



Program 12th SOLLAB Doctoral Colloquium

MONDAY, 6th June 2016

9:00-9:10 Welcome

SOLAR THERMOCHEMISTRY

| | | | |
|-------------|--|---------------|--------|
| 9:10-9:30 | Particles reactor based on the fluidized bed configuration | Lucia Arribas | IMDEA |
| 9:30-9:50 | Mechanism of carbothermic reduction of magnesium oxide | Adrian Coray | ETH |
| 9:50-10:05 | High-efficiency CSP plants based on thermo-electro-chemical conversion devices | Elena Díaz | IMDEA |
| 10:05-10:20 | Analyzing nonstoichiometric redox materials for solar thermochemical gas splitting | Marie Hoes | ETH |
| 10:20-10:40 | In situ thermo-mechanical diagnostics of materials subjected to high solar flux: Test device development | Yasmine Lalau | PROMES |

10:40-11:10 COFFEE BREAK

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| 11:10-11:25 | Product distribution from solar pyrolysis of agricultural and forestry biomass residues | Rui Li | PROMES |
| 11:25-11:40 | Experimental and theoretical assessment of a solar thermal calcination reactor | Gkiokchan Moumin | DLR |
| 11:40-12:00 | A pressurized high-flux solar reactor for the thermochemical gasification of carbonaceous feedstock | Fabian Müller | PSI |
| 12:00-12:15 | Calcination of CaCO ₃ using Continuous Fluidized Bed Solar Reactors | Inma Perez | PROMES |
| 12:15-12:30 | Particle mix reactor for reduction of redox materials in solar thermochemical water splitting | Sebastian Richter | DLR |
| 12:30-12:45 | Solar thermochemical splitting of CO ₂ via isothermal redox cycling | Maria Tou | ETH |

13:00 LUNCH

DESALINATION AND SOLAR PHOTOCHEMISTRY

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| 14:30-14:45 | Modeling, optimization and control for efficient management of resources in solar desalination processes | Jose Carballo | PSA |
| 14:45-15:05 | Mechanistic modelling solar water disinfection based on intracellular ROS generation and influence of solar mild heat | María Castro | PSA |
| 15:05-15:20 | Solar photochemical and photocatalytic processes for fresh-cut industry wastewater treatment and reuse | L. Samira Nahim | PSA |
| 15:20-15:35 | Integration of photochemical solar processes with others advanced techniques and elimination of the contaminants emerging concern in the landfill leachate treatment | Ana Ruiz | PSA |

18:00 KAYAK



TUESDAY, 7th June 2016

| MEASUREMENTS, CHARACTERIZATION & MATERIALS | | | |
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| 09:30-09:50 | Backward-gazing method for measuring heliostats optical errors | Mathieu Coquand | PROMES |
| 09:50-10:10 | Analysis of solar reflectors behavior under special environments affected by highly corrosive pollutants | Alejandro García | PSA |
| 10:10-10:30 | Coatings optimization for solar receiver tubes using modified solar spectrums | Antoine Grosjean | PROMES |
| 10:30-10:50 | Flux density measurement for industrial-scale solar power towers | Matthias Offergeld | DLR |
| 10:50-11:30 | COFFEE BREAK | | |
| 11:30-11:50 | Airborne optical characterization of parabolic trough collector fields | Christoph Pahl | DLR |
| 11:50-12:10 | Erosion of mirrors in desert environments | Florian Wiesinger | DLR |
| 12:10-12:30 | Atmospheric Extinction of Solar Radiation in PSA. Application to Solar Thermal Electric Plants | Maria Elena Carra | PSA |
| 12:30-12:45 | Development and benchmarking of All Sky Imager derived DNI nowcasts | Pascal Kuhn | DLR |
| 13:00 | LUNCH | | |

| LINEAR FOCUSSING SYSTEMS | | | |
|--------------------------|---|------------------|--------|
| 14:30-14:45 | Modelling of innovative heat transfer fluids used in solar receiver tubes | Rafael Aguilar | PSA |
| 14:45-15:05 | Experimental and Numerical Investigation of a Pilot Parabolic Trough Power Plant Including a Thermocline Thermal Energy Storage | Thomas Fasquelle | PROMES |
| 15:05-15:20 | Optimizing design of a Linear Fresnel Reflector for process heat supply | Diego Pulido | PSA |
| 21:00 | GALA DINNER | | |

WEDNESDAY, 8th June 2016

| THERMAL ENERGY STORAGE | | | |
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| 11:00-11:20 | Solar thermochemical energy storage via solid-gas redox reactions | Laurie André | PROMES |
| 11:20-11:40 | Thermal Energy Storage Materials Made Of Natural And Recycled Resources For CSP In West Africa | Eric S. Kenda Nitedem | PROMES |
| CENTRAL RECEIVER SYSTEMS | | | |
| 11:40-11:55 | Simulation and optimization of Solar Tower plant receivers | Peter Schöttl | ETH |
| 11:55-12:15 | Experimental analysis of the forced convective heat loss from cavities of multi-MW scale solar central receiver systems | Silvan Siegrist | DLR |
| 12:15-12:35 | Experimental investigation of heat transfer in a directly irradiated ceria particle bed under vacuum conditions | Johannes Grobbel | DLR |
| 13:00 | LUNCH | | |