

CURRICULUM VITAE



PERSONAL DATA

Name: Evangelia E. Golia

Occupation: **Professor of Soil Science**

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EDUCATION

- **Degree in Chemistry**, Aristotle University of Thessaloniki, Greece (1987-1991) (Grade: 8.6/10)
- **Degree in Agriculture**, Department of Agriculture Crop Production and Rural Environment, University of Thessaly, Greece (2003-2008). (Grade: 8.34/10)
- **MSc in Quality Assurance**, Greek Open University, Greece (2003-2006). (Grade: 9.2/10)
- **PhD in Soil Science**, Department of Agriculture, Crop Production and Rural Environment, University of Thessaly (1999-2003). (Grade: Excellent 10/10)
- **Postdoctoral Research** between the SZENT ISTVAN University, Hungary and the Department of Agriculture Crop Production and Rural Environment, School of Agricultural Sciences, University of Thessaly, Greece. (2004-2006).

RESEARCH FIELDS

1. Environmental **Analysis** (use of Atomic Absorption Spectrophotometer, ICP-AES, Ionic chromatography)
2. Environmental **monitoring** using GIS
3. Sample **preparation techniques** for the analysis of metals.
4. **Development** and **validation** of analytical methods for **determination of metals** in environmental and food samples.
5. Physicochemical behavior of **metals in environment**. Transportation of metals and metalloids in environmental compartments. **Adsorption-desorption** studies.
6. Investigation concerning the influence of the (**micro- or nano-**) **plastics** used in agriculture in soil physicochemical properties and soil fertility.
7. **Microplastics** soil pollution in urban and rural soils.

8. **Metals and (polycyclic aromatic Hydrocarbons) PAHs** combined effects with **microplastics** in soils. Investigation of **absorption** and **desorption** phenomena on microplastics surface.

RESEARCH EXPERIENCE

- Project "Evaluation of agrochemical inputs in Pagassitikos Gulf. Determination of metals and persistent organics in the sediment and biota in Pagassitikos Gulf", as Researcher, Project funded by the Prefecture of Magnesia. 1998-2000.
- Project "Monitoring of the drinking water quality of Volos city. Determination of solvents and Trihalomethanes», as Researcher, Project funded by the Prefecture of Magnesia. 2001-2002, 2002-2004, 2004-2009
- Project «Pesticides Monitoring for industrial tomatoes» as Researcher, Project funded by Agricultural Cooperation of Volos. 2002-2003
- Project «Monitoring the quality of marine environment- the case of metals in Pagassitikos Gulf» as Researcher, Part of the Greek MED-POL Program, 2003-2006.
- Project «Metals behavior in the greenhouse environment» as Researcher, Project funded by the Ministry of National Education-EPEAEK in the frame of Pythagoras I, 2004-2006.
- Project «Diphenylamine contamination in postharvest facilities environment. Evaluation of techniques for diphenylamine' uses reduction» as Researcher, Project funded by the Research Committee of University of Thessaly, 2009-10.
- Project «Evaluation of biobeds for the decontamination of wastewaters of agricultural origin – BIOBEDS» as Researcher, Project funded by the Institute of Research Promotion of Cyprus, 2009-2011.
- Project «Ozone application for improving postharvest handling of edible horticultural products- HORTOZONE» as Researcher, Project funded by Ministry of National Education- NSRF in the frame of Thalis, 2011-2015.
- Project «Pesticides & metals Monitoring Systems using Nanosensors for Safe Food Production, PEISMON», as Researcher. Project funded from the Greek General Secretariat for Research & Technology GSRT under the framework of the Bilateral Greek-China agreement, 2013-2015
- Project «Investigating the use of geotextile & plastic materials (for soil & plant cover) on the pollution of the soil and crops with micro and nano plastics" as Principal Investigator, Project funded by the Research Committee of Aristotle University of Thessaloniki, 2023-2026.
- Project «Biosoil: the use of wastes as soil amendments" as Associate Professor, Principal Investigator, Responsible for Soil Science, Project funded by the Research Committee of Aristotle University of Thessaloniki, 2023-2026.
- Project «Investigating the use of fire extinguisher filler powder as a soil conditioner and/or fertilizer in various crops», as Principal Investigator, Project funded by the Research Committee of Aristotle University of Thessaloniki, 2023-2028.

