



EnerSol World Sustainable Energy Forum

November, 26 - 28, 2014 - Tunis - Tunisia

2nd Edition of the World Sustainable Energy Forum

EnerSol WSEF Tunisia 2014

Science and Technology Forum Program (27th -28th November 2014)

Conference General Chairs

Pr. Jamel Belhadj (LSE-ENIT/ENSIT, University of Tunis, **Tunisia**)

Pr. Samia Charfi-Kaddour (FST, University of Tunis El Manar, **Tunisia**)

Pr. S. Yamaguchi (University of Chubu, **Japan**)

Organizers



SETCOR
Conferences & Events



Thursday 27th November 2014
PV, LSPVP, Material for energy

	Chairs : Pr. Jamel Belhadj (LSE-ENIT/ENSIT, University of Tunis, Tunisia) Pr. Samia Charfi-Kaddour (FST, University of Tunis El Manar, Tunisia) Pr. S. Yamaguchi (University of Chubu, Japan)	
Keynote talk 9.00 - 10.00	Plenary Session Ms. Maria Van Der Hoeven , Executive Director, International Energy Agency, France. Mr. André Joffre , Vice President, IMEDER, France Mr Eric Noir , Director, Green By Design, South Africa Green Building Council, South Africa Prof. Ali Sayigh , Director General, World Renewable Energy Network, United Kingdom	
10.00 -10.30	Networking Coffee Break- Poster Session I	
Keynote talk 10.30- 11.00	Prof. Ali Sayigh - World Renewable Energy Congress/Network (WREC/WREN), United Kingdom Renewable Energy will supply 50% of Global Electricity by 2030	Prof Ali Sayigh
11.00-11.30	H. Koinuma , K. Itaka, S. Yamaguchi, A. Stambouli and S. Hannachi Sahara Solar Breeder Foundation, International (SSBI) and Tokyo University/Hirosaki University/ Chubu University, Japan and University of Science & Technology of Oran (USTO), Algeria Sahara Solar Breeder plan as Stem technology initiative for global energy future	Prof. Hideomi Koinuma
11.30- 11.45	A.S. Shikoh , A. Popelka, Z. Zhu, T. Mankowsk, K. Balakrishnan, F. Touati, M.A. Benammar, M. Mansuripur and C.M. Falco Qatar University, Qatar and University of Arizona, Tucson, Arizona, USA rGO/CuNWs Based Flexible Transparent Electrodes for Thin Film Solar Cells	Mr Ali Sehpar Shikoh
11:45- 12:00	N. Ihaddadene , R. Ihaddadene and A. Betka University of M'Sila, Algeria Effect of Glass Thickness on the performance of The ET200 Solar thermal Collector	Dr Nabila Ihaddadene
12:00- 12:15	Z .Kadachi , M. Ben Karoui, T. Azizi, R.Gharbi Ecole Supérieure des Sciences et Techniques de Tunis, University of Tunis and Centre de Recherche et des Technologies de l'Energie, Technopole de Borj Cedria, Tunis, Tunisia Electrical and morphological properties of TiO2 thin films prepared by sol gel method	Mrs Zouhour Kadachi
12.15-12.30	M. Haggui , W. Rouis, L. Sfaxi and P. Fumagalli Freie Universität Berlin, Institut für Experimentalphysik, Arnimallee Germany and College of Sciences at Monastir/ High School of Sciences and Technology-Hammam Sousse, Tunisia Scanning Near-field Optical Microscopy: Principles and Application to Studying Electronic and Photonic Devices	Dr Mohamed Haggui
12.30-12.45	S. Aouida , R. Benabderahmen, S. Jaidene, N. Bachtouli, B. Bessais. Centre de Recherches et des Technologies de l'Energie, Tunis, Tunisia Minority carrier lifetime measured by Sinton WCT-120 lifetime tester in QSS-mode and silicon surface treatments	Dr Selma Aouida
12.45-14.00	Lunch break- Poster Session I	
Energy prod, Trans, Distrib, Storage and efficiency / Smart Grids, Micro Grids, and Energy Management		
	Chairs : Pr. Samia Charfi-Kaddour (FST, University of Tunis El Manar, Tunisia) and Pr. S. Yamaguchi (University of Chubu, Japan)	
Keynote talk 14.00- 14.45	Prof. Satarou Yamaguchi - Chubu University, Japan Superconducting Power Transmission line as the most efficient energy transport	Prof. Satarou Yamaguchi
14.45- 15.00	A. Esseghir and L. Haouaoui Khouni Higher Institute of Management of Tunis, Laboratory of UAQUAP, Tunis, Tunisia Energy efficiency in the Union for the Mediterranean countries: Trends and implications	Dr Asma Esseghir
15.00-15.15	R. Khama , F. Aissani and R. Alkama Kasdi Merbah Ouargla University and A. Mira Bejaia University, Algeria. Indirect solar drying : Theoretical study and experimental validation	Mr Reda Khama
15.15-15.30	Y. Abdellaoui , H. Chaouch, S Elgaied and M. Krarti	

