



*Canea von Türcken
Belagert A. 1645.*

CHANIA 2008

1ST INTERNATIONAL
CONFERENCE

HAZARDOUS WASTE
MANAGEMENT

1-3 OCTOBER 2008
CHANIA-CRETE, GREECE

P R O G R A M

CHANIA 2008

1st International Conference on Hazardous Waste Management

*1 – 3 October 2008
Chania, Crete, Greece*

Organized by:

Technical University of Crete (GR)

University of Padua (IT)

Hamburg University of Technology (DE)

IWWG – International Waste Working Group

With the participation of:

European Union Commission

U.S. Environmental Protection Agency (USA)

Umweltbundesamt (DE)

Federal Ministry for the Environment, Nature Conservation & Nuclear Safety (DE)

Under the aegis of the Hellenic Ministry for the Environment, Physical Planning and Public Works

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Rainer STEGMANN • Hamburg University of Technology (DE)

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Polyeco S.A. is the unique fully licensed industry in Greece in the field of waste management and valorization. Its vision is to become a global reference in managing all kind of wastes by giving baseline in terms of waste services. Its mission is to combine the high level technical expertise with the effective contribution to sustainable development. This ambition is backed by asserting the values of professionalism, partnership and research for the benefit of the community. POLYECO is the leader industry in Greece providing Integrated Management Services of hazardous and non-hazardous industrial waste.

CENTRAL SPONSORS



Environmental Protection Engineering S.A. was established in Piraeus in 1977. By continuously investing in research and development and implementation of new technologies, EPE S.A. is one of the major companies in the field of environmental protection, offering a variety of services and products in the marine and industrial field. Institutions such as the Athens Academy, the Hellenic Marine Environment Protection Association (HELMEPA) and the Chamber of Commerce of Piraeus recognize EPE's demonstrated capability and responsibility, as well as the quality of its services and its social contribution.



Hellenic Petroleum holds a strong position in the international energy sector, mainly in SE Europe and is the largest industrial and commercial company in Greece. The main current business activities are: Refining & Marketing of petroleum products (R&M), Petrochemicals/Chemicals, Oil & Gas Exploration & Production (E&P), Power Generation Production and Trading and Natural Gas. In the R&M sector the Group holds the three of the four refineries in Greece and operates 1.262 retail stations.



TITAN Cement Company, the parent company of the Titan Group, has entered on its second century of successful life. The Company's first production plant was opened in Elefsina, Greece, in 1902 and its shares were first quoted on the Athens Stock Exchange in 1912. The core of the Group's activities consists of 12 cement production facilities in seven different countries and four continents, with an overall annual production capacity of more than 17 million tons.

SPONSORS



Athens Hospital Wastes Incinerator has been in operation since 2002. Since February 2007, when the international tender was completed, the Joint Venture HELECTOR S.A.- PANTECHNIKI S.A.- ARSI S.A is responsible the operation and maintenance of the Plant. The above Joint Venture in collaboration with Environmental Protection Engineering S.A., has established APOTEFROTIRAS S.A. for the purpose of operation and maintenance of the Plant.



The private consulting firm "ENVIROPLAN Consultants and Engineers S.A.", was founded in Athens in 1991 with the objective to offer the experience of its professional staff to the international market. The main offices of the company are in Athens - Greece but the company is also acting abroad and has offices in Cyprus and Romania, covering the markets of Middle East and Eastern Europe. The firm has significant experience & expertise in Technical Consulting, Engineering & Project Management Services and is specialized in Environmental Management & Engineering Services.



ZYGOS publishing company was established in 1986 based in Thessaloniki. It mainly publishes academic books. Its publication production counts about 150 book titles, with a subject selection covering a wide range of academic fields.



Background and goals

Future waste management programs must be put into practice in conjunction with sound policies that restrict the use of fossil fuels and natural resources and contribute to the reduction of emissions into the environment. Such a strategy should be based in a sound scientific basis, without ideology, politics or financial interests. It should be implemented on a world-wide basis and not limited to industrialized countries. To achieve this goal, existing waste management options must be evaluated for implementation, new strategies must be formulated and new, innovative solutions have to be found.

Based on this need, the IWWG (International Waste Working Group) was established in 2002, not to contrast or to compete with existing professional organizations but to set up a network with existing national and international organizations with similar goals.

The IWWG aims to provide an intellectual platform to encourage and support integrated and sustainable waste management and to promote practical scientific development in the field.

In order to achieve this goals Task Groups on the following topics are currently active: Sustainable Landfilling; Landfill Aerobisation; Control of Landfill Emissions (CLEAR); Combustion Residues (PHOENIX); Waste Management in Developing Countries; Compost Quality (HUMOR); Hazardous Waste Management (HWM); Leaching Assessment Methodology.

The activities of the Task Groups will provide the opportunity to fully exploit the tremendous amount of knowledge and experience that has been accumulated so far.

For further information and for joining: www.iwwg.eu; info_iwwg@vigrilio.it

INTRODUCTION

CHANIA 2008 Conference aims at the establishment of an international meeting of scientists and practitioners, that work in the field of hazardous and industrial waste management and treatment and have valuable knowledge and experience, which can be exchanged and readily available to professional communities worldwide. The 1st International Conference on Hazardous Waste Management includes oral presentations, special workshops and poster presentations focusing on the main controversial aspects of hazardous waste management and treatment.

Papers were selected from a total of more than 320 submitted from 56 different countries. The Scientific Committee developed on this basis a program of around 165 oral presentations and 65 poster presentations.

Selection of papers and session destination are based on several factors, including scientific quality of the paper, relevance of the topic, nature of the paper (case study, preliminary work, conceptual work, design, etc.), specificity of the topic and novelty.

All papers are organized and published on a CD-ROM, according to the session order. In addition, a book has been printed with the extended executive summaries of the conference papers, in order to allow a better attendance of the different sessions. Last minute changes in the conference program may have resulted unconformity with the printed book of executive summaries.

