

Aikaterini Sakellari



Laboratory Teaching Staff

LABORATORY OF ENVIRONMENTAL CHEMISTRY, DEPARTMENT OF CHEMISTRY,
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(1329 citations, h-index 17, i10-index 28)

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EDUCATION

- 2000 B.Sc. in Chemistry/ NKUA
- 2002 M.Sc. from the Interdepartmental Post Graduate Course of Oceanography/ NKUA/ "Study of cadmium and lead sources of the human organism"
- 2007 Ph.D. from the Interdepartmental Post Graduate Course of Oceanography/ NKUA/ "Biogeochemical study of metals: Study of trace elements' cycle in seawater and sediment and investigation of their impact on the food chain"

RESEARCH FIELDS

Biogeochemical metal cycles in marine systems. Surface microlayer of aquatic systems. Metal speciation in different phases of the marine environment. Use of voltammetric techniques for the study of metal complexing capacity in several substrates (seawater, rainwater, algal exudates, wines and their products, infusions, beverages etc). Trace elements accumulation in biomass and humans. Occurrence of trace elements in several environmental samples substrates (seawater and fresh water, sediments, atmospheric particulate matter, biomass, foodstuffs, biological fluids, solid wastes and waste recycling products). Role of organic matter speciation.

EDUCATIONAL EXPERIENCE

UNDERGRADUATE COURSES

- Environmental Chemistry (632)/ Obligatory/ Department of Chemistry/ NKUA
- Atmospheric Chemistry (737)/ Optional/ Department of Chemistry/ NKUA
- Chemical Oceanography (738)/ Optional/ Department of Chemistry/ NKUA
- Environmental Management and Technology (836)/ Optional/ Department of Chemistry/ NKUA
- Toxicology – Ecotoxicology (8121)/ Optional/ Department of Chemistry/ NKUA

POST GRADUATE COURSES

- Laboratory of Environmental Chemistry/ Department of Chemistry/ Interinstitutional Post Graduate Course "Oceanography and Management of the Marine Environment"/ Introduction to Chemical Oceanography
- Laboratory of Environmental Chemistry/ Department of Chemistry/ Interinstitutional Post Graduate Course "Oceanography and Management of the Marine Environment"/ Analytical Chemical Oceanography
- Laboratory of Environmental Chemistry/ Department of Chemistry/ Interinstitutional Post Graduate Course "Oceanography and Management of the Marine Environment"/ Marine Ecotoxicology
- Laboratory of Environmental Chemistry/ Department of Chemistry/ Interinstitutional Post Graduate Course "DIXINET-EAA"/ Environmental Education and Education for Sustainable Development I

RESEARCH GRANTS

The following are mentioned indicatively:

- “Training on laboratory analysis of water samples with emphasis on priority substances”/ Finance: Mediterranean Information Office (MIO)
- Program “ARISTEIA”, “Integrated study of the biogeochemical behavior of heavy metals in the coastal marine environment”/ Finance: 2007-2013, Ministry of Development, GSRT
- “THALIS – NKUA – Study of climate change impact on river deltas. Application in the case of river Pinios delta (Thessaly)”/ Finance: European Union and National Sources
- “Monitoring of atmospheric air quality in ELPE facilities”/ Finance: ELPE
- “Determination of physicochemical parameters and chemical composition of solid wastes of Attica”/ Finance: Municipalities of Attica Prefecture
- “Monitoring of the quality of marine environment”/ Finance: Ministry of Environment

REVIEWER OF SCIENTIFIC JOURNALS

African Journal of Agricultural Research

Agronomy

Continental Shelf Research

Ecotoxicology and Environmental Safety

Environmental Earth Sciences (ENGE)

Environmental Monitoring and Assessment (EMAS)

Environmental Science and Pollution Research (ESPR)

Frontiers in Marine Science (FMS)

Journal of Cereals and Oilseeds

Journal of Consumer Protection and Food Safety (JVUL)

Marine Pollution Bulletin

Science of the Total Environment

Water

EDITOR OF BOOKS AND SPECIAL VOLUMES

- Participation in the book “Mercury – Cadmium – Lead, Handbook for Sustainable Heavy Metals Policy and Regulation (EUPHEMET)”, by Michael Scoullou (Ed.), Gerrit Vonkeman, Ian Thornton, Zen Makuch. Kluwer Academic Publishers, 2001, ISBN: 1-4020-0224-6
- “Environmental Chemistry”, Dassenakis M.I., Voutsas D.K., Samara C.A., Karapanagioti C.K., Sakkas V.A., Karavoltzos S., Ladakis E.I., Paraskevopoulou V.V., Sakellari A. Broken Hill Publishers LTD, 2021, Nicosia, Cyprus, ISBN: 978-9925-588-12-1 (Translation in Greek of the original English edition of “Environmental Chemistry”, 5th edition of Colin Baird and Michael Cann, W.H. Freeman and Company, 2012, ISBN: 978-1-4292-7704-4)

ADDITIONAL INFORMATION

- 45 Publications in scientific journals
- Conference presentations: 56 (International), 15 (Greek)
- Participation in the three member examination committee of master theses of post graduate students: 5
- Supervision of undergraduate theses: 4
- Participation in the accreditation system according to ISO EN/IEC 17025 of the Laboratory of Environmental Chemistry of the Department of Chemistry of NKUA
- Organization of environmental education actions in secondary schools. Visits to schools, field works with the participation of students, visits of students in the premises of the Laboratory of Environmental Chemistry of the Department of Chemistry of NKUA and participation of students in the elaboration of experiments.

