Tuesday, 23 September 2025

9:00 AM - 9:30 AM - SALA 1 - Las Salinas de Cabo de Gata

Welcome address from the conference organizers

9:30 AM - 11:00 AM - SALA 1 - Las Salinas de Cabo de Gata

Global Update on CST Technology, Market and Commercial Plants

11:00 AM - 11:30 AM -

Coffee Break

11:30 AM - 12:30 PM - SALA 1 - Las Salinas de Cabo de Gata

Welcome address from Institutional Representatives

12:30 PM - 2:15 PM -

Lunch Break

2:15 PM - 3:45 PM - SALA 1 - Las Salinas de Cabo de Gata

Spanish CST Scenario

3:45 PM - 4:15 PM -

Coffee Break

4:15 PM - 6:00 PM - SALA 1 - Las Salinas de Cabo de Gata

CST for Process Heat

6:00 PM - 7:30 PM - Entrance Area

Poster Session Tuesday

Thermal and dynamic analysis of a solar particle receiver with integrated thermal energy storage

Jesús Alberto Moctezuma Hernandez1.

1Universidad de Salamanca.

Location specific design and deployment scenarios of solar concentrators for efficient photocatalytic hydrogen production

Aman Dhiman1.

1Brunel University of London.

Conceptual Design of Solar Driven Oxygen Permeable Membrane Reactor

Pei Wang1.

1College of Renewable Energy, Hohai University.

Performance and Cost Evaluation of a Structured Thermal Energy Storage Tank

Oriol Sanmartí1.

1Universitat Politècnica de Catalunya - BarcelonaTech (UPC).

Two-Step Thermochemical Water Splitting Using Industrial Heat from Steel Industry: System and Reactor Analysis

Yehyeong Lim1.

1M.S..

Development of a novel concrete mixture for high-temperature thermal energy storage applications

Saranprabhu Mani Kala1.

1University of Lleida.

Study of an air-molten salt heat exchanger, a CFD and 1D approach

Jordi Vera I Fernandez1.

1Universitat Politecnica de Catalunya.

Detailed Phase-Change Characterization and Long-Term Stability Study of HITEC Salt for Thermal Energy Storage

Valery Vuillerme1.

1CEA.

Guideline for Techno-Economic Assessment of Solar Fuel Production

Andreas Rosenstiel1.

1Deutsches Zentrum für Luft- und Raumfahrt, Institute of Future Fuels, Germany.

Electricity and Steam Production Through Thermal Energy Storage for Green Hydrogen Generation

Patricia Santamaría Prado1.

1RPow Consulting SL.

LONG DURATION AND CUTTING-EDGE THERMOCHEMICAL HEAT STORAGE AND UPGRADING TECHNOLOGY FOR HEAT AND POWER APPLICATIONS

Khushwant Singh Chauhan1.

1Department of Thermal and Fluid Engineering, University of Twente, 7500 AE, Enschede, The Netherlands.

Flowability and Heating Tests of Iron-Based Oxide Catalysts in a Labo-scale, Fluidized Bed Solar Thermochemical Water Splitting Reactor

Hayatao Kondo1.

1Faculty of Engineering/Graduate School of Science & Technology, Niigata University.

Poly-cation metal oxides synthesized by solid-phase reaction for a two-step thermochemical water splitting cycle

Takeru Usami1.

11. Faculty of Engineering / Graduate School of Science & Technology, Niigata University, 8050 Ikarashi 2-nocho, Niigata 950-2181, Japan.

Mn-based thermochemical energy storage honeycomb body suitable for large-scale thermal energy storage

Shengchi Gan1.

1Zhejiang University.

GEN VERDE: Innovation in Renewable Heat and Storage Systems for Industrial Decarbonization

José F. Gallego1.

1Empresarios Agrupados Internacional.

Development of a High Temperature Phase Change Material Slurry Storage with Supercooling Method

Daniel Carbonell1.

1DCarbo Energy Consulting S.L., OST - Eastern Switzerland University of Applied Science, SPF.

Materials selection for phase Change heating system

Sarah Yasir1.

1University of Derby.

Material Choice for Particle Thermal Energy Storage

Benjamin Castelnau1.

1EDF R&D.

Evaluation of Thermal Losses in a Silo Containing Particles for Long Duration Energy Storage

Bo LIU1.