CONFERENCE STRUCTURE

Tuesday evening	Welcome Drink			
Wednesday morning	Opening Ceremony			
	Invited Speakers			
	A: Hazardous Waste Issues	B: Hazardous Waste Treatment	C: Special Issues	D: Special Workshops
	A1: Hazardous Waste Regulations	B1: Heavy Metals	C1: Hazardous Waste in Greece	D1: Explosive Waste
Wednesday afternoon	Invited Speaker			
	A2: Hazardous Waste Characterization I	B2: Biological Treatment of Hazardous Waste	C2: Risk Assessment	D2: Mining Sites
	A3: Hazardous Waste Characterization II	B3: Special Waste Treatment	C3: Waste Sites	
Thursday morning	Invited Speaker			
	A4: Hazardous Waste Minimization and Recycling I	B4: Soil Remediation	C4: Advanced Oxidation Processes	D3: Waste Electrical and Electronic Equipment I
	A5: Hazardous Waste Minimization and Recycling II	B5: Contaminated Sites Remediation and Monitoring	C5: Hazardous Waste Stabilization / Solidification	D4: Waste Electrical and Electronic Equipment II
Thursday afternoon	Invited Speaker			
	A6: Hazardous Waste Management in Developing Countries	B6: Thermal Treatment of Hazardous Waste	C6: Leachate Treatment	D5: Auto Shredder Residue Management
	A7: Special Hazardous Waste Management	B7: Physicochemical Treatment of Hazardous Waste	C7: Sludge Treatment	
Friday morning	Invited Speaker			
	A8: Hazardous Waste Generation and Composition in Different Countries	B8: Hazardous Waste Landfilling I	C8: Investigation of Contaminants	D6: Hospital / Infectious Waste I
	A9: Hazardous Waste Management in Different Countries	B9: Hazardous Waste Landfilling II	C9: Contaminant Release and Transport	D7: Hospital / Infectious Waste II
Friday afternoon	Invited Speaker			
	A10: Management and Treatment of Hazardous Waste - Case Studies	B10: Old Landfill Remediation	C10: Asbestos Waste	D8: Petroleum Contamination / Remediation
	Invited Speaker – Round Table Discussion			
Poster Awards - Closing Ceremony				
Friday evening	Gala Dinner			

CONFERENCE PROGRAM

Tuesday, September 30th 2008

17:00 – 19:00 *Registration*

19:30 - 22:30 *Welcome drink (Pool Bar – CONFERENCE VENUE)*

Wednesday, October 1st 2008

8:00 – 9:00 *Registration*

9:00 – 10:00 *Opening Ceremony - Welcome Addresses*

Conference chairmen: E. Gidarakos, R. Cossu, R. Stegmann
EU - IPCC - Hellenic Ministry for the Environment, Physical Planning & Public Works Representatives

Room: Imperial I

10:00 – 10:30 *Invited Speaker: Dr. Thomas Rummeler - Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Germany) Room: Imperial I*
The management of hazardous wastes and the adoption of the new EC-Directive on waste

10:30 – 11:00 *Invited Speaker: Dr. Danny Reible - U.S. Environmental Protection Agency (USA)*
Design consideration involving active sediment caps

Room: Imperial I

11:00 – 11:30 *Coffee Break*

11:30 – 13:00

A: Hazardous Waste Issues	B: Hazardous Waste Treatment
<i>Session A1: Hazardous Waste Regulations</i> <i>Room: Imperial III</i> <i>Chairman: Franzius V. (Germany)</i>	<i>Session B1: Heavy Metals</i> <i>Room: Imperial II</i> <i>Chairman: Calmano W. (Germany)</i>
A1.1. Transboundary shipments of hazardous waste in the EU. Developments 1995-2005 and possible drivers <u>Fischer C.</u> (Denmark)	B1.1. Tolerance and removal of metals by microorganisms isolated from a pitch lake Cruz-Vega D., Cervantes-Gonzales E., Ammons D., Rojas-Avelizapa L.I., Garcia-Mena J., Pless R., <u>Rojas-Avelipaza N.G.</u> (Mexico)
A1.2. Hazardous waste management planning and strategic environmental assessment in Ireland <u>Carty G., Gaillot O.</u> (Ireland)	B1.2. Chromium (VI) resistance mechanisms in gram-positive and gram-negative bacteria: a proteomics approach <u>Kilic N.K., Donmez G.</u> (Turkey)
A1.3. Contaminated soil management in Australia <u>Parker R.</u> (Australia)	B1.3. Wet extraction of heavy metals and chloride from MSWI and straw combustion fly ashes <u>Aguiar Del Toro M., Calmano W., Ecke H.</u> (Germany)
A1.4. Quantities and composition of the MSW in Greece and management requirements in accordance with EU Directives <u>Economopoulos A.P., Naxakis G., Gouskos Z.</u> (Greece)	B1.4. Influences of humic acid, calcium and bicarbonate on hexavalent chromium reduction process by zero-valent iron: kinetics study <u>Liu T., Lo I.M.C.</u> (China)
<i>Discussion</i>	<i>Discussion</i>

	C: Special Issues	D: Special Workshops
11:30 – 13:00	<p>Session C1: Hazardous Waste in Greece (IN GREEK) Room: Imperial I Chairman: Abatzoglou G. (Greece)</p>	<p>D1 : Explosive Waste Room: Imperial IV Chairman: Thomanetz E. (Germany)</p>
	<p>C1.1. National planning for hazardous waste management</p> <p><u>Hellenic Ministry for the Environment, Physical Planning and Public Works Representative</u> (Greece)</p>	<p>D1.1. Extended Presentation Bioremediation of explosives - contaminated soil using indigenous bacteria</p> <p><u>Boopathy R.</u> (USA)</p>
	<p>C1.2. Development of an integrated hazardous waste management system in Greece</p> <p><u>Gidarakos E.</u> (Greece)</p>	<p>D1.2. Analysis of explosive residues in soil</p> <p><u>Jovanic P. (Serbia)</u></p>
	<p>C1.3. Hazardous waste management in ports</p> <p><u>Palantzas G., Papachristou E., Vafaki E.</u> (Greece)</p>	<p>D1.3. High dynamic loads on a ground sealing system in the karst-chalk geology of the Swabian Alb</p> <p><u>Boley C., Meyer F., Meier C.</u> (Germany)</p>
	<p>C1.4. Management practices of household and other hazardous waste at the landfill of Thessaloniki, Greece</p> <p><u>Poulios K., Papachristou E., Alivanis K.</u> (Greece)</p>	<p>D1.4. Subcritical water degradation of HMX and RDX on soil at low temperatures</p> <p><u>Kalderis D., Gidarakos E.</u> (Greece)</p>
		<p>D1.5. A life cycle assessment of destruction of ammunition</p> <p><u>Alverbro K., Björklund A., Finnveden G., Hochschorner E., Hägvall J.</u> (Sweden)</p>
	Round Table Discussion	Discussion
13:00 – 14:30	Lunch Break	
14:30 – 15:30	Poster Session / Discussion *Poster exhibition will be open all day long during the Conference	
15:30 – 16:00	<p>Invited Speaker : <u>Dr. Karl-Werner Schramm</u> - GSF-National Research Center for Environment and Health (Germany) Room: Imperial I</p> <p><i>Fe^{III}-TAML-Catalyzed Green Oxidative Destruction of Textile Dyes and Chlorinated Phenols in Wastewater</i></p>	

