Program of the 5th SOLLAB Doctoral Colloquium

Cologne, 22nd – 24th of June 2009

Monday, 22nd of June		
08:30 – 08:50	Registration	
08:50 – 09:00	Opening	
Topic: Solar Radiation and Solar Fields Proposed chair: Eckhard Lüpfert		
Time	**Title of Presentation**	**Presenting Author**
09:00 – 09:25	Spectral characterization of solar radiation	Aitor Marzo, PSA
09:25 – 09:50	The Once-Through Concept in Direct Steam Generation Power Plants	Fabian Feldhoff, DLR
09:50 – 10:15	Solar Field Performance Testing Dynamic Measurements and Data Analysis	Nicole Janotte, DLR
10:15 – 10:40	Revenue Optimal Operation Strategies: Power Plant Modeling	Michael Wittmann, DLR
10:40 – 11:10	Coffee Break	
Topic: Solar Detoxification Proposed chair: Christian Sattler		
11:10 – 11:35	Degradation of emerging contaminants and disinfection of treated municipal wastewater with photo-Fenton	Nikolaus Klamerth, PSA
11:35 – 12:00	Solar photocatalytic reactor experimental and modelisation results	Franck Correia, PROMES
12:00 – 13:15	Lunch	
Topic: Heat and Mass Transfer 1 Proposed chair: Aldo Steinfeld		
13:15 – 13:40	Thermal Dispersive Effects in Sintered Metal Foams	Stefan Brendelberger, DLR
13:40 – 14:05	Tomography based analysis of heat and mass transfer in reacting packed beds	Sophia Haussener, ETH
14:05 – 14:30	Study of Flow and Heat Transfer in Ceramic Foams for Application in Solar Thermal Power	Zhiyong Wu, PROMES
14:30 – 15:00	Coffee Break	
Topic: Solar CO_2 Reduction Proposed chair: Gilles Flamant		
15:00 – 15:25	Solar Driven CO_2 Reduction Using Photo Thermal Electro Chemical Process	Gidon Ferdiman, WIS
15:25 – 15:50	CO_2 and H_2O Reduction via Solar Thermochemical Cycles	Anastasia Stamatiou, PSI
15:50 – 16:15	Solar Driven High Temperature Electrolysis of CO_2	Yury Alioshin, WIS
16:15 – 16:30	Break	
17:00	Departure for High Rope Course	
18:00	High Rope Course and Barbeque	

Tuesday, 23rd of June		
Topic: Modeling Proposed chair: Robert Pitz-Paal		
Time	**Title of Presentation**	**Presenting Author**
08:30 – 09:00	Modeling of solar-driven steam gasification of carbonaceous feedstocks	Nicolas Piatkowski, ETH
09:00 – 09:25	Chattering problem in dynamic mathematical two-phase flow models	Javier Bonilla Cruz, PSA
09:25 – 09:50	Modeling and Simulation of the Solar Hybrid Sulfur Cycle - preliminary Considerations and Objectives	Nicolas Bayer Botero, DLR
09:50 – 10:15	Modeling and simulation of dynamic effects on an open volumetric air receiver	Nils Ahlbrink, DLR
10:15 – 10:45	Coffee Break	
Topic: Solar Components - Receiver Proposed chair: Eckhard Lüpfert		
10:45 – 11:10	Solid Particle Receiver	Birgit Gobereit, DLR
11:10 – 11:35	Constructal approach applied to the optimization of single or multi-channel solar thermochemical reactors	Stefania Tescari, PROMES
11:35 – 12:00	Modelling and designing of a solar receiver carrying pressurized air for the PEGASE project	Benjamin Grange, PROMES
12:00 – 13:15	Lunch	
Topic: Solar Hydrogen Proposed chair: Christian Sattler		
13:15 – 13:40	Investigations and Simulation of a two-step thermochemical water splitting cycle using mixed iron-oxides	Martina Neises, DLR
13:40 – 14:05	Development and evaluation of a two step thermo - chemical cycle for hydrogen generation	Jan Peter Säck, DLR
14:05 – 14:30	Volatile cycles for solar thermochemical production of hydrogen from water	Marc Chambon, PROMES
14:30 – 15:00	Coffee Break	
Topic: Solar Components - Concentrator and Storage Proposed chair: Gilles Flamant		
15:00 – 15:25	Accelerated aging of solar reflectors	Florian Sutter, DLR
15:25 – 15:35	Optimization of PTC Concentrator Geometry based on Optical Shape Measurements	Siw Meiser, DLR
15:35 – 16:00	Thermal storage for solar power plants based on low cost recycled material	Nicolas Calvet, PROMES
16:00 – 16:15	Break	
17:00	Departure for DLR	
17:45	Guided tour of the solar facilities at DLR	
19:30	Departure at DLR	
20:00	Dinner	

Wednesday, 24th of June		
Topic: Solar Systems – Conceptional Studies Proposed chair: Diego Alarcón		
Time	**Title of Presentation**	**Presenting Author**
08:30 – 09:00	Concentrated solar energy based cogeneration with linear Fresnel reflectors	François Veynandt, PROMES
09:00 – 09:10	Preliminary analysis of the coupling of MED desalination units to parabolic trough solar power plants.	Patricia Palenzuela, PSA
09:10 – 09:35	Design of an experimental Solar 5 kW Organic Rankine Cycle test bed at Plataforma Solar de Almeria	Mercedes Ibarra, PSA
09:35 – 10:00	Economical assessment of different central receiver concepts for USC steam cycles	Csaba Singer, DLR
10:00 – 10:10	A Non-Stationary Solar-Thermal Power Cycle	Jan Wurzbacher, ETH
10:10 – 10:40	Coffee Break	
Topic: Solar Hydrogen – Methane Reforming and Decomposition Proposed chair: Aldo Steinfeld		
10:40 – 11:05	Solar steam reforming of methane using molten salts as heat carrier	Isabelle Labach, ENEA
11:05 – 11:30	Thermal decomposition of methane - research into reaction kinetics	Michael Wullenkord, DLR
11:30 – 11:55	Solar thermal decarbonation of methane for co-production of hydrogen and carbon black	Gilles Maag, ETH
11:55 – 12:20	High temperature chemical reactor for co-production of hydrogen and carbon black from methane pyrolysis	Sylvain Rodat, PROMES
12:20 – 13:30	Lunch	
Topic: Heat and Mass Transfer 2 Proposed chair: Hans Müller-Steinhagen		
13:30 – 13:55	Heat Transfer Analysis of a Novel Pressurized Air Receiver For Concentrated Solar Power via Combined Cycles	Illias Hischier, ETH
13:55 – 14:20	Heat transfer analysis of a thermoelectric converter driven by concentrated solar radiation	Clemens Suter, ETH
14:20 – 14:45	Measuring radiative properties of participating media - Methodology, set-ups and selected results	Patrick Coray, PSI
14:45 – 15:10	Heat transfer model of a novel receiver for solar trough concentrators	Roman Bader, ETH
15:10 – 15:40	Coffee Break	
15:40 – 16:10	Closing Session	