

Evangelos A. Voudrias

Rank: Professor

Laboratory: Solid and Hazardous Waste Management

Specialty: Solid waste management (FEK 13-9-1995 for position announcement, Appointment FEK 145/23-8-1996).

Education:

Postdoctoral Studies: Environmental Engineering and Science, Department of Civil and Environmental Engineering, Stanford University, Stanford, California, USA (January 1984 – April 1986).

Ph.D.: Environmental Engineering and Science, Department of Civil and Environmental Engineering, University of Illinois, Urbana, Illinois, USA (January 1984).

B.S. in Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece (May 1977).

Scientific Interests:

1. Engineering and management of solid and hazardous waste.
2. Management of healthcare waste.
3. Management of construction and demolition waste.
4. Fate and transport of contaminants in subsurface systems (aquifers, unsaturated soils, landfills) and their remediation.

Undergraduate Courses Taught:

1. Solid Waste Engineering and Management – II
2. Hazardous Waste Engineering and Management
3. Soil and Groundwater Remediation

Indicative Research Projects:

1. Research Associate (Principal Investigator Professor V. Tsihrintzis): “Integrated management of sludge from wastewater treatment plants with natural systems”. Funded by the General Secretariat for Research and Technology of Greece with total budget 675.750 euro, project number 1517 (December 2006 – November 2008).
2. Research Associate (Principal Investigator Professor K. Drainas): “Installment and operation of pilot scale units for remediation of petroleum-contaminated soil”. Funded by the General Secretariat for Research and Technology of Greece with total budget 105.649 euro, project number 61/1496-PENED University of Ioannina, with Democritus University of Thrace as partner (2003 – 2008).
3. Director of the postgraduate program “Environmental Engineering and Science” of the Department of Environmental Engineering of Democritus University of Thrace with total budget 520.579,50 euro (2009 – 2020).

Distinctions: Associate Editor of *Waste Management* (Elsevier) from May 2016 to January 2018.

Contact

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SELECTED PUBLICATIONS

1. Tsioka, M., Voudrias, E.A. Comparison of alternative management methods for phosphogypsum waste using life cycle analysis. *Journal of Cleaner Production* 266, 121386, <https://doi.org/10.1016/j.jclepro.2020.121386> (2020).
2. Kermenidou, M., Voudrias, E.A., Konstantoula, A.C. Composition and production rate of cytostatic pharmaceutical waste from a Greek Cancer Treatment Hospital. *Global NEST Journal*, 21(2), 131-140 (2019).
3. Voudrias, E.A., Topalidis, A., Mandalidis, A., Iosifidis, N. Variability of Greek dental solid waste production by different dentist groups. *Environmental Monitoring and Assessment*, 190: 418, <https://doi.org/10.1007/s10661-018-6803-3> (2018).
4. Voudrias, E.A. Healthcare waste management from the point of view of circular economy. Editorial in *Waste Management*, 75, 1-2 (2018).
5. Mandalidis, A., Topalidis, A., Voudrias, E.A., Iosifidis, N. Composition, production rate and characterization of Greek dental solid waste. *Waste Management*, 75, 124-130 (2018).
6. Zarkadas, I., Angeli, E., Sainis, I., Voudrias, E.A., Pilidis, G.A. Food waste composting in a high-rate continuous feed drum reactor: Start up and carbon balance analysis. *CLEAN – Soil, Air, Water*, 46(2), Article number 1700622 (2018).
7. Mantzaras, G., Voudrias, E.A. An optimization model for collection, haul, transfer, treatment and disposal of infectious medical waste: Application to a Greek region. *Waste Management*, 69, 518-534 (2017).
8. Voudrias, E.A. Technology selection for infectious medical waste management using the Analytic Hierarchy Process. *Journal of the Air and Waste Management Association*, 66:7, 663-672 (2016), DOI: [10.1080/10962247.2016.1162226](https://doi.org/10.1080/10962247.2016.1162226).
9. Athanasiou, C.J., Tsalkidis, D.A., Kalogirou, E., Voudrias, E.A. Feasibility analysis of municipal solid waste mass burning in the Region of East Macedonia – Thrace in Greece. *Waste Management and Research*, 33, 561-569 (2015).
10. Zarkadas, I.S., Sofikiti, A.S., Voudrias, E.A., Pilidis, G.A. Thermophilic anaerobic digestion of pasteurized food wastes and dairy cattle manure in batch and large volume laboratory digesters: Focusing on mixing ratios. *Renewable Energy*, 80, 432-440 (2015).
11. Fytanidis, D.K., Voudrias, E.A. Numerical simulation of landfill aeration using computational fluid dynamics. *Waste Management*, 34, 804-816 (2014).
12. Voudrias, E., Graikos, A. Infectious medical waste management at the regional level. *Journal of Hazardous, Toxic and Radioactive Waste*, ASCE, ISSN 2153-5493/04014020(9) (2014).
13. Diamantis, V., Erguder, T.H., Aivasidis, A., Verstraete, W., Voudrias, E. Wastewater disposal to landfill-sites: A synergistic solution for centralized management of olive mill wastewater and enhanced production of landfill gas. *Journal of Environmental Management*, 128, 427-434 (2013).