18:00 – 19:30

<i>A: Hazardous Waste Issues</i>		<i>B: Hazardous Waste Treatment</i>	
<i>Session A3: Hazardous Waste Characterization II</i>		<i>Session B3: Special Waste Treatment</i>	
<i>Room: Imperial I</i>		<i>Room: Imperial II</i>	
<i>Chairman: Papachristou E. (Greece)</i>		<i>Chairman: Ritzkowski M. (Germany)</i>	
A3.1.	Discriset:Development of a set of fast screening tests to discriminate between hazardous and non-hazardous complex waste materials <u>Weltens R.</u> , Vanermen G., Tirez K., Robbens J., Michiels L. <i>(Belgium)</i>	B3.1.	Biogas production from pig breeding facilities and slaughterhouse wastes with the use of anaerobic co-digestion treatment process <u>Pilidis G.A.</u> , Zarkadas I.S. <i>(Greece)</i>
A3.2.	Waste containing enhanced concentration of naturally occurring radionuclides <u>Michalik B.</u> , Tsurikov N. <i>(Poland)</i>	B3.2.	Investigation into the ferric leaching of covellite sludge at high ferric ferrous ratio <u>Conic V.</u> , Cvetkovska M., Cvetkovski V., Stankovic S., Vukovic M. <i>(Serbia)</i>
A3.3.	Evolution of activity-specific solvent of NMVOC emissions in Greece <u>Sidiropoulos C.</u> , Tsilingiridis G. <i>(Greece)</i>	B3.3.	Degradation of nitrogen compounds from heavily loaded wastewater of pig manure by the root-zone method <u>Seretaki Th.</u> , Kickuth R. <i>(Germany)</i>
A3.4.	Ecotoxicological characterisation of 12 incineration ashes (MWI) using six terrestrial and aquatic tests <u>Roembke J.</u> , Moser Th., Moser H. <i>(Germany)</i>	B3.4.	The environmental and economical advantages of agricultural wastes for sustainable development <u>Omer A.</u> <i>(UK)</i>
<i>Discussion</i>		<i>Discussion</i>	

18:00 – 19:30

<i>C: Special Issues</i>	
<i>Session C3: Waste Sites</i>	
<i>Room: Imperial III</i>	
<i>Chairman: Reible D. (USA)</i>	
C3.1.	Geophysical characterisation of hazardous industrial and urban waste sites <u>Ranieri G.</u> , Deidda G.P., Loddo F., Piga C., Casas A. <i>(Italy)</i>
C3.2.	Assessment and treatment of illegal depositories of toxic chemical wastes Kubal M., Podhola M., Patocka T., Burkhard J., <u>Kuras M.</u> <i>(Czech Republic)</i>
C3.3.	Random assessment of selected dumpsites in Ramallah / Al-Bireh governorate - Occupied Palestinian Territory <u>Musleh R.</u> , Abu Thaher A. <i>(Occupied Palestinian Territory)</i>
C3.4.	Potential hazard assessment of paper sludge in a restoration site <u>Dall' Ara A.</u> , Billi L., Grilli S., Marroni V., Rappoli N., Sangiorgi S. <i>(Italy)</i>
<i>Discussion</i>	

Thursday, October 2nd 2008

8:30 – 9:00

Registration

9:00 – 9:30

Invited Speaker: Dr. Rainer Stegmann - Technical University of Hamburg (Germany)
Optimization of microbial treatment of TPH contaminated soils

Room: Imperial I

9:30 – 11:00

<i>A: Hazardous Waste Issues</i>	<i>B: Hazardous Waste Treatment</i>
<i>Session A4: Hazardous Waste Minimization and Recycling I</i>	<i>Session B4: Soil Remediation</i>
<i>Room: Imperial I</i>	<i>Room: Imperial II</i>
<i>Chairman: Bilitewski B. (Germany)</i>	<i>Chairman: Agamuthu P. (Malaysia)</i>
A4.1. Technological, economic and social factors of the solution of the problem of hazardous waste <u>Goryunov V.</u> (Russia)	B4.1. Batch kinetic study and sequential extraction of metals by metal-EDDS and free-EDDS under limited dosage <u>Lo I.M.C., Yip T.C.M., Tsang D.C.W., Ng K.T.W.</u> (China)
A4.2. Spent catalyst waste minimization and utilization <u>Marafi M.</u> (Kuwait)	B4.2. The effect of nitrogen addition on the aerobic bioremediation of diesel contaminated soils <u>Komilis D., Vrohidou A.E., Voudrias E.A.</u> (Greece)
A4.3. Hazardous waste minimization in a petrochemical complex (Iran) <u>Mokhtarani B., Alavi Moghadam M.R., Mokhtarani N., Naserian S.</u> (Iran)	B4.3. Soil remediation following pollution by insulating oil <u>Dimitriou A., Theodosis H., Ioakimidis P.</u> (Greece)
A4.4. Prevention and treatment of hazardous and non-hazardous wastes <u>Neubacher F.P., Fürst F.</u> (Germany)	B4.4. Using emulsified oil substrate (EOS [®]) for in situ bioremediation of a trichloroethene source area in residual soils <u>Borden A.M., Lieberman M.T., Beckwith W.J., Borden R.C.</u> (USA)
<i>Discussion</i>	<i>Discussion</i>