TEACHING EXPERIENCE:

- University of Thessaly, Greece. (2003-2010): 1) Soil Science, 2) Soil Fertility-Fertilizers-Plant Nutrition (Graduate and postgraduate courses).
- (2010-2021): General and Inorganic Chemistry, 2) Organic Chemistry, 3) Soil Science, 4) Soil Fertility-Fertilizers-Plant Nutrition (Undergraduate studies -laboratory teaching)

(2017-present) Sustainable management of Environmental Changes and Circular Economy (postgraduate courses)

Member of the Examination Board of graduate student's thesis, and postgraduate student's research thesis (15).

Aristotle University of Thessaloniki (2021-present): 1) Soil Science, 2) Soil Fertility-Fertilizers-Plant Nutrition (Undergraduate studies -laboratory teaching), 3) Soil Chemistry

Member of the Examination Board of graduate student's thesis, and postgraduate student's research thesis (15).

PARTICIPATION IN TEACHER MOBILITY THROUGH ERASMUS PLUS

1. Lectures at **SZENT ISTVAN University**, Hungary (9-14 September 2008). Theme of the lecture series: "The heavy metal sorption of soils". Titles of the lectures:

- "Heavy metals and environment" (2 hours).
- "Analytical methods for determination of metals in soils, solids, water and plant tissues" (2 hours).
- "Cadmium, Zinc, Copper, Arsenate and Arsenite sorption of soils" (1 hour).

2. Conducting lectures at the **Cyprus University of Technology** (20 - 26 June 2016)

The title of the lecture was: "Heavy metals in the environment. Laboratory methods for the determination of heavy metals in environmental samples".

3. Lectures at the University **BERGISCHE UNIVERSITÄT WUPPERTAL**, Germany (10 - 13 October 2017). Lecture topic: "Properties of potentially toxic elements"

Titles of the lectures:

- «Heavy metals from a more chemical perspective. Some theoretical principles» (2 hours).
- «Potentially Toxic Elements and Analytical Chemistry. Analytical methods for determination of metals in soils, solids, water and plant tissues» (2 hours).
- "Heavy metals and environment" (2 hours).
- "Potentially toxic elements and superfoods" (2 hours).

SUPERVISOR OF POST DOCTORAL THESES

1. Title: "Phytoremediation of heavy metal containing contaminated soils", by Dimitrios Arabatzis
2. Title: "Investigation of the effect of **plastic particles (microplastics and nanoplastics)** on the physico-chemical soil properties and on plant growth and yield. How can influence the primary and secondary plant metabolites production?"

SUPERVISOR OF PhD THESES

1. Title: "Investigation of the use of *Silybum marianum* (L.) Gaertn. for remediation of **heavy metal** contaminated soils", by Sotiria G. Papadimou
2. Title: "Study of the levels of soil pollution caused by inorganic and **organic pollutants**", by Christos Xagoraris
3. Title: Investigation of mobility, contaminant activity and effects of **plastics (microplastics)** on agricultural soils and plants, by John Bethanis.

Participation in the Advisory Committee of the Doctoral Thesis

1. Evaluation of the agrochemical use of solid residues of aromatic and medicinal plants distillation

2. Study of Innovative Electrode Surfaces based on the molding and their application in the development of electrochemical (bio)sensors

PARTICIPATION IN EXAMINATION DOCTORAL THESIS COMMITTEES

1. Investigation of new methods of stabilization of dehydrated urban sewage sludge and evaluation of its agronomic use", by Eftihia Samara.
2. Factors affecting the geochemistry, mobility and bioavailability of selenium in Greek soils
3. Phytoremediation of heavy metal contaminated soils
4. The effect of agricultural and forestry management of chestnut (*Castanea sativa* L.) on soil properties and nutrition
5. Stabilization of dehydrated sludge from urban waste water using soil improvers and its agronomic use