14. Voudrias, E., Goudakou, L., Kermenidou, M., Softa, A. Composition and production rate of pharmaceutical and chemical waste from Xanthi General Hospital in Greece. *Waste Management*, 32, 1442-1452 (2012).
15. Komilis, D., Evangelou, A., Voudrias, E. Monitoring and optimizing the co-composting of dewatered sludge: A mixture experimental design approach. *Journal of Environmental Management*, 92, 2241-2249 (2011).
16. Graikos, A., Voudrias, E., Papazachariou, A., Iosifidis, N., Kalpakidou, M. Composition and production rate of medical waste from a small producer in Greece. *Waste Management*, 30, 1683-1689 (2010).
17. Karamalidis A. K., Evangelou A. C., Karabika E., Koukkou A. I., Drainas C., Voudrias E. A. Laboratory scale bioremediation of petroleum-contaminated soil by indigenous microorganisms and added *Pseudomonas aeruginosa* strain Spet. *Bioresource Technology*, 101(16), 6545-6552 (2010).
18. Komilis, D.P., Vrohidou, A.-E.K., Voudrias, E.A. Kinetics of aerobic bioremediation of a diesel-contaminated sandy soil: Effect of nitrogen addition. *Water, Air and Soil Pollution*, 208, 193-208 (2010).
19. Dolaptsoglou, C., Karpouzas, D.G., Menkissoglou-Spiroudi, U., Eleftherohorinos, I., Voudrias, E.A. Influence of different organic amendments on the leaching and dissipation of Terbuthylazine in a column and field study. *Journal of Environmental Quality*, 38(2), 782-791 (2009).
20. Komilis, D., Voudrias, E.A., Anthoulakis, S., Iosifidis, N. Composition and production rate of solid waste from dental laboratories in Xanthi, Greece. *Waste Management*, 29, 1208-1212 (2009).
21. Karamalidis, A., Voudrias, E.A. Leaching and immobilization behavior of Zn and Cr from cement-based stabilization/solidification of ash produced from incineration of refinery oily sludge. *Environmental Engineering Science*, 26(1), 81-96 (2009).
22. Karamalidis, A. and Voudrias, E.A. Anion leaching from refinery oily sludge and ash from incineration of oily sludge stabilized/solidified with cement. Part I. Experimental results. *Environmental Science and Technology*, 42, 6116-6123 (2008).
23. Karamalidis, A., Voudrias, E.A. Anion leaching from refinery oily sludge and ash from incineration of oily sludge stabilized/solidified with cement. Part II. Modeling. *Environmental Science and Technology*, 42, 6124-6130 (2008).
24. Karamalidis, A., Voudrias, E.A. Leaching behavior of metals released from cement-stabilized/solidified refinery oily sludge by means of sequential toxicity characteristic leaching procedure. *Journal of Environmental Engineering, ASCE*, 134(6), 493-504 (2008).
25. Karamalidis, A.K., Pscharis, V., Nicolis, I., Pavlidou, E., Benazeth, S., Voudrias, E.A. Characterization of stabilized/solidified refinery oily sludge and incinerated refinery sludge with cement using XRD, SEM and EXAFS. *Journal of Environmental Science and Health, Part A*, 43:10, 1144-1156 (2008).
26. Batziaka, V., Fytianos, K., Voudrias, E.A. Leaching of nitrogen, phosphorus, TOC and COD from the biosolids of the municipal wastewater treatment plant of Thessaloniki. *Environmental Monitoring and Assessment*, 140(1-3), 331-338 (2008).
27. Diamantis, V., Voudrias, E.A. Laboratory and pilot studies on reclamation of a salt-affected alluvial soil. *Environmental Geology*, 54(3), 643-651 (2008).
28. Chatzikosma, D., Panagiotakopoulos, D., Voudrias, E.A. Assessment of alternative technologies for remediation of an uncontrolled landfill in Greece. In

