ELENI GKRILLA

Assistant Professor (Tenure-Track)
Department of Environment, Ionian University

Google Scholar. https://scholar.google.com/citations?user=fprsXtUAAAAJ&hl=el&oi=ao
Research Gate. https://www.researchgate.net/profile/Eleni-Grilla
Scopus. https://www.scopus.com/authid/detail.uri?authorId=57201094750

WORK

Position:	Assistant Professor (Tenure-Track)
Department / Institution:	Department of Environment, Ionian University
Office Address:	M. Minotou-Giannopoulou, Panagoula, 29100, Zakynthos, Greece
Office Telephone:	(+30) 2695021068
Email:	egrilla@ionio.gr
Field of Expertise:	Environmental Engineering with emphasis on Wastewater Treatment Processes

EDUCATION

2016-2021	Doctor of Philosophy (Ph.D) in Chemical Engineering University of Patras, Greece
2014-2016	Master of Science in “Environment and Energy” Department of Chemical Engineering University of Patras, Greece
2009-2014	Diploma in Environmental Engineering Technical University of Crete, Chania, Greece

TEACHING EXPERIENCE

2023-2026	Supervision of MSc Theses, Postgraduate Programme "Waste Management", Hellenic Open University. Supervision of 9 Master's theses.
03–06/2026	"Environmental Engineering" and "Air Pollution" at Department of Environment, Ionian University, Spring Semester, Academic Year 2025–2026.
10/2025-02/2026	"Organic Chemistry" and "Wastewater Treatment" at Department of Environment, Ionian University, Winter Semester, Academic Year 2025–2026.
10/2025-06/2026	Adjunct Lecturer, Philips University, Cyprus in MSc Programme in Environmental Management through Open and Distance Education. Courses taught: "Waste Treatment Technologies" and "Advanced Waste Treatment Processes", Academic Year 2025–2026.
02-06/2025	"Management of Agricultural Residues and Waste" and "Agricultural and Environmental Studies" at Department of Agriculture, University of Patras, Spring Semester, Academic Year 2024–2025.

02-06/2025	Adjunct Lecturer, Philips University, Cyprus in MSc Programme in Environmental Management through Open and Distance Education. Courses taught: "Waste Treatment Technologies", Spring Semester, Academic Year 2024–2025.
09-12/2024	Adjunct Lecturer, English-taught undergraduate programme "BA Program in Chemical Engineering and Technology", in collaboration with Liaoning University of Technology, Jinzhou City, Liaoning Province, People's Republic of China. Course taught: Physical Chemistry, Winter Semester, Academic Year 2024–2025.
04-09/2024	Adjunct Lecturer, Department of Agriculture, University of Patras. Course taught: Management of Agricultural Residues and Waste. Additional activity: Supervision of Diploma Theses, Spring Semester, Academic Year 2023–2024.
2022-2023	Post-secondary Education Teaching, Public Experimental Institute of Vocational Training (DPIEK), Patras Courses taught: Analytical Chemistry, Organic Chemistry, and Quality Control and Evaluation of Cosmetics.
2022, 2023, 2024, 2026	Contribution and provision of educational material within the framework of the Distance Learning Summer School organized by the Hellenic Open University, entitled "Wastewater and Biosolids Management".
03-06/2019	Teaching Assistant, Laboratory Course "Process Laboratory II", Department of Chemical Engineering, University of Patras.
09/2017-01/2018	Teaching Assistant, Course "Instrumental Chemical Analysis", Department of Chemical Engineering, University of Patras.
03-06/2017	Teaching Assistant, Laboratory Course "Organic Chemistry Laboratory", Department of Chemical Engineering, University of Patras.