1EDF R&D.

Sulfur Dioxide Disproportionation by Electrochemical Route for Long Term Thermal Storage

Luca Turchetti1.

1ENEA.

Techno-economic analysis of a hybrid solar system with integrated electrical and thermal storage for industrial process heat demand

Raphael Albert1.

1CEA.

Corrosion resistance of aluminized and uncoated IN617 in molten carbonates and chlorides at 700º C

Alina Agüero1.

1Instituto Nacional de Técnica Aeroespacial.

A Prototype of Vertical Parabolic Trough Fluidized- bed Reactor for Solar-driven Biomass Pyrolysis

zhang wanlin1.

1中国科学院工程热物理研究所.

Improving UHTES systems performance by enhanced design modelling: the SUNSON-Box approach

Alfonso Hernández1.

1IDENER R&D, Thermodynamics Division.

Thermal Wave Flowmeter and Thermal Mass Flowmeter for Application in Molten Salts

Jan Skarohlid1.

1Czech Technical University in Prague.

Single-Medium Indirect Thermocline Thermal Energy Storage: An Improved Design

Mattia Cagnoli1.

1ENEA.

Redesign of Molten Salt Tanks to Prevent Buckling Failure

Craig McGregor1.

1Stellenbosch University.

Retrofit Layer(s) for Temperature Homogenization of Molten Salt Tank Floor

Youyang Zhao1.

1National Renewable Energy Laboratory.

Protection System for a Solar Calciner Window using Electrostatic Separation of Particles

Gkiokchan Moumin1.

1German Aerospace Center (DLR), Institute of Future Fuels.

Innovative application based on artificial intelligence for the pre-design of solar thermal-PV plants for the decarbonisation of industry

Javier Baigorri Martinez1.

1CENER.

Impact of Oxygen and Nitrogen Oxide Partial Gas Pressures on 310 N Stainless Steel Corrosion in Solar Salt at 600 °C

Sumit Kumar1.

1German Aerospace Center (DLR).

Economic Impact of Solar Heat Availability in Green Methanol Production

Enric Prats-Salvado1, 2.

1German Aerospace Center (DLR),

2RWTH Aachen University.

Pilot-Scale Investigation of Encapsulated PCM Geometries for Cooling Applications

Álvaro Castro Vizcaíno1.

1Universidad de Almería.

A new experimental protocol for the heat storage performance assessment of plant waxes, based on the evolution of micro- and nano- scale surface features during crystallization

George Claudiu Savulescu1.

1TU Eindhoven.

Numerical Study of SiSiC Thermal Energy Storage: Impact of Porosity and Geometry

Abdullah Ayed Alrwili1, 2.

1Cranfield University,

2Northern Border University.

Development of a solar drop-tube reactor for waste biomass fast pyrolysis

Quentin FALCOZ1.

1Research Manager, PROMES CNRS.

Performance and Pressure Drop of a Packed Bed Thermal Energy Storage Unit

Ye Wang1.

1Australian National University.

Hybrid Sensible-Latent Heat Thermal Energy Storage for Concentrated Solar Power Applications

Antonio Avila-Marin1.

1CIEMAT - Plataforma Solar de Almeria (PSA), Ctra. De Senes km 4.5, E-04200 Tabernas, Almeria, Spain.

SUNROADS: First tests of RAP heating using the beam-down linear Fresnel reflector prototype

José Antonio Almendros-Ibáñez1.

1University of Castilla-La Mancha.

Structured versus random arrangement filler: experimental comparison

Esther Rojas1.

1PSA / CIEMAT.

Enhancing the Altayr Packed Bed Storage Facility at PSA: Upgrades and Optimization

Marina Casanova1.

1CIEMAT - Plataforma Solar of Almería.

FEM simulations of the first electrical charging phase of a thermo-electric energy storage system

Daniele Nicolini1.

1ENEA.

Integration of CSP in the asphalt industry: drying of RAP solids with a beam-down linear Fresnel

Paula M. Flores-Ríos1.

1Universidad de Castilla-La Mancha.

Rotary Kiln Particle Receiver Design and Performance for Solar-driven Biomass Pyrolysis Plant

Marco Colombi1.

1Politecnico di Milano.

