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I. RESEARCH AND PROFESSIONAL INTERESTS

Main thrust of expertise involves environmental geochemistry, contaminated site remediation, beneficial use of industrial by products and recycled materials, and clay mineralogy. Current research initiatives focus on the surface chemistry of iron oxides; fate, transport and treatment of metals in contaminated soils and solid waste, and spectroscopy applications in the characterization of soils, waste and construction materials. Experimental expertise involves traditional wet chemistry and various solid analysis techniques, including qualitative and quantitative X-ray Powder Diffraction by the Rietveld method, optical microscopy, Scanning Electron Microscopy, Electron Probe Microanalysis, Fourier Transform Infrared Spectroscopy and X-ray Absorption Spectroscopy. My expertise is specifically geared to leverage solid state, traditional geochemical, geotechnical and modeling approaches to assess and predict the behavior of soil constituents in complex geoenvironmental systems, as well as to characterize industrial waste and construction materials.

II. EDUCATION

- **Ph. D. in Environmental Engineering**, Stevens Institute of Technology, Hoboken NJ, May 2006. Thesis: *Investigation of environmental and geotechnical implications associated with deposition of Chromite Ore Processing Residue (COPR)*.
- **Master of Science in Environmental Engineering**, with honors. Technische Universität Dresden, Germany, January 2003.
- **Bachelor of Science in Physics**, with honors. Aristotle University of Thessaloniki, Greece, March 2000.

III. EXPERIENCE

8/15-present: Director, Environmental Engineering Program, University of Connecticut.

8/13-present: Associate Professor, Civil and Environmental Engineering, University of Connecticut.

7/13-6/15: Marie Curie Fellow, School of Civil Engineering, National Technical University of Athens, Greece.

4/12-10/13: Associate Director, Environmental Engineering Program, University of Connecticut.

8/07-8/13: Assistant Professor, Civil and Environmental Engineering, University of Connecticut.

6/06-8/07: Post-doctoral research associate, Stevens Institute of Technology, Hoboken, NJ.

1/04-5/06: Graduate research assistant, Stevens Institute of Technology, Hoboken, NJ.

2003: Consultant, Intergeo Environmental Consultants, Thessaloniki, Greece.

2000-2002: Graduate research assistant, Technische Universitaet Dresden, Germany.

RESEARCH PROJECTS

1. “Laboratory Testing for Sediment Resuspension Mitigation”. 12/16-06/17, \$7,000, SESI Consulting Engineers, PI: Maria Chrysochoou, co-PI: Ross Bagtzoglou
2. “Investigation of Capillary Rise Induced Chromium Blooms”. 08/15-01/17, \$125,000, AECOM, PI: Maria Chrysochoou, co-PI: Ross Bagtzoglou
3. “Collaborative Research: Toward a unified model for ferrihydrite behavior in the environment: a multipronged investigation of surface structure and reactivity”, 09/14-08/17, \$440,000, National Science Foundation: PIs: Maria Chrysochoou and Nadine Kabengi (Georgia State University)
4. “XRD and SEM characterization of Cr-contaminated samples”, 04/14-06/15, \$10,850, AECOM, PI: Maria Chrysochoou
5. “XRD and SEM characterization of soil and historic fill materials”, 04/14-09/15, \$21,000, CB&I, PI: Maria Chrysochoou
6. “SPECHROM— Spectroscopic and computational investigation of chromium binding on pure minerals and Asopos aquifer soils”, 07/13-06/15, €222,483, Marie Curie International Incoming Fellowship, National Technical University of Athens.
7. “Evaluating Applications of Field Spectroscopy Devices to Fingerprint Commonly Used Construction Materials”, 02/19-04/14, \$587,000, Strategic Highway Research Program 2, PI: Maria Chrysochoou.
8. “Sustainable erosion control in developing countries using industrial by-products”, U.S. Environmental Protection Agency, 08/11-08/12, \$15,000, PI: Maria Chrysochoou.
9. “Development of GIS and prioritization strategies for brownfield reclamation”, CT Department of Economic and Community Development, 06/11-06/12, \$22,200, PI: Maria Chrysochoou.
10. “Strengthening and modeling of earth embankments under high loads”, U.S. Department of Homeland Security, 09/09-09/10, \$118,189, PI: Maria Chrysochoou (share: 45%). Co-PIs: Dipanjan Basu, Amvrossios Bagtzoglou.
11. “XRD and SEM characterization of PPG Chromite Ore Processing Residue samples”, AECOM, 01/10-05/10, \$8,800, PI: Maria Chrysochoou.
12. “Investigation of the use of nanoscale Zero Valent Iron for Cr remediation in contaminated soils”, UConn Research Foundation, 06/09-06/10, \$26,435, PI: Maria Chrysochoou.
13. “Reversing Urban Sprawl: A Reclaimability Index Approach for Reviving Downtown Brownfields”, Center for Transportation and Livable Systems, U.S. Department of Transportation, 08/08-08/10, \$242,405 PI: Maria Chrysochoou (share: 55%) co-PIs: Norman Garrick, Kathleen Segerson, Amvrossios Bagtzoglou.
14. “Column studies for treatment optimization at National Chromium”, National Chromium Inc., 10/08 - 10/09, \$10,000 PI: Maria Chrysochoou.
15. “Analysis of soil-cement blending samples”, Schnabel Engineering, 09/08-11/08, \$3,350 PI: Maria Chrysochoou.

16. “Analysis of Al-rich powders”, Schnabel Engineering, 03/08-05/08, \$6,200 PI: Maria Chrysochoou.
17. “Cr-treatability study at the National Chromium Facility”, National Chromium Inc., 02/08-08/08. \$8,000 PI: Maria Chrysochoou.
18. “Soil-cement blending study, Greenport, NY”. Schnabel Engineering, 01/08/08-04/30/08. \$4,500 PI: Maria Chrysochoou.
19. “Investigation of Cr(VI) speciation via micro-XANES, micro-XRF and micro-XRD analyses”, Uconn Research Foundation, 10/07, \$1,000 PI: Maria Chrysochoou.
20. “LaFarge-Dominion Portland Cement–Fly Ash–Dredged Material blend evaluation”, Schnabel Engineering, 09/07-04/08 \$12,000 PI: Maria Chrysochoou.

