and risk assessment; e) Development and application of analytical methods for the determination of pollutants and degradation products in catalytic processes and environmental media; f) Advanced mass spectrometric techniques (GC MS/MS, LC-MS-MS, HR-MS) for target analysis and structure elucidation; g) Green chemistry and Technology.

He has published more than 155 publications in international peer-reviewed high impact scientific journals (e.g. Appl. Catal. B: Environ., Environ. Sci. Technol., Chem. Eng. J., Water Res., etc.) and books of international publishers (Springer, Wiley, Taylor & Francis) that have received more than 9750 citations and has an H-index=43. He has communicated more than 200 communications in national and international conference and workshop proceedings. Finally, he holds two patents from the Hellenic Industrial Property Organization. He was the co-author of the book entitled "Instrumental Environmental Analysis" eds. Tziola (Greece). He has been participating in more than 31 national and European research projects. He was/is the supervisor of 7 Ph.D. theses and 20 MSc theses. Other activities include the following: He acts as a reviewer for more than 120 international peer-reviewed journals and for national (IKY, GSRT) and international research proposals (Israel, Croatia, Romania, Cyprus and Holland). He is a member of six national and international scientific associations and member of the organizing /scientific committee of more than 20 conferences.

Among other educational activities he teaches lessons in undergraduate and postgraduate level related to environmental pollution, chemical and environmental technologies, environmental catalysis and photocatalysis, chemical and physical processes. He participated in the examination jury of numerous PhDs and MSc diplomas in different departments and universities in Greece as well as in Europe (France, Italy, Ireland). He has been invited to present lectures and talks on Greek and European Universities and Conferences. He is currently a member of the Regional Council of Research and Innovation (PSEK) in Epirus region and member of coordination Committee of the Institute of Environment and Sustainable Development, University of Ioannina Research Center.

List of publications in international peer-reviewed journals:

1. D.G. Hela, T.M. Sakellarides, I.K. Konstantinou and T.A. Albanis. Influence of salinity and dissolved humic acids on pesticides extraction from water using solid phase extraction disks. International Journal of Environmental and Analytical Chemistry 68, 69-82, 1997.
2. K. Fytianos, S. Charitonidis, T. Albanis, I. Konstantinou, and M. Seferlis. Bioaccumulation of PCB congeners in different species of microalgae from Thermaikos gulf

of the North Aegean Sea, Greece. *Journal of Environmental Science and Health A*, 32(2), 333-345, 1997.

3. K. Fytianos, J. Konstantinou, J. Kaidatzis, T. Albanis. Multiresidue determination of insecticides and fungicides in fruits and vegetables by gas chromatography. *Bulletin of Environmental Contamination and Toxicology*, 61, 684-689, 1998.

4. T.A. Albanis, D.G. Hela, T.M. Sakellarides, I.K. Konstantinou. Monitoring of pesticide residues and their metabolites in surface and underground waters of Imathia (N. Greece) by means of solid phase extraction disks and gas chromatography. *Journal of Chromatography A*, 823, 59-71, 1998.

5. I.K. Konstantinou, T.A. Albanis, D.E. Petrakis and P.J. Pomonis. Removal of herbicides from aqueous solutions by adsorption on Al-pillared, Fe-Al pillared clays and mesoporous alumina aluminum phosphates. *Water Research*, 12, 3123-3136, 2000.

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9. D.A. Lambropoulou, I.K. Konstantinou and T.A. Albanis. Determination of herbicides in natural waters using solid phase microextraction (SPME) and gas chromatography coupled with flame thermionic and mass spectrometric detection. *International Journal of Environmental and Analytical Chemistry*, 78, 223-240, 2000.

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11. D.A. Lambropoulou, I.K. Konstantinou and T.A. Albanis. Determination of fungicides in natural waters using solid phase microextraction (SPME) and gas chromatography coupled with electron capture and mass spectrometric detection. *Journal of Chromatography A*, 893, 143-156, 2000.

12. V. Goutner, T.A. Albanis, I.K. Konstantinou, and K. Papakonstantinou. Polychlorinated biphenyls (PCBs) and organochlorine pesticide residues in eggs of Audouin's gull (*Larus Audouinii*) in the North-Eastern Mediterranean. *Marine Pollution Bulletin*, 42, 377-388, 2001.

13. I.K. Konstantinou, A.K. Zarkadis and T.A. Albanis. Photodegradation of selected herbicides in various natural waters and soil-sorbed phase under environmental conditions. *Journal of Environmental Quality*, 30, 121-130, 2001.

14. S. Guittonneau, I.K. Konstantinou, C. Emmelin, T.A. Albanis and P. Meallier. Determination of the photochemical life time of pesticides in aqueous medium with solar light. *Fresenius Environmental Bulletin*, 10, 353-356, 2001.

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intermediates and the reaction pathway. *Applied Catalysis B: Environmental*, 34, 227-239, 2001.

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27. I.K. Konstantinou* and T.A. Albanis. Worldwide occurrence and effects of antifouling paint booster biocides in the aquatic environment. *Environment International* 30 (2004) 235-248.

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29. V.A Sakkas, I.M. Arabatzis, I.K. Konstantinou, A.D. Dimou, T.A. Albanis and P. Falaras. Photocatalyzed degradation of metolachlor on TiO₂ surfaces. *Applied Catalysis B: Environmental* 49 (2004) 195-205.

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Related Patents :

1. "Photocatalytic regenerated composite waste tire pyrolytic carbon N,F-TiO₂ adsorbent for phenol sorption –degradation" Patent Number: 1008854, Hellenic Industrial Property Organization, 2016.
2. "Optimized material from waste tire char for the sorption of As" Patent Number: 1008850, Hellenic Industrial Property Organization, 2016.

Finally, a list of representative recent research projects relevant to the proposal is provided below:

- Photocatalytic degradation of priority organic pollutants in water systems, Project Heraclitus II, Greek Ministry of Education, 2011-2013. (Coordinator)
- Development of advanced oxidation processes (AOPs) with the use of nanomaterials and sunlight, for the removal of various organic toxic micropollutants, endocrine disruptors and cyanotoxins from natural waters and sewages (AOP-Nanomat), Thalys Project, 2011-2014, General Secretariat of Research and Technology. (Coordinator for the research team of Patras University).

- Development and application of integrative methodologies for the determination of priority pollutants in wetlands of Amvrakikos Gulf. Project «Nea Gnosi», Operational Program “THESSALY-MAINLAND GREECE AND EPIRUS-2007–2013” of the National Strategic Reference Framework (NSRF 2007–2013).2011-2013.
- Dissipation, transport of selected pesticides in soil-water systems and the impact on soil microorganisms and self-sown flora in experimental field cultivations of energy crops (PEST-SOW-E-CROP), Archimedes Project, 2011-2013.
- Waste-Tyre Pyrolysis Recycling Technology for the Production of Added-Value adsorptive and catalytic materials with applications in Industrial and Pollution Control Technologies Project "COOPERATION 2011"– 2012-2015, General Secretariat of Research and Technology.
- Development and application of a system based on advanced oxidation processes for the treatment of hospital wastewaters in order to remove pharmaceutical compounds with high persistence in aquatic environment. (2018-2020). INTERREG IPA II CROSS-BORDER COOPERATION PROGRAMME GREECE -ALBANIA 2014-2020
- New management, quality assurance and minimization of environmental implications standards associated with the production of aquaculture products (ENVIQUAMAN), 2014-2020.
- synthesis, characterization of g-C₃N₄/WO₃ heterostructures and photocatalytic applications for the removal of pollutants from water systems, ELIDEK, PhD Grants, 2019.