



International Congress
on Energy and Environment Engineering
and Management
Lisbon, 17th- 19th July 2013

GENERAL SCHEDULE

17/07/2013

Schedule	Room 1	Room 2
9h	Documentation delivery	-
9h30	Welcoming Session	-
10h	Plenary Conference	-
10h30	Coffee-break. Energetic Installations, Renewable Energies, Materials and CFD posters session	Coffee-break. Energetic Installations, Renewable Energies, Materials and CFD posters session
11h30	Energetic Installations oral presentations	Project Management oral presentations
12h50	Lunch	Lunch
14h	Renewable Energies oral presentations	Environmental Engineering oral presentations
16h	Break. Energetic Installations, Renewable Energies, Materials and CFD posters session	Break. Energetic Installations, Renewable Energies, Materials and CFD posters session
16h30	Renewable Energies Oral presentations	Computational Fluid Dynamics oral presentations

18/07/2013

Schedule	Room 1	Room 2
9h	Environmental engineering oral sessions.	Renewable Energies Oral presentations
11h00	Coffee-break. Environmental Engineering, Environmental Project Management and Environmental Education Posters session	Coffee-break. Environmental Engineering, Environmental Project Management and Environmental Education Posters session
11h40	Technical Conference	-
12h00	Materials Oral presentations	Renewable Energies Oral presentations
13h30	Lunch	Lunch



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19/07/2013

Schedule	Room 1
9h	Computational Fluid Dynamics Oral Presentations
11h00	Coffee-break. Environmental Engineering, Environmental Project Management and Environmental Education Posters session
11h40	Environmental Engineering Oral Presentations
13h00	Closing Session



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Room 1

Wednesday, 17th July

9:00 – Documentation delivery, Technical Secretary

9h30 – Welcoming session

10h: **Plenary conference: “A tobacco biorefinery?”** - Cuadros, F. (Extremadura University, Spain)

10h30-11h30 – **Coffee-break. Energetic Installations, Renewable Energies, Materials and CFD posters sesion**

11h30 - 12h50: Energetic Instalations Oral session

11h30: **Energy Recovery in Water Cycle using Picoturbine Systems. Autoconsumption Applications. 3 Cases of Study**, Antonio Cortés Marco, (Aqualogy, Murcia, Spain), J. Pérez-García, J.A. Imbernón Manresa et al

11h50: **Evaluation of the performance of a domestic pellet boiler burning EU certified and non-certified commercial pine pellets**, Tânia Ferreira (Viseu Polytechnic Institute, Portugal), J.M. Paiva, C. Pinho

12h10: **Computational Intelligence techniques for maximum energy efficiency of cogeneration processes**, Sandra Seijo Fernández (University of Basque Country UPV/EHU, Spain), I. del Campo, J. Echanobe et al.

12h30, **Energetic efficiency in buildings: the use of a solar system for water heating associated with a heat exchanger**, Richard Barbosa Pontes (*Metrocamp, Brazil*), P. Roberto dos Santos

12h50: **An analysis of strongly swirling flow in a model vortex chamber**, Sergey Stork (Institute of Thermophysics SB RAS, Russia), I. Litvinov, P. Kuibin et al.

13h10 – 14h: Lunch

14h- Renewable Energies Oral Session

14h: **Design and analysis of buoy geometries for a wave energy converter**, Pedro Beirão (ISEC, Coimbra, Portugal), Cândida Malça

14h20: **Feasibility Study of Offshore Wind Farms Installation within the Greek Exclusive Economic Zone**, Emmanouil I. Konstantinidis (Democritus University of Thrace, Greece), Dimitris G. Kompolias, Pantelis N. Botsaris

14h40: **Maximum efficiency of a solar gas turbine power plant**, Alejandro Medina (Salamanca University, Spain), S. Sánchez- Orgaz , A. Calvo Hernández

15h: **Characterization of new developed catalyst for natural gas and biogas steam reforming reaction**, Giulia Monteleone (Enea, Italy), M.C. Annesini, A. Giaconia et al



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15h20: **Energetic applications of tobacco plant**, Almudena González González (Extremadura University, Spain), F. Cuadros, F. Cuadros-Salcedo

15h40: **Slow pyrolysis of woody biomass waste: Influence of raw material on pyrolysis products**, Jon Solar (University of the Basque Country, Spain), A. Lopez-Urionabarrenechea*, I. de Marco et al

16h –Energetic Installations, Renewable Energies, Materials and CFD posters sesion