<i>A: Hazardous Waste Issues</i>		<i>B: Hazardous Waste Treatment</i>	
<i>Session A5: Hazardous Waste Minimization and Recycling II</i>		<i>Session B5: Contaminated Sites Remediation and Monitoring</i>	
<i>Room: Imperial I</i>		<i>Room: Imperial II</i>	
<i>Chairman: Amosov P.V. (Russia)</i>		<i>Chairman: Franzius V. (Germany)</i>	
A5.1.	Hazardous waste management and ship recycling: friends or foe? <u>Ventikos N., Chatzinikolaou S.</u> (Greece)	B5.1.	Monitored natural attenuation as a tool for the remediation of tar contaminated sites <u>Werner P., Hüasers N., Lorbeer H., Leibenath C., Börke P., Schönekerl S.</u> (Germany)
A5.2.	Effect of filter washing water recycling on iron and manganese removal process from groundwater <u>Lupa L., Mosoarca G.E., Negrea P., Ciopec M., Negrea A.</u> (Romania)	B5.2.	Emergency measures and long-term remediation plan for the chromium (VI) contaminated site Cromatos de Mexico, Tultitlan Mexico <u>Schmidt W., Ruiz Saucedo U., Swoboda P.</u> (Mexico)
A5.3.	Recycling and valorisation of the salt cake generated at secondary aluminium melting processes <u>Korili S.A., Gil A.</u> (Spain)	B5.3.	The study of a real case application of electrochemical methods for a contaminated industrial site in Romania <u>Oprea I.A., Andreottola G., Ziglio G., Bandea A., Ragazzi M., Apostol T.</u> (Italy)
A5.4.	Control of NORM contaminated scrap: the example of disposal of thorium alloys scrap <u>Koukoulidou V., Potiriadis D., Kehagia K., Malliarou E., Georgiadis S.</u> (Greece)	B5.4.	Protocol for enhanced in situ bioremediation of chlorinated solvents and perchlorate using emulsified oil substrate <u>Liebermann M.T., Borden R.C., Beckwith W.J., Borden A.M.</u> (USA)
<i>Discussion</i>		<i>Discussion</i>	

	C: Special Issues	D: Special Workshops
11:30 – 13:00	Session C5: Hazardous Waste Stabilization/Solidification Room: Imperial III Chairman: Schramm K.-W. (Germany)	D4: Waste Electrical and Electronic Equipment (WEEE) II Room: Imperial IV Chairman: Barbieri L. (Italy)
	C5.1. Stabilization and solidification of spent bleaching earth using cement kiln dust <u>Beshara A., Cheeseman C.R.</u> (UK)	D4.1. Extended Presentation The treasure in our trash: opportunities and challenges to recover scarce and valuable metals from end-of-life electronic devices <u>Hagelüken C., Meskers C.E.M.</u> (Germany)
	C5.2. Cement-based stabilisation/solidification of electric arc furnace dust <u>Pellizon Birelli M., Ouki S.K.</u> (UK)	D4.2. Transfer of heavy metals released by WEEE and batteries into the high caloric fraction during MBT processes <u>Janz A., Rotter V.S., Bilitewski B.</u> (Germany)
	C5.3. Comparison of the physical properties and leaching characteristics of APC residues solidified using portland cement and ground granulated blast furnace slag <u>Lampris C., Stegemann J.A., Cheeseman C.R.</u> (UK)	D4.3. A sequential TCLP to assess leaching of heavy metals from personal computer components <u>Komilis D.P., Tsakmakis T.</u> (Greece)
	C5.4. Stabilization of sulphidic wastes using red mud <u>Bazdanis G., Komnitsas K., Zaharaki D.</u> (Greece)	D4.4. Modelling input for WEEE treatment <u>Salhofer S., Spitzbart M., Herrmann C.</u> (Austria)
	C5.5. Solidification and stabilization disposal of medical waste incinerator fly ash using cement <u>Agamuthu P., Chitra S.</u> (Malaysia)	
	<i>Discussion</i>	<i>Discussion</i>

13:00 – 14:30 **Lunch Break**

14:30 – 15:30 **Poster Session / Discussion** *Poster exhibition will be open all day long during the Conference

15:30 – 16:00 **Invited Speaker: Dr. Bernd Bilitewski - Technical University of Dresden (Germany)** **Room: Imperial I**
State of the art of hazardous waste incineration

16:00 – 17:30

<i>A: Hazardous Waste Issues</i>	<i>B: Hazardous Waste Treatment</i>
<p><i>Session A6: Hazardous Waste Management in Developing Countries</i> <i>Room: Imperial I</i> <i>Chairman: Diaz L. (USA)</i></p>	<p><i>Session B6: Thermal Treatment of Hazardous Waste</i> <i>Room: Imperial II</i> <i>Chairman: Bilitewski B. (Germany)</i></p>
<p>A6.1. Hazardous waste management and disposal - Nigeria situation <u>Olanipekun O.</u>, Anibilowo K., Mundi M. <i>(Nigeria)</i></p>	<p>B6.1. TG-MS/TG-GC-MS analyses for the pyrolysis characterization of sewage and refinery sludge <u>Ischia M.</u>, Perazzolli C., Dal Maschio R., Tognana L., Ragazzi M., Rada E.C. <i>(Italy)</i></p>
<p>A6.2. Environmentally and sustainable hazardous waste management in Bosnia and Herzegovina <u>Hadzic E.</u>, Fejzic DJ., Loncarevic-Gliha DZ., Milisic H. <i>(Bosnia and Herzegovina)</i></p>	<p>B6.2. Dioxin removal in hazardous waste incineration using Adiox <u>Andersson S.</u>, Lindgren P. <i>(Sweden)</i></p>
<p>A6.3. Industrial hazardous waste management in Occupied Palestinian Territory - case study: Ramallah industrial zone <u>Samhan Z.</u>, Abu-Shanab Y., Abu-Rmeileh NME., Musleh R. <i>(Occupied Palestinian Territory)</i></p>	<p>B6.3. Pyrolysis-vitrification process applied to disposal of sewage sludge and refinery sludge - comparison by energetical point of view Baratieri M., Grigiante M., Ischia M., <u>Ragazzi M.</u>, Dal Maschio R., Tognana L., Rada E.C. <i>(Italy)</i></p>
<p>A6.4. Hazardous waste management in Israel, case study: Haifa region <u>Elimelech E.</u>, Flicstein B., Ayalon O. <i>(Israel)</i></p>	<p>B6.4. Waste-to-Energy alternatives: an overview of technologies, regulatory framework and economics <u>Paleologos E.K.</u>, Economopoulos A.P., Rambow B. <i>(Greece)</i></p>
<p><i>Discussion</i></p>	<p><i>Discussion</i></p>