Factors of Merit for a Solar Thermal Heat Transfer Fluid Selection Algorithm

Jeremy Sment1.

1Sandia National Laboratories.

Research and development on thermal storage in GREENOLIVE project

Margarita Rodríguez García1.

1CIEMAT - Plataforma Solar de Almería.

Solar-Aided Hydrothermal Treatment of Agricultural Waste: Integrated Bio-Oil Production and Life Cycle Assessment with Thermal Energy Storage

Onur Taylan1, 2.

1Middle East Technical University (ODTÜ/METU),

2Center for Solar Energy Research and Applications (ODTÜ-GÜNAM).

Performance Enhancement of Hemispherical Solar Still Using Small Stones and Reflective Mirrors: An Experimental Study

TAWFIQ CHEKIFI1.

1Unité de Recherche Appliqué en Energies Renouvelables, URAER, Centre de Développement des Energies Renouvelables, CDER, 47133, Ghardaïa, Algeria.

Numerical Analysis of High-Temperature Fluidic Heat Recovery Configurations in a Solar Reactor

Stefan Brendelberger1.

1Deutsches Zentrum für Luft- und Raumfahrt e. V..

Synthesis and characterization of AI-selected perovskites for H2 production via thermochemical cycles

Alberto de la Calle1.

1Instituto de Catálisis y petroleoquímica.

Techno-economic assessment for a solar-driven biogas steam reforming for hydrogen production

Marco D'Auria1.

1ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development.

Modeling and Techno-Economic Assessment of the multiTESS Concept for Sector-Coupled Energy Systems

Zahra Mahdi1.

1Solar-Institut Jülich of FH Aachen University of Applied Sciences.

Development of Eutectic Nitrate/Carbonate Phase Change Materials and Encapsulation Units for Medium-Temperature Thermal Energy Storage

Jiatai Yang1.

1Zhejiang University.

Design Optimization of Solar Charged Radial Packed Bed TES for Heating Applications

Jeremy Sment1.

1Sandia National Laboratories.

Methane Chemical Looping Cycles Using a γ-Al2O3 Supported Perovskite Catalyst

Roberta Russo1.

1Istituto di Scienze e Tecnologie per l’Energia e la Mobilità Sostenibili.

Thermodynamic Modelling of a Multi-modular Fluidized Bed TES System for High Temperature Steam Generation

Fulvio Bassetti1.

1Magaldi Power.

Investigation and assessment of industrial waste heat recovery potential: Based on energy consumption and CO2 emissions

Abdechafik El harrak1.

1UM6P-LIMSET.

Investigation of steam effect on calcium looping process for cement industry applications

Gkiokchan Moumin1.

1German Aerospace Center.

Molten Salt technology as a flexible solution for power-gas interconnection

Marco D'Auria1.

1ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development.

Hydrogen Production from Natural Gas via Pyrolysis using Concentrated Solar Thermal Technology

José Henrique Martins Neto1.

1Centro Federal de Educação Tecnológica de Minas Gerais - CEFET-MG.

Experimental Study on Interfacial evaporation of plasmon effect based on Asymmetric CPC Solar Concentrated

Wang Fangxing1.

1presenterSchool of Energy and Power Engineering, Changsha University of Science and Technology,Changsha 410114,China.

Analysis of Particle Clumping and the Strategies Used to Reduce this Phenomenon

Hernando Romero-Paredes Rubio1.

1Universidad Autónoma Metropolitana Iztapalapa.

On the buckling Failures in Thermal Energy Storage Tanks

Stuart Bell1.

1Queensland University of Technology.

Stability of Cu-doped SrCO3 in Thermochemical energy storage cycles: Effect of Synthesis method

Hernando Romero-Paredes Rubio1.

1Departamento de Ingeniería de Procesos e Hidráulica, Universidad Autónoma Metropolitana Iztapalapa.

Molten Salt driven coupling of methanation and pyrolysis: a preliminary assessment

Asma Nouira1.

1Post-Doc Researcher.

Performance Evaluation of a Concentrated Solar Power-driven Adsorption Desalination

Ababacar Thiam1.

1Alioune Diop University.

Dynamic Loop for Molten Salt Corrosion Testing in Electric Heaters

N Carmen Pavon-Moreno1.

1University of seville.

SHIP IDAE guide and presentation of feasibility analysis simulation tool, following standardization

Egoitz San Miguel1.