16h30 - Renewable Energies Oral Session

16h30: **Adaptive Monitoring of μg Activity through Intelligent Smart Meter Deployments in Smart Grids**, Francisco Prieto-Castrillo (CIEMAT, Spain), J. Domínguez-Bravo, M. Rubio del Solar et al

16h50: **Time Delay Algorithms for Wind Turbine Yaw Control System**, Ayse Gokcen Kavaz (Istanbul Technical University, Turkey), B. Barutcu

17h10: **Stabilize Fluctuating Power from Renewable Energies Exploited with Advanced Technologies**, Toshiaki Kanemoto (Kyusyu Institute of Technology, Japan), S. Okamoto, Y. Usui

17h30: **Modelling of electrical self consumption facilities for power optimization profitability**, Awf Al-Kassir Abdulla (Extremadura University, Spain), Luis Alberto Horrillo Horrillo, Diego Carmona

17h50: **Estimation of temperature and enthalpy of the flue gases in the combustion of biomass in a conical reactor of spouted bed**, Aitor Pablos Castro (University of the Basque Country, Spain), JF. Saldarriaga , M. Amutio et al

18h10: **Siloxanes removal from Biogas by high surface area adsorbents**, Paola Gilson (ENEA, Italy), S.Galli, G.Monteleone

18h30: **Advanced use of pod as inspection technique for a sirocco double aspirating centrifugal fan**, José González (Oviedo University, Spain), Laura Delgado, Jesús M. Fernández et al

18h50: **Potential of Producing Bio-oils through Fast Pyrolysis from Agricultural Residues**, Ricardo Maximino (IST/Lisbon Technical University, Portugal), R. Neto, M. Costa



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Thursday, 18th July

9h: Environmental Engineering Oral Sessions

9h: **Ecological Footprint Assessment Building in the Residential Sector in Spain**, Patricia González Vallejo (Sevilla University, Spain), M. Morales Martínez, J. Solís Guzmán et al.

9h20: **Ventilation and energy efficiency of a light-steel-framing residential building – CoolHaven case study**, Ana I. Craveiro (Coimbra University, Spain), Paulo Santos, António Gameiro Lopes et al

9h40: **Binary biosorption of copper and lead by pine cone shell in a packed bed column**, Ana Isabel Almendros Molina (Granada University, Spain), M. Calero, M.C. Trujillo et al

10h: **Moyses (MOdeller and Simulator for viSual impact AssESsment) v4.0.**, Cristina Manchado del Val (Cantabria University, Spain), V. Gómez-Jáuregui, C. Otero

10h20: **Sustainable Management in Facilities – Problems today turn into challenges and opportunities for tomorrow**, Susana Lucas (Setubal Polytechnic Institute, Portugal), A. Silva-Afonso (2), Victor M. Ferreira

10h40: **Complete Physicochemical characterization of olive mill wastewater after advanced oxidation process for final purification by pressure-driven membrane technology**, J. M. Ochando-Pulido (Granada University, Spain),

11h00 – 11h40, Coffee-break, Environmental Engineering, Environmental Project Management and Environmental Education Posters session

11h40 – **Technical Conference (room 1): Bioenergy Portugal: Opportunities for Alto Alentejo**”, Tiago Gaio (Bioenergia Portugal/AREANATEjo, Portugal)

12h00: Materials Oral Session

12h00- **Theoretical study on the structural and electronic properties of photocatalytic materials**, Koichi Yamashita (Tokyo University, Japan)

12h20 – **Thermal performance of plastering mortars comprising hybrid phase change materials for increased energy efficiency in buildings**, Mohammad Kheradmand (Minho University, Portugal), J.Aguiar, M.Azenha

12h40: **FB720 Project: solar control glass with passive seasonal discrimination**, Joan-Lluís Zamora i Mestre (Catalunya Polytechnic University, Spain), Pablo Garrido, José Manuel Marco et al

13h00: **Experimental Detection of Stress Corrosion Cracking Initiation with Direct Current Potential Drop (DCPD) Technique in Simulated PWR Primary Conditions**, Antonio Fernández-Viña Reinoso (CIEMAT, Spain), F.J. Perosanz

13h20: **Study of hydrothermal carbonization process on Biomass residues from tomato processing industries: effect on tomato skin** – Silvia Román (Extremadura University, Spain), E. Sabio, A. Álvarez-Murillo et al



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13h40 – 14h20: Lunch

14h40 – Touristic Visit (only for people who confirmed participation)

20h30 – Congress diner (only for people who confirmed participation)