POSTDOCTORAL RESEARCH

07/2023-07/2025	Title of the project: *Improving the fertility of barren soils with the combined use of earthworms and biochars for the production of products of high nutritional and agronomic value. Application of technology in a pilot stage.* Action 2 'Implementation of the business plan (project)', with (MIS) code M16SYN2-00101, Sub-measure 16.1–16.5, which is co-financed by the European Union (European Agricultural Fund for Rural Development) through the Rural Development Programme 2014–2020 (NSRF).
05-10/2024	Title of the project: *Greece4.0 – Network of Excellence for the Development, Dissemination and Application of Digital Transformation Technologies in the Greek Manufacturing Industry* Project code TAEDR-0535864, Action 'Flagship actions in interdisciplinary scientific fields of special interest for their linkage with the productive sector' (ID 16618), with OPS code TA 5149305, of the Recovery and Resilience Fund, implemented within the framework of the programme 'Greece 2.0 – National Recovery and Resilience Plan', co-financed by Greece and the European Union – NextGenerationEU".

11/2022-03/2023 Title of the project: *Integration Methodology for Landfill Leachate Treatment by using a hybrid System based on Ultraviolet Processes Advanced Oxidation Processes (AOPs) and Membrane Technology*.

Project acronym: UV-LEACH; Project code: T2EDK-00137. Co-financed by the European Union and Greek national funds through the Operational Program Competitiveness, Entrepreneurship, and Innovation, under the call RESEARCH – CREATE – INNOVATE (2nd Cycle).

03-07/2023 Title of the project: *Institutional Strategic Planning. Study on the analysis of evaluation systems, identification of the University's position and methods for its optimization, and a Study on the implementation of the principles of sustainability, sustainable development, and environmental protection.*

Funding: Ministry of National Education and Religious Affairs.

02/2022-02/2023 Title of the project: *Technical Research Reports on Innovative Materials Technologies, Techno-Economic Processes and Procedures for the Environment and the Circular Economy*.

Funding: General Secretariat for Research and Technology.

RESEARCH PROJECTS AS A PHD CANDIDATE

2020-2021 Title of the project: *Advanced hybrid oxidation processes for the removal of emerging priority pollutants from aquatic matrices*.

Funding: Co-financed by Greece and the European Union through the program "Human Resources Development, Education and Lifelong Learning 2014–2020".

2018-2020 Title of the project: *Colour Removal from Wastewater Using Nanotechnology (CLIENTDR)*

Funding: Operational Programme "Western Greece 2014–2020", Action "Promotion of Transnational Research Projects for SMEs".

1-2/2020 Title of the project: *Integrated Process and Product Design for Sustainable Biorefineries (IProPBio) – WP1*

Institution: Texas A&M University, United States

Funding: European Union's Horizon 2020 research and innovation program under Marie Skłodowska-Curie grant agreement.

1-2/2019 Title of the project: *Integrated Process and Product Design for Sustainable Biorefineries (IProPBio) – WP1*

Institution: University of Paraná, Department of Chemical Engineering, Brazil

European Union's Horizon 2020 research and innovation program under Marie Skłodowska-Curie grant agreement.

9-10/2017 Title of the project: *Study of antibiotic degradation using solar-activated persulfate in a pilot-scale unit*, in Research Center for Energy, Environment and Technology (CIEMAT), Almería, Spain

Funding: European-funded program SFERA II (Solar Facilities for the European Research Area 2014–2017)

4-9/2017 Title of the project: *Study on the Utilization of Red Mud in Asphalt Mixtures in collaboration with Axonas MB S.A.*

