Sotirios Karavoltsos



Assistant Professor

LABORATORY OF ENVIRONMENTAL CHEMISTRY, DEPARTMENT OF CHEMISTRY, NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS

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EDUCATION

1995	Bachelor in Chemistry, NKUA
1998	MSc of the Interdepartmental Post-Graduate Course of Oceanography (Field of Chemical Oceanography), NKUA
2002	PhD of the Interdepartmental Post-Graduate Course of Oceanography (Field of Chemical Oceanography), NKUA

RESEARCH FIELDS

- Study of metal speciation in different phases of the environment (dissolved phase, sediments / soils, sediments pore water, suspended particulate matter, air) and of the processes which affect them.
- Marine biogeochemical cycles.
- Application of sensitive electrochemical techniques for the investigation of the nature of metal binding organic ligands. Determination of metal complexing capacity and of the corresponding stability constants of metal complexes formation.
- Pollutants (metals, organic compounds) in waters, soils / sediments, air, biota, biological fluids and foodstuff.
- Pollutants bioaccumulation.
- Food safety and environmental impact.
- Uncertainty evaluation of results produced in the framework of environmental analysis.

EDUCATIONAL EXPERIENCE

UNDERGRADUATE COURSES

- Environmental Chemistry (632), Compulsory, Department of Chemistry
- Atmospheric Chemistry (737), Elective, Department of Chemistry
- Chemical Oceanography (738), Elective, Department of Chemistry
- Environmental Management and Technology (836), Elective, Department of Chemistry
- Toxicology-Ecotoxicology (8121), Elective, Department of Chemistry

POSTGRADUATE COURSES

Laboratory of Environmental Chemistry, Department of Chemistry, Inter-institutional Post-graduate Course “Oceanography and Management of the Marine Environment”

Courses: “Introduction to Chemical Oceanography”, “Analytical Chemical Oceanography”, “Marine Pollution”, “Marine Ecotoxicology”, “Management of the Marine Environment”

RESEARCH GRANTS

Coordinator of the research project “Development of automated sampling tools to monitor the sea-air interface in coastal areas (InterSeA)”, implemented in the framework of H.F.R.I call “Basic research Financing (Horizontal support of all Sciences)” under the National Recovery and Resilience Plan “Greece 2.0” funded by the European Union – Next Generation EU (H.F.R.I. Project Number: 15392).

REVIEWER OF SCIENTIFIC JOURNALS

Reviewer in >30 international scientific journals

EDITOR OF BOOKS AND SPECIAL VOLUMES

- Contribution in the book “Mercury – Cadmium - Lead, Handbook for Sustainable Heavy Metals Policy and Regulation (EUPHEMET)”, by Michael Scoullos (Ed.), Gerrit Vonkeman, Ian Thornton, Zen Makuch. Kluwer Academic Publishers, 2001 (ISBN 1-4020-0224-6)
- Electronic university book «Chemical Oceanography», M. Dassenakis, M. Ladakis, S. Karavoltsos, V. Paraskevo poulou, Hellenic Academic Books Kallipos, National Technical University of Athens (NTUA), 2015 (ISBN 978-960-603-234-9)
- Dassenakis M.I., Voutsa D.K., Karapanagioti C.K., Karavoltsos S., Ladakis E.I., Samara C.A., Sakkas V.A., Paraskevopoulou V.V., Sakellari A., Environmental Chemistry, Broken Hill Publishers, 2021, ISBN: 978-9925-588-12-1. Translation of the originally published in English book “Environmental Chemistry”, 5th edition, by Colin Baird and Michael Cann, W.H. Freeman and Company, 2012, ISBN: 978-1-4292-7707-4

ADDITIONAL INFORMATION

- Publications in SCI journals: 57
- Conferences / Workshops: >80
- Reviewer in >30 international scientific journals
- Guest editor in 3 special issues of scientific journals
- Supervision of PhD thesis (in progress): 3
- Supervision and participation in the elaboration of M.Sc. thesis: 29
- Supervision and participation in the elaboration of undergraduate thesis: 30
- Responsible for the quality assurance of the accreditation system (ISO EN/IEC 17025) of the Laboratory of Env ironmental Chemistry, Department of Chemistry, NKUA

SELECTED PUBLICATIONS

- Metal complexation, FT-IR characterization, and plankton abundance in the marine surface microlayer of coa stal areas in the Eastern Mediterranean. Karavoltsos S., Sakellari A., Plavsic M., Bekiaris G., Tagkouli D., Triant afyllidis A., Giannakourou A., Zervoudaki S., Gkikopoulos I., Kalogeropoulos N., Frontiers in Marine Science, 2 022, 9: 932446. doi 10.3389/fmars.2022.932446
- Polycyclic aromatic hydrocarbons and trace elements dietary intake in inhabitants of Athens, Greece, based o n a duplicate portion study. Grigoriou C., Costopoulou D., Vassiliadou I., Karavoltsos S., Sakellari A., Bakeas E., Leondiadis L., Food and Chemical Toxicology, 2022, 165, 113087. doi 10.1016/j.fct.2022.113087
- Trace metals in the marine surface microlayer of coastal areas in the Aegean sea, Eastern Mediterranean. Ka ravoltsos S., Sakellari A., Dassenakis M., Bakeas E., Scoullos M., Estuarine, Coastal and Shelf Science, 2021, 25 9, 107462. doi 10.1016/j.ecss.2021.107462
- Trace elements, polycyclic aromatic hydrocarbons, mineral composition and FT-IR characterization of unrefin ed sea and rock salts: environmental interactions. Karavoltsos S., Sakellari A., Bakeas E., Bekiaris G., Plavšić M ., Proestos C., Zinelis S., Koukoulakis K., Diakos I., Dassenakis M., Kalogeropoulos N., Environmental Science a nd Pollution Research, 2020, 27, 10857-10868. doi 10.1007/s11356-020-07670-2
- Dynamics of trace metals in the system water-soil-plant-wild rats-tapeworms (Hymenolepis diminata) in Magl izh area, Bulgaria. Kovacheva A., Vladov I., Gabrashanska M., Rabadjeva D., Tepavitcharova S., Nanev V., Dass enakis M., Karavoltsos S., Journal of Trace Elements in Medicine and Biology, 2020, 58, 126440. doi 10.1016/j .jtemb.2019.126440
- Chemical characterization of indoor and outdoor particulate matter (PM2.5, PM10) in Doha, Qatar.Saraga D.,

Maggos T., Sadoun E., Fthenou E., Hassan A., Tsiouri V., Karavoltsos S., Sakellari A., Vasilakos C., Kakosimos K., Aerosol and Air Quality Research, 2017, 17, 1156-1168. doi 10.4209/aaqr.2016.05.0198

- Organic complexation of copper in throughfall and open field bulk deposition: Influence of the tree canopy of Mediterranean forest ecosystems. Karavoltsos S., Fotiadis F., Michopoulos P., Sakellari A., Plavšić M., Bourletsikas A., Kaoukis K., Thomaidis N.S., Dassenakis M., Scoullos M., Chemosphere, 2017, 167, 28-35. doi 10.1016/j.chemosphere.2016.09.131
- Organic matter characterization and copper complexing capacity in the sea surface microlayer of coastal areas of the Eastern Mediterranean. Karavoltsos S., Kalambokis E., Sakellari A., Plavšić M., Dotsika E., Karalis P., Leondiadis L., Dassenakis M., Scoullos M., Marine Chemistry, 2015, 173, 234-243. doi 10.1016/j. marchem.2014.12.004