Friday, 19th July

9h: Computational Fluid Dynamics Oral Session

9h: **Numerical simulations on a twin plate wake**, Unai Fernández-Gámiz (Basque Country University, Spain), P. Clara M. Velte, E. Egusquiza

9h20: **Validation using a real model of a CFD thermal simulation of an insulated venue with a warm air inlet**, Ignacio Acosta (Sevilla University, Spain), Miguel Ángel Campano, Armando Pinto

9h40: **CFD simulation of hydrodynamics of gas-solid two-phase flow for different geometries of solid particles**, Farivar Fazelpour (Islamic Azad University, Iran), Pooyandeh Ansarirad, Majid Vafaeipour et al

10h: **Coupling WRF meteorological model and OpenFOAM: grid tools and methodology**, Diego Domínguez (León University, Spain) Jesús Gonzalo, Deibi López

10h20: **Aerodynamic characterization of isothermal swirling flows in combustors**, Teresa Parra (Valladolid University, Spain), V. Vuorinen, R. Pérez et al

10h40: **Stable and Unstable Behavior of Cylinder Arrays Subject to Cross- Flow from CFD Simulations**, Jorge Parrondo (Oviedo University, Spain), Beatriz de Pedro Palomar, Jesús M. Fernández Oro

11h-11h40 Coffee-break, Environmental Engineering, Environmental Project Management and Environmental Education Posters session

11h40: Environmental Engineering Oral Session

11h40: **Utilization of fly ash-based geopolymers as hydraulic road binders**, Ana Cornejo (Sevilla University, Spain), Y. Luna, C. Leiva et al

12h00: **Methodological development of a probabilistic model for CO₂ geological storage safety assessment**, Antonio Hurtado Bezos (CIEMAT, Spain), S. Eguilior, F. Recreo

12h20: **Removal of natural organic matter in drinking water with chitosan coated ultrafiltration membrane**, İsmail Hakkı Zengin (Istanbul Technical University, Turkey), Mehmet Çakmakçı, Fatma Büşra Yaman et al



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12h40: Remediation of Azo dyes in Textile wastewaters by Advanced Oxidative Processes (AOPs), Anabela S. Oliveira (C3i/Portalegre Polytechnic Institute, Portugal), Enrico Saggioro, Cátia Gil Maia et al

13h00- Closing session



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ROOM 2

Wednesday, 17th July

9:00 – Documentation delivery, Technical Secretary

9h30 – Welcoming session

10h: Plenary conference (room 1): “A tobacco biorefinery?” - Cuadros, F. (Extremadura University, Spain)

10h30 – 11h30 – Coffee-break. Energetic Installations, Renewable Energies, Materials and CFD posters sesion

11h 30- 12h40: Environmental Project Management Oral session

11h30: On The Thermo-economic Modeling for CO₂ Allocation in a Simple Back-Pressure Steam Turbine Cogeneration System, José Joaquim Conceição Soares Santos (Federal University of Espírito Santo, Brazil), C. Ribeiro, P. Faria et al

11h50: Current global compensator for three-phases loads, Juan M. Cabrera Rodríguez (Las Palmas de Gran Canaria University, Spain), Jose J. Quintana, Ignacio A. Nuez

12h10: Energy Efficiency in Agriculture, Fátima Batista (Évora University, Portugal), L.L. Silva , C. de Visser

12h30: Environmental Education. Humam Ecology oral presentation: A story with end: small rural communities on the shores of eucalyptu’s plantation, Alexandre Martins de Araújo (Goiás Federal University, Brazil)

12h50: Lunch

14h- Environmental Engineering Oral Session

14h: Membrane modification and coated ultrafiltration membranes surface characterization, F. Busra Yaman (Yildiz Technical University, Turkey), İsmail Hakkı ZENGİN, Mehmet ÇAKMAKCI et al

14h20: CO₂ optimization of precast-prestressed concrete road bridges with steel fiber-reinforcement, Julián Alcalá (Valencia Polytechnic University, Spain), J.V. Martí, V. Yepes

14h40: Indoor environmental quality in classrooms: preliminary results in terms of air quality and thermal comfort conditions, Ricardo M.S.F. Almeida (Viseu Polytechnic Institute, Portugal), .G. Pinho, L.T. de Lemos

15h: Use of crushed coal bottom ash as a pozzolanic material in concrete, Celia García Arenas (Sevilla University, Spain), L.F. Vilches, C. Leiva et al.