Funding/Collaborating Organization: Axonas MB S.A., Patras, Greece

PUBLICATIONS IN INTERNATIONAL JOURNALS

1. **E. Grilla**, A. Petala, Z. Frontistis, I.K. Konstantinou, D.I. Kondarides, D. Mantzavinos, Solar photocatalytic abatement of sulfamethoxazole over Ag_3PO_4/WO_3 composites, *Applied Catalysis B: Environmental* 231 (2018) 73-81. DOI: 10.1016/j.apcatb.2018.03.011
2. **E. Grilla**, V.Matthaiou, Z. Frontistis, I. Oller, I. Polo, S. Malato, D. Mantzavinos, Degradation of antibiotic trimethoprim by the combined action of sunlight, TiO_2 and persulfate: A pilot plant study, *Catalysis Today* 328 (2019) 216-222. DOI: 10.1016/j.cattod.2018.11.029
3. A.P. Kloc, **E. Grilla**, C.A. Capeletto, M. Papadaki, M.L. Corazza, Phase equilibrium measurements and thermodynamic modeling of {CO_2 + diethyl succinate+cosolvent} systems, *Fluid Phase Equilibria* 502 (2019) 112-285. DOI: 10.1016/j.fluid.2019.112285
4. **E. Grilla**, J. Vakros, I.K. Konstantinou, I.D. Manariotis, D. Mantzavinos, Activation of persulfate by biochar from spent malt rootlets for the degradation of trimethoprim in the presence of inorganic ions, *Journal of Chemical Technology and Biotechnology* 95 (2020) 2348-2358. DOI: 10.1002/jctb.6513
5. S. Karamoutsos, T.V. Tzevelekou, A. Christogerou, **E. Grilla**, A. Gypakis, L.P. Villarejo, D. Mantzavinos, G.N. Angelopoulos, On the industrial symbiosis of alumina and iron/steel production: Suitability of ferroalumina as raw material in iron and steel making, *Waste Management & Research* (2021). DOI: 10.1177/0734242X21991906
6. **E. Grilla**, M.N. Kagialari, A. Petala, Z. Frontistis, D. Mantzavinos, Photocatalytic degradation of valsartan by MoS_2/BiOCl heterojunctions, *Catalysts* 11 (2021) 650. DOI: 10.3390/catal11060650
7. **E. Grilla**, M.Ed. Taheri, K. Miserli, D. Venieri, I. Konstantinou, D. Mantzavinos, Degradation of dexamethasone in water using BDD anodic oxidation and persulfate: reaction kinetics and pathways, *Journal of Chemical Technology and Biotechnology* 96 (2021) 2451-2460. DOI: 10.1002/jctb.6833
8. V. Faka, M. Griniezaki, G. Kiriakidis, **E. Grilla**, D. Mantzavinos, Samuel Mao, Shaohua Shen, Z. Frontistis, V. Binas, Solar light induced photocatalytic degradation of sulfamethoxazole by $ZnWO_4$/CNNs nanocomposites, *Journal of Photochemistry and Photobiology A: Chemistry* 432 (2022) 114108. DOI: 10.1016/j.jphotochem.2022.114108
9. Mergenbayeva S., Poulopoulos S.G., **Grilla E.**, Hapeshi E., Vakros J., Mantzavinos D., Influence of the addition of M^{2+} (M: Co, Cu, Zn) on the properties and activity of Mo-TiO_2 photocatalysts for water remediation, *Global Nest Journal* 25 (2022) 1-6. https://doi.org/10.30955/gnj.004360
10. Isari A.E., **Grilla E.**, Parthenidis P., Kokkinos P., Evgenidou E., Lambropoulou D.A., Kalavrouziotis I.K., Safe Reuse of Landfill Leachates for Irrigation Purposes, *International Journal of Environmental Engineering and Development* 1 (2023) 113-118. DOI: 10.37394/232033.2023.1.13
11. **E. Grilla**, P. Parthenidis, A. Filiou, E. Isari, P. Gkouvousis, P. Kokkinos, D. Papaioannou, E. Evgenidou, D.A. Lambropoulou, I.K. Kalavrouziotis, Phytotoxicity and ecotoxicity assessment

of landfill leachate treated by UV-Fenton: From lab to pilot scale, *Sustainable Chemistry and Pharmacy* 38 (2024) 101483. DOI: 10.1016/j.scp.2024.101483

12. Kanteraki A., Isari A.E., **Grilla E.**, Giotis K., Kalavrouziotis IK., Svarnas P., Pharmaceutically Active Compound (PhAC) Degradation by Means of Cold Plasma Jet Treatment, *Plasma* 7(3) (2024) 733-748. DOI: 10.3390/plasma7030038

13. Chalatsi-Diamanti P., Isari E.A., **Grilla E.,** Kokkinos P., Kalavrouziotis I.K. Recent prospects, challenges and advancements of photocatalysis as wastewater treatment method, *Water Emerging Contaminants & Nanoplastics* 4 (2025) 12. DOI: 10.20517/wecn.2025.03

14. Dimitriadou, S., Isari, E.A., **Grilla, E**., Kokkinos, P., Kalavrouziotis, I.K. Revitalizing Degraded Soils: The Role of Biochar in Enhancing Soil Health and Productivity, *Environments* 12 (2025) 324. DOI: 10.3390/environments12090324.