CONSULTING/ OTHER PROFESSIONAL ACTIVITIES

2016-present, Consultant, Phoenix Environmental Services, Evaluation and modeling of environmental data.

2014-present, Consultant and Expert Witness, CB&I, Evaluation of the nature of historic fill materials in contaminated sites.

2014-present, Consultant and Expert Witness, AECOM, Investigation of chromium speciation in contaminated sites.

2014-present, Consultant, Strategic Highway Research Program 2 (SHRP2), Transportation Research Board, Webinar presenter and Subject Matter Expert

2012-2013, Consultant and Expert Witness, Kohl’s Department Store, Investigation of heaving mechanisms in foundation material.

2011-2013, Consultant, National Technical University of Athens, Greece. Project LIFE+: Chromium in Asopos Groundwater System: Remediation Technologies and Measures – “CHARM”

2012, Organization and delivery of ASCE Webinar: Geochemistry: An important tool for Geo-Environmental engineers (offered January 10th 2011, April 9th 2012, October 3rd 2012).

2011, U.S. Army Engineering Research and Development Center, Workshop on quantitative X-ray Diffraction and other spectroscopic applications for soil characterization.

2011, Environmental Professionals Organization of Connecticut, Organization of professional seminar on in situ remediation technologies.

2010, Schnabel Engineering, Project Consultant.

TEACHING

- Soil Mechanics I
- Geoenvironmental Engineering
- Contaminant Source Remediation
- Environmental Transport Phenomena
- Environmental Geotechnology
- The Environmental Debate

- Introduction to Air Pollution
- Environmental Engineering Senior Design
- Research Thesis in Environmental Engineering

M.Sc. STUDENTS

- Kelly Drengler, May 2008
- Aaron Ting, May 2010
- Matthew Rood, May 2010
- Geeta Dahal, December 2010
- Xiaolong Zhang, December 2010
- Jacqueline Oakes, May 2013
- Patrick Houston, May 2014

Ph.D. STUDENTS

- Chad Johnston, May 2013
- Nefeli Bompoti, May 2017
- Yaguang Du, May 2018

IV. PUBLICATIONS

Citations (as of January 2017)

Scopus: 802 (h-index 14)

Google Scholar: 1115 (h-index 17, i10-index 30)

a. Book Chapters

1. Kabengi N. and **Chrysochoou M.**, 2015. Soil Science in Environmental Management. In: An Integrated Approach to Environmental Management, Editors: Rupali Datta, John Wiley and Sons, pp. 75-98.
2. **Chrysochoou M.**, 2013. Application of quantitative X-ray Diffraction in Geoenvironmental problems: overview and case studies, Chapter 5, In: X-ray Diffraction: Structure, Principles and Applications, Editor: Kaimin Shih, Nova Science Publishers.
3. **Chrysochoou M.** and Dermatas D., 2011. An overview of the properties and treatment of Chromite Ore Processing Residue, In: Management of hazardous residues containing Cr(VI), Nova Science Publishers, pp. 273-302.

b. Journal Articles (Refereed)

1. Mpouras T., **Chrysochoou M.** and Dermatas D. 2017. Investigation of hexavalent chromium sorption on serpentine soil, Journal of Contaminant Hydrology, in press, DOI: 10.1016/j.jconhyd.2016.12.009.
2. Bompoti N., **Chrysochoou M.** and Machesky M., 2017. Surface structure of ferrihydrite: Insights from modeling surface charge. Chemical Geology, DOI: 10.1016/j.chemgeo.2016.12.018.
3. Kabengi N., **Chrysochoou M.**, Bompoti N. and Kubicki J. 2017. An integrated flow microcalorimetry, infrared spectroscopy and density functional theory approach to the study of chromate complexation on hematite and ferrihydrite, Chemical Geology,

<http://dx.doi.org/10.1016/j.chemgeo.2017.01.017>.

4. **Chrysochoou M.**, Theologou E., Bompoti N., Dermatas D. and Panagiotakis I. Occurrence, Origin and Transformation Processes of Geogenic Chromium in Soils and Sediments, *Current Pollution Reports*, 2(4), 224-235.
5. **Chrysochoou M.**, and Reeves K. 2016. Investigation of hexavalent chromium reduction by green tea polyphenols, *Bulleting of Environmental Contamination and Toxicology*, in press, DOI 10.1007/s00128-016-1901-9.
6. Johnston C. and **Chrysochoou M.** 2016. Mechanisms of Chromate, Selenate, and Sulfate Adsorption on Al-Substituted Ferrihydrite: Implications for Ferrihydrite Surface Structure and Reactivity, *Environmental Science and Technology*, 50(7), 3589-3596.
7. Bompoti N., **Chrysochoou M.** and Dermatas D. 2015. "Geochemical characterization of Greek ophiolitic environments using statistical analysis", *Environmental Processes*, 2, (Suppl 1), S5-S21 DOI: 10.1007/s40710-015-0097-z.
8. **Chrysochoou M.**, 2015. "Geochemistry in Geotechnical Engineering Problems: Ettringite as Case Study", *Geotechnical Engineering* , 46(4), 1-7.
9. Mystrioti C., Sparis D., Papassiopi N., Xenidis A., Dermatas D. and **Chrysochoou M.** 2015. "Assessment of Polyphenol Coated Nano Zero Valent Iron for Hexavalent Chromium Removal from Contaminated Waters" *Bulletin of Environmental Contamination and Toxicology*, 94(3), 302-307.
10. Panagiotakis I., Dermatas D., Vatseris C., **Chrysochoou M.**, Papassiopi N., Xenidis A. and Vaxevanidou K. 2015. Forensic Investigation of a Chromium(VI) groundwater plume in Thiva, Greece, *Journal of Hazardous Materials*, 281, 27-34.
11. Dermatas D., Mpouras A., **Chrysochoou M.**, Vatseris C., Papassiopi N., Xenidis A., Theologou E. and Bompoti N. 2015. Origin and concentration profile of chromium in a Greek aquifer, *Journal of Hazardous Materials*, 281, 35-46.
12. **Chrysochoou M.** and Johnston C.P., 2015. Sulfur speciation and reactivity in calcium-polysulfide treated soil, *Journal of Hazardous Materials*, 281, 87-94.
13. Johnston C.P. and **Chrysochoou M.**, 2015. Mechanisms of chromate adsorption on boehmite, *Journal of Hazardous Materials*, 281, 56-63.
14. Mystrioti C., Papassiopi N., Xenidis A., Dermatas D. and **Chrysochoou M.**, 2015., "Column study for the evaluation of the transport properties of polyphenol coated nano iron", *Journal of Hazardous Materials*, 281, 64-69.
15. Johnston C.P. and **Chrysochoou M.**, 2014. Mechanisms of chromate adsorption on hematite, *Geochimica et Cosmochimica Acta*, 138, 146-157.
16. **Chrysochoou M.**, 2014. Investigation of mineral dissolution rate and strength development in stabilized soils using quantitative X-ray Diffraction, *Journal of Materials in Civil Engineering*, 26(2), 288-295
17. **Chrysochoou M.**, Zhang X and Amador J., 2013. Comparison of Cr(VI) reduction by aerobic bacteria in culture and soil conditions, *Soil and Sediment Contamination*, 22, 273-287.
18. Johnston C.P. and **Chrysochoou M.**, 2012. Investigation of Chromate Coordination on Ferrihydrite by in situ ATR-FTIR Spectroscopy and Theoretical Frequency Calculations, *Environmental Science and Technology*, 46(11), 5851-5858.
19. **Chrysochoou M.**, Brown K., Dahal G., Granda C., Segerson K., Garrick N. and Bagtzoglou A., 2012. Decoupling brownfield assessment from end use: A GIS tool and indexing scheme for long term redevelopment planning, *Landscape and Urban Planning*, 105(3), 187-198.