<i>C: Special Issues</i>		<i>D: Special Workshops</i>	
16:00 – 17:30	<p><i>Session C6: Leachate Treatment</i> <i>Room: Imperial III</i> <i>Chairman: Kuras M. (Czech Republic)</i></p>		<p><i>D5: Auto Shredder Residue Management</i> <i>Room: Imperial IV</i> <i>Chairman: Salhofer S. (Austria)</i></p>
	<p>C6.1. Autotrophic biological oxidation of arsenic from mine water in fixed bed bioreactor</p> <p><u>Dictor M.C.</u>, Battaglia-Brunet F., Godon J.J., Michon J., Dagot C., Deluchat V., Deloustal J. (France)</p>		<p>D5.1. <i>Extended Presentation</i> Pretreatment and sustainable landfilling of ASR (Automotive Shredded Residues) <u>Cossu R.</u>, Lai T., Bausani R. (Italy)</p>
	<p>C6.2. Application of in-situ reactive zones (IRZ) to the biological stabilization of chromite ore processing residues (CORP) heap and acid mine drainage</p> <p><u>Gisbert T.</u>, Ferriere L., Thepaut B-E. (France)</p>		<p>D5.2. End - of - life vehicles Directive (ELVs) and hazardous wastes</p> <p><u>Flemetaki M.</u>, Maria E. (Greece)</p>
	<p>C6.3. Rehabilitattion plans for non-uranium mines in the Arda and Struma river basins; treatment of hazardous waste landfill and mine leachates</p> <p><u>Schneider H.J.</u>, Economides D., Kostova L., Tomschi H. (Germany)</p>		<p>D5.3. Promotion of best solutions regarding recycling of end-of-life vehicles in Romania</p> <p><u>Tavoularis G.</u>, Lolos T., Loizidou M., Konstantinopoulos G., Iordan C., Mihai C. (Greece)</p>
	<p>C6.4. Advanced treatment of stabilized landfill leachate by coagulation, activated carbon absorption and electrochemical oxidation</p> <p>Papastavrou H., Mantzavinos D., <u>Diamadopoulos E.</u> (Greece)</p>		<p>D5.4. Material and energy recovery from automotive shredded residues (ASR) via sequential gasification and combustion</p> <p>Viganò F., <u>Consonni S.</u>, Grosso M., Rigamonti L. (Italy)</p>
	<i>Discussion</i>		<i>Discussion</i>
17:30 – 18:00	<i>Coffee Break</i>		

18:00 – 19:30

<i>A: Hazardous Waste Issues</i>		<i>B: Hazardous Waste Treatment</i>	
<i>Session A7: Special Hazardous Waste Management</i>		<i>Session B7: Physicochemical Treatment of Hazardous Waste</i>	
<i>Room: Imperial I</i>		<i>Room: Imperial II</i>	
<i>Chairman: Rummeler T. (Germany)</i>		<i>Chairman: Heuss-Aßbichler S. (Germany)</i>	
A7.1.	Elements of internet based data processing and publication for hazardous waste Becker C, Hegemann M., <u>Oberdoerfer M.</u> , Striegel K.-H. (Germany)	B7.1.	Precipitation processes in the treatment of industrial inorganic wastewaters: impact of reactor and process configuration Barbier E., Logette S., <u>Coste M.</u> , Cook R.G., Blumenschein C.D. (France)
A7.2.	Sustainable universities environmental references for society: handling and management of emissions of universities <u>Marquez F.</u> , Carrasco J.C., Perez, C. (Chile)	B7.2.	Extraction and separation of arsenic and chromium from chromated copper arsenate-treated wood using protonated manganese oxide <u>Hata T.</u> , Hwang W.J., Koyanaka H. (Japan)
A7.3.	Industrial solid waste management in an industrial park <u>Mokhtarani N.</u> , <u>Mokhtarani B.</u> , Alavi Mog Hadam M.R., Rezaei R., Khaledi Mehr H. (Iran)	B7.3.	Study of sorption equilibrium of biopolymers alginic acid and xanthan with C.I. disperse yellow 54 <u>Lozano-Alvarez J.</u> , <u>Jáuregui-Rincón J.</u> , Mendoza-Díaz G., <u>Rodríguez-Vázquez R.</u> , Frausto-Reyes C. (Mexico)
A7.4.	Direct drifts evidences for the active surface intermediates responsible for the improved catalytic performance of Na Promoted Pt/ γ -Al ₂ O ₃ catalysts during NO reduction by hydrocarbons <u>Matsouka V.</u> , Konsolakis M., Yentekakis I.V. (Greece)	B7.4.	Purification of dye-work and urban wastewaters, production of odorless and cohesive zeo-sewage sludge, using hellenic natural zeolite <u>Filippidis A.</u> , Apostolidis N., Paragios I., Filippidis S. (Greece)
<i>Discussion</i>		<i>Discussion</i>	

18:00 – 19:30

<i>C: Special Issues</i>	
<i>Session C7: Sludge Treatment</i>	
<i>Room: Imperial III</i>	
<i>Chairman: Diamadopoulos E. (Greece)</i>	
C7.1.	Management and re-use of contaminated industrial sludge from geotechnical point of view <u>Yonatan P.H.</u> , Van Gemert D., Maertens J., Houtmeyers J., Goorden M. (Belgium)
C7.2.	Solidification/stabilization of chemical sludge generated from textile wastewater treatment plants using ordinary portland cement (OPC) <u>Patel H.</u> , Pandey S. (India)
C7.3.	Aerobic stabilisation of tannery sludge mixed with compost <u>Alibardi L.</u> , <u>Cossu R.</u> (Italy)
C7.4.	Solidification of the sludge of metal plating industry by clinoptilolite <u>Kocasoy G.</u> , Balkan M., Tiryaki E. (Turkey)
<i>Discussion</i>	

8:30 – 9:00

Registration

9:00 – 9:30

Invited Speaker: Dr. Raffaello Cossu - University of Padua (Italy)
Principles of landfill remediation