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15h20: **Cork and energy**, Luis Gil (LNEG, Lisbon, Portugal), Isabel P. Marques, P. Marques

15h50: **Approaches to integration in sustainability assessment of technologies**, Paula Antunes (CENSE – Center for Environmental and Sustainability Research, Portugal) , R. Santos, N. Videira

16h10 – **Energetic Installations, Renewable Energies, Materials and CFD posters sesion**

16h30 – Computational Fluid Dynamics

16h30 -**CFD analysis of a large mass of water performance in the heat dissipation from a solar cooling installation**, Eduardo Álvarez Álvarez (Oviedo University, Spain), María José Suárez López, Isaac Sarries Olmos et al

16h50: **Numerical model to assess thermal efficiency in flat-plate liquid solar collector**, Juan Francisco Cerón Muñoz (Cartagena Polytechnic University, Spain), J. Pérez-García, J.P. Solano et al

17h10: **Practical use of Computational Fluid Dynamics (CFD) in improving the efficiency of domestic ventilation heat recovery systems**, Adam Kyte (Plymouth University, U.K.)

17h30: **CFD and PIV Characterization of the Rotor-Stator-Interaction of a Centrifugal Pump and Acoustic Emission to the Hydraulic Circuit**, Jorge Parrondo (Oviedo University, Spain), Jens Keller, Eduardo Blanco et al

17h50: **CFD analysis of the influence of different design parameters in the performance of horizontal ground-coupled heat exchangers**, Marta Fernández (Oviedo University, Spain), Eduardo Álvarez Álvarez, Isaac Sarries Olmos et al

Thursday, 18th July

9h, Renewable Energies Oral Sessions

9h: **Steam Gasification of Crude Glycerin in a Packed Bed Reactor**, Mário Costa (IST/Lisbon Technical University, Portugal), P. Barata, A.S. Veríssimo

9h20: **Life Cycle Assessment of Residual Forestry Biomass Chips at Power Plant: a Portuguese case study**, José Vicente Ferreira (Viseu Polytechnic Institute, Portugal), Helder Viana, Bruno Esteves et al

9h40: **A study made using geothermal energy to heat and cool an old building**, Maria Rosa Duque (Évora University, Portugal)

10h: **Optimization of syngas yield obtained from biomass and wastes gasification**, Paula Costa (LNEG, Lisbon, Portugal), Rui N. André, Filomena Pinto

10h20: **Ammonia Economy, instead of Hydrogen Economy?**, Paulo S. D. Brito (C3i/Portalegre Polytechnic Institute), Luiz F.F.T.T.G. Rodrigues



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12h, Renewable Energies Oral Sessions

12h00 – **Rapid hydrogen generation from aluminum-water system by adjusting aluminum, aluminum hydroxide and water ratio**, Hong-Wen Wang (Chung-Yuan Christian University, Taiwan), Yu-Kuang Chen, Hsin-Te Teng et al

12h20- **Small hydro in Portugal. The technical response to social and environmental constraints: a recent case study**, Francisco Nunes Godinho (Hidroerg, Projectos Energéticos, Lda., Lisboa, Portugal), M.M. Portela, A.E. Leitão

12h40 - **Application of indicators of alteration to characterize dam-induced hydrological changes in Portuguese rivers**, Joana Cardoso (Lisbon Technical University, Portugal), M.M. Portela, F.C. Aguiar

13h10– 14h20: Lunch

14h40 – Touristic Visit (only for people who confirmed participation)

20h30 – Congress diner (only for people who confirmed participation)



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POSTERS

AREA 1 – ENERGETIC INSTALLATIONS

Full Solar Charging Station for EV, Juan Manuel Suárez (King Juan Carlos University, Spain), A. Pérez Cagigas, A. Ortiz Juárez et al

Ecological Footprint Assessment Building in the Residential Sector in Spain, P. González Vallejo (Sevilla University, Spain), M. Morales Martínez, J. Solís Guzmán et al

Definition of construction cost structure for energy rehabilitation of buildings, P. González Vallejo (Sevilla University, Spain), C. FÉ, E. Gómez et al.

Solar Roadsides, J.M. Suárez Muñoz (ReyJuan Carlos University, Spain), R. Pascual Juez

Thermodynamic validation of near-optimal reactive distillation column designs, I. F. Gomes (ISEL, Portugal), R. M. Filipe, A. Q. Novais

HVAC System Energy Optimization of an Industrial, A. Guedes (Oporto Superior Institute of Engineering, Portugal), L. Oliveira, I. Sarmento et al

Energy Optimization of the Climate Control of a Pottery, A. Guedes (Oporto Superior Institute of Engineering, Portugal), A. Silva, H. Barros

Extremadura Climate Zoning for application in Energy Certification Procedures, F. López Rodríguez (Extremadura University, Spain), A. Ruiz Celma, F. Cuadros Blázquez et al

Basic Desing of a Three Pressures Steam Cycle in HRSG for CCPP, S.G. Orille (Oviedo University), M. R. Guerrero

Pelletizing mixtures of Eucalyptus globulus and Acacia dealbata: influence on pellets quality, Diana Almeida (Viseu Polytechnic Institute, Portugal), T. Ferreira, C. Pinho.