1TEWER Engineering S.L..

Influence of different magnesium sources in doping molten salts for the mitigation of corrosion for CSP/CST technologies

Mafalda Gil1, 2.

1LNEG,

2FCUL.

Presenting “Solar Thermal Energy for the Industry: Advanced Integration and Validation at Lab (STEILAB)”

Mercedes Ibarra1.

1Universidad Nacional de Educación a Distancia (UNED).

Cement Clinker Production driven by Multiple Reflection Solar Concentration

Dongqiang Lei1.

1China National Solar Thermal Energy Alliance.

Thermal fatigue experiments in encapsulated phase change materials for a solar-cooling thermal storage system

Juan Luis Bosch Saldaña1.

1University of Almería.

Unravelling the redox mechanisms of Nd0.6Sr0.4MnO3 perovskite in a Two-Step Thermochemical Conversion of CO2: synergistic experimental and DFT approach

Khalid Al-Ali1.

1khalifa University.

Preliminary Assessment of a Hybrid Thermal Energy Storage System Based on Nanoparticle-Enriched Phase Change and Thermochemical Materials

Francesco Rovense1.

1ENEA Casaccia Research Center.

Mechanical characterization of CaO based pellets for thermochemical heat storage

Miguel Ángel Garrido1.

1Rey Juan Carlos University.

Continuous Solar-Powered Syngas Production: Advancements and Insights from the EU SOMMER Project

Asmaa Eltayeb1.

1German Aerospace Center.

Heat transfer in packed beds of crushed rocks

Eduard Fourie1.

1Stellenbosch University.

Thermal Performance of a Thermocline Storage System with Multilayer Solid-PCM

Oriol Sanmartí1.

1Universitat Politècnica de Catalunya- BarcelonaTech (UPC).

Evaluating Demand-Driven Performance Variations in Process-Integrated Solar Heating Systems

Mercedes Ibarra1.

1Universidad Nacional de Educación a Distancia (UNED).

Techno-Economic Study of Concentrated Solar Technologies for Process Heat Applications: Comparison of Different Sites in Mexico

Gregor Bern1.

1Fraunhofer ISE.

Parabolic Troughs in Process and District Heating

Navina Konz1.

1German Aerospace Center, Institute of Solar Research.

Calcium-Based Materials For High Temperature Fluidised Bed Thermochemical Storage

Luca Turchetti1.

1ENEA.

Solar Thermal Energy Planner (STEP 1): A new decision support tool for solar industrial process heat applications

Jeremy Sment1,

Guangdong Zhu2.

1Sandia National Laboratories,

2National Renewable Energy Laboratory.

Solar Heat for Industrial Processes: A Comprehensive Bibliometric Analysis

Aabla YAHYA1.

1Green Energy Park (um6p/iresen), Benguerir, Morocco.

Lessons Learned from the Failure Assessment and Improvement Proposals for the Molten Salt Thermal Storage Tank of the Pilot Plant

Mauro Henriquez1.

1CentroCentro Ibérico de Investigación en Almacenamiento de Energía.

Micro Direct Steam Generation in linear Fresnel plants

Miguel Frasquet1.

1SOLATOM.

Environmental Impact Assessment of CSP-PV hybrid system with Cascade PCM TES for Heat and Power applications

Tanima Sharma1.

1KTH.

Model Validation and Testing of a CO2/H2O Driven Calciner

Nathan Schroeder1.

1Sandia National Laboratories.

Preliminary CFD-Based Design of a Modular High-Temperature Thermal Energy Storage System for CSP Applications

Onur Taylan1, 2.

1Center for Solar Energy Research and Applications (ODTÜ-GÜNAM),

2Middle East Technical University (ODTÜ/METU).

Experimental results of the one-axis tracking SunDial: a collector for solar heat for industrial heating

Antonio Rovira1.

1Universidad Nacional de Educación a Distancia.

Thermoeconomic diagnosis of a combined water desalination and power plant

Roberto Leiva-Illanes1.

1Universidad Técnica Federico Santa María.

Performance Enhancement of Pyramid solar still Using pebbles : An Experimental Study

reski khelifi1.

1uraUnité de Recherche Appliqué en Energies Renouvelables, URAER, Centre de Développement des Energies Renouvelables, CDER, 47133, Ghardaïa, Algeria.