20. **Chrysochoou M.**, Grubb D.G. and Malasavage N., 2012. Assessment of Sulfate-Induced Swell in Stabilized Dredged Material: Is Ettringite Always a Problem?, *Journal of Geotechnical and Geoenvironmental Engineering*, 138(3), 407-414.
21. **Chrysochoou M.**, Johnston C. and Dahal G., 2012. A Comparative Evaluation of Cr(VI) Treatment in Contaminated Soil by Calcium Polysulfide and Nanoscale Zero Valent Iron, *Journal of Hazardous Materials*, 201-202, 33-42.
22. Dermatas D., Vatseris C., Panagiotakis I. and **Chrysochoou M.**, 2012. Potential contribution of geogenic chromium in groundwater contamination of a Greek heavily industrialized area, *Chemical Engineering Transactions*, 28, 217-222.
23. **Chrysochoou M.**, McGuire M. and Dahal G., 2012. Transport Characteristics of Green-Tea Nano-scale Zero Valent Iron as a Function of Soil Mineralogy, *Chemical Engineering Transactions*, 28, 121-126.
24. **Chrysochoou M.** and Ting A., 2011. A kinetic study of Cr(VI) reduction by calcium polysulfide, *Science of the Total Environment*, 409, 4072-4077.
25. **Chrysochoou M.**, Granda C., Brown K., Dahal G., Garrick N., Segerson K. and Bagtzoglou A., 2011. Reviving Connecticut's brownfields: institutions and obstacles, *The Connecticut Economy*, 19(1), 14-16.
26. **Chrysochoou M.**, Grubb D.G., Drengler K. and Malasavage N., 2010. Stabilized Dredged Material III: A mineralogical perspective, *Journal of Geotechnical and Geoenvironmental Engineering*, 136(8), 1037-1050.
27. Grubb D.G., Malasavage N., Smith C.J and **Chrysochoou M.**, 2010. Stabilized Dredged Material II: Geomechanical behavior, *Journal of Geotechnical and Geoenvironmental Engineering*, 136(8), 1025-1036.
28. Grubb D.G., **Chrysochoou M.**, Smith C.J. and Malasavage N., 2010. Stabilized Dredged Material I: A parametric study, *Journal of Geotechnical and Geoenvironmental Engineering*, 136(8), 1011-1024.
29. **Chrysochoou M.**, Ferreira D. and Johnston C., 2010. Calcium polysulfide treatment of Cr contaminated soil, *Journal of Hazardous Materials*, 179, 650-657.
30. **Chrysochoou M.**, Dermatas D., Moon D.H., Grubb D.G. and Christodoulatos C., 2010. Geoenvironmental characterization of Chromite Ore Processing Residue: Implications for treatment, *Journal of Geotechnical and Geoenvironmental Engineering*, 136(3), 510-521.
31. **Chrysochoou M.**, Fakra S., Marcus. M.A., Moon D.H. and Dermatas D., 2009. Microstructural Analyses of Cr(VI) Speciation In Chromite Ore Processing Residue (COPR), *Environmental Science and Technology*, 43(14), 5461-5466.
32. **Chrysochoou M.**, Moon D.H., Fakra S., Marcus M.A., Dermatas D. and Christodoulatos C., 2009. Use of Micro-X-ray Absorption spectroscopy and diffraction to delineate Cr(VI) speciation in COPR, *Global NEST Journal*, 11(3), 318-324.
33. Grubb D.G., Moon D.H., Reilly T., **Chrysochoou M.**, Dermatas D. 2009. Stabilization/solidification (S/S) of Pb and W contaminated soils using type I/II portland cement, silica fume cement and cement kiln dust, *Global Nest Journal* 11 (3) , pp. 267-282.
34. **Chrysochoou M.**, Dermatas D. and Christodoulatos C., 2009. Experimental studies on coupled treatment of Chromite Ore Processing Residue, *Journal of ASTM International*, Vol. 6 No. 3 DOI: 10.1520/JAI102165.
35. Dermatas D., **Chrysochoou M.**, Grubb D.G. and Xu X., 2008. Phosphate treatment of firing range soils: Pb fixation or P release?, *Journal of Environmental Quality*, 37: 47-56.