AREA 2 – RENEWABLE ENERGIES

PellArtificial roughness arrangement effects on heat transfer and flow developments – case of solar air collector, Omar Mahfoud (Mohamed Khider University, Algeria), A. Moumami, N. Moumami

Solar Photovoltaic Energy, Antonio Blanco Solsona (Valencia CIPFP Vicente Blasco Ibáñez, Spain)

Optimization of CFD methodologies for the aerodynamic study of wind turbine airfoils, Sandra Velarde-Suárez, (Oviedo University, Spain), Esther Castiñeira-Martínez, Jesús M. Fernández Oro et al

Study of the viability of installation for solar swimming pool to product electric energy, José Roberto Abbud Jorge (Unisantia, Brazil)



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Potential of Jerusalem artichoke as an energetic crop: tuber yield and above-ground biomass in different sampling dates, M. A. Rodrigues (Bragança Polytechnic Institute, Portugal), I. Q. Ferreira, M. Arrobas et al

Studies on nitrogen rates, sowing dates and cultivars of rapeseed in North-eastern Portugal, M. Ângelo Rodrigues (Bragança Polytechnic Institute, Portugal), Lino Maia, Rodrigo Rocha et al

Assessment of Several Weeds for Biogas Production, J.L. Guil-Layne (Granada University, Spain), A. Guil-Layne, J.L. Guil-Guerrero

A study of combustion and emissions of experimental pellets in a small-scale stove, J.I. Arranz (Extremadura University, Spain), T. Miranda, I. Montero

Biogas Production from Greenhouse By-products, A. Guil-Layne (Granada University, Spain), J.L. Guil-Layne, J.L. Guil-Guerrero

Nutritional Assessment of Fishing By-products for Biogas Production, J. L. Guil-Layne (Granada University, Spain), A. Guil-Layne, J.L. Guil-Guerrero

Nutritional Assessment of Greenhouse By-products for Biogas Production, A. Guil-Layne (Granada University, Spain), J.L. Guil-Layne, J.L. Guil-Guerrero

The use of ultrasonication in biomass and its effect on thermogravimetric and emission profiles, J.I. Arranz (Extremadura University, Spain), M. T. Miranda, S. Nogales-Delgado et al

Wind speed profile model based a new artificial neural network, Fatiha Youcef Ettoumi (Sciences and Technology University, Algeria) Nawal Cheggaga

Autochthon microalgae cultivation technology for biomass feedstock production, J.F. González (Extremadura University, Spain), B. Cuello, M. Calderón

Synthesis of biodiesel from animal fats by acid catalysis in subcritical methanol conditions, J. M. Encinar (Extremadura University, Spain), J.F. González, N. Sánchez et al

Complete optimization of castor oil transesterification to obtain biodiesel: A response surface methodology approach, J. M. Encinar (Extremadura University, Spain), J.F. González, N. Sánchez et al

Use of Biogas and Sludge of UASB Reactors as Renewable Energy Source in Waste Water Treatment Plants, J. A. Conesa (Alicante University, Spain), A. Pereira, C.A.L. Chernicharo

Corn Stover Thermal Decomposition in Pyrolytic and Oxidant Atmosphere, J. A. Conesa (Alicante University, Spain), A. Urueña

Analysis of the incorporation of thermal storage and/or hybridization into a thermosolar power generation system, C. Monné (Zaragoza University, Spain), Y. Bravo, F. Moreno

Modelling and simulation of biomass pyrolysis through thermodynamical equilibrium approach using ASPEN PLUS, García Ares, M.T. (Santiago de Compostela University, Spain), Sáiz Rubio, R., Bao Iglesias



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Intelligent Solar Tracking, Adérito Neto Alcaso (Polytechnic Institute of Guarda, Portugal) Guilherme F. dos Santos Pereira, Carlos Carreto et al

Thermal, hydraulic and electric coupled model for a PVT solar panel, Fernando Varela Díez (Burgos University, Spain), Cristina Alonso-Tristán, Montserrat Díez Mediavilla et al

