



The First International Congress ESE' 2018
Energy Security & Environment
From 02 to 04 May 2018, Palm Azur Hotel****, Djerba, Tunisia



ESE Congress Program

The 02nd May 2018

14:00-16:00
16:00-16:30
16:30-17:00
17:00-17:30
17:30-18:00
19:00-21:00

Welcome of the participants

Opening Ceremony

PL1: Prof AMRANE A., Rennes University, France

PL2: Prof KHERBECHE A., Fes University, Morocco

PL3 : Prof OUEDERNI A., Gabes University, Tunisia

Dinner

The 03rd May 2018

Oral Session1: Water

Chairman
(Prof Amrane A. & Prof Zazoua A.)

Oral Session2: Materials For Energy Applications MEA

Chairman
(Prof Aroua Kh. & Prof Ouederni A.)

8:30-8:45
8:45-9:00
9:00-9:15
9:15-9:30
9:30-9:45
9:45-10:00
10:00-10:15
10:15-10:30
10:30-11:00
11:00-11:30
11:30-12:00
12:00-12:30
12:30-14:30

WST02

WST03

WST06

WST07

ET02

ET03

ET04

ET10

MEA03

MEA04

MEA06

MEA07

MEA09

MEA10

MEA11

MEA12

Coffee Break

PL4: Prof ZAZOUA A., Jijel University, Algeria

PL5: Prof ALWARTHAN A., King Saud University, Saudi Arabia

PL6: Prof Zondervan E., Bremen University, Germany

Lunch

Oral Session3: Environment E

Chairman
(Prof Alwarthan A. & Prof Zourgui A.)

workshop

Trainer (Dr Djridi M.)

14:30-14:45

E03

14:45-15:00

E12

15:00-15:15

E13

15:15-15:30

E14

15:30-15:45

E15

15:45-16:00

E16

16:00-16:15

E17

Quality management for Industrial Systems

16:30-17:00

Coffee Break

17:00-18:30

Posters Session

Chairman
(Prof Slama F. & Prof Alwarthan A.)

Quality management for Industrial Systems

19:00-21:00

Dinner

21:30-00:00

Soft Tunisian Party

The 04th May2018

Oral Session4: Modelling&Simulation

Chairman
(Prof Zondervan E. & Dr Timoumi S.)

Oral Session5: Energy

Chairman
(Prof Kherbeche A. & Ouederni A.)

8:30-8:45

MS01**RE01**

8:45-9:00

MS02**RE03**

9:00-9:15

MS05**RE04**

9:15-9:30

MS06**RE05**

9:30-9:45

MS07**MEA14**

9:45-10:00

MS09**MEA17**

10:00-10:15

MS10**E20**

10:15-10:30

MS11**E21**

10:30-11:00

11:00-11:30

11:30-12:00

12:00- 12:30

12:30-13:30

Coffee Break

PL6: Prof AROUA K., SunWay University, Malaysia

PL7: Prof ZOURGUI A., Gabes University, Tunisia

Honorary Ceromony & Awards

Lunch

Renewable Energies RE

Effluents Treatment ET

Environment E

Water Sciences & Technologies WST

Modelling& Simulation MS

Materials for Energy Applications MEA

The 02nd May 2018

14:00-16:00

Welcome of the participants

16:00-16:30

Opening Ceremony

16:30-17:00

PL1: Prof AMRANE A., Rennes University, France
"Coupling of an electrochemical process and a biological treatment for the removal of a pharmaceutical compound, metronidazole"

17:00-17:30

PL2: Prof KHERBECHE A., Fes University, Morocco
"Oxydation du phénol en milieu aqueux dilué sur des catalyseurs à base d'argile et par photocatalyse"

17:30-18:00

PL3 : Prof OUEDERNI A., Gabes University, Tunisia
"Activated carbons as support for chemical energy storage"

19:00-21:00

Dinner

The 03rd May 2018

Oral Session1: Water

Chairman

(Prof Amrane A. & Prof Zazoua A.)

Oral Session2: Materials For Energy Applications MEA

Chairman

(Prof Aroua Kh. & Prof Ouederni A.)

8:30-8:45 *Evaluation of the specific energy consumption of brackish water reverse osmosis (BWRO) desalination plant and the production water cost under variable conditions*

Cherif Hayet, Dalhoumi Rania, Saidi Hakima and Elfil Hamza

WST02

8:45-9:00 *Activated carbon or bentonite clay for defluoridation of scrubbing seawater in the wet process phosphoric acid production?*

Bader Najoua

WST03

9:00-9:15 *Solubility of Gallic acid in different pure solvents and in binary solvent mixtures of propan-2-ol+ water from (293.2 to 318.2) K: Experimental measurements and modelling*

Dali Imen, Claumann Carlos Alberto, Zibetti André Wüs, Abderrabba Manef

WST06

9:15-9:30 *CARE WASTE IN TUNISIA: EVALUATION OF THE MANAGEMENT AND ANALYSIS OF GENERATION RATES AND PATTERNS IN PUBLIC HEALTH-CARE FACILITIES*

