

**Technical University of Crete
June 2008 – December 2008**

Technical Study on the state-of-the art treatment technologies of sewage sludge municipalities of Chania, Rethymnon, Heraklion, and Ag. Nikolaos of Crete, Greece. Funded by the Prefecture of Crete

**Technical University of Crete
2005-2007**

Since June 2005, I worked on the E.U.-financed project HARMONICA (Production of High Added Value Products for Environmental Applications from Agricultural by-products in India - Activated Carbon Production from Bagasse & Rice Husks). Achievements during this project included: novel lab- and pilot- scale method development for the production of high quality activated carbon from agricultural by-products, worldwide dissemination of results and their presentation to audiences in Europe and Asia.
(EUROPEAN UNION-INDIA CROSS CULTURAL PROGRAMME
(ALA/95/23/2003/077-124)

**Technical University of Crete
2004-2005**

From February 2004 until June 2005, I worked as a research associate in the Laboratory of Environmental Technology & Management at the Department of Environmental Engineering at the Technical University of Crete, doing research work in the E.U.-financed project HI-VALUE (Production of high added value materials from clean coal gasification by-products'. Achievements during this project included: development of novel treatment scheme for the clean-up of wastewater using Lime and Reverse Osmosis (EU COAL AND STEEL ECONOMIC COMMUNITY ECSC 7220-PR/145)

**Ministry of Education &
Religious Affairs
2003-2004**

From September 2003 until June 2004, I worked as a Chemistry teacher in the High School of Kolymbari, through the Programme of Added Teaching Support.

**Energy & Environmental
Research Centre (E.E.R.C),
North Dakota, U.S.A.
1999-2000**

From July 1999 until June 2000, I worked as a research associate at the E.E.R.C, under the supervision of Dr. Steven Hawthorne. My duties included development of a novel approach to the remediation of soil that is contaminated by explosive substances, results analysis and evaluation and presentations of the results to various audiences in conferences and seminars. **This work contributed towards U.S. Patent 6352644 ‘Method of manipulating the chemical properties of water to improve the effectiveness of a desired process’, March 2002.**

**Austrian Research Centres
Siebersdorf (Austria)
1999**

Attendance of E.U. seminar titled ‘E.U. Advanced Study School in Soil Remediation’ between 12th-18th of July 1999. The main subjects of the seminar included Risk assessment, Contaminated land management, Bioremediation, Transport of pollutants and Case studies.

**Waste In Social Environment
(WISE): Substance Cycle
Waste Management,
Monschau, Germany, March
2008**

Attendance of EU-funded training course ‘WISE TC2: Substance Cycle Waste Management’ on the 10th-14th of March 2008. The main subjects of the training course included analysis of waste fractions, waste to energy, operating waste treatment plants, technical visits to waste processing plants, practical laboratory work and presentations.

2. EDUCATION

**School of Chemistry
University of Leeds
1997-2001**

Ph.D. in Chemistry from the School of Chemistry, University of Leeds. Title of Thesis: ‘Soil Remediation Using Sub/Supercritical Water’, under the supervision of Prof. A.A. Clifford.

**School of Chemistry
University of Leeds
1994-1997**

B.Sc. in Chemistry from the School of Chemistry, University of Leeds. Final mark 2:1.

3. ADDITIONAL INFORMATION

Reviewer for the ACS journal publication Environmental Science & Technology

Member of the Society of Greek Chemists (E.E.X)

Member of the Royal Society of Chemistry (UK)

Member of CIRIA (Construction Industry Research and Information Association)

Member of CL:AIRE (Contaminated Land : Applications in Real Environments)

Member of NICOLE (Network for Industrially Contaminated Land in Europe)

LIST OF PUBLICATIONS

A. Publications in peer-reviewed journals

1. **Kalderis D.**, Aivalioti M., Gidarakos E., *Options for sustainable sewage sludge management in small wastewater treatment plants on islands: The case of Crete, Desalination*,
2. E. Koumantakis, K. Anastasiadou **D. Kalderis**, E. Gidarakos, *Asbestos pollution in an inactive mine: Determination of asbestos fibers in the deposit tailings and water* Journal of Hazardous Materials 2009, 167, 1080-1088.
3. **D. Kalderis**, S.B. Hawthorne, A.A. Clifford, E. Gidarakos, *Interaction of soil and water and TNT during degradation of TNT on contaminated soil using subcritical water*, Journal of Hazardous Materials 2008, 159 329-334.
4. **D. Kalderis**, D. Koutoulakis, P. Paraskeva, E. Diamadopoulos, E. Otal, J.Olivares del Valle, C. Fernandez-Pereira, '*Adsorption of Polluting Substances on Activated Carbon Prepared from Rice Husk and Sugarcane Bagasse*' ,Chemical Engineering Journal 2008, 144, 42-50.
5. **D. Kalderis**, E. Tsolaki, A. Antoniou, E. Diamadopoulos, '*Characterization and treatment of wastewater produced during the hydrometallurgical extraction of Ge from fly ash*', Desalination 2008, 230, 162-174.
6. E. Diamadopoulos, P. Paraskeva, **D. Kalderis**, '*Production of Activated Carbon from Agricultural By-Products*', Journal of Chemical Technology and Biotechnology, Journal of Chemical Technology and Biotechnology 2008, 83(5) 581-592.
7. **D. Kalderis**., Bethanis S., Paraskeva P. Diamadopoulos E., '*Production of activated carbon from bagasse and rice husks by a single-stage chemical activation method at low retention times*', Bioresource Technology, 2008, 99, 6809-6816
8. Hawthorne, S.B.; Lagadec, A.J.M.; **Kalderis, D.**; Lilke, A.V.; Miller, D.J.; "*Pilot-Scale Destruction of TNT, RDX and HMX on Contaminated Soils Using Subcritical Water*" Environmental Science and Technology 2000, 34, 3224-3228.
9. **D. Kalderis**, '*Soil contamination – A Western-world problem now comes to Greece*', Greek Chemical Chronicles, issue 11, November-December 2003.
10. Anastasakis K., **Kalderis D.** and Diamadopoulos E. *Flocculation behavior of okra and mallow in treating wastewater*, Desalination, 249(2), 2009, 786-791.
11. **D. Kalderis** and E. Diamadopoulos, *Valorization of Solid Waste Residues from Olive Oil Mills: A Review*, Terrestrial and Aquatic Environmental Toxicology 4 (Special Issue 1), 2010, 7-20