Invasive Acacia dealbata Link. as a potential wood fuel source, H. Viana (Viseu Polytechnic Institute, Portugal), B. Esteves, L. Lopes et al

An Artificial Neural Network Approach to Predict Wind Velocity Time-Series in Tehran, Farivar Fazelpour (Islamic Azad University), Majid Vafaeipour, Omid Rahbari et al

Hydrogenation of mixtures of used frying oils and animal fat to produce biofuels, P. Costa (LNEG, Portugal), F. Pinto, P. Branco, B. Barradas

Biodiesel by soybean oil and microalgae lipids, Sebastián Sánchez (Jaén University), M^a Lourdes Martínez, Nora R. Aimaretti et al

Thermodynamic equilibrium model applied to pomace gasification, Tiago B. Carvalho (C3i/ Portalegre Polytechnic Institute, Portugal), Paulo S.D. Brito, Anabela S. Oliveira

AREA 3 – ENVIRONMENT. ENVIRONMENTAL ENGINEERING

Evaluation of water quality in Viana do Castelo coast and Lima river mouth for use in osmotic power, Manuela Vilarinho Oliveira (Viana do Castelo Polytechnic Institute, Portugal), P. Pires, M. Barros et al

Evaluation of the wind turbine noise impact of an experimental offshore platform in the Asturian coast, Sandra Velarde-Suárez (), Katia M. Argüelles Díaz, Jesús M. Fernández Oro et al

Removal of ammonia nitrogen (NH₄⁺) in a synthetic effluent using macrophytes *in natura*, N.T. Schröder (ULBRA, Brazil), A. E. M. Petry

Removal of Ni(II) from aqueous solution by biosorption on pine cone shell, A. Almendros (Granada University, Spain), M.A. Martín-Lara, G. Blázquez et al

Simulation of pulverized coal combustion process, Johnny Zambrano (Valladolid University, Spain), L.M. Delgado-Abad, M.C. Martín

Effect of coal bottom ash addition and firing temperature on ceramic bricks properties, C. Arenas (Sevilla university, Spain); C. Leiva, L.F. Vilches

Waste stabilization/solidification of an electric arc furnace dust using bottom and fly ash-based geopolymers, A. Cornejo (Sevilla University, Spain), Y. Luna, C. Leiva et al



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Hydroelectric potential and environmental impact of small hydroelectric plant in Slovakia, L. Zvijáková (Technical University of Košice, Slovakia), M. Zeleňáková

Multicriteria analysis of building assessment in terms of energy performance using a life cycle approach, L. Ganova (Technical University of Košice, Slovakia), S. Vilcekova , E. Kridlova Burdova

Environmental impact assessment of small hydroelectric plant at Bystrá creek using risk analysis, L. Zvijáková (Technical University of Košice, Slovakia), M. Zeleňáková

Experimental investigation of selected characteristics of concrete exposed to different aggressive media, L. Ganova (Technical University of Košice, Slovakia), V. O. Harbulakova, A. Estokova

Characterization of wastewater from the cork industry, Francisco Sepulveda Justo (Extremadura University, Spain), I. Montero, M.T. Miranda et al

Environmental risk assessment in former uranium mining regions of Portugal, Fernando P. Carvalho (Technological and Nuclear Institute/UTL, Portugal), J.M. Oliveira, M. Malta

Preliminary study in the design of a pilot plant for hydrogen or syngas production from glycerol reforming, J.F. González (Extremadura University, Spain), G. Engo, S. Román et al

Energy optimization in cold storage chambers from meat industry, Paulo Brito (C3i/Portalegre Polytechnic Institute, Portugal), Pedro Lopes, Paula Reis et al

Improving permanganate treatment to remove TCE from low permeability zones, C. Chokejaroenrat (Suranaree University of Technology, Thailand), S. Comfort, C. Sakulthaew

Bio-augmentation to improve the effluent quality in biological treatment of olive mill and winery wastewater, P.T. Martín de la Vega (Extremadura University, Spain), F. Fernández, M. A. Jaramillo

Long-term experience with free-floating macrophytes for urban wastewater treatment plants, P.T. Martín de la Vega (Extremadura University, Spain), F. Fernández, M. A. Jaramillo

Identification with neural networks of the mathematical model of a laboratory-scale plant for biogas production from slaughterhouse effluents, M. A. Jaramillo-Morán (Extremadura University, Spain), J. M. Sagrado-Iglesias, P. T. Martín de la Vega

Ultrasonic treatment to improve effluent quality of Wastewater Treatment Plants: bulking control and organic load, P.T. Martín de la Vega (Extremadura University, Spain), M. D. Muñoz, M. A. Jaramillo