80x80 Matrix Micro-Reactor Receiver Control Approach for High Efficiency and Conversion Dry Methane Reforming

Jean-Francois Dufault1.

1Université de Sherbrooke.

Thermochemical Hydrogen Production in an Indirectly Irradiated Multi-Tubular Reactor; Model-based design and Laboratory Testing

Remo Schäppi1.

1Massachusetts Institute of Technology.

Impact of Redox Material, Operating Conditions and Auxiliary Processes on STCH based Hydrogen Production efficiency

Ziyao Wu1.

1Massachusetts Institute of Technology.

A prospective analysis of synergies between Pumped Thermal Energy Storage systems and CSP

Rubén Abbas1.

1Universidad Politécnica de Madrid.

7:30 PM - 9:00 PM -

Welcome Reception

Wednesday, 24 September 2025

8:30 AM - 9:50 AM - Sala 4 - La Fabriquilla **Analysis and Simulation of CSP Systems 1**	8:30 AM - 10:15 AM - Sala 6 - San Telmo **Receivers and Heat Transfer Media: Point Focus Systems 1**	8:30 AM - 10:15 AM - SALA 2 - Nueva Almería **Solar Industrial Process Heat and Thermal Desalination 1**	8:30 AM - 10:15 AM - SALA 1 - Las Salinas de Cabo de Gata **Thermal Energy Storage Materials, Media, and Systems 1**
8:30 AM - 8:50 AM **Toward airborne real-time condition monitoring systems of solar tower power plants** Alexander Schnerring1. 1DLR Institute of Solar Research.	8:30 AM - 8:50 AM **A High-Accuracy Model for Solar Receiver Thermal Performance: CFD Validation and Application** Xiaolong Li1. 1Xi'an Jiaotong University.	8:30 AM - 8:50 AM **Control of a concentrated solar plant for heat production under various thermal demand** Eliott Girard1. 1PROMES-CNRS Laboratory.	8:30 AM - 8:50 AM **Pilot Development to Demonstrate an Electric Thermal Energy Storage (ETES) System** Guangdong Zhu1. 1National Renewable Energy Laboratory.
8:50 AM - 9:10 AM **A Validated Machine Learning Approach to Efficient Thermal Energy Storage Simulation Using Synthetic Data** Falko Schneider1. 1Solar-Institute Jülich, FH Aachen University of Applied Sciences, Germany.	8:50 AM - 9:10 AM **Two-Stage Aiming Strategy Optimization for Enhanced Thermal Safety and Optical Efficiency in External Receivers** Maitane Ferreres Eceiza1. 1Fraunhofer Institute for Solar Energy Systems ISE.	8:50 AM - 9:10 AM **Compact Solar Receivers: Emerging Opportunities for Industrial Heat Processes** María José Montes1. 1National University of Distance Education (UNED).	8:50 AM - 9:10 AM **Seasonal Energy Storage integration in Brønderslev PTC Field and Biomass Hybrid CHP Plant for DH** Rafael Pérez Santana1. 1Aalborg CSP A/S.

9:10 AM - 9:30 AM **Environmental assessment of a Concentrated Solar Power plant with a Molten Salt Electrical Heater** María Asunción Palmero González1. 1Universidad Carlos III de Madrid.	9:10 AM - 9:30 AM **Absorbing gas solar receiver - Performance characterization and on-sun experimental testing** Simone A. Zavattoni1, 2. 1SUPSI-DTI-MEMTi, 2GECOS - Politecnico di Milano.	9:10 AM - 9:30 AM **RenovAl: A Novel Annular Fresnel Solar Furnace for Aluminum Melting and Recycling** Pablo Castillo1. 1Fraunhofer Chile Research.	9:10 AM - 9:30 AM **Microwave Heating of Solar Salt in a Lab-Scale Thermal Energy Storage: Experimental Study** Mattia Cagnoli1. 1ENEA.
9:30 AM - 9:50 AM **Automated Mass Flow Distribution Measurement in linear Concentrating Solar Systems** Thomas Kraft1. 1Fraunhofer ISE.	9:30 AM - 9:50 AM **Preliminary assessment of the collector-tube flow in an external solar receiver** Rafael Pérez-Álvarez1. 1Department of Thermal and Fluids Engineering, Carlos III University of Madrid.	9:30 AM - 9:50 AM **Solar collectors for 500+°C process heat** Fabian Gross1. 1sbp sonne gmbh.	9:30 AM - 9:50 AM **From lab to pilot scale: Current status of liquid metal-based heat storage experiments** Florian Kreißig1. 1Karlsruhe Institute of Technology.
	9:50 AM - 10:10 AM **Comparison of modelling techniques for fluidized particle based cavity receivers** Simone Girelli1. 1Politecnico di Milano, Energy department.	9:50 AM - 10:10 AM **Performance results of a solar thermal system to co-generate steam and hot water for a brewery** Joakim Byström1. 1Absolicon solar Collectors AB.	9:50 AM - 10:10 AM **Advancing Industrial Decarbonization: Development of the Magaldi Fluidized Bed Green Thermal Energy Storage** Fulvio Bassetti1. 1Magaldi Power.
10:15 AM - 10:45 AM - **Coffee Break**			