36. Wazne M., Moon D.H., Jagupilla S.C., Jagupilla S.C., Christodoulatos C., Dermatas D., **Chrysochoou M.**, 2007. Remediation of chromite ore processing residue using ferrous sulfate and calcium polysulfide, *Geosciences Journal*, 11(2): 105-110.
37. Dermatas D. and **Chrysochoou M.**, 2007. Lead particle size and its association with firing conditions and range maintenance: implications for treatment, *Environmental Geochemistry and Health*, 29(4):347-355.
38. Moon D.H., Dermatas D., Wazne M., Sanchez A., **Chrysochoou M.** and Grubb D.G, 2007. Swelling related to ettringite crystal formation in Chromite Ore Processing Residue, *Environmental Geochemistry and Health*, 29(4):289-294.
39. **Chrysochoou M.**, Dermatas D. and Grubb D.G., 2007. Phosphate application to firing range soils for Pb immobilization: the unclear role of phosphate, *Journal of Hazardous Materials*, 144(1-2):1-14.
40. Moon D.H., Wazne M., Dermatas D., Christodoulatos C., Sanchez A.M., Grubb D.G., **Chrysochoou M.** and Kim M.G., 2007. Long-term treatment issues with chromite ore processing residue (COPR): Cr⁶⁺ reduction and heave, *Journal of Hazardous Materials*, 143(3):629-635.
41. Dermatas D., **Chrysochoou M.**, Pardali S. and Grubb D.G., 2007. Influence of X-Ray Diffraction sample preparation on quantitative mineralogy: implications for chromate waste treatment, *Journal of Environmental Quality*, 36(2):487-497.
42. **Chrysochoou M.** and Dermatas D., 2007. Application of the Rietveld method to assess Cr(VI) speciation in Chromite Ore Processing Residue, *Journal of Hazardous Materials*, 141(2):370-377.
43. Dermatas D., **Chrysochoou M.**, Moon D.H., Grubb D.G., Wazne M. and Christodoulatos C., 2006. Ettringite-Induced Heave in Chromite Ore Processing Residue (COPR) upon Ferrous Sulfate Treatment, *Environmental Science and Technology* 40(18):5786-5792.
44. **Chrysochoou M.** and Dermatas D., 2006. Evaluation of Ettringite and Hydrocalumite Formation for Heavy Metal Immobilization: Literature Review and Experimental Study, *Journal of Hazardous Materials*, 136(1):20-33.
45. Dermatas D., Shen G., **Chrysochoou M.**, Grubb D.G., Menounou N. and Dutko P., 2006. Pb speciation vs. TCLP release in army firing range soils, *Journal of Hazardous Materials*, 136(1):34-46.
46. Dermatas D., Bonaparte R., **Chrysochoou M.** and Moon D.H., 2006. Chromite Ore Processing Residue: Hazardous Contaminated Soil or Solid Waste?, *Journal of ASTM International*, Vol. 3 No.7, doi: 10.1520/JAI13313.
47. **Chrysochoou M.**, Dermatas D., Moon D.H., Christodoulatos C., Wazne M., French C., Morris J. and Kaouris M., 2006. Investigation of barium treatment of Chromite Ore Processing Residue, *Journal of ASTM International* Vol. 3 No.6, doi: 10.1520/JAI13314.
48. Moon D.H., Dermatas D., **Chrysochoou M.** and Shen G., 2006. An Investigation of the Heaving Mechanism Related to Chromite Ore Processing Residue, *Journal of ASTM International* Vol. 3 No.6, doi: 10.1520/JAI13309.
49. Karagiannidis A., **Chrysochoou M.**, Moussiopoulos N., Samaras Z., and Rakibey P. (2006). Examples of solid waste analysis and characterisation in accordance with contemporary European environmental legislation, *International Journal of Sustainable Development and Planning*, 1(4):464-475.
50. Karagiannidis A., Perkoulidis G., Moussiopoulos N. and **Chrysochoou M.**, 2004. Facility location for solid waste management through compilation and multicriterial ranking of optimal decentralised scenarios: a case study for the region of Peloponnesse in southern Greece, *Engineering Research*, 1:7-18.

b. Published Proceedings Full Papers

1. Bompoti N., **Chrysochoou M.** and Machesky M. 2016. Advances in surface complexation modeling for chromium adsorption on iron oxide, GeoChicago 2016, Sustainability, Energy, and the Geoenvironment, Chicago, IL, August 14-18.
2. Du Y. and **Chrysochoou M.** 2016. The leaching characteristics of Chromite Ore Processing Residue from China, GeoChicago 2016, Sustainability, Energy, and the Geoenvironment, Chicago, IL, August 14-18.
3. Binteris A., Mpouras T., Panagiotakis I., Dermatas D., **Chrysochoou M.**, 2015. Reed material – A potential biosorbent for the treatment of Cr(VI)-contaminated water discharged into Asopos river, 14th Conference on Environmental Science and Technology, Rhodes, Greece, September 2015, paper 01428.
4. Lagiopoulos I., Panagiotakis I., **Chrysochoou M.**, Dermatas D., 2015. Treatment of Cr(VI)-contaminated water discharged to Asopos river using low-cost natural materials, Conference on Environmental Science and Technology, Rhodes, Greece, September 2015, paper 01426.
5. **Chrysochoou M.**, Bompoti N., Dermatas D. and Theologou E. 2014. Identification of Cr and Ni origin in Greek soils via R-mode factor analysis, paper A408, Proceedings of the 12th International Conference on Protection and Restoration of the Environment, Skiathos, Greece, June 29 – July 3 2014.
6. Mpouras T., Dermatas D. and **Chrysochoou M.**, 2014. Evaluation of the adsorption of hexavalent chromium on ophiolitic soils, paper A409, Proceedings of the 12th International Conference on Protection and Restoration of the Environment, Skiathos, Greece, June 29 – July 3 2014.
7. I. Panagiotakis, D. Dermatas, C. Vatsieris, P. Merkos, M. Chrysochoou, N. Linardos, T. Mpouras, E. Theologou, N. Papassiopi A. Xenidis, 2014. Assessment of a Cr(VI)-contaminated industrial site in Greece, paper A410, Proceedings of the 12th International Conference on Protection and Restoration of the Environment, Skiathos, Greece, June 29 – July 3 2014.
8. Mystrioti C., Xenidis A., Papassiopi N., Dermatas D. and **Chrysochoou M.**, 2014. “Fate of green tea iron nanoparticles in calcareous soils”, Geotechnical Special Publication 234, 2189-2198.
9. Mpouras T., Panagiotakis I., Dermatas D. and **Chrysochoou M.**, 2014. Nano-zero valent iron: An emerging technology for contaminated site remediation, Geotechnical Special Publication 234, 2206-2215.
10. **Chrysochoou M.**, Machesky M. and Johnston C., 2013. A new surface complexation model for chromate adsorption on ferrihydrite. Proceedings of the 13th International Conference on Environmental Science and Technology, paper 687, Athens, Greece, 5-7 September 2013.
11. Kabengi N., **Chrysochoou M.**, Johnston C.P. and Tulloch J., 2013. Elucidating mechanisms of chromate complexation on iron oxide surfaces using flow calorimetry and infrared spectroscopy. Proceedings of the 13th International Conference on Environmental Science and Technology, paper 552, Athens, Greece, 5-7 September 2013.
12. Theologou E., Panagiotakis I., Dermatas D., **Chrysochoou M.** and Toskos T., 2013. Remediation technologies for hexavalent chromium contaminated aquifers. Proceedings of the 13th International Conference on Environmental Science and Technology, paper 815, Athens, Greece, 5-7 September 2013.
13. Mystrioti C., Papassiopi N., Xenidis A., Dermatas D. and **Chrysochoou M.**, 2013. Column study for the evaluation of transport properties of polyphenol coated nano-iron. Proceedings of the 13th International Conference on Environmental Science and Technology, paper 742, Athens, Greece, 5-7 September 2013.
14. Panagiotakis I., Dermatas D., Vatsieris C., **Chrysochoou M.**, Papassiopi N., Xenidis A., Theologou E., Mpouras T. and Sakellariou L., 2013. Investigation of chromium sources in the

