

## Manos Dassenakis

Emeritus Professor of Environmental Chemistry and Chemical Oceanography

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**University Address :** University of Athens, Faculty of Chemistry, Laboratory of Environmental Chemistry, Panepistimiopolis, Athens 15784, Greece.

**Graduate studies:** Diploma of Chemistry, University of Athens (1975) ,

**Postgraduate studies:** Master of Science in Oceanography, University of Athens (1981) , Ph.D. of Chemistry, University of Athens (1990),

**Educational activities:** Teaching the graduate and postgraduate students of Chemistry and Oceanography about special aspects of Environmental Chemistry and Marine Chemistry and training them in the relevant laboratories. Participating in lifelong learning activities mainly as it concern Environmental Education for high school teachers

### ***Undergraduate courses***

- ENVIRONMENTAL CHEMISTRY.
- CHEMICAL OCEANOGRAPHY.
- ENVIRONMENTAL MANAGEMENT AND TECHNOLOGY.

### ***Postgraduate Courses***

- MARINE POLLUTION
- ANALYTICAL CHEMICAL OCEANOGRAPHY
- MANAGEMENT AND TECHNOLOGY OF MARINE ENVIRONMENT
- SPECIFIC CHAPTERS OF CHEMICAL OCEANOGRAPHY

### ***Supervising Ph.D. and MSc theses . Some recent Ph.D.s :***

- ✓ M.Ladakis: Bio-Geochemical study of coastal organosedimentary forms (algal mats)
- ✓ A.Kastritis: Study of nitrogen and phosphorus cycles in the coastal system of Maliakos Gulf
- ✓ S.Triantafyllaki: Chemical behaviour and transport of organic pollutants in a coastal area affected by industrial pollution (NW Saronicos gulf)
- ✓ V.Paraskevopoulou: Transport and chemical behaviour of trace metals in a coastal area affected by refinery activities.
- ✓ K.Parinos: Study of the chemical composition and circulation of heavy metals and nutrients in estuarine systems affected by anthropogenic polluting activities
- ✓ E.Anastasopoulou: Study of the effects of olive mills in the coastal environment
- ✓ O.Chalkiadaki : Study of the interactions of heavy metals and proteins in marine benthic organisms
- ✓ E.Zafiraki: Risk asesment of PFASs through the determination of their concentrations in various food matrices
- ✓ V.Ovezikoglou: Methodology for the evaluation of the management of Marine Protected Areas. Implementation in the cases of Greek Marine Parks of North Sporades and Zakynthos.

## **Research activities**

My main research interests focus on the chemical behaviour, distribution and circulation, of pollutants like heavy metals, nutrients and organic substances in aquatic environment and between the various environmental compartments. There is a specific interest for the cases of mercury, cadmium, chromium (VI) and polyaromatic hydrocarbons. The study of the transfer of pollutants from the land to the sea (e.g. estuaries) is of high priority. Of particular importance is also the study of the different forms under which various elements occur in natural systems and which are responsible for their biological activity and impact (speciation). I also work on application of anti-polluting technologies, study of sewage treatment plant and solid wastes, recycling facilities and their products, studies of environmental impact and determination of environmental limitations in industrial sectors. Another topic of interesting environmental research of my group is the relation between aquacultures and pollution of the marine environment and, finally, the research in "microenvironments" of special interest (lagoons, algal mats, ports, hot springs, etc). A lot of research projects funded by various sources (Local, National, European Union, international) have been accomplished by my research team in collaboration with various Greek and European Laboratories.

### **Coordinator for the Laboratory of Environmental Chemistry in a lot of scientific projects:**

- "Transport of pollutants through small polluted rivers to the sea": Greek-Spanish- Georgian collaboration funded by INTAS
- "Sampling and Analysis of Polycyclic Musks in activated sludge and sewage treatment plant effluents in various cities of Greece (Larisa, Volos, Lamia)" Funded by Fragrance Producing Industries IFF and PWF.
- "Study of the transport and chemical behaviour of toxic pollutants in a marine area influenced by a big refinery and other industrial activities" Funded by the Greek General Secretary of Research and Technology and the Refinery of MOTOR OIL
- "Nitrogen and phosphorus cycles in the Maliakos gulf – study of the eutrophication in the area of Sperchios estuary" Funded by the Greek Ministries of Education and Environment.
- "Environmental Study in the Gulf of Suda in Crete" Funded by the Municipality of Suda
- "Study of the interactions of heavy metals and proteins in marine benthic organisms. Funded by the Greek General Secretary of Research and Technology
- "Integrated Regional Monitoring Implementation Strategy in the South European Seas", funded by EU
- "Action Plans for Integrated Regional Monitoring Programmes, Coordinated Programmes of Measures and Addressing Data and Knowledge Gaps in Mediterranean" funded by EU
- "Supporting maritime spatial Planning in the Eastern Mediterranean" funded by EU
- "Support Mediterranean Member States towards coherent and coordinated implementation of the second phase of the MSFD", funded by EU