10:45 AM - 12:45 PM - Sala 4 - La Fabriquilla **Solar Fuels and Chemical Commodities 1**	10:45 AM - 12:45 PM - Sala 6 - San Telmo **Receivers and Heat Transfer Media: Point Focus Systems 2**	10:45 AM - 12:45 PM - SALA 2 - Nueva Almería **Advanced Materials, Manufacturing, and Components 1**	10:45 AM - 12:25 PM - SALA 1 - Las Salinas de Cabo de Gata **Thermal Energy Storage Materials, Media, and Systems 2**
10:45 AM - 11:05 AM **Long-term and flexible kilowatt-scale production of hydrogen using concentrated sunlight** Guilherme Armas1. 1École Polytechnique Fédérale de Lausanne.	10:45 AM - 11:05 AM **Accelerated Aging of SiC Coating: Numerical and Experimental Study** Thiane Ndiaye1. 1PROMES-CNRS laboratory.	10:45 AM - 11:05 AM **Corrosion behavior of Fe- and Ni-based alloys in molten solar salt and mitigation strategies** Ceyhun Oskay1. 1DECHEMA-Forschungsinstitut.	10:45 AM - 11:05 AM **Long-term thermal energy storage in hot blast stoves** Ye Wang1. 1Australian National University.
11:05 AM - 11:25 AM **Artificial Intelligence-Driven Materials Discovery for Solar Thermochemical Hydrogen Generation** Alberto De la Calle1. 1ICP, CSIC.	11:05 AM - 11:25 AM **Prototype Development, Testing, and Modeling for a Solar Light-Trapping Planar-Cavity Particle Receiver** Alexander Zolan1. 1National Renewable Energy Laboratory.	11:05 AM - 11:25 AM **Corrosion Performance Of Sol-Gel Coated P91 In Ternary Molten Nitrate Under Dynamic Conditions.** Francisco Javier Pérez Trujillo1. 1Complutense University of Madrid.	11:05 AM - 11:25 AM **Thermal Energy Storage and Exchange with Integrated Rotating Media Transport (Sandewirm): An Overview** Shaun Sullivan1. 1Brayton Energy.

11:25 AM - 11:45 AM **Efficient water splitting via a solar hybrid thermochemical cycle with sulphur dioxide depolarized electrolysis** Kai Risthaus1. 1German Aerospace Center.	11:25 AM - 11:45 AM **Additive Manufactured High Temperature Effectiveness Air-based Rotary Solar Thermal Receiver and Heat Flux Spillage Recovery Device for Central Tower Applications** Pok-Wang Kwan1. 1Odqa Renewable Energy Technologies.	11:25 AM - 11:45 AM **Electroless Ni-P Coatings as a Corrosion Mitigation Strategy for Complex Geometries in Molten Nitrate Salts** Christoph Grimme1. 1DECHEMA-Forschungsinstitut.	11:25 AM - 11:45 AM **Molten Salt Thermal Energy Storage - Pilot Unit and Experimental Activities** Tomáš Melichar1. 1Centrum výzkumu Řež.
11:45 AM - 12:05 PM **Experimental Study of a Photothermal Catalytic Hydrogen Production System from Biomass based on Double-axis Linear Fresnel Solar Collector** Dongqiang Lei1. 1Institute of Institute of Electrical Engineering, Chinese Academy of Sciences.	11:45 AM - 12:05 PM **Update on the commissioning of the HEHTRES CentRec® receiver and the solar high temperature particle test facility** Markus Reichart1. 1DLR (German Aerospace Center)., Institute of Solar Research, Stuttgart, Germany.	11:45 AM - 12:05 PM **Solar Sintered Ti + 5 vol.% TiB2 Composites for Biomedical Applications** Jaroslav Kovacik1. 1IMMM SAS.	11:45 AM - 12:05 PM **Laboratory prototype of a double layered radial-flow high-temperature packed bed TES** Konstantinos Apostolopoulos-Kalkavouras1. 1KTH.