SUPERVISIN OF MSc THESES

1. Title: "Study of the levels of heavy metals (Zn, Cu, Ni, Pb and Cd) in soil samples in the center of the city of Volos", by Sotiria G. Papadimou
2. Title: "Urban territorial and urban potentially toxic elements, during the years 2018 - 2021. Case study: Volos, Greece, by Panagiotis-Stavros Aslanidis.
3. Title: "Investigation of the levels of heavy metals (potential toxic elements) in the urban soil environment of Larissa. Risk assessment for human health", by Violetta-Stefania Goltso
4. Title: "Sustainable management of soil pollutants. Inventory of urban soil pollution in Greece & optimal ways to manage it", by Georgia Kaffe.
5. Title: "Sustainable Solid Waste Management in the context of the Circular Economy. Evaluation of the Integrated Waste Management Plan in the Administrative Unit of Larissa. Investigation of the effect on the soil quality of the study area", by Koulotsiou Evangelia
6. Title: 'Soil remediation through the use of soil amendments - The use of biochar', by Theodora Bousdra
7. Title: "Sustainable development objectives and the environment-assessment of Cu and Zn pollution in the urban soil environment of Thessaloniki", by Andromachi Charizani.
8. Title: "Organic waste management through composting while supporting the circular economy concept. Investigate the use of compost products as soil amendment materials", by Konstantina Anagnostopoulou.
9. Title: "Sustainable management of contaminated soils: the case of copper uptake from industrial hemp", by Charicleia Vasilou.
10. Title: "Investigation the use of fire extinguisher filler powder as a soil conditioner or fertilizer in agricultural soils in the context of circular economy", by Ioanna Tsigka.
11. Title: Investigation of factors affecting the availability of nutrients and toxic elements in agricultural soils of Thessaly, by Georgios Koutopoulos
12. Title: "Study, monitoring and assessment of soil pollution levels in urban green areas of Thessaloniki city, Greece", by Ourania-Despoina Kantzou (2022-2024)
13. Title: "*Cannabis Sativa* (L.) usage for Cd-polluted soils phytoremediation purposes, by Maria Androudi (2022-2024)

PARTICIPATION IN POSTGRADUATE THESIS COMMITTEES

1. Title: "The management of Municipal Solid Waste in Greece: the institutional framework, the current situation and the national planning for the period 2020-2030 according to principles of the circular economy", by Apostolia Kremali
2. Title: "Improvement of structural composition and stability of soils by the method of bio-cementation", by Antigoni Vranna

SSUPERVISION OF UNDERGRADUATE THESIS EXAMINATION COMMITTEES

Member of Three-Member Examination Committees, as a contract lecturer based on PD407 / 80, in the following dissertations of students of the Department of Crop Production and Rural Environment (> 50 dissertations)

- "Improvement of soils contaminated by Zn with the use of materials resulting from the modification of natural soil components and minerals" by student Nikolaidou Danai
- "Determination of assimilable phosphorus in the soils of Almyros, Thessaly" by student Nikoli Thomais.
- "Study of the levels of nitrate and nitrite ions in agricultural soils of the Almyros area of N. Magnesia. Illustration of the spatial variability of these data in selected areas of the study "by the student Mr. K. Papadimas.
- "Study of the levels of available phosphorus and phosphate ions in agricultural soils of the Almyros area of N. Magnesia. Illustration of the spatial variability of these data in selected areas of the study "by the student Mr. Ch. Iliopoulos
- "Study of the exchangeable levels of Potassium and Sodium in agricultural soils of the Almyros area of N. Magnesia. Illustration of the spatial variability of these data in selected areas of the study "by the student Mr. G. Skamagoulis.
- "Study of the levels of nitrates, nitrite ions and heavy metals in agricultural soils of Thessaly. Illustration of their spatial variability in selected areas of the study "by the student Mr. N. Kiatikidis.
- "Study of the degree of soil pollution of Thessaly from nitrate, nitrite, phosphate ions, as well as heavy metals. Determination of the respective levels in cotton (*Gossypium hirsutum*) "by the student Mrs. E. Lioliou.
- "Study of the adsorption and desorption of cadmium by Zeolite-Gaitite system" by the student Mrs. S. Tzavara.
- "Study of magnesium, calcium and iron levels in soils and cotton (*Gossypium hirsutum*) in the area of Almyros, Magnesia. Illustration of the spatial variability of these data with GIS "by the student Mr. A. Karabelas.
- "Comparison of methods for determination of nitrate, nitrite and ammonia ions as well as total soil nitrogen. Illustration of nitro-pollution in the area of Almyros, N. Magnesia, using Geographic Information Systems ", by the student Mrs. S. Verani.
- "Comparison of the method of determination of phosphate ions and assimilable phosphorus (with the OLSEN method). Imaging of pollution in the area of Almyros, N. Magnesia, using Geographic Information Systems ", by the student Mrs. T. Xoura.
- "Study of the adsorption and desorption of cadmium from Zeolite", by the student Mrs. A. Foundoulis.
- "Study of the levels of nitrate, nitrite, phosphate, sulfate, chloride and bromide ions in agricultural soils of Thessaly", by the student Mrs. K. Dermati.
- "Study of the adsorption of cadmium by Gaititis", by the student Mr. P. Belitsiotis.