15. Gkogkou E.V., Kanteraki A., Isari E.A., **Grilla E.**, Manariotis I.D., Kalavrouziotis I., Kokkinos P. A Comprehensive Review on Sewage Sludge Biochar: Characterization Methods and Practical Applications, *Environments* 13(1) (2026) 45. https://doi.org/10.3390/environments13010045

16. Lykouras M., Isari E.A, **Grilla E.**, Kokkinos P., Kalavrouziotis I.K. The Role of Biochar and Earthworms in Pharmaceutical Remediation of Contaminated Soil: A Systematic Review, *Environmental Processes* 13 2 (2026). https://doi.org/10.1007/s40710-026-00814-5.

17. Souliou P., **Grilla E.,** Ioannidi A., Bekiari V. Study of the Removal of Organic Pollutants from Aqueous Solutions Using Organic Hydrogels and Biochars, *Environmetal Earth Sciences Proceedings* 40(1), (2026) 9. https://doi.org/10.3390/eesp2026040009.

18. Chalatsi-Diamanti, P., Isari, E. A., **Grilla, E.,** Kokkinos, P., Kalavrouziotis, I. K. Closing the Loop in Vitiviniculture and Spirit Production: From Grape Processing Waste to the Multifunctional Biochar. Environments, 13(7) (2026) 380. https://doi.org/10.3390/environments13070380.

PROFESSIONAL SERVICES

Guest Editor of the Special Issue "*Advances in Landfill Leachates Treatment*" in the scientific journal Environments. Special Issue Editors: Eleni Grilla, Petros Kokkinos, Ioannis Kalavrouziotis.

Reviewer for the following peer-reviewed journals: *Journal of Chemical Technology & Biotechnology, Infrastructures (MDPI), Toxics (MDPI), Plants (MDPI), Agriculture (MDPI), Reactions (MDPI)*.

PUBLICATIONS IN CONFERENCES

1. 9º European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA 9), 13-17 July 2016, Strasbourg, France. *Poster*: Solar photocatalytic abatement of sulfamethoxazole by Ag_3PO_4. E. Grilla, A. Petala, Z. Frontistis, D.I. Kondarides, D. Mantzavinos.
2. 14th Hellenic Catalysis Society Conference, Patras, Greece. *Oral presentation*: Solar photocatalytic abatement of sulfamethoxazole by Ag_3PO_4. E. Grilla, A. Petala, Z. Frontistis, D.I. Kondarides, D. Mantzavinos.
3. 11th Hellenic Scientific Conference on Chemical Engineering, Thessalonikh, Greece. *Poster:* Solar photocatalytic abatement of sulfamethoxazole by Ag_3PO_4. E. Grilla, A. Petala, Z. Frontistis, D.I. Kondarides, D. Mantzavinos.

4. 10º European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA 10), 4-8 June 2018, Almeria, Spain. *Poster:* Degradation of antibiotic

trimethoprim by the combined action of sunlight, TiO_2 and persulfate: A pilot plant study. E. Grilla, V. Matthaiou, Z. Frontistis, I. Oller, I. Polo, D. Mantzavinos, S. Malato.

5. 7ο International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2019) and SECOTOX Conference, 19-24 May 2019, Mykonos Island, Greece. *Poster:* Towards supercritical extraction of valuable compounds from waste: Phase equilibrium measurements of CO_2 with diethyl succinate. E. Grilla, C. A. Capeletto, M. L. Corazza, M. Papadaki, D. Mantzavinos.

6. 5ο Workshop of Graduates & Post-Docs in Chemical Engineering Sciences, 6 November 2019, Patras, Greece. *Poster:* Biochar-activated persulfate for the degradation of trimethoprim. E. Grilla, J. Vakros, D. Mantzavinos.