- groundwater of Thiva, Greece. Proceedings of the 13th International Conference on Environmental Science and Technology, paper 745, Athens, Greece, 5-7 September 2013.
15. Dermatas D., Panagiotakis I., Vatseris C., Xenidis A., Papasiopi N., Mpouras T., Theologou E., Vaxevanidou K. and **Chrysochoou M.**, 2013. Investigation of origin of hexavalent chromium in a Greek ophiolitic aquifer. Proceedings of the 13th International Conference on Environmental Science and Technology, paper 746, Athens, Greece, 5-7 September 2013.
 16. Panagiotakis I., Dermatas D., Vatseris C., Tettas K., Theologou E. and **Chrysochoou M.**, 2012. Anthropogenic Activities Increasing Cr(VI) Concentrations In The Aquifer of The Asopos River Basin, The ISWA Solid Waste Congress, September 17-19, Florence, Italy.
 17. **Chrysochoou M.** and Dahal G., 2012. Influence of soil geochemistry on transport of green tea iron nanoparticles, Protection and Restoration of the Environment XI Conference Proceedings, July 3-6 2012, Thessaloniki, Greece.
 18. **Chrysochoou M.**, Puppala A. and Chittoori B., 2012. Characterization of clays using quantitative XRD and chemical analyses, GeoCongress 2012: State of the Art and Practice in Geotechnical Engineering, Geotechnical Special Publication No. 225, ed. R.D. Hryciw, A. Athanasopoulos-Zekkos, N. Yesiller, pp. 1165-1174.
 19. Zofka A., **Chrysochoou M.** and Yut I. 2012. Spectroscopic Evaluation of Recycled Asphalt Pavement Materials, GeoCongress 2012: State of the Art and Practice in Geotechnical Engineering, Geotechnical Special Publication No. 225, ed. R.D. Hryciw, A. Athanasopoulos-Zekkos, N. Yesiller, pp. 1572-1581.
 20. **Chrysochoou M.** and Johnston C.P., 2012. Reduction of Chromium(VI) in Saturated Zone Sediments by Calcium Polysulfide and Nanoscale Zerovalent Iron Derived From Green Tea Extract, GeoCongress 2012: State of the Art and Practice in Geotechnical Engineering, Geotechnical Special Publication No. 225, ed. R.D. Hryciw, A. Athanasopoulos-Zekkos, N. Yesiller, pp. 3959-3968.
 21. **Chrysochoou M.**, Dahal G., Brown K., Garrick N., Granda C., Segerson K. and Bagtzoglou A. Prioritizing brownfields for development: a GIS tool and indexing scheme for environmental, socioeconomic and smart-growth factors, accepted for presentation at the TRB 2011 conference, Washington D.C., January 23-27, 2011.
 22. Grubb, D.G., **Chrysochoou M.**, and Schrock, M., 2010. "Dredged material stabilization with lime and cement kiln dusts," 2010 International Solidification/Stabilization Technology Forum, C.B. Lake and C.D. Hills (eds.), Dalhousie University Press, Halifax, Nova Scotia, Canada, pp. 227-234.
 23. **Chrysochoou M.**, Grubb D.G. and Fair J., 2010. Beneficial Use Evaluation of Two Aluminum Powders in Soil-Cement Applications, GeoFlorida 2010 Conference Proceedings, West Palm Beach, FL.
 24. **Chrysochoou M.**, Moon D.H., Fakra, S., Marcus M.A., Dermatas D. and Christodoulatos C., 2008. Use of X-ray Absorption Spectroscopy and diffraction to delineate Cr(VI) speciation in COPR, Protection and Restoration of the Environment IX, Kefalonia, Greece.
 25. Moon D.H., Grubb D.G., Reilly T., **Chrysochoou M.** and Dermatas D., 2008. Leaching Behavior of Lead (Pb) and Tungsten (W) Contaminated Soils Stabilized with Type I/II Portland Cement, Silica Fume Cement and Cement Kiln Dust, Protection and Restoration of the Environment IX, Kefalonia, Greece.
 26. **Chrysochoou M.**, Dermatas D., Moon D.H. and Christodoulatos, C., 2008. Reductive treatment of Chromite Ore Processing Residue: lessons from a field study, Geocongress 2008, Conference Proceedings, New Orleans, LA.