Maaroufi Kaouthar, Afef MAKNI SIALA, Abdallah NASSOUR, Anne SCHEINBERG, Khaled HSSINE et Ezzeddine MAHMOUDI

WST07

Effects of high-temperature heat treatment on the microstructure and mechanical properties of Metakaolin based-geopolymer

Zeineb Zidi, M. Ltifi, Z.Ben Ayadi, L.El Mir

MEA03

Graphene oxide/TiO₂ photocatalysts for hydrogen production from water

Naima Naffati, Luísa M. Pastrana-Martínez , Mohamed F. Nsib, Joaquim L. Faria, Cláudia G. Silva

MEA04

Hydrogen production by dry reforming of methane over Ni supported activated carbons based on olive stones

Marwa Mahmoudi, Anthony Dufour, Mohammed M. Bettahar, Roger Gadiou, Abdelmottaleb Ouederni

MEA06

Valorization of a food industry by-product : extraction of fibers and their structural and microstructural characterizations

Marwa Cheikh Rouhou, **Souhir Abdelmoumen**, Hamadi Attia, Thomas Sabu, Dorra Ghorbel

MEA07

9:30-9:45	<p><i>Investigation into pomegranate peels valorization</i></p> <p>Ben Ali Samia, Abdelmouemen Souhir</p> <p>ET02</p>	<p><i>Activated Carbons from Pomegranate Peel Biomass waste. Prospects as adsorbent for gas separation</i></p> <p>Wafa Saadi, Souissi-Najar Souad, Abdelmottaleb Ouederni, Sandra Rodríguez-Sánchez, Begoña Ruiz, Enrique Fuente</p> <p>MEA09</p>
9:45-10:00	<p><i>Electrochemical oxidation 1,2-dichlorobenzene using PbO₂ and BDD</i></p> <p>Ben Kace Sabrine, Nejmeddine Rabaaoui, Ridha ben Salem and Younes Moussaoui</p> <p>ET03</p>	<p><i>Annealing effect on the properties of Cu-Fe-O thin films deposited by reactive magnetron sputtering</i></p> <p>Hanen Ben Jbara, Arab Pour Yazdi², F. Chaffar Akkari³, M. Kanzari⁴ and A. Billard⁵</p> <p>MEA 10</p>
10:00-10:15	<p><i>Leachate to enhance olive mill wastewater anaerobic digestion</i></p> <p>Timoumi Souad, S. Saadellaoui, I. Trabelsi and F. Zagrouba</p> <p>ET04</p>	<p><i>Structural and optical properties of annealed In₂S₃ thin films prepared by spray technique</i></p> <p>Yemna Bchiri, N. Bouguila, M. Kraini, S. Alaya</p> <p>MEA11</p>
10:15-10:30	<p><i>Adsorption of zinc(II) on pillared clay FeSb</i></p> <p>Nessrine Dammak, Mourad Ben zina</p> <p>ET10</p>	<p><i>Invention of a cooling system of a glass greenhouse based on the use of the date palm leaf</i></p> <p>Ali Arfaoui, Othmani Ahmed</p> <p>MEA12</p>
10:30-11:00	Coffee Break	
11:00-11:30	<p>PL4: Prof ZAZOUA A., Jijel University, Algeria</p> <p><i>"Design and development of simple and miniaturized instruments for pollutants monitoring"</i></p>	
11:30-12:00	<p>PL5: Prof ALWARTHAN A., King Saud University, Saudi Arabia</p> <p><i>"Synthesis, Characterization, and Relative Study on the Catalytic Activity of Zinc Oxide Nanoparticles Doped MnCO₃, -MnO₂, and -Mn₂O₃ Nanocomposites for Aerial Oxidation of Alcohols"</i></p>	
12:00-12:30	<p>PL6: Prof Zondervan E., Bremen University, Germany</p> <p><i>"Process systems engineering as a cornerstone discipline for energy transition challenges"</i></p>	

Oral Session3: Environment E
Chairman
(Prof Alwarthan A. & Prof Zourgui A.)

workshop
Trainer (Dr Djridi M.)

14:30-14:45 *Thermochemistry of the dissolution of calcium fluorapatite in nitric acid and in pure water*

Kaouthar Ardhaoui, J. Rogez
E03

14:45-15:00 *Effect of temperature on the adsorption of Cr (VI) chromium transition metal by Spirulina microalgae: Statistical physics modeling*

Fakher Ayachi, Guilherme L. Dotto, Abdellatif Sakly, Houcine Mejri, Abdelmottaleb Ben Lamine
E12

15:00-15:15 *Sulfuric acid production by contact : Contribution to the valorization of thermal discharges by absorption machines*

Yasmine Elghaeb, Narjes Abdennebi, Jalel Belghaieb, Nejib Hajji
E13

15:15-15:30 *Analyzes of contaminated soil : case of insecticide*

Nadia Hammouda, Souad Timoumi, Sami Talmoudi, Rakia Ayat
E14

15:30-15:45 *Evaluation of the impact of pharmaceutical waste on the environment*

Chouaib Saouli, Assaba R.

15:45-16:00 **E15**

Degradation of caffeic acid by a novel electro-Fenton process using chalcopyrite as heterogeneous source of iron catalyst

Aziza Hadj Ltaif, Salah Ammara, and Abdellatif Gatria

E16

Quality management for Industrial Systems

16:00-16:15	<p><i>Exergetic and environmental study of petroleum refining process</i></p> <p>Ghada Ghoudi, Taieb Dalila, Magherbi Mourad</p> <p>E17</p>	
16:15-16:30	<p><i>Development of a process for the removal of H2S from the effluent of phosphoric acid unit</i></p> <p>Arwa Lagha, Abdelmottaleb Ouederni</p> <p>E19</p>	
16:30-17:00		Coffee Break
17:00-18:30	<p>Posters Session</p> <p>Chairman (Prof Slama F. & Prof Alwarthan A.)</p>	Quality management for Industrial Systems
19:00-21:00		Dinner
21:30-00:00		Soft Tunisian Party

Oral Session4: Modelling&Simulation

Chairman
(Prof Zondervan E. & Dr Timoumi S.)

Oral Session5: Energy

Chairman
(Prof Kherbeche A. & Prof Ouederni A..)

8:30-8:45

Offset jet ejection angle (OJEA) effect in combined wall and offset jets flow: numerical investigation and engineering correlations

Saloua marzouk, Habib ben aissia, Jacques jay

MS01

8:45-9:00

Two phase flow simulation in a pipeline

Fallah Tawba, Jalel Belghaieb, Nejib Hajji

MS02

9:00-9:15

Sulphur dioxide conversion in microchannel and tubular reactor: comparative study

Hanen Nouri, Abdelmottaleb Ouederni

MS05

9:15-9:30

Modeling and optimization of real-solar refrigeration machines

Yasmina Boukchana, Fellah Ali, Ben Brahim Ammar

MS06

Design of a Wall-heater-solar water

Rihab Lasouad, R. Ben Slama

RE01

RENEWABLE HYDROGEN GENERATION VIA PHOTO-CATALYSIS PROCESS

Ghiat Iman, A. SAADI, A. BOUDJEMAA

RE03

STUDY OF SOLAR ADSORPTION COOLING SYSTEM USING ACTIVATED CARBON-METHANOL AND ACTIVATED CARBON-CO2 PAIRS

Belhadj Jrad Amel, Abdelaziz Zagnani and Abdallah Mhimid

RE04

Optimization of supercritical carbon dioxide extraction of Eucalyptus Leaves .Evaluation of antioxidant and cytotoxic activity of extracts

Chamali Saoussan, Jalloul Bouajila, Severine Camy, Ezzeddine Saadaoui, Jean-Stephane Condoret and Mehrez Romdhane

RE05

9:30-9:45	<p><i>Numerical Study on microdroplets generation in Flow-Focusing microfluidic system</i></p> <p>Ines Hamidi, Abdelmottaleb Ouederni</p> <p>MS07</p>	<p><i>Effect of the co-deposition of Pd and Pt on TiO₂ photoactivity</i></p> <p>Belfaa Khaled, E. Pulido Melián O. González Díaz, J.M. Doña Rodríguez, S. Ammar, A. Gadri</p> <p>MEA14</p>
9:45-10:00	<p><i>Predictive analysis of different models of the clean exchange coefficient in a heat exchanger from industrial data</i></p> <p>Rania Jradi, Ali FGUIRI, Christophe MARVILLET, Mohamed Razak JEDAY</p> <p>MS09</p>	<p><i>Modeling of the Magnetic Entropy and the Magnetocaloric Effect</i></p> <p>Zina Meddeb</p> <p>MEA17</p>
10:00-10:15	<p><i>Stabilized NZVI nanoparticles transport and retention modeling in a saturated soil column</i></p> <p>Fayrouz Slama, P. Esther Jegathambal, Rabeb Dridi, Preethy Grace and Rachida Bouhlila</p> <p>MS10</p>	<p><i>Structural and Dielectric properties of ZnS thin films</i></p> <p>J. Koaib, N. Bouguila, K. Khirouni, S. Alaya</p> <p>E20</p>
10:15-10:30	<p><i>Thermal energy storage: Prediction of energy efficiency in buildings containing phase change materials</i></p> <p>Marwa Othman, Najoua Mekaddem, Samia Ben Ali, Ahmed hannachi</p> <p>MS11</p>	<p><i>Hybrid process combining ozonation and adsorption on cobalt supported on activated carbon for refractory molecule degradation</i></p> <p>Asma Abdeddayem, Monia Guiza, Abdelmottaleb Ouederni and Francisco Javier Rivas Toledo</p> <p>E21</p>
10:30-11:00	Coffee Break	
11:00-11:30	<p>PL6: Prof AROUA K., SunWay University, Malaysia <i>"Development of Green Solvents for CO₂ Capture"</i></p>	
11:30-12:00	<p>PL7: Prof ZOURGUI A., Gabes University, Tunisia <i>"Valorization of cactus waste in the medicinal, cosmetic and agri-food sectors"</i></p>	
12:00- 12:30	Honorary Ceromony & Awards	
12:30-13:30	Lunch	