Room: Imperial I

9:30 – 11:00

<i>A: Hazardous Waste Issues</i>	<i>B: Hazardous Waste Treatment</i>
Session A8: Hazardous Waste Generation and Composition in Different Countries	Session B8: Hazardous Waste Landfilling I
Room: Imperial I	Room: Imperial II
Chairman: Kocasoy G. (Turkey)	Chairman: Cossu R. (Italy)
A8.1 Waste oil generation from road vehicles in Turkey <u>Yilmaz O., Yetis U.</u> (Turkey)	B8.1. Effect of domestic hazardous waste on the anaerobic degradation of municipal solid waste: laboratory scale tests Marquez - Benavides L., Sanchez - Yanez JM., <u>Buenrostro Delgado O., Ojeda-Benitez S.</u> (Mexico)
A8.2. Accelerated hazardous waste reduction in Victoria, Australia <u>Hall G.C.</u> (Australia)	B8.2. Innovative low impact bioremediation technology in reducing explosion risk <u>Grilli S., Dall'Ara A., Rappoli N., Billi L.</u> (Italy)
A8.3. Household hazardous waste components in Malaysian MSW - the current scenario <u>Fauziah S.H., Agamuthu P.</u> (Malaysia)	B8.3. Risk assessment of small old landfills: the EVAPASSOLD model <u>Allgaier G., Ritzkowski M., Stegmann R.</u> (Germany)
A8.4. Hazardous waste generation in teaching and research laboratories in Mexico <u>Buenrostro O., Marquez L, Ojeda S, Alfaro R., Velásquez E.</u> (Mexico)	B8.4. Application of the EVAPASSOLD model on the inactive landfills of Kouroupitos and Mesomouri <u>Kalderis D., Gidarakos E., Stegmann R.</u> (Greece)
Discussion	Discussion

<i>A: Hazardous Waste Issues</i>	<i>B: Hazardous Waste Treatment</i>
Session A10: Management and Treatment of Hazardous Waste - Case Studies Room: Imperial I Chairman: Ragazzi M. (Italy)	Session B10: Old Landfill Remediation Room: Imperial II Chairman: Rettenberger G. (Germany)
A10.1. Waste stabilization ponds for wastewater treatment and reuse in Egypt Nasr F.A., El-Ashmawy A., Eltaweel G., <u>El-Shafai S.A.</u> (Egypt)	B10.1. In situ aeration of old landfills: description of the technology and case studies <u>Cossu R.</u> , Raga R., Cannas M., Demontis S., Fraghi A., <u>Zanella M.</u> (Italy)
A10.2. Pilot study of the removal of toxic THMs and HAAs from drinking water by GAC post filter - adsorber in Galatsi WTP, Athens Babi K., Koumenides K., Makri C., Nikolaou A., <u>Lekkas T.</u> (Greece)	B10.2. Landfill remediation by means of biological in situ stabilization <u>Ritzkowski M.</u> , Stegmann R. (Germany)
A10.3. Recording, evaluation and classification of waste dump sites in Cyprus using multiple criteria decision analysis <u>Lolos T.</u> , Koullapis G., Lolos G., Paschali-Manou K., Tsobanidis C., Georgiou I., Panagouloupoulos A. (Greece)	B10.3. Total remediation of the hazardous waste landfill at Kolliken / Switzerland <u>Hoppe U.</u> , Tardent J.L., Beitinger E. (Switzerland)
A10.4. Toxic waste in Romanian MSW: which consequences on the health impact from MSW bio-chemical treatment plants? <u>Rada E.C.</u> , Apostol T., Ragazzi M. (Italy)	B10.4. Approach to old landfill restoration in Croatia <u>Grabar S.</u> , Lokner V., Subasic D., First B. (Republic of Croatia)
	B10.5. Remedial engineering for closed landfill redevelopment in the UK <u>Summersgill I.M.</u> , Witherington P.J (UK)
<i>Discussion</i>	<i>Discussion</i>

POSTERS

*From Wednesday 1st to Friday 3rd October 2008
(poster exhibition will be open all day long during the Conference)*

- P1** Strategic waste management in ecologically sensitive areas
Vego G., Kucar-Dragicevic S., Koprivanac N. (Croatia)
- P2** Comparative analysis of the end of life management of durable goods in Europe
Zappini G., Cocca P., Rossi D. (Italy)
- P3** Manure characterization: estimation of nutrient values of pig and cattle slurries and dairy cow farms dirty water in Spain, Italy and Ireland
Martínez-Suller L., Salcedo G., Tejero I., Provolo G., Richards K. (Spain)
- P4** Upward immiscible displacement movement of BTEX compounds in unsaturated soil
Nerantzis P. C., Dyer M. R. (UK)
- P5** Effect of the ethanol content on the evaporation rate of BTEX from gasoline
Finotti A., Fedrizi F., Teixeira C., Nascimento I. (Brazil)
- P6** Virus transport through unsaturated packed columns
Anders R., Chrysikopoulos C.V. (Greece)
- P7** Mathematical modeling of underground water contamination from potential facility of isolation of radiation hazardous materials
Amosov P.V., Naumov A.V., Novozhilova N.V. (Russia)
- P8** Ecotoxicological characterization of waste: results and experiences from a European ring test
Moser H., Roembke J., Donnevert G., Becker R. (Germany)
- P9** Application of a column leaching test for the evaluation of the environmental hazard of a lignite fly ash
Tsiridis V., Kungolos A., Samaras P., Sakellaropoulos G. (Greece)
- P10** Determination of indicator organisms in biowaste – a comparison of methods
Mateju L., Štepankova M., Zimova M. (Czech Republic)
- P11** Sustainable universities environmental references for society: handling and management of chemical substances and hazardous wastes
Marquez F., Carrasco J.C., Esparza C. (Chile)
- P12** Implementing industrial ecology through the incorporation of waelz slag into clay bricks: thermal characterization of slag
Quijorna N., Alonso-Santurde R., San Miguel G., Viguri J.R., Andrés A. (Spain)
- P13** Use of the reflux classifier in bottom ash sand polishing
Hu B., Rem P.C. (The Netherlands)
- P14** Valorization of contaminated sediments in clay bricks: the effect of water content and sediment content on the technological properties of fired ceramic bodies
Alonso-Santurde R., Quijorna N., Coz A., Viguri J., Andres A. (Spain)
- P15** Utilization of metal hydroxides waste sludge for textile dyes removal in aqueous solution
Santos S., Boaventura R.A.R. (Portugal)
- P16** Characteristics of heavy metal leaching on thermal treatment conditions of melted slag made from MSWI fly ash
Yoo Y.S., Cheon K.H. (South Korea)
- P17** Conditions and effects for crystallization of melted slug from MSWI fly ash
YooY.S., Cheon K.H., Lee J.I., Lee W.K. (South Korea)