12:05 PM - 12:25 PM **Solar Powered Fluidized Bed Reactor for Lunar Ilmenite Reduction** Thorsten Denk1. 1Ciemat-PSA.	12:05 PM - 12:25 PM **Experimental study of fixed and fluidized bed operation of a novel particle receiver** Fernando Hernández Jiménez1. 1Universidad Carlos III de Madrid.	12:05 PM - 12:25 PM **Experimental and Numerical Investigations of a 3D-printed Monolithic Channel Receiver in Hot Sodium** Alexandru Onea1. 1Karlsruhe Institute of Technology.	12:05 PM - 12:25 PM **Design considerations for fluidized-bed particle HX for next generation CSP** Gregory Jackson1. 1Colorado School of Mines.
12:25 PM - 12:45 PM **Investigation into the performance of the Hybrid Sulphur (Hy-S) HySelect Demo Plant for green hydrogen production** Francesco Rovense1. 1ENEA Casaccia Research Centre.	12:25 PM - 12:45 PM **Early Test Results of the Generation 3 Particle Pilot Plant** Jeremy Sment1. 1Sandia National Laboratories.	12:25 PM - 12:45 PM **Thermo-Mechanical Study of Silicon Carbide (SiC) for Fluidized Bed Solar Receivers** Oussama AMOUD1, 2. 1PROMES, 2UNIVERSITY OF PERPIGNAN.	
12:45 PM - 2:00 PM - **Lunch Break**			
2:00 PM - 4:00 PM - Sala 4 - La Fabriquilla **Solar Fuels and Chemical Commodities 2**	2:00 PM - 4:00 PM - Sala 6 - San Telmo **Receivers and Heat Transfer Media: Point Focus Systems 3**	2:00 PM - 4:00 PM - SALA 2 - Nueva Almería **Advanced Materials, Manufacturing, and Components 2**	2:00 PM - 4:00 PM - SALA 1 - Las Salinas de Cabo de Gata **Thermal Energy Storage Materials, Media, and Systems 3**

2:00 PM - 2:20 PM **Enhancing Performance of Pressurized Chemical Looping Methane Reforming with Ni-Ceria** Kathryn Trimm1. 1University of Florida.	2:00 PM - 2:20 PM **Field testing of a small-scale hybrid solar gas turbine in a rural community** Evan Humphries1. 1University of Pretoria.	2:00 PM - 2:20 PM **Optimization of anti-soiling coatings for glass covers in solar systems** Naia Barandica1, 2. 1CIEMAT-PSA, 2Universidad Autónoma de Madrid.	2:00 PM - 2:20 PM **Corrosion resistance of HVOF-Inconel 625 coatings in molten salt-based nanofluids for TES applications** Lorena Betancor-Cazorla1. 1Universitat de Barcelona.
2:20 PM - 2:40 PM **Solar driven biomass gasification for negative emis-sion methanol production** Alejandro González Silvestre1. 1Politecnico di Milano.	2:20 PM - 2:40 PM **Multi-Variate Optimization of Generation 3 CSP Falling Particle Receivers Using Ray Tracing** Jeremy Sment1. 1Sandia National Laboratories.	2:20 PM - 2:40 PM **Enhanced Durability of Advanced Solar Reflectors: Performance under CASS Testing** Daniela Molina Hernandez1. 1CIEMAT, Centre for Energy, Environmental and Technological Research, Almería, Spain.	2:20 PM - 2:40 PM **Aluminide coatings: a step towards enhancing the lifetime of CSP and TES components** Loïc Oger1. 1Instituto Nