

**PROGRAM OF THE 4<sup>th</sup> SOLLAB DOCTORAL COLLOQUIUM**  
PSA (TABERNAS, SPAIN), SEPTEMBER 10-12, 2008

<b>10<sup>th</sup> SEPTEMBER</b>		
<b>Time</b>	<b>Activity</b>	
8:10 - 8:45	Travel from Hotel Elba to PSA	
8:45 - 9:15	Welcome and Registration	
9:15 - 10:45	Visit to PSA	
10:45 - 11:00	Coffee break	
11:00 - 11:05	Opening	Diego Martínez
<b>TOPIC: MODELLING AND SOLAR COMPONENTS</b>		
<b>SESSION I</b> (Proposed chairman: Luis Yebra)		
<b>Time</b>	<b>Presentation Title</b>	<b>Presenting Author</b>
11:05 - 11:30	Chattering problem in dynamic mathematical two-phase flow models	Javier Bonilla
11:30 - 11:55	Monte-Carlo ray-tracing modelling of a novel solar trough concentrator coupled to a secondary reflector	Roman Bader
11:55 - 12:20	Modelling and simulation of dynamic effects on an open volumetric air receiver	Nils Ahlbrink
<b>Time</b>	<b>Activity</b>	
12:30 - 14:00	Lunch at "Las Eras" Restaurant	
<b>SESSION II</b> (Proposed chairman: Robert Pitz-Paal)		
<b>Time</b>	<b>Presentation Title</b>	<b>Presenting Author</b>
14:00 - 14:25	Experimental determination of thermal radiative properties of densely packed zinc oxide particulate media	Patrick Coray
14:25 - 14:50	Development of a tube receiver for a solar-hybrid microturbine system	Lars Amsbeck
14:50 - 15:15	Tomography based determination of effective properties for porous media – A multi-scale approach	Sophia Haussener
15:15 - 15:40	Development of optimized aim point strategies for central receiver Systems	Boris Belhomme
15:40 - 16:05	Measurement of the heat losses of parabolic trough receivers	Andreas Orth
<b>Time</b>	<b>Activity</b>	
16:30 - 17:30	Travel to Sorbas	
18:00 - 19:30	Visit to Gypsum Karst in Sorbas	
19:30 - 20:30	Travel to Hotel Elba	

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<b>11<sup>th</sup> SEPTEMBER (Morning Session)</b>		
<b>Time</b>	<b>Activity</b>	
7:50 - 8:30	Travel from Hotel Elba to PSA	
<b>TOPIC: DISINFECTION AND DETOXIFICATION</b>		
<b>SESSION III</b> (Proposed chairman: Sixto Malato)		
<b>Time</b>	<b>Presentation Title</b>	<b>Presenting Author</b>
8:30 - 8:55	The effect of turbidity on solar disinfection (SODIS)	Inmaculada Polo
8:55 - 9:20	Degradation of emerging contaminants at low concentration by solar AOPs in a pilot plant	Noelia Miranda
9:20 - 9:45	Degradation of emerging contaminants at low concentrations by photo-Fenton	Nikolaus Klamerth
9:45 - 10:10	Coupled solar photo-Fenton and biological oxidation for the degradation of a commercial pesticide mixture	Ana Zapata
<b>Time</b>	<b>Activity</b>	
10:15 - 10:45	Coffee break	
<b>Time</b>	<b>Presentation Title</b>	<b>Presenting Author</b>
10:45 - 11:10	Treatment of antibiotics used in aquaculture by photocatalytical processes under solar radiation	Carla Sirtori
<b>TOPIC: SOLAR DESALINATION</b>		
<b>Time</b>	<b>Presentation Title</b>	<b>Presenting Author</b>
11:10 - 11:35	Seawater desalination by solar driven membrane distillation	Elena Guillén
<b>TOPIC: SOLAR FUELS</b>		
<b>SESSION IV</b> (Proposed chairman: Aldo Steinfeld)		
<b>Time</b>	<b>Activity</b>	
11:35 - 12:00	CO <sub>2</sub> splitting via a solar thermochemical cycle based on Zn/ZnO redox reactions: Thermodynamic and kinetic analysis	Illias Hischer
12:00 - 12:25	Development and evaluation of a two step thermo-chemical cycle for solar hydrogen generation	Jan Peter Säck
12:25 - 12:35	Process and Components' Modelling and Simulation for thermochemical hydrogen production	Nicolas Bayer-Botero