12. Panakoulias T., Kalatzis P., **Kalderis D.**, Katsaounis A., Electrochemical degradation of Reactive Red 120 using DSA and BDD anodes, *Journal of Applied Electrochemistry*, 2010, 40(10), 1759-1765
13. **Kalderis D.**, Boopathy R., Juhasz A. Comfort S. Soils contaminated with explosives - environmental fate and evaluation of state-of-the-art treatment processes: A review, *Pure and Applied Chemistry*, accepted.

B. Publications in Conferences

1. Yuji Takao, **Dimitrios Kalderis**, Arnaud J.M. Lagadec, Carol. B. Grabanski, David J. Miller and Steven B. Hawthorne, “*Degradation of Pesticides and Explosives on Highly-Contaminated Soils in Subcritical Water*”, **Abstracts of the 32nd American Chemical Society Great Lakes Regional Meeting**, June 5, 2000, Fargo, ND, USA.
2. Steven B. Hawthorne, Arnaud J.M. Lagadec, **Dimitrios Kalderis**, Alan V. Lilke, and David J. Miller, “*Non-oxidative Destruction of TNT, RDX and HMX on Contaminated Soil Using Subcritical (Hot/Liquid) Water*”, **Proceedings of the 1st Annual Conference and Exhibition on Natural Gas Technologies**, Gas Technology Institute, September 30 – October 2, 2002, Orlando, FL, USA.
3. Anthony A. Clifford, **Dimitrios Kalderis**, John F. Griffiths, Steven B. Hawthorne and David J. Miller, “*The kinetics of high pressure subcritical water degradation of TNT, HMX and RDX on contaminated soil*”, **Proceedings of the 12th Symposium on Chemical Problems Connected with the Stability of Explosives**, Swedish Section for Detonics and Combustion, Stockholm ,2004, pp. 77-90.
4. **D. Kalderis**, S. B. Hawthorne, A. J. M. Lagadec, A. V. Lilke, D. J. Miller, and N. Lydakis – Simantiris, “*Subcritical Water Remediation of Soils contaminated with TNT, RDX and HMX*”, **2nd International Workshop of Integrated Soil and Water Protection: Risks from Diffuse Pollution**, Prague, 28-29th of June 2004.
5. **D. Kalderis**, S. Bethanis, D. Koutoulakis, P. Paraskeva, E. Diamadopoulos, C. Fernandez-Pereira, J. Olivares del Vale, M. Balakrishnan, R. Johri, A. Gosh, “*Production of Activated Carbon from Bagasse and Rice Husks by a single stage pyrolysis activation method*”, **Protection and Restoration of the Environment VIII**, Chania (Greece), 3-7th of July 2006.
6. V.S. Batra, M. Balakrishnan, R. Johri, A.M. Ghosh, **D. Kalderis**, P. Paraskeva *et al.*; “*Preparation, characterisation and environmental application of porous adsorbents from agro-residues*”, **Fifth International Conference on Inorganic Materials**, Ljubljana, Slovenia, 23-26th of September 2006.
7. **Kalderis D.**, Koutoulakis D., Paraskeva P., Diamadopoulos E., *Production of Activated Carbon from Rice Husks*, **3rd Greek Symposium of Porous Materials**, Thessaloniki, 1-3rd November 2007.

8. Subcritical Water Degradation of HMX and RDX on soil at low temperatures, **D. Kalderis** and E. Gidakos, 1st International Conference on Hazardous Waste Management, 1-3 October 2008, Chania, Crete, Greece.
9. Application of the EVAPASSOLD model to the inactive landfills of Kouroupitos and Mesomouri, **D. Kalderis**, E.Gidakos and R. Stegmann, 1st International Conference on Hazardous Waste Management, 1-3 October 2008, Chania, Crete, Greece.
10. Adsorption of Cu(II) ions from aqueous solutions using biochar prepared from agricultural byproducts. Pelleri F., Giannis A., Anastasiadou K., **Kalderis D.** Pentari D., Gidakos E. 2nd International Conference on Hazardous Waste Management, 5-8 October 2008, Chania, Crete, Greece.
11. Hydrothermal conversion of chrysotile asbestos using supercritical steam. Axiotis D., Anastasiadou K., **Kalderis D.**, Gidakos E. 2nd International Conference on Hazardous Waste Management, 5-8 October 2008, Chania, Crete, Greece.
12. Soil contaminated by explosives – environmental fate and evaluation of state of the art remediation processes. **Kalderis D.**, Juhasz A., Boopathy R., Comfort S. 11th International UFZ- Deltares/TNO Conference on Management of Soil, Groundwater and Sediment, Salzburg 22-24 September 2010.
13. Electrochemical degradation of Reactive Red 120 using DSA and BDD anodes, T. Panakoulis, P. Kalatzis, D. Kalderis and A. Katsaounis, 61st International Society of Electrochemistry Annual Meeting, Nice, France, 27/9-1/10/10