- Landfill Aeration*, iwwg monograph series, Edited by R. Stegmann and M. Ritzkowski, 350 pages (2007).
29. Karamalidis, A., Voudrias, E.A. Cement-based stabilization/solidification of oil refinery sludge: Leaching behavior of alkanes and PAHs. *Journal of Hazardous Materials*, 148, 122-135 (2007).
 30. Karamalidis, A., Voudrias, E.A. Leaching of VOCs from cement-based stabilized/solidified refinery oily sludge, using solid phase microextraction. *Environmental Technology*, 28, 1173-1185 (2007).
 31. Chatzikosma, D. and Voudrias, E.A. Simulation of polychlorinated biphenyls transport in the vadose zone. *Environmental Geology*, 53(1), 211-220 (2007).
 32. Dolaptsoglou, C., Karpouzas, D.G., Menkissoglou-Spiroudi, U., Eleftherohorinos, I. and Voudrias, E.A. Influence of different organic amendments on the degradation, metabolism, and adsorption of Terbutylazine. *Journal of Environmental Quality*, 36, 1793-1802 (2007).
 33. Karamalidis, A. and Voudrias, E.A. Release of Zn, Ni, Cu, SO₄²⁻ and CrO₄²⁻ as a function of pH from cement-based stabilized/solidified refinery oily sludge and ash from incineration of oily sludge. *Journal of Hazardous Materials*, 141(3), 591-606 (2007).
 34. Gemitzi, A., Tsihrintzis, V.A., Voudrias, E.A., Petalas, C. and Stravodimos, G. Combining geographic information system, multicriteria evaluation techniques and fuzzy logic in siting MSW landfills. *Environmental Geology*, 51, 797-811 (2007).
 35. Kizlary, E., Iosifidis, N., Voudrias E.A. and Panagiotakopoulos D. Composition and production rate of dental solid waste in Xanthi, Greece. *Waste Management*, 25(6), 582-591 (2005).
 36. Karamalidis, A.K. and Voudrias, E.A. Application of stabilization/solidification technology on oil refinery sludge contaminated by heavy metals. *Journal of Environmental Science and Health-Part A*, A39(4), 961-971 (2004).
 37. Georgiou, D., Metallinou, C., Aivasidis, A., Voudrias, E. and Gimouhopoulos, K. Decolorization of azo-reactive dyes and cotton-textile wastewater using anaerobic digestion and acetate-consuming bacteria. *Biochemical Engineering Journal*, 19, 75-79 (2004).
 38. Voudrias, E.A., Fytianos, K. and Bizani E. Sorption-desorption isotherms of dyes from aqueous solutions and wastewaters with different sorbent materials. *Global Nest: the International Journal*, 4(1), 75-83 (2002).
 39. Voudrias, E.A. The concept of a sorption chemical barrier for improving effectiveness of landfill liners. *Waste Management and Research*, 20, 251-258 (2002).
 40. Voudrias, E.A. Pump-and-treat remediation of groundwater contaminated by hazardous waste: Can it really be achieved? *Global Nest: the International Journal*, 3(1), 1-10 (2001).

There are a total of 73 publications in international peer-reviewed journals with 1961 citations (not counting self-citations) and h index = 23 (Scopus, May 2021).