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<b>11<sup>th</sup> SEPTEMBER (Afternoon Session)</b>		
<b>Time</b>	<b>Activity</b>	
12:40 - 14:00	Lunch at "Las Eras" Restaurant	
<b>TOPIC: SOLAR FUELS</b>		
<b>SESSION V (Proposed chairman: Aldo Steinfeld)</b>		
<b>Time</b>	<b>Presentation Title</b>	<b>Presenting Author</b>
14:00 - 14:25	Modelling of a two-phase solid-gas flow exposed to concentrated thermal radiation	Gilles Maag
14:25 - 14:50	Hydrogen production by in-situ formation and hydrolysis of zinc nanoparticles	Tom Melchior
14:50 - 15:15	Kinetic investigations of the redox-reaction of mixed iron-oxides coated on ceramic substrates for solar hydrogen production	Martina Neises
15:15 - 15:40	Solar driven steam gasification of coal for synthesis gas production in a packed bed reactor	Nicolas Piatkowski
<b>Time</b>	<b>Activity</b>	
15:40 - 16:10	Coffee break	
<b>Time</b>	<b>Presentation Title</b>	<b>Presenting Author</b>
<b>SESSION VI (Proposed chairman: Gilles Flamant)</b>		
16:10 - 16:35	The influence of radiative transfer on methane cracking in a high temperature solar reactor	Cyril Caliot
16:35 - 17:00	The SnO <sub>2</sub> /SnO thermochemical cycle for solar hydrogen production from water: trends and kinetics	Marc Chambon
17:00 - 17:25	Thermal dissociation of methane – research into reaction kinetics	Michael Wullenkord
17:25 - 17:50	Solar thermal dissociation of methane in a 10 kW tubular reactor	Sylvain Rodat
<b>Time</b>	<b>Activity</b>	
18:00 - 19:00	Travel to Hotel Elba	
21:00	Dinner at Hotel Elba	



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<b>12<sup>th</sup> SEPTEMBER</b>		
<b>Time</b>	<b>Activity</b>	
7:50 - 8:30	Travel from Hotel Elba to PSA	
<b>TOPIC: CONCENTRATED SOLAR POWER</b>		
<b>SESSION VII (Proposed chairman: Hans Müller-Steinhagen)</b>		
<b>Time</b>	<b>Presentation Title</b>	<b>Presenting Author</b>
8:30 - 8:55	Concentrating Solar Power (CSP) technical-economic study	Yawei Zong
8:55 - 9:20	Experimental method for the characterisation of thermal dispersive effects of forced convective flow in sintered metal foams	Stefan Brendelberger
9:20 - 9:45	Development of a high temperature air solar receiver based on compact heat exchanger technology	Mathieu Vrinat
9:45 - 10:10	Thermal performance measurements of concentrating collectors, loops and fields with non-invasive measurement techniques	Nicole Janotte
<b>Time</b>	<b>Activity</b>	
10:10 - 10:40	Coffee break	
<b>Time</b>	<b>Presentation Title</b>	<b>Presenting Author</b>
<b>SESSION VII (Proposed chairman: Alain Ferriere)</b>		
10:40 - 11:05	Geometrical optimization of a solar thermochemical reactor by constructal approach	Stefania Tescari
11:05 - 11:30	Assessment of solar power tower driven ultra supercritical steam cycles applying tubular central receivers with various heat transfer media	Csaba Singer
11:30 - 11:55	Numerical investigation of a turbulent flow submitted to a high temperature gradient	Sylvain Serra
11:55 - 12:20	Global revenue optimization for solar thermal power plants with integrated storage using dynamic programming technique	Michael Wittmann
12:20 - 12:50	Discussion and Closing Session	
<b>Time</b>	<b>Activity</b>	
13:00 - 14:30	Lunch at "Las Eras" Restaurant	
14:30 - 15:30	Travel to Hotel Elba	
<b>Time</b>	<b>Activity</b>	
17:30 - 20:00	Sport tournaments at the beach (football and volley ball)	