27. Dermatas D., **Chrysochoou** M., Moon D.H., Kaouris M., Morris J. and French C., 2008. Current knowledge on heaving mechanisms of Chromite Ore Processing Residue, Geocongress 2008, Conference Proceedings, New Orleans, LA.
28. Moon D.H., Dermatas D., Sanchez A., **Chrysochoou** M., Grubb D.G. and Wazne M., 2008. Assessment of brownmillerite hydration in chromite ore processing residue at elevated temperature, Geocongress 2008, Conference Proceedings, New Orleans, LA.
29. Grubb D.G., **Chrysochoou** M. and Smith, C.J., 2008. Dredged Material stabilization: the role of mellowing on cured properties, Geocongress 2008, Conference Proceedings, New Orleans, LA.
30. Dermatas, D., **Chrysochoou** M. and Moon D.H., 2008. Geoenvironmental Characterization to Assess Waste Stabilization/Solidification Treatment Performance and Sustainability, Geocongress 2008, Conference Proceedings, New Orleans, LA.
31. **Chrysochoou** M., Dermatas D. and S. Pardali, 2006. Effects of mineralogy on the leaching characteristics of solid waste, Protection and Restoration of the Environment VIII, Conference Proceedings, Chania, Greece.
32. Dermatas, D. Sanchez A., Moon D.H., **Chrysochoou** M., Christodoulatos C. and Grubb D.G., 2006. Brownmillerite hydration in Chromite Ore Processing Residue at elevated temperatures, Protection and Restoration of the Environment VIII, Conference Proceedings, Chania, Greece.
33. Moon D.H., Dermatas D., **Chrysochoou** M. and Grubb D.G., 2006. An investigation of the phase transformation in brownmillerite in Chromite Ore Processing Residue, Protection and Restoration of the Environment VIII, Conference Proceedings, Chania, Greece.
34. Moon D.H., Dermatas D., **Chrysochoou** M., Sanchez A. and Grubb D.G., 2006. Sulfate-induced heaving in Chromite Ore Processing Residue, 5th Conference on Environmental Geotechnics Proceedings, 26-30th June, Cardiff, United Kingdom.
35. **Chrysochoou** M. and Dermatas D., 2005. Comparison of geochemical modeling in Chromite Ore Processing Residue using MINTEQ and EQ3/6 software, Proceedings 9th Conference on Environmental Science and Technology, Rhodes, Greece.
36. **Chrysochoou**, M., Moon D.H., Dermatas D., Wazne M., Christodoulatos C., Meng X., Kaouris M., Morris J., French C. and Sass B., 2005. Mineralogical analysis of Chromite Ore Processing Residue by X-ray Powder Diffraction, In-situ and On-site Bioremediation Symposium, Conference Proceedings, Battelle, Columbus, Ohio.
37. Dermatas D., **Chrysochoou** M., Moon D.H., Pardali S., Christodoulatos C., Lazarte C.A., Pendleton C., Bonaparte R., Briggs R., Myers M., French C., Morris J., and Kaouris M., 2005. Mineralogical analysis of Chromite Ore Processing Residue at Dundalk Marine Terminal Area 1800, In-situ and On-site Bioremediation Symposium, Conference Proceedings, Battelle, Columbus, Ohio.
38. Moon D.H., Dermatas D., **Chrysochoou** M., Sanchez A., Wazne M. and Grubb D.G., 2005. Sulfate induced heaving in Chromite Ore Processing Residue, 5th International Conference in Environmental Geotechnics, Cardiff, UK.
39. Dermatas D. and **Chrysochoou** M., 2005. The Rietveld Method as a Tool for Assessing Heavy-metal Immobilization in S/S Treatment Investigations, Proceedings International Conference on Stabilization/Solidification Treatment and Remediation, Cambridge, England.
40. **Chrysochoou** M., Dermatas D., Moon D.H. and Wazne M., 2005. Role and properties of Calcium Aluminum Chromium Oxide Hydrates in Chromium Waste Stabilization, First International Conference on Environmental Science and Technology, New Orleans, Louisiana, USA.

41. **Chrysochoou M.** and Dermatas D., 2004. Application of Ettringite in Heavy-Metal Immobilization: A Literature Review, Protection and Restoration of the Environment VII, Conference Proceedings, Mykonos, Greece.
42. Karagiannidis A., Xirogiannopoulou A., **Chrysochoou M.**, Perkoulidis G., and Moussiopoulos N. 2004. Modeling the citizens' annoyance and convenience from urban solid waste management collection bins, Protection and Restoration of the Environment VII, Conference Proceedings, Mykonos, Greece.
43. **Chrysochoou M.**, Michalzik B., Harzer S., Bilitewski B. and Moussiopoulos N., 2003. Assessment of the contamination potential from waste material – a comparison between batch/elution experiments and studies in landfill simulation reactors, Proceedings of the 9th International Waste Management and Landfill Symposium, Sardinia, Italy.
44. **Chrysochoou M.**, Bilitewski B., Moussiopoulos N. and Karagiannidis A., 2003. Comparison of leaching tests for the characterization of waste, Proceedings 8th Conference on Environmental Science and Technology, Lemnos, Greece.
45. Papadopoulos S., Moussiopoulos N., Vatsaris C., Karagiannidis A. and **Chrysochoou M.**, 2003. Development of an integrated tool for contaminated site remediation implementing biological and physicochemical treatment methods, Proceedings 8th Conference on Environmental Science and Technology, Lemnos, Greece.

c. Other articles and oral/poster presentations

1. **Chrysochoou M.**, Mamais D. and Dermatas D. 2016. Cr and Mn speciation and interactions in Greek ophiolites, Goldschmidt 2016, Yokohama, Japan, June 26-July 1.
2. **Chrysochoou M.**, Kabengi N. Bompoti N., Kubicki J. and Machesky M. 2016. Resolving the fine-scale reactivity of chromate complexation on iron oxide surfaces, 251st American Chemical Society National Meeting & Exposition, San Diego, CA, March 13-17.
3. **Chrysochoou M.** and Bompoti N. 2016. Carbonate adsorption on ferrihydrite: a semi-quantitative IR study, 251st American Chemical Society National Meeting & Exposition, San Diego, CA, March 13-17.
4. Bompoti N., **Chrysochoou M.** and Machesky M. 2016. Surface complexation modelling of chromate adsorption on iron oxides, 251st American Chemical Society National Meeting & Exposition, San Diego, CA, March 13-17.
5. Theologou E., Panagiotakis I., Dermatas D., **Chrysochoou M.** and Toskos T., 2013. Remediation technologies for hexavalent chromium contaminated aquifers. International Solid Waste Association World Congress, October 7-11 2013, Vienna, Austria.
6. Dermatas D., Panagiotakis I., Vatsaris C., Xenidis A., Papasiopi N., Mpouras T., Theologou E., Vaxevanidou K. and **Chrysochoou M.**, 2013. Investigation of origin of hexavalent chromium in a Greek ophiolitic aquifer. International Solid Waste Association World Congress, October 7-11 2013, Vienna, Austria.
7. **Chrysochoou M.**, Kabengi N., Machesky M., Johnston C. and Kubicki J., 2013. An integrated approach to build surface complexation models for chromate on iron oxides, Goldschmidt 2013, August 25-30, Florence, Italy.
8. C. Mystrioti, D. Sparis, N. Papasiopi, A. Xenidis, D. Dermatas and M. **Chrysochoou**, "Hexavalent chromium reduction with polyphenol-coated nano zero valent iron", Extended Abstract in Proceedings of 3rd International Conference on Industrial and Hazardous Waste Management, Chania, Greece, 2012