Effect of pH on the removal of main pollutants in synthetic wastewater simulating pretreated olive mill wastewater by means of ion exchange , María Dolores Víctor-Ortega (Granada University, Spain), Javier Miguel Ochando-Pulido, Salvador Rodríguez-Vives

Effects of acetic acid on carob sugar-rich pulp fermentation, M. E. Lima-Costa (Algarve University, Portugal), A. Constantino, P. Lino et al



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Kinetics of ethanol production at a gradient of limitant-nutrient concentrations, M. E. Lima-Costa (Algarve University, Spain), B. Rodrigues, S. Raposo

Effect of the addition of brewing industry wastes in lightweight aggregate, C. Martínez García (Jaén University, Spain) , T. Cotes Palomino, F.J. Iglesias Godino

Life cycle assessment of Municipal Solid Waste Incineration bottom ash: comparing the conventional ash solidification with the recycling in Portland cement production, Ruben Aldaco García (Cantabria University, Spain), M. Margallo, A. Irabien

Elaboration of short videos as educational innovation techniques for subjects related to the Materials Science and Chemical Engineering, M.T. Cotes Palomino (Jaén University, Spain), C. Martínez García, F.J Iglesias Godino et al

Indoor environmental quality in classrooms: preliminary results in terms of noise conditions, R.M.S.F. Almeida (Viseu Polytechnic Institute, Portugal), P.G. Pinho S.M. Lopes et al

Youtube channel for subjects related to the Materials Science and Chemical Engineering, M.T. Cotes Palomino (Jaén University, Spain), C. Martínez García , R. Mata Campos

Dynamic simulation of a solar dryer with TRNSYS, Antonio Ruíz Celma (Extremadura University, Spain), Fernando López Rodríguez , Iría Bay Alfonso

Analysis of constructive pathologies of a building constructed on expansive ground and repair proposal, RD. Cano (Sevilla University, Spain)

Economic viability of building energy rehabilitation interventions including dynamic analysis of life cycle cost, David Cabrerizo Romero (Madrid Polytechnic University, Spain)

Characterization and biological treatment of leachates from waste treatment centres in Castilla and León, M. Carmen Márquez (Salamanca University, Spain), Javier Domínguez, Belén Autrán et al

Volatile fatty acids production by mesophilic and thermophilic fermentation of organic fraction from organic urban waste, M.C. Márquez (Salamanca University, Spain), R. Ramos, C. Costa et al

Modeling dynamics and rejection performance of a reverse osmosis membrane for the final purification of olive mill wastewater, J. M. Ochando-Pulido (Granada University, Spain), G. Hodaifa, M.D. Victor-Ortega et al

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Rainwater Sustainable Management in Facilities – Two Choices, S. Lucas (Setubal Polytechnic Institute, Portugal), F. Melo, M. Aguiar

Solid phase microextraction (SPME) for the evaluation of VOC emissions in the composting process by manual operation, J. F. Saldarriaga (Basque Country University, Spain)

Assessment of risk of VOC exposure of operators of composting plants municipals solid waste by manual operation, J. F. Saldarriaga (Basque Country University, Spain)

Efficiency of tartaric acid for removal of zinc from tailing ore, A. Azadmehrs (Amirkabir University of Technology), S. Magsodi

Characterization of an Ecuadorian crude using a vibrating tube densitometer and a vibrating-wire viscometer, J. Zambrano (Valladolid University, Spain), R. Acuña, M.C. Martín

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Development and Optimization of the BDD-Electrochemical Oxidation of parabens in Aqueous Solutions, J.R. Domínguez (Extremadura University, Spain), M.J. Muñoz, P. Palo et al

Comparing efficiency of adsorption on activated carbon with POA's treatment on the remediation of model waters contains indigo dye, Enrico Mendes Saggiaro (Oswaldo Cruz Foundation, Brazil), Anabela Sousa Oliveira, Thelma Pavesi

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Density variation of lightweight aggregate by inclusion of brewing industry wastes in ceramic matrix, M.T. Cotes Palomino (Jaén University, Spain), C. Martínez García, F.J. Iglesias Godino

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Indoor air quality in schools, Ana Ferreira (Coimbra University, Portugal), Salvador Cardoso

Pedagogical development of material for bitonal solidary pet chain project, Matheus Hirdes Antunes (IFSUL Rio-Grandense, Brazil), Neuza Maria Corrêa da Silva

Ecotechnologica education project, Neuza M. Corrêa da Silva (IFSUL Rio-Grandense, Brazil), M. Hirdes Antunes