	Higher Institute of Technological Studies of Sidi Bouzid and Higher Institute of Technological Studies of Mahdia, Tunisia and University of Colorado, USA	Mr Youssef Abdellaoui
	Design and development of a self-adjusting solar dryer prototype	
15.30-15.45	N. Y. Mansouri and A. F. Ghoniem Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, MA, USA	Dr Noura Mansouri
	Optimizing a Sustainable Desalination System: A Comparison between CPV-RO and CSP-MED Cogeneration Plants in Saudi Arabia	
15.45-16:00	S. Elouaer Mrizak , K. Cabaret and F. Picard University of Technology Belfort Montdéliard and IRTES- RECITS, Belfort, France	Dr Sana Elouaer Mrizak
	European Smart Grids Projects Development and Geographical Proximity: Evidence from Network Analysis	
16.00-16.30	Networking Coffee break- Poster session I	
16.30-16.45	M. Khelif , A. M'raoui and L. Hassaine Centre de Développement des Energies Renouvelables, CDER, Algeria	Dr Messaoud Khelif
	A detailed modelling, optimizing and evaluating process for a 3 KWp, 50 Hz, 3x 380v regulated voltage, stand-alone photovoltaic power supply.	
16.45-17.00	S. Nems , L. Barazane and S. Diaf Centre de Développement des Energies Renouvelables CDERAlgiers and University of Sciences and Technology Houari Boumediene, Algiers, Algeria	Ms Salima Nems
	Modeling, Simulation and analyses of a photovoltaic system using two MPPT algorithms	
17.00-17.15	J. Abu Hamad, N. A. Chowdhury, F. Touati and M. Al. Al-Hitmi Qatar University, Doha, Qatar	Dr Farid touati
	Wirelessly Monitoring, Investigating and Overcoming the Effects of Harsh Environment on the Performance of Solar PV Technologies in the State of Qatar	
17.15-17.30	J. Shen , C. Jiang and Y. Liu Department of Electrical Engineering, Shanghai Jiaotong University, China	Mr Jingshuang Shen
	Optimal Operation of Microgrid Considering Regulation of Grid Tie-line Power Fluctuations	
17.30-17.45	K.Y. Lim , Y.S. Lim, J. Wong and K.H. Chua University Tunku Abdul Rahman, Kuala Lumpur, Malaysia.	Ms Lim Khim Yan
	Energy Storage with Fuzzy Controller for Power Quality Improvement on Distribution Network with Renewable Energy	
17.45-18:00	A.H. Almukhtar University of Technology Baghdad, Iraq	Dr. Eng. Ali H. Almukhtar
	Study and Implementation Photovoltaic Cell Efficiency at Evaluated Temperature	