7. Protection and Restoration of the Environment XV, 7-10 July 2020, Kalamata, Greece. *Poster:* Biochar-activated persulfate for the degradation of trimethoprim. E. Grilla, J. Vakros and D. Mantzavinos.

8. 1ο International Conference on Environmental Design (ICED2020) 24-25 October 2020, Athens, Greece. *Oral Presentation:* Degradation of Dexamethasone Using the Combined BDD/SPS/Solar Process in Environmental Matrices. E. Grilla, E.M. Taheri, D. Venieri, D. Mantzavinos. https://iced.eap.gr/past-conferences/

9. 1ο International Conference on Environmental Design (ICED2020) 24-25 October 2020, Athens, Greece. *Poster:* Photocatalytic Degradation of Valsartan by MoS_2/BiOCl Heterojunctions. E. Grilla, A. Petala, M.N. Kagialari, Z. Frontistis, D. Mantzavinos. https://iced.eap.gr/past-conferences/

10. 1st Online Conference of Young Scientists "Mineral Resources-Environment-Chemical Engineering", 26-28 February 2021. *Oral Presentation:* Heterogeneous Photocatalysis with the use of MoS_2/BiOCl for the degradation of valsartan. Grilla E., Kagialari M.N., Petala A., Frontistis Z., Mantzavinos D.

11. 10ο International Conference on Sustainable Solid Waste Management, 21-24 June 2023, Crete, Chania. *Poster:* Treatment of landfill leachates by advanced oxidation processes and phytotoxicity assessment. E. Isari, E. Grilla, P. Parthenidis, E. Evgenidou, P. Kokkinos, D. A. Lambropoulou, I. Kalavrouziotis. https://chania2023.uest.gr/poster.html.

12. 18th International Conference on Environmental Science and Technology, 30 August to 2 September 2023, Athens, Greece. *Poster*. https://cest2023.gnest.org/e/cest-2023

13. XV International Scientific Agriculture Symposium "Agrosym 2024", Jahorina, 10-13 October 2024, Bosnia and Herzegovina. *Poster:* The effect of the combined use of biochars and earthworms to barren soils, Ekavi Aikaterini Isari, Eleni Grilla, Petros Kokkinos, Konstantinos Komnitsas, Theofylaktos Sidiropoulos, Ioannis K. Kalavrouziotis.

14. ONE-Bridge in Health – European One Health Conference: Bridging Human, Animal, and Environmental Health 8–11 December 2025, University of Patras, Greece. *Poster*: Biochar from Sewage Sludge: A Circular Strategy Enhancing Water and Health Resilience under Climate Stress. https://one-bridge.iwaterfood.gr/conference/

15. Gkogkou, E. V., Isari, E. A., Grilla, E., Manariotis, I. D., Kalavrouziotis, I. K., and Kokkinos, P.: Sewage sludge-derived biochar as a circular “waste-to-resource” strategy for wastewater treatment, EGU General Assembly 2026, Vienna, Austria, 3–8 May 2026, EGU26-10788, https://doi.org/10.5194/egusphere-egu26-10788, 2026.

TRAINING PROGRAMMES

1. Professional Training and Lifelong Learning Programme entitled "Training of Adjunct Faculty Members in Open and Distance Education", with a duration of 50 hours.
2. Training in Liquid Chromatography–Triple Quadrupole Mass Spectrometry (LC-MS/MS) for the Shimadzu LCMS-8050 system and the LabSolutions software.
3. Training in the operation of the Shimadzu TOC-L CSH Total Organic Carbon Analyzer and SSM-5000A Solid Sample Module.
4. Training in Ion Chromatography using the Shimadzu Prominence system and the LabSolutions software.
5. Training in the operation of the HACH LANGE DR3900 Spectrophotometer.

PERSONAL SKILLS

Native language: Greek

Foreign languages: English, Michigan Proficiency Certificate (C2)

Digital skills: Excellent command of Microsoft Office (Word, Excel, PowerPoint) and Origin

Driving licence: Category B