Member of undergraduate Examination Committees (2012 to present):

1. "Measurement of soil properties and levels of heavy metals in the industrial area of Volos", by student Mamaloudis Christos, 2019 (completed).

2. "Measurement of soil organic matter by the method of loss in firing", by Spathara Stergiou (2019)
3. "Thermodynamic study of manganese adsorption by wild artichoke", by Tsekouras Vassilios, (2017)
4. "Study of the behavior of hexavalent chromium in onion cultivation with the addition of manure, zeolite, modified zeolite and marble dust", by student Tsiamita Asimos, 2017 (completed).
5. "Thermodynamic study of the adsorption of pigments by hematite-zeolite-carbon systems", by student Kochilas Xenofontas, 2017 (completed).
6. Study of Cr³⁺ + adsorption from environmentally friendly materials ", by student Tziartzoudi Vassilias, 2012 (completed).
7. "Study of the behavior of certain soil components in the uptake of Cr³⁺ + by specific plants", by student Markopoulou Aikaterini, 2012 (completed).
8. "Effect of zeolite in combination with organic and inorganic fertilization on soil nutrient levels in barley cultivation" by student Bairamis (2021).
9. "Levels of heavy metals in soil and cultivation of cereals in the area of Domokos Mines" by the student Grammenos Aspasias (2020).
10. "Levels of copper, zinc and lead in soils and leaves of trees of the urban fabric of Volos" by the student Efstathiadis Konstantinos (2021).
11. "Addition of hexavalent chromium to soils before and after the addition of organic matter", by student Mentessidou Panagiota (2020).
12. "Study of soil properties and levels of pollution from heavy metals in the area of Goritsa, Volos" by the student Theodoridou Maria (2021).
13. "Pollution of the soils of the urban fabric of Volos by copper, chromium and cadmium and a study of their physicochemical behavior" by the paper student Maria-Anna "(2022).
14. "Study of the levels and physicochemical behavior of lead, zinc and tin in soil samples of the city of Volos" by the student Mrs. Kantzou Ouranias-Despina "(2022).

MEMBER OF SCIENTIFIC SOCIETIES

Hellenic Association of Chemists

Hellenic Association of Soil Scientists

European Association of Soil Scientists

Society of Ecotoxicology and Environmental Safety

International Association of Environmental Analytical Chemistry

REVIEWER IN INTERNATIONAL JOURNALS

Analytica Chimica Acta, International Journal of Environmental Management, Ecotoxicology and Environmental Safety, Environmental Science and Pollution Research

Waste and Biomass Valorization, Environmental Monitoring and Assessment, Journal of Agricultural and Food Chemistry, International Journal of Environmental Analytical Chemistry, Journal AOAC International, Journal of Hazardous Materials, Chemical papers, Chemistry and Ecology, Biodegradation, Chemosphere, Science of the Total Environment

CITATIONS OF PUBLISHED PAPERS

>1000 (self-citations from any of the co-authors excluded; Scopus, Web of Science, accessed January 2024), h-index: 20.