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- P18** Effect of treatment on digested sewage sludge for recycling as lightweight aggregate use
Lee J.I., Yoo Y.S. (South Korea)
- P19** Municipal solid waste compost utilization for groundwater remediation in biobarriers
Aivalioti M., Mavrakis N., Gidaracos E. (Greece)
- P20** Priorities in utilisation of alumina production residue
Fulop T., Egyhazy T., Kovacs J. (Hungary)
- P21** Municipal solid waste incinerator fly ash to obtain geopolymers
Lancellotti I., Kamseu E., Barbieri L., Corradi A., Leonelli C. (Italy)
- P22** Studies concerning minimisation and recycling of sludge resulted during hot-dip galvanization
Negrea A., Lupa L., Negrea P., Mosoarca G., Ciopec M. (Romania)
- P23** Drivers and barriers for the integrated management of hazardous industrial waste in Greece
Mentzis A., Kourniotis E., Skoulaxinou S., Gargoulas N. (Greece)
- P24** Treatment of colored effluent coupled with energy production using a modified photo-Fenton process
Tokumura M., Morito R., Shimizu A., Kawase Y. (Japan)
- P25** Dechlorination of PCBs in aqueous mixtures with zero-valent nano-iron in statu nascendi. Influence of microwaves on the rate of reaction
Kastanek P., Kastanek F. (Czech Republic)
- P26** Treatment of the waste byproducts created by re-refinement of the used lubricant oil
Simic S., Stanojevic S., Pavlovic M. (Yugoslavia)
- P27** Possibilities for using copper sludge as a copper-sulphate substitution in the zinc manufacturing technological process
Pavlovic M., Lolic Z., Jurisic Z., Velimirovic M. (Yugoslavia)
- P28** Study on leachate reuse with hybrid system based on preozonation and membrane filtration
S.S. Lee., K. Kwon, S.K. Kim, H.I. Chung, I.S. Chang (South Korea)
- P29** Development of pretreated technique for chromated copper arsenate (CCA) - treated wood
K. Kwon, S.S. Lee, J. You, I.S. Chang, H.I. Chung (South Korea)
- P30** Composting of PAH contaminated soil and bioavailability enhancement
Hermanek R., Cajthaml T., Stavelova M. (Czech Republic)
- P31** Utilisation of nickel-containing electroplating sludge for production of glaze coatings
Kochetov G.M., Emelianov B.M., Ternovtsev V.E. (Ukraine)
- P32** Enhancement of benzene biodegradation by variation of culture medium constituents
Sabzali A., Gholami M., Sadati M. (Iran)
- P33** *Salmonella spp.* and enterobacteria in four full-scale compost facilities and two pilot-drums with on-line temperature monitoring
Rainisalo A., Romantschuk M., Kontro M. (Finland)
- P34** Nickel and chromium batch removal from aqueous solution by *Laminaria hyperborean*
Freitas O.M., Delerue-Matos C., Boaventura R.R. (Portugal)
- P35** Degradation of 2,6-Diisopropilnaftalene (DIPN) with macrophytes inoculated with bacteria
Salvato M., Baldan E., Basaglia M., Casella S., Borin M. (Italy)
- P36** The utilization of bone char as a sequestering agent for Co²⁺ ions
Smiciklas I., Dimovic S., Sljivic M., Plecas I. (Serbia)
- P37** The influence of dust lime - kiln on sewage sludge
Surma E., Bien J., Neczaj E. (Poland)
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- P38** Solar drying of sewage sludge
Luboschik U. (Germany)
- P39** Removal of copper(II), nickel(II) and reactive dye from wastewater by *Aspergillus sp*
Ertit B., Ertuğrul S., Dönmez G. (Turkey)
- P40** Healthcare waste management in the Czech Republic
Zimova M., Mateju L., Podolska Z., Melichercik J., Polansky J. (Czech Republic)
- P41** Effect of low frequency ultrasounds on desorption of mercury from solid matrices (a case study in North-East Italy)
Lesa B., Aneggi E., Comuzzi C., Dolcetti G., Goi D. (Italy)
- P42** The phenol tolerance of *Desulfotomaculum Sp.*
Artan Onat T., Donmez G. (Turkey)
- P43** Biodegradation of nonylphenolic surfactants under aerobic conditions
Liwarska-Bizukojc E. (Poland)
- P44** Fate of olive oil mill wastes in Evrotas river basin
Tzoraki O., Moraetis D., Stamati F., Navrozidis S., Kouseri E., Kalogerakis N., Nikolaidis N.P. (Greece)
- P45** Identification of iron corrosion products in arsenic remediation using zero valent iron
Tyrovola K., Nikolaidis N., Ojeda J.J., Romero-Gonzales M., Banwart A. (Greece)
- P46** Using the sorptive capabilities of post-flotation dolomites in creating dumping sites for wastes with heavy metals
Sobik-Szolytysek J., Jablonska B. (Poland)
- P47** Management of the salt cake generated at secondary aluminium melting plants by disposal in a controlled landfill
Gil A. (Spain)
- P48** New solutions and materials used for the closure of radioactive wastes repositories in Romania - case study
Caranda D., Ciocan V. (Romania)
- P49** Disposal of elemental mercury via sulfur reaction by milling
López F.A., Alguacil F.J., Roman C.P., Tayibi H., López-Delgado A. (Spain)
- P50** Current status of hazardous waste management in Portugal
Costa Xara S.M. (Portugal)
- P51** Waste management and environmental management systems: a survey of an Italian manufacturing context
Cocca P., Rossi D., Tomasoni G. (Italy)
- P52** Flow behaviour within fractured media
Kostarelos K., Wade J., Taiwo J., Yoon S., Dermatas D. (Cyprus)
- P53** Hazardous waste and PCB management in the Czech Republic
Sirotková D., Poláková K., Eckhardt P. (Czech Republic)
- P54** Environmental monitoring programme of the restored landfill site at Schisto, Attica. Introduction of a modern leachate toxicity analysis technique using bioassays
Lolos G., Lolos T., Tsompanidis C., Oikonomou K., Raptis C., Georgiou I. (Greece)
- P55** Effect of chelates on heavy metals desorption from contaminated soil using different extraction techniques. Evaluation of soil use after electrokinetics
Nikolaou A., Giannis A., Gidakos E. (Greece)
-