9. Johnston C.P. and **Chrysochoou M.**, 2012. Mechanisms of chromate adsorption at the mineral-water interface, 244th American Chemical Society National Meeting and Exposition, Philadelphia, PA, August 19-23, oral presentation.
10. Boyer D., Cipoletti S. and **Chrysochoou M.**, 2012. Sustainable Erosion Control in Developing Countries using Industrial By-products, 2012 National Sustainable Design Expo, April 21-23, Washington, D.C., poster presentation.
11. **Chrysochoou M.**, Dahal G., Brown K., Garrick N., Granda C., Segerson K. and Bagtzoglou A., 2011. Prioritizing brownfields for development: a GIS tool and indexing scheme for environmental, socioeconomic and smart-growth factors, TRB 90th Annual Meeting, January 23rd – 27th, Washington, DC.
12. **Chrysochoou M.**, Rood M. and Vasquez C., 2011. A systematic approach to clay stabilization, International Symposium on Testing and Specification of Recycled Materials for Sustainable Geotechnical Construction, February 2nd-4th, Baltimore, Maryland.
13. **Chrysochoou M.**, Dahal G., Kweku B., Granda-Carvajal C., Garrick N., Segerson K and Bagtzoglou R., 2010. Reversing Urban Sprawl: A Reclaimability Approach to Reviving Downtown Brownfields, Transportation Systems for Livable Communities Conference, Washington D.C. October 18-19th, poster presentation.
14. Dahal G., Brown K., Granda-Carvajal C., **Chrysochoou M.**, Garrick N., Segerson K. and Bagtzoglou A., 2010. Reversing Urban Sprawl: A Reclaimability Approach to Reviving Downtown Brownfields, International Conference on Green Remediation, University of Massachusetts at Amherst, June 15-17, poster presentation.
15. Johnston C.P. and **Chrysochoou M.**, 2010. An in situ ATR-FTIR study of chromate binding to goethite, American Chemical Society Annual Meeting, San Francisco, March 21-25th, 2010.
16. Dahal G. and **Chrysochoou M.**, 2010. Nanoscale Zero Valent Iron treatment of Cr contaminated soil, American Chemical Society Annual Meeting, San Francisco, March 21-25th, 2010.
17. Ting A. and **Chrysochoou M.**, 2010. Kinetics of Cr(VI) reduction by cationic polysulfides, American Chemical Society Annual Meeting, San Francisco, March 21-25th, 2010.
18. Johnston C.P. and **Chrysochoou M.**, 2009. Calcium polysulfide reduction of hexavalent chromium-contaminated aquifer sediments in saturated flow-through columns, American Chemical Society Northeast Regional Meeting, Hartford, CT, October 8th 2009.
19. Ting A. and **Chrysochoou M.**, 2009. Reaction kinetics between hexavalent chromium and cationic polysulfides in aqueous solutions, American Chemical Society Northeast Regional Meeting, Hartford, CT, October 8th 2009.
20. Rood M. and **Chrysochoou M.** Strengthening of soil embankments under high dynamic loads, 2009 Northeast Geotechnical Graduate Research Symposium, University of Massachusetts at Amherst, October 30th 2009.
21. **Chrysochoou M.**, Ferreira D. and Johnston C., 2009. Calcium polysulfide treatment of Cr contaminated soil, Second International Conference on Environmental Management, Engineering, Planning and Economics, Mykonos, Greece.
22. **Chrysochoou M.** and Grubb D.G., 2009. Quantification of ettringite in lime-stabilized clays, 46th Annual Meeting of the Clay Minerals Society, Billings, Montana, June 2009.
23. **Chrysochoou M.**, Fakra S., Marcus M.A., Dermatas D. and Moon D.H., 2009. Microstructural analyses of Cr speciation in Chromite Ore Processing Residue, Second International Conference on Environmental Management, Engineering, Planning and Economics, Mykonos, Greece.