1. Girousi S.T., **Golia E.E.**, Voulgaropoulos, A.N., Maroulis A.J., **1997**. Fluorometric Determination of formaldehyde. *Fresenius Journal of Analytical Chemistry*, 358: 667-668.
2. Mitsios, I.K., **Golia E.E.** and Tsadilas C. D., **2005**. Heavy metal concentration in soils and irrigation water in Thessaly area, Central Greece. *Communications in Soil Science and Plant Analysis*. 36: 487-501.
3. Tsadilas C.D., Mitsios I. K. and **Golia E.E.**, **2005**. Influence of Biosolids Application on Some Soil Physical Properties. *Communications in Soil Science and Plant Analysis*. 36: 709-716.
4. Karpouzas D.G., Pantelelis, I., Menkissoglu-Spiroudi, U., **Golia E.**, Tsiropoulos N.G., **2007**. Leaching of the organophosphorus nematicide fosthiazate. *Chemosphere*. 68: 1359–1364.
5. **Golia, E.E.**, Dimirkou, A., Mitsios[†] I.K., **2007**. Accumulation of Heavy Metals on Burley, Virginia and Oriental Tobacco Leaves Grown in an Agricultural Area in Relation to Soil. *Bulletin of Environmental Contamination and Toxicology*. 79: 158–162
6. **Golia, E.E.**, Tsiropoulos, N.G., Dimirkou, A. and Mitsios[†] I.K. **2007**. Distribution of heavy metals of agricultural soils of central Greece, using the modified BCR sequential extraction method. *International Journal of Environmental Analytical Chemistry*. 87(13–14): 1053–1063.
7. **Golia, E.E.**, Dimirkou, A., Mitsios[†] I.K., **2008**. Levels of Heavy Metals Pollution in Different Types of Soil of Central Greece. *Bulletin of Environmental Contamination and Toxicology*. *Bulletin of Environmental Contamination and Toxicology*. 80:206–210.
8. **Golia, E.E.**, Dimirkou, A., Mitsios[†]I.K., **2008**. Influence of some soil parameters on heavy metals accumulation by vegetables grown in agricultural soils of different soil orders. *Bulletin of Environmental Contamination and Toxicology*. 81:80-84.
9. **Golia, E.E.**, Dimirkou A. and I.K.Mitsios[†]. **2009**. Heavy metals concentration in tobacco leaves in relation to their available soil fractions. *Communications in Soil Science and Plant Analysis*. 40:106-120.
10. **Golia, E.E.**, Dimirkou, A., Floras, St.A.. **2009**. Monitoring the variability of nitrogen and cadmium concentration in soils and irrigation water in Almyros area of central Greece. *Communications in Soil Science and Plant Analysis*. 40: 376-390.
11. Dimirkou, A., Ioannou, Z.A., **Golia E.E.**, Danalatos N. and Mitsios[†]I.K., **2009**. Sorption of Cd and As by goethite and clinoptololite. *Communications in Soil Science and Plant Analysis*. 40: 259–272.
12. Ioannou, Z.A., Dimirkou, A., **Golia E.E.** and Ioannou A.. **2009**. Sorption of Zinc by clinoplilolite-Fe(NO₃)₂ systems. *Communications in Soil Science and Plant Analysis*. 40:240-258.