Friday 28th August 2014
Wind Energy / Biofuel -Biomass

Chairs: Pr. Jamel Belhadj (LSE-ENIT/ENSIT, University of Tunis, Tunisia) Pr. Samia Charfi-Kaddour (FST, University of Tunis El Manar, Tunisia)		
9:00- 9:15	Othman Hasnaoui ENSIT and (LSE-ENIT) Research Centre, Tunis-Tunisia Back-to-back Inverters: Common Mode Voltage Mitigation in Variable Speed Wind Energy Conversion Systems	Dr Hasnaoui Othman
9:15- 9:30	H. Atia , A. Ilinca, A. Snoussi, R. Boukchina and A. Benbrahim University of Gabes, National Engineering School of Gabes and Arid Regions Institute (IRA), Gabes, Tunisia and Wind Energy Research Laboratory, Université du Québec à Rimouski, Rimouski, Canada Effects of collector slope on solar chimney power plant performances	Ms Hela Atia
9:30- 9:45	M. Dali and J. Belhadj National Engineers School of Tunis (ENIT), University of Tunis El Manar, Tunis, Tunisia. Design and Control of a Hybrid Wind/PV System for Grid-Integration	Dr Dali Mehdi
9.45-10.00	H. Chaouch , Y. Abdellaoui and M. Krarti Higher Institute of Technological Studies of Sidi Bouzid, Tunisia and University of Colorado, USA Automated Solar Water Pumping Systems for Agricultural Irrigation Applications	Mr Haithem Chaouch
10.00-10.15	A. Haddad , F. Fayala, S. BenLtoufa and A. Jemni National School of Engineering of Monastir (ENIM), Monastir University, Tunisia Acoustic Study of Insulators Manufactured from Textile waste : The case of the Tablecloth Structure	Mr Abderrazak Haddad
10.15-10.30	S. Takali , F. Fabry, V. Rohani, F. Cauneau, L. Fulcheri Centre PERSEE- MINES ParisTech, Sophia Antipolis, France A 100 kW Three-Phase Plasma Torch for Biomass Valorization and Other Applications	Mr Sabri. Takali
10.30-11.00	Networking Coffee Break- Poster session II	
11.00 - 11.15	A. Bianchini, M. Pellegrini , C. Sacconi University of Bologna, Department of Industrial Engineering, Bologna, Italy Solar steam reforming of natural gas integrated with a gas turbine power plant: economic assessment	Dr Marco Pellegrini
11.15 - 11.30	F. Meguellati , Z. Aouachria, S. Bougoul and A. Messaoudène Centre de Developement des Energies Renouvelables, CDER and Batna University, Algeria. Numerical Simulation of a Modified Savonius Wind Turbine Based on a Commercial Software	Dr Meguellati Farouk
11.30 - 11.45	C. E. Ilochonwu , I. U.Onyenanu and P. N. Atanmo Scientific Equipment Development Institute Enugu and Anambra State University, Nigeria. Extraction of High Purity Silica from Rice Husks Ash for Reduction to Silicon.	Mr Chukwunwendu Ilochonwu
11.45 – 12:00	M. Atigi, A. Elalem , H., Alakramy and A. Zrouga Nalco Company, University Of Tripoli and Higher Institute of Comprehensive Profession, Libya Enhancement of Tilted Absorption Columns in Offshore Projects using Reinforced Materials	Dr. Hadi Alakramy
12.00 - 12.30	Poster session II	
12.30 - 14.00	Lunch Break	

Posters sessions

Poster session I: 27th November 2014

Poster N°.	Abstract's details	Participant
1	Optical, electrical properties and OH group adsorption with deposits electrolysis N. Bouazizi , A. Azzouz, B. Chaouchi and R. Ben Slama. University of Gabes, Tunisia and University of Quebec at Montreal, Canada	Mr Nabil Bouazizi
2	The temperature variation in the soil at shallow depths in the region of Noumerat in Ghardaia N. Chenini and S. Chabou Unité de Recherche Appliqué en Energies Renouvelables, URAER, Centre de Développement des Energies Renouvelables, CDER, 47133, Ghardaïa, Algeria	Mr Nadir chenini
3	Numerical study of heat transfer in solar receivers for CSP S. Lecheheb , A. Bouhallassa, M. Mammam, S. Bouaichaoui and A. Hamidat Centre de Développement des Energies Renouvelables Algiers and University of Sciences and Technology Houari Boumediene, Algeria	Ms Sabrina Lecheheb
4	Optical and electrical behavior of MACE silicon nanowire structures R. Benabderrahmane Zaghouni , S. Aouida, M. Rawefi, N. Bachtouli and B. Bessais. Centre de Recherches et des Technologies de l'Energie, Tunis, Tunisia	Prof. Rabia Benabderrahmane zaghouni
5	Optimal Design of a Hybrid Systems for GSM Radio Base Station in Tataouine, Tunisia A.H. Gabsi and M. Krarti ISET Tataouine, Tunisia and University of Colorado, USA	Mr Abd El Hedi Gabsi
6	Theoretical study of a solar-assisted ejector cooling system with refrigerant ammonia Z.Saadi , H.Soualmi and A. Rahmani 1Research Unit for Renewable Energies in the Saharan Medium, B.P 478, Road of Reggane - Adrar. Algeria.	Mr Zine Saadi
7	Design of an Optimal Cogeneration System for a Brick Manufacturing Facility in Tunisia F. Guemri , Y.Kang and M. Krarti ISET Tataouine, Tunisia and University of Colorado, USA	Mr Fethi Guemri
8	Estimation of Solar Global Irradiation towards Solarization of Rural Communities F. Antonanzas-Torres , J. Antonanzas, R. Urraca, F.J. Martinez-de-Pison University of La Rioja, Spain	Mr Fernando Antonanzas
9	Linke turbidity prediction for improving solar radiation forecasting F. Antonanzas-Torres , F. J. Martinez-de-Pison, O. Perpignan, R. Nunes, Carlos Coimbra University of La Rioja and EUITI-UPM- Madrid, Spain and University of California, USA	Mr Fernando Antonanzas-Torres
10	Effect of the Sandstorms on the Solar Panels Efficiency: finding and remedy A. Marouani, H. Laouamri, N. Bouaouadja and M. Kolli University Sétif 1, Algeria.	Prof. Nouredine Bouaouadja

Poster session II: 28th November 2014

Poster N°	Abstract's details	Participant
1	Design and construction of sun tracking systems for sola parabolic concentrator displacement S. Skouri , S. Bouadila and S. Ben Nasrallah he Research and Technology Center of Energy-Tunis and National engineering school of Monastir, Tunisia.	Mrs Safa Skouri
2	Experimental study of an evacuated tube solar water heater for heating a tunnel greenhouse at night S. Bouadila , M. Lazaar and A. Farhat The Research and Technology Center of Energy, Tunis, Tunisia	Mrs Salwa Bouadila
3	Modeling of Thermal Storage System for Solar Energy N. Ibrir , D. Haddad and Z. Aouachria University of Batna, Algeria	Mrs Nadia Ibrir
4	Optimisation of The Rear Surface Passivation Layer of In-terdigitated Back Contact Silicon Heterojunction photovoltaic IBC/SHJ Solar Cell. K. Benyelles , A. Zerga and H. Benmansour	Mrs Kamila Benyelles

	Materials and Renewable Energies Research Unity URMER, University Abou Bekr Bel-kaid-Tlemcen, Algeria.	
5	Determination of critical micellar concentration in binary system: Cationic surfactant-Glycerol A. Hamel , C. Chanay and K. Guerfi University B.M Annaba, Algeria and Institute Charles Gerhardt. Montpellier, France	Dr Abdallah Hamel
6	Optimisation of Screen Printing Process For High Efficiency Multicrystalline Silicon Solar Cells. A. Zerga and K. Benyelles Materials and Renewable Energies Research Unity URMER, University Abou Bekr Bel-kaid-Tlemcen, Algeria.	Mr Abdellatif zerga
7	Kinetic study for the adsorption of Ethanol on Activated Carbon K. Hajji , F. Mhiri and A. Ben Lamine University of Monastir and Preparatory Institute for Engineering studies of Monastir, Tunisia	Mrs Khaoula Hajji
8	<i>In situ</i> transesterification of wet marine microalgae to biodiesel using supercritical methanol S. Jazzar, P. Olivares-Carrillo, I. Smaali, M.N. Marzouki, F.G. Acién-Fernández, J.M. Fernández-Sevilla, E. Molina-Grima, A. Pérez de los Ríos and J. Quesada-Medina University of Murcia and University of Almería, Spain and University of Carthage - INSAT, Tunis, Tunisia	Dr Joaquín Quesada-Medina
9	Design of a Grid-Connected PV System For a company (SICEM) in Tataouine - Tunisia A. Guemri and M. Krarti ISET Tataouine, Tunisia and University of Colorado, USA	Mr Ahmed Guemri