Control of Water Quality in Houses of Pedra Branca – Bahia, Brazil, An Enviromental Education Action, Maria de Fátima M. Paixão (Feira de Santana State University), L. C. Porto, S. M.O. Brito

Analyse of the bioclimatic behaviour of a classroom: a Kit for secondary school students, J. Barrau (Lleida University), M. Ibanez

Characterization of handcrafted red wine in the village of Pedra Branca, Bahia, Brazil: an Environmental Education Action, Maria de Fátima M. Paixão (Feira de Santana State University), I. M. Barreto, D. B. Queiroz

Impacts of a thermal power plant discharges on coastal seawater, N. Ferreira (ISEC, Portugal), P. Ferreira, T. Marques

Ecological Footprint: an experience with under-graduate students, Isabel Cabrita (ISEC, Portugal), Luís Moreira, Cristina Ventura et al

Ecotoxicological effects of solar and artificial light photocatalysis of indigo carmine dye in water, Anabela Sousa Oliveira (C3i/Portalegre Polytechnic Institute, Portugal), Enrico Mendes Saggiaro, Daniel Forsin Bus et al

PAHs in fish from Guanabara Bay accessed by fixed and synchronous fluorescence spectroscopy, Marina Moreira Freire (Oswaldo Cruz Foundation, Brazil), Anabela Sousa Oliveira, Ana Rosa Linde Araias

Ecotoxicological study to Indigo Carmine dye with Eisenia Andrei, T. Pavesi (ESTEH/ ENSP / FIOCRUZ, Brazil), F.V. Correia, A.S. Oliveira



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Tannin used as inhibitor for corrosion protection of phosphatised carbon steel, E. S. Rieder (ULBRA; Brazil), G. C. da Rosa, A.P.S Farias et al

A ternary catalytic system for direct ethanol fuel cells, E. S. Rieder (ULBRA; Brazil), B. Proença, E.L. Silva et al

Modifications on porosity of activated carbons during adsorption/thermal desorption cycles, S. Román (Extremadura University, Spain), E. Sabio, B. Ledesma et al

Choice of preparation conditions in order to enhance the adsorption of nitrates onto biomass-derived adsorbents, S. Román (Extremadura University, Spain), B. Ledesma, M. E. Fernandez

Modification in the surface hydrophobicity of activated carbons during adsorption/desorption cycles by wet oxidation regeneration, C.M. E. Sabio (Extremadura University, Spain) González-García, B. Ledesma

Characterization of an Ecuadorian crude using a vibrating tube densitometer and a vibrating-wire viscometer, J. Zambrano (Valladolid University, Spain), R. Acuña, M.C. Martín

Structural, Electrical and Optical Properties Of SnO₂ Deposited By Spray Pyrolysis Technique, M. Loghmarti (Mohammed V University, Morocco), A C. Nassiri, A. Hadri et al

Structural, optical and electrical properties of sprayed indium-doped ZnO thin films, A. Mzerd (University Mohammed V-Agdal, Morocco), A. Hadri, C. Nassiri et al

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Impact on the nature of the materials on the determination of optimum insulation thickness, J. Barrau (Lleida University, Spain), M. Ibanez, F. Badia

Analysis of energetic and environmental sustainability of a building of tertiary sector, Fernando López Rodríguez (Extremadura University, Spain), Antonio Ruíz Celma, Iría Bay Alfonso et al

LCA of precast concrete kerb manufactured with recycled aggregates using the CML methodology, J. González (Oviedo University, Spain), F. López Gayarre, C. Lopez-Colina

The Karnaugh maps in the Simplification of Functions of n Variables, António D. Reis (Beira Interior University, Portugal), José F. Rocha, Atílio S. Gameiro et al

The Decoder in the Implementation of Functions of n Variables, António D. Reis (Beira Interior University, Portugal), José F. Rocha, Atílio S. Gameiro et al

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Groupings of 1's and 0's in the Karnaugh Maps for the Prior Decision, António D. Reis (Beira Interior University, Portugal), José F. Rocha, Atílio S. Gameiro et al

Representation of Binary Numbers and a Little Contribution, António D. Reis (Beira Interior University, Portugal), José F. Rocha, Atílio S. Gameiro et al

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Numerical modeling of Vertical Axis Wind Turbines, T. Parra (Valladolid University Spain), R. Ramos, C. Vega et al

Fluid dynamics characterization on handling nebulizers, Joaquín Fernández (Extremadura University, Spain), Ana F. Tena, Pere Casan et al

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