13. **E.E. Golia**, St. A. Floras, A. Dimirkou. **2009**. Monitoring the variability of Zinc and Copper in Surface Soils from Central Greece. *Bulletin of Environmental Contamination and Toxicology*. 82: 6-10.
14. Arvanitoyiannis, I.S., Mavromatis, A.G., Vaitisi, O., Korkovelos A., and **Golia E.**, **2012**. Effect of genotype and geographical origin on potato properties (physical and sensory) for authenticity purposes. *Journal of Agricultural Science*, 4, (4), 63-74.
15. Antoniadis, V., Koliniati, R., **Golia, E.**, and Petropoulos, S. **2014**. Effect of soil properties on phosphorus sorption in 13 soils with varying degree of weathering. *Kazakh Journal of Soil Science* 4, 64-69.
16. **Golia, E.E.**, Dimirkou, A., Floras, St. A., **2015**. Spatial monitoring of arsenic and heavy metals in the Almyros area, Central Greece. Statistical approach for assessing the sources of contamination. *Environmental Monitoring and Assessment*. 82: 6-10.
17. Antoniadis, V., **Golia, E.E.**, **2015**. Sorption of Cu and Zn in low organic matter-soils as influenced by soil properties and by the degree of soil weathering. *Chemosphere*. 138, 364–369.
18. Antoniadis, V., Koliniati, R., Efstratiou, E., **Golia, E.E.**, and Petropoulos, S. **2016**. Effect of soils with varying degree of weathering and pH values on phosphorus sorption. *Catena* 139, 214-219.
19. Antoniadis, V., **Golia, E.E.**, Shaheen, S.M., and Rinklebe, J., **2016**. Bioavailability and health risk assessment of potentially toxic elements in Thriassio Plain, near Athens, Greece. *Environmental Geochemistry and Health*, 39:2, 319–330 .
20. Antoniadis, V., Polyzois, T., **Golia, E.E.**, and Petropoulos, S., **2017**. Hexavalent chromium availability and phytoremediation potential of *Cichorium spinosum* as affect by manure, zeolite and soil ageing. *Chemosphere*, 171, 729-734.
21. addition on onion plants in 13 soils of varying degree of weathering. *Journal of Plant Nutrition*, 40:14, 2054-2062,
22. **Golia E.E.**, Füleky G., Dimirkou A., Antoniadis V., Tsiropoulos N.G., Gizas G., **2017**. Influence of Zeolite and *Posidonia oceanica* (L.) in the Reduction of Heavy Metal Uptake by Tobacco (*Nicotiana tabacum*) Plants of Central Greece. *Water, Air, & Soil Pollution*, 228:9, 324, 1-12.
23. Antoniadis V., **Golia E.E.**, Liub Y.-T., Wangd S.-Li, Shaheene S.M., Rinklebe J., **2019**. Soil and maize contamination by trace elements and associated health risk assessment in the industrial area of Volos, Greece. *Environment International*, 124, 79–88
24. **Golia E.E.**, Tsiropoulos G.N., Füleky G., Floras S., Vleioras S. **2019**. Pollution assessment of potentially toxic elements in soils of different taxonomy orders in central Greece. *Environmental Monitoring and Assessment*, 191, 106-118.
25. Sihag P., Singh V.P., Angelaki A., Kumar V., Sepahvand A., **Golia E.** **2019**. Modelling of infiltration using artificial intelligence techniques in semi-arid Iran. *Hydrological Sciences Journal* , 64:13, 1647-1658.
26. Mitsopoulou, N., Lakiotis, K., **Golia, E.**, Khah, E., Pavli, O. **2021**. Response of *hrpZPsp*-transgenic *N. benthamiana* plants under cadmium stress. *Environmental Science and Pollution Research*, 28(4), 3787-3796, <https://doi.org/10.1007/s11356-020-09204-2>

27. Antoniadis, V., **Golia, E.E.** 2021. Spatial and temporal assessment of cadmium and chromium contamination in soils in the Karditsa region (Central Greece). *Environmental Science and Pollution Research*, 28(4), 3820-3827, <https://doi.org/10.1007/s11356-020-09273-3>
28. **Golia, E.E.**, Tsiropoulos, N.G., Vleioras, S., Antoniadis, V., 2020. Investigation of extraction methods for the assessment of the pseudo-total concentration of potentially toxic elements in moderately contaminated soils of central Greece. *Water, Air and Soil Pollution*, 231: 484. <https://doi.org/10.1007/s11270-020-04849-8>
29. **Golia, E.E.**, Papadimou, S.G., Cavalaris, C., Tsiropoulos, N.G., 2021. Level of Contamination Assessment of Potentially Toxic Elements in the Urban Soils of Volos City (Central Greece). *Sustainability*. 13(4), 2029, 1-12, <https://doi.org/10.3390/su13042029>
30. **Golia, E.E.**, Angelaki, A., Giannoulis, K.D., Skoufogianni, E., Bartzialis, D., Cavalaris, Ch., Vleioras, S. 2021. Evaluation of soil properties, irrigation and solid waste application levels on Cu and Zn uptake by industrial hemp. *Agronomy Research*. 19 (1), 92-99, <https://doi.org/10.15159/ar.21.016>
31. **Golia, E.E.**, Diakouloukas, V. 2022. Soil parameters affecting the levels of potentially harmful metals in Thessaly area, Greece: a robust quadratic regression approach of soil pollution prediction. *Environmental Science and Pollution Research*, 29(20), 29544–29561, <https://doi.org/10.1007/s11356-021-14673-0>
32. Angelaki, A., Dionysidis, A., Sihag, P., **Golia, E.E.** 2022. Assessment of Contamination Management Caused by Copper and Zinc Cations Leaching and Their Impact on the Hydraulic Properties of a Sandy and a Loamy Clay Soil. *Land*, 11(2), 290. <https://doi.org/10.3390/land11020290>
33. **Golia, E.E.**, Zorpas, A. 2022. Editorial. «Assessing environmental impacts through innovative solutions». *Environmental Science and Pollution Research*, 29(20), 29524–29527, <https://doi.org/10.1007/s11356-022-19068-3>
34. Aslanidis, P.-S.C., **Golia, E.E.** 2022. Urban Sustainability at Risk Due to Soil Pollution by Heavy Metals—Case Study: Volos, Greece. *Land*, 11(7), 1016, <https://doi.org/10.3390/land11071016>
35. **Golia, E.E.**, Aslanidis, P.-S.C., Papadimou, S.G., Kantzou, O.-D., Chartodiplomenou, M.-A., Lakiotis, K., Androudi, M., Tsiropoulos, N.G. 2022. Assessment of remediation of soils, moderately contaminated by potentially toxic metals, using different forms of carbon (charcoal, biochar, activated carbon). Impacts on contamination, metals availability and soil indices. *Sustainable Chemistry and Pharmacy*, 28, 100724, <https://doi.org/10.1016/j.scp.2022.100724>
36. Skoufogianni, E., Molla, A., Angelaki, A., **Golia, E.E.** 2022. [Effect of Bio-nitrogen Fertilization, Plant Density and Irrigation on Physiological and Agronomic Characteristics of *Salvia officinalis* Organic Cultivation. *Universal Journal of Agricultural Research*, 10\(6\), 804–813, <https://doi.org/10.13189/ujar.2022.100618>](https://doi.org/10.13189/ujar.2022.100618)