P56	Case study: effects of an innovative biopile treatment in reducing explosion hazards in a restoration site Dall'Ara A., Billi L., Grilli S., Iacondini A., Rappoli N. <i>(Italy)</i>
P57	Requirements for configuration and operation of interim storage facilities for hazardous waste - OWAV Guideline No. 517 Grinschgl A., Gungl E., Iordanopoulos-Kisser M., Kraml M., Ottersbock M., Steinlechner K., Strobl H. <i>(Austria)</i>
P58	Evaluation of the sustainability of energy recovery from automobile shredder residue (ASR): an Italian case study Nardin G., Peressotti A., Simeoni P. <i>(Italy)</i>
P59	Hazardous waste treatment and future trend - Case studies Leglise J.P., Muller P. <i>(France)</i>
P60	Modified equilibrium-solubility domains and resulting particle surface charge in electroflocculation Ofir E., Oren Y., Adin A. <i>(Israel)</i>
P61	Evaluating the development of public operated municipal wastewater treatment plants Bilitewski B., Karagiannidis A., Samaras P., Kontogianni S. <i>(Greece)</i>
P62	Spatial distribution of Pb and Cd in urban soils of Chania city, Crete (Greece) Papafilippaki A., Sotiriou C., Paidia E., Stavroulakis G. <i>(Greece)</i>
P63	Determination of Mercury(II) levels in some contaminated areas near to Abe Kammash industrial complex area in West Tripoli-Libya Nagi S.S., Etorki A.M. <i>(Libya)</i>
P64	Risk Assessment at several asbestos polluted areas in Greece - case studies Anastasiadou K., Gidarakos E. <i>(Greece)</i>

CHANIA 2008 CONTACTS

CONFERENCE CHAIRMEN



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REFERENDUM FORM

1. Where did you learn of this Conference?

- Through Personal E-mail*
- Through Internet*
- At another Conference*
- Other (please specify)*

2. Please judge the following services offered at Chania 2008 with a vote from 1 to 5 (highest vote for the best service).

- ___ *Conference Web Site – Provided Information*
- ___ *Communication and Service - Conference Secretariat*
- ___ *Travel Agency and Service of Room Booking*
- ___ *Registration at the Conference*
- ___ *Conference Venue*
- ___ *Quality and Interest of the Scientific Program*
- ___ *Invited Speakers*
- ___ *Opening / Closing Ceremonies*
- ___ *Meals and Coffee Breaks*
- ___ *Conference Gala Dinner*
- ___ *Proceedings*

Other remarks:

3. Which of these topics would you like to see discussed at the next **CHANIA 2010** Conference?

- Hazardous Waste Regulations*
- Hazardous Waste Characterization*
- Hazardous Waste Minimization and Recycling*
- Hazardous Waste Management in Developing Countries*
- Special Hazardous Waste Management*
- Hazardous Waste Generation and Composition in Different Countries*
- Hazardous Waste Management in Different Countries*
- Management and Treatment of Hazardous Waste – Case Studies*
- Heavy Metals*
- Biological Treatment of Hazardous Waste*
- Special Waste Treatment*
- Soil Remediation*
- Contaminated Sites Remediation and Monitoring*
- Thermal Treatment of Hazardous Waste*
- Physicochemical Treatment of Hazardous Waste*
- Hazardous Waste Landfilling*
- Old Landfill Remediation*
- Hazardous Waste in Greece*
- Risk Assessment*
- Waste Sites*
- Advanced Oxidation Processes*
- Hazardous Waste Stabilization / Solidification*

Leachate Treatment
Sludge Treatment
Investigation of Contaminants
Contaminants Release and Transport
Asbestos Waste
Explosive Waste
Mining Sites
Waste Electrical and Electronic Equipment
Auto Shredder Residue Management
Hospital / Infectious Waste
Petroleum Contamination / Remediation

4. Suggestions



The **International Waste Working Group** is an international waste organization founded in 2002 to serve as a forum for the scientific and professional community. The IWWG aims to provide an intellectual platform to encourage and support integrated and sustainable waste management and to promote practical scientific development in the field. The Group is conceived as a think-tank, whose work would be based on scientific principles oriented towards practical application.

IWWG CONFERENCES

- Sardinia International Waste Management Symposium
- BOKU Waste Conference (Vienna)
- Hazardous Waste Management (Crete)
- VENICE, Biomass and Waste to Energy Symposium

IWWG OFFICIAL JOURNAL



Waste Management published by Elsevier, Amsterdam, is a refereed journal and serves as the official voice of IWWG and the strategic focal point for the activities of the Group.

IWWG BOOKS

- Management and Landfilling of Solid Wastes in Developing Countries
L.F. Diaz, L.L. Eggerth, C.M. Savage Eds
- The Sustainable Landfill
R. Cossu, H. Van der Sloot Eds
- Landfill Aeration
R. Stegmann, M. Ritzkowski Eds
- Landfill Modeling
A. Haarstrick, T. Reichel Eds

IWWG TASK GROUPS

With the aim of coordinating interdisciplinary research and discussing controversial aspects, the following Task Groups are currently working:

- Sustainable Landfilling
- Landfill Aerobisation
- CLEAR Consortium for Landfilling Emission Abatement Research
- PHOENIX Combustion Residues
- Waste Management in Developing Countries
- Hazardous Waste Management (HWM)
- HUMOR Compost Quality
- Leaching Assessment Methodology

IWWG MEMBERSHIPS

Associate Members

Every professional working in the solid waste field can become a IWWG Associate Member simply by signing up for a membership fee.

The benefits are as follows::

- Free subscription to IWWG Scientific Journal *Waste Management*
- Access to the member only area on the IWWG website (Conference Proceedings, Powerpoint Presentations, Task Groups Outputs and more...)
- Discount on IWWG events (Courses, Seminars, Conferences and Symposia)
- Discount on the purchase price of IWWG publications (Monographs and Textbooks)
- Discount on Elsevier publications
- Task Groups membership