24. **Chrysochoou** M. and Dermatas D., 2009. Investigation of Cr(VI) speciation and reduction in Chromite Ore Processing Residue, 11th International Conference on Environmental Science and Technology, Chania, Greece, September 3-5 2009.
25. **Chrysochoou** M., Fakra S. and Marcus M., 2008. Investigation of Cr(VI) speciation and reduction in Chromite Ore Processing Residue (COPR) using micro-XANES, -XRF and -XRD, 2009 ALS Users Meeting, Berkeley, CA, October 13-15 2008.
26. Dermatas D. and **Chrysochoou** M., 2007. A critical review of Pb-contaminated firing range soil remediation by phosphate addition: treatment performance and environmental sustainability, 10th International Conference on Environmental Science and Technology, Kos, Greece.
27. **Chrysochoou** M., Dermatas D., and Grubb D.G., 2007. Comparison of the TCLP, sequential extraction (SET) and SPLP tests for evaluating lead leachability in firing range soils, European Geosciences Union, Vienna, Austria.
28. **Chrysochoou** M., Shen G., Dermatas D., Grubb D.G., Braida W., and Christodoulatos C., 2007. Tungsten (W) and lead (Pb) leaching behavior in firing range soils, European Geosciences Union, Vienna, Austria.
29. Dermatas D., Pardali S., **Chrysochoou** M. and Moon D.H., 2006. The role of XRPD analyses in the investigation of COPR mineralogy during treatment: a case study, Protection and Restoration of the Environment VIII, Conference Proceedings, Chania, Greece.
30. **Chrysochoou** M., Dermatas D. And Grubb D.G., 2006. Phosphate application to firing range soils for Pb immobilization: the unclear role of phosphate, General Assembly, European Geosciences Union, Vienna, Austria.
31. Dermatas D. and **Chrysochoou** M. 2006. Lead particle size and its association with firing conditions and range maintenance: implications for treatment, General Assembly, European Geosciences Union, Vienna, Austria.
32. Dermatas D. and **Chrysochoou** M., 2006. Application of deep soil mixing techniques for in-situ reductive treatment of chromite ore processing residue, General Assembly, European Geosciences Union, Vienna, Austria.
33. Wazne M., Moon D.H., Dermatas D., **Chrysochoou** M., Christodoulatos C. and Meng X., 2005. Investigation of Cr(Vi) Leachability in Chromite Ore Processing Residue (COPR): Experimental and Model Study, The 10th Anniversary of the KoSSGE, International Symposium on Soil and Groundwater Environment, Seoul, Korea.
34. Moon D.H., Dermatas D. and **Chrysochoou** M., 2005. An Investigation of the Phase Transformation of Brownmillerite in Chromite Ore Processing Residue, The 10th Anniversary of the KoSSGE, International Symposium on Soil and Groundwater Environment, Seoul, Korea.
35. Moon D.H., Dermatas D., **Chrysochoou** M. and Sanchez A., 2005. Heave related to ettringite formation in Chromite Ore Processing Residue, The 10th Anniversary of the KoSSGE, International Symposium on Soil and Groundwater Environment, Seoul, Korea.
36. Moon D.H., Dutko P., Dermatas D., **Chrysochoou** M. and Christodoulatos C., 2005. Ettringite-Induced Laboratory Swelling in Chromite Ore Processing Residue, In-situ and On-site Bioremediation Symposium, Conference Proceedings, Battelle, Columbus, Ohio.
37. Moon D. H., **Chrysochoou** M., Dermatas D. and Christodoulatos C., 2005. Investigation of Ettringite Formation in Chromite Ore Processing Residue, In-situ and On-site Bioremediation Symposium, Conference Proceedings, Battelle, Columbus, Ohio.
38. Moussiopoulos N., Karagiannidis A., Theodoseli M., Perkoulidis G., **Chrysochoou** M. and Salonikidou A., 2003. Effects in urban air quality from open burning of residual solid wastes in uncontrolled landfills, 4th International Conference on Urban Air Quality, Measurement, Modeling and Management, Charles University Prague, Czech Republic

V. DISTINCTIONS AND AWARDS

2013-2015 Marie Curie International Incoming Fellowship, European Union

2012, University of Connecticut Environmental Leadership Award

2012, P3 (People, Prosperity and the Planet) Award, U.S. Environmental Protection Agency

2005, Graduate Student of the Year, Stevens Institute of Technology

2000-2002, Scholarship of the German Academic Exchange Service (DAAD)

VI. INVITED TALKS

South Central University for Nationalities, 2015. Application of spectroscopy in metal remediation: the example of chromium, Wuhan, China, 2 June 2015.

Chemical Processes at Environmental Interfaces Symposium, 2015. 249th American Chemical Society Meeting, Denver, CO, March 22-26, 2015.

National Technical University of Athens, 2015. Soil functions in metal remediation: the example of chromium, Seminar series of the Water Resources Science and Technology graduate program, October 31st 2015, Athens, Greece

Los Alamos National Laboratory, 2013. Application of spectroscopy to delineate chromium geochemistry and optimize remediation, Frontiers in Geochemistry seminar series, invited speaker, December 16-17, Los Alamos, New Mexico, USA.

U.S. Army Research and Development Center, 2011. Identifying the mineralogy of soils, sediments and rocks: why you need it and how to do it. Invited workshop, June 20-22, Vicksburg, Mississippi, USA.

Rensselaer Polytechnic Institute, Department of Civil and Environmental Engineering, 2011. Application of spectroscopy in metal remediation – the example of chromium.

University of Massachusetts at Amherst, Department of Civil Engineering, 2011. A systematic approach to clay stabilization.

National Technical University of Athens, 2010. The role of soil in water quality and remediation.

Schnabel Engineering, 2010. Geochemistry: A science for dusty classrooms or a living, breathing beast in geotechnical/geoenvironmental engineering?

Schnabel Engineering, 2007. Application of material characterization techniques to geoenvironmental projects: a shortcut to successful management.

VII. MEMBERSHIPS

European Association of Geochemistry

American Society of Civil Engineers (ASCE)

American Chemical Society

Association of Environmental Engineering and Science Professors

Engineers Without Borders U.S.A.

Engineering for Change

United States University Council on Geotechnical Engineering and Research

VIII. OTHER PROFESSIONAL ACTIVITIES

Member, Environmental Engineering Program Leaders Committee, AEESP

Guest Editor, Journal of Hazardous Materials, Special issue “Chromium in the geoenvironment”, 2015.

GeoChicago 2016, Conference session organizer, American Society of Civil Engineers, Chicago, IL, August 13-16 2016.

Geocongress 2014 Conference session organizer, American Society of Civil Engineers, Atlanta, February 22-26th 2014.

GNEST 2013 conference session organizer, Athens, Greece, September 7-9th 2013.

2011-2012 Faculty Advisor, Engineers Without Borders University of Connecticut Student Chapter.

Geocongress 2012 Conference session organizer, American Society of Civil Engineers, San Francisco, March 23-27th 2012.

GeoFlorida 2010 Conference session organizer, American Society of Civil Engineers, West Palm Beach, February 20-24th 2010.

GeoCongress 2008 Conference session organizer, American Society of Civil Engineers, New Orleans, March 10-13th 2008.

Peer-review journal reviewer: Environmental Science and Technology, Chemosphere, Journal of Hazardous Materials, Science of the Total Environment, Journal of Environmental Engineering, Journal of Geotechnical and Geoenvironmental Engineering, Journal of Soil and Sediment Contamination, Journal of Environmental Management, Journal of Environmental Monitoring, Geotechnical Testing Journal, American Mineralogist, Journal of Civil Engineering Materials, Journal of Hazardous, Toxic and Radioactive Waste.

Member, ASCE Geoenvironmental committee

National Science Foundation proposal reviewer and panel member

Stanford Synchrotron Radiation Lightsource proposal reviewer

U.S. Department of Homeland Security proposal review panel member