37. **Golia, E.E.**, Chartodiplomenou, M.-A., Papadimou, S.G., Kantzou, O.-D., Tsiropoulos, N.G. **2023**. [Influence of soil inorganic amendments on heavy metal accumulation by leafy vegetables. *Environmental Science and Pollution Research*, 30\(4\), 8617–8632, <https://doi.org/10.1007/s11356-021-17420-7>](https://doi.org/10.1007/s11356-021-17420-7)
38. Bousdra, T., Papadimou, S.G., **Golia, E.E.** **2023**. The Use of biochar in the Remediation of Pb, Cd, and Cu-Contaminated Soils. The Impact of biochar Feedstock and Preparation Conditions on Its Remediation Capacity. *Land*, 12(2), 383. <https://doi.org/10.3390/land12020383>
39. **Golia, E.E.**, Kantzou, O.-D., Chartodiplomenou, M.-A., Papadimou, S.G., Tsiropoulos, N.G. **2023** [Study of Potentially Toxic Metal Adsorption in a Polluted Acid and Alkaline Soil: Influence of Soil Properties and Levels of Metal Concentration. *Soil Systems*, 7\(1\), 16, <https://doi.org/10.3390/soilsystems7010016>](https://doi.org/10.3390/soilsystems7010016)
40. Papadimou, S.G., Kantzou, O.-D., Chartodiplomenou, M.-A., **Golia, E.E.** **2023**. [Urban Soil Pollution by Heavy Metals: Effect of the Lockdown during the Period of COVID-19 on Pollutant Levels over a Five-Year Study. *Soil Systems*, 7\(1\), 28, <https://doi.org/10.3390/soilsystems7010028>](https://doi.org/10.3390/soilsystems7010028)
41. **Golia, E.E.**, Bethanis, J., Ntinopoulos, N., Komnou, A.A., Vasilou, C. **2023**. Investigating the potential of heavy metal accumulation from hemp. The use of industrial hemp (*Cannabis Sativa* L.) for phytoremediation of heavily and moderated polluted soils. *Sustainable Chemistry and Pharmacy*, 31, 100961 <https://doi.org/10.1016/j.scp.2022.100961>
42. **Golia, E.E.** **2023**. [The impact of heavy metal contamination on soil quality and plant nutrition. Sustainable management of moderate contaminated agricultural and urban soils, using low cost materials and promoting circular economy. *Sustainable Chemistry and Pharmacy*, 33, 101046, <https://doi.org/10.1016/j.scp.2023.101046>](https://doi.org/10.1016/j.scp.2023.101046)
43. **Golia, E.E.**, Emmanouil, C., Charizani, A., Koropouli, A., Kungolos, A. **2023**. Assessment of Cu and Zn contamination and associated human health risks in urban soils from public green spaces in the city of Thessaloniki, Northern Greece. *Euro-Mediterranean Journal for Environmental Integration*, 8(3), pp. 517–525, <https://doi.org/10.1007/s41207-023-00391-1>
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