### **Projects for the dissemination and promotion of Environmental sciences were:**

- "Development of Oceanographic Research in Greece" Specific Support Action project in the frame of the 6<sup>th</sup> FP of European Union- Structuring the European Research Area - Human resources and mobility - FP6-2004-Mobility-13 (2005-2006)
- Researchers' night 2006–2007-2008 "A Night On the Beach with Oceanography Researchers" (ANOBOR) - "Researchers Against Degrading Environment" (RADE) – Research Web in the Society (REWEBIS) Specific Support Action projects Human resources, Marie Curie actions and mobility In the frame of FP6 –FP7 of European Union

### **Other activities :**

- President of European Federation of Marine Science and Technology Societies (EFMS) 2008-2013, Organization of two International Scientific Conferences of EFMS during 2002 and 2010
- President of the Hellenic Oceanographers Association 2000-2010
- Titular member of the Division of Chemistry and Environment of International Union of Pure and Applied Chemistry. 2011-16

### **Scientific publications:**

The results of my research work was published in more than 100 scientific publications and about 200 announcements in International or National conferences. Some characteristic publications:

- "THE EFFECT OF MINING ACTIVITIES ON THE HYPERSALINE MAR MENOR LAGOON", M. Dassenakis, G. Garcia, E. Diamantopoulou, E.M. Garcia-Marin, G. Filippi, V. Fioraki, Desalination and Water Treatment , 13, 282-289, 2010
- "EVALUATION OF WATER QUALITY IN AN URBAN PARK FOR ENVIRONMENTAL ENSITISATION : A LARGE SCALE SIMULATION PROJECT" S.Karavoltzos, M.Antonopoulou, A.Sakellari, M.Dassenakis, M.Scoullos, Desalination and Water Treatment, 13, 328-335, 2010
- "CHEMICAL SPECIATION IN WATERS INFLUENCED BY LEAD-ZINC METAL-LURGICAL INDUSTRY", S.Tepavitcharova, T.Todorov, M.Dassenakis, V. Paraskevopoulou, Environmental Monitoring and Assessment, Vol 169, 1, 27-36, 2010
- "ASSESSMENT OF HEAVY METAL CONTAMINATION AND MINERAL MAGNETIC CHARACTERIZATION OF THE ASOPOS RIVER SEDIMENTS (CENTRAL GREECE). F.Botsou, A.Karageorgis, M.Dassenakis, M.Scoullos ,Marine Pollution Bulletin,2011
- "CHEMICAL SPECIATION IN NATURAL AND BRINE SEA WATERS" S.Tepavitcharova, T.Todorov, M.Dassenakis, V. Paraskevopoulou, Environmental Monitoring and Assessment ,180,217-227, 2011
- "COMPARISON OF ISO-GUM AND MONTE CARLO METHODS FOR THE EVALUATION OF MEASUREMENT UNCERTAINTY: APPLICATION TO DIRECT CADMIUM MEASUREMENT IN WATER BY GFAAS", D.Theodorou, L.Meligotsidou, S.Karavoltzos, M.Dassenakis,M.Scoullos,Talanta 83, 1568-1574 , 2011
- "REMOTE SENSING IN COASTAL WATER MONITORING:APPLICATIONS IN THE EASTERN MEDITERRANEAN SEA" M.Dassenakis, V.Paraskevopoulou ,C.Cartalis, N.Adaktilou, K.Katsiabani (IUPAC Technical Report) Pure and applied Chemistry, 84, 2, 335-375, 2012
- "TRACE METAL VARIABILITY, BACKGROUND LEVELS AND POLLUTION STATUS ASSESSMENT IN LINE WITH THE WATER FRAMEWORK AND MARINE STRATEGY FRAMEWORK EU DIRECTIVES IN THE WATERS OF A HEAVILY IMPACTED MEDITERRANEAN GULF" V. Paraskevopoulou, C.Zeri, H. Kaberi, O.Chalkiadaki , E.Krasakopoulou, M.Dassenakis, M.Scoullos, Marine Pollution Bulletin 87,(1-2), 323–337, 2014
- "EFFECTS OF OLIVE OIL WASTES ON RIVER BASINS AND AN OLIGOTROPHIC COASTAL MARINE ECOSYSTEM: A CASE STUDY IN GREECE"A.Pavlidou, E.Anastasopoulou, M.Dassenakis, I.Hatzianestis, V. Paraskevopoulou,N. Simboura, E.Rousselaki, P.Drakopoulou, Science of the Total Environment, 497, 38-49, 2014
- "NUTRIENT DYNAMICS AND EUTROPHICATION IN THE SEA OF MARMARA: DATA FROM RECENT OCEANOGRAPHIC RESEARCH" Bahattin Yalçın , M. Levent Artüz , Alexandra Pavlidou , Soner Çubuk , Manos Dassenakis ,Science of the Total Environment 601–602 (2017) 405–424