SELECTED PUBLICATIONS (publications link)

- Karavoltzos S., Sakellari A., Plavšić M., Bekiaris G., Tagkouli, D., Triantafyllidis A., Giannakourou A., Zervoudaki S., Gkikopoulos I., Kalogeropoulos N., 2022. Metal complexation, FT-IR characterization, and plankton abundance in the marine surface microlayer of coastal areas in the Eastern Mediterranean. *Frontiers in Marine Science*, 9, 932446 (<https://doi.org/10.3389/fmars.2022.932446>).
- Grigoriou C., Costopoulou D., Vassiliadou I., Karavoltzos S., Sakellari A., Bakeas E., Leondiadis L., 2022. Polycyclic aromatic hydrocarbons and trace elements dietary intake in inhabitants of Athens, Greece, based on a duplicate portion study. *Food and Chemical Toxicology*, 165, 113087 (<https://doi.org/10.1016/j.fct.2022.113087>).
- Sakellari A., Karavoltzos S., Moutafis I., Koukoulakis K., Dassenakis M., Bakeas E., 2021. Occurrence and distribution of polycyclic aromatic hydrocarbons in the marine surface microlayer of an industrialized coastal area in the eastern Mediterranean. *Water*, 13, 3174 (<https://doi.org/10.3390/w13223174>).
- Kandyliari A., Karavoltzos S., Sakellari A., Anastasiadis P., Asderis M., Papandroulakis N., Kapsofetalou M., 2021. Trace metals in six fish by-products of two farmed fishes, the gilthead sea bream (*Sparus aurata*) and the meager (*Argyrosomus regius*): Interactions with the environment and feed. *Human and Ecological Risk Assessment: An International Journal*, 27(4), 1126-1146 (<https://doi.org/10.1080/10807039.2020.1799188>).
- Sakellari A., Karavoltzos S., Tagkouli D., Rizou C., Sinanoglou V.J., Zoumpoulakis P., Koutrotsios G., Zervakis G.I., Kalogeropoulos N., 2019. Trace elements in *Pleurotus ostreatus*, *P. eryngii* and *P. nebrodensis* mushrooms cultivated on various agricultural by-products. *Analytical Letters*, 52(17), 2692-2709 (<https://doi.org/10.1080/00032719.2019.1594865>).
- Sakellari A., Karavoltzos S., Plavšić M., Bempi E., Papantonopoulou G., Dassenakis M., Kalogeropoulos N., 2017. Copper complexing properties, trace metal content and organic matter physico-chemical characterization of Greek beers. *Microchemical Journal*, 135, 66-73 (<https://doi.org/10.1016/j.microc.2017.07.010>).
- Sakellari A., Karavoltzos S., Kalogeropoulos N., Theodorou D., Dedoussis G., Chrysohoou C., Dassenakis M., Scoullou M., 2016. Predictors of cadmium and lead concentrations in the blood of residents from the metropolitan area of Athens (Greece). *Science of the Total Environment*, 568, 263-270 (<https://doi.org/10.1016/j.scitotenv.2016.06.018>).
- Karavoltzos S., Plavšić M., Kalogeropoulos N., Kogiannou D.A.A., Strmečki S., Sakellari A., Dassenakis M., Scoullou M., 2014. Copper complexing properties and physicochemical- characterization of the organic matter in Greek herbal infusions. *Food Chemistry*, 160, 53-60 (<https://doi.org/10.1016/j.foodchem.2014.03.080>).
- Sakellari A., Karavoltzos S., Theodorou D., Dassenakis M., Scoullou M., 2013. Bioaccumulation of metals (Cd, Cu, Zn) by the marine bivalves *M. galloprovincialis*, *P. radiata*, *V. verrucosa* and *C. chione* in Mediterranean coastal microenvironments: association with metal bioavailability. *Environmental Monitoring and Assessment*, 185, 3383-3395 (<https://doi.org/10.1007/s10661-012-2799-2>).
- Sakellari A., Plavšić M., Karavoltzos S., Dassenakis M., Scoullou M., 2011. Assessment of copper, cadmium and zinc mobilization in Mediterranean marine coastal sediments. *Estuarine, Coastal and Shelf Science*, 91, 1-12 (<https://doi.org/10.1016/j.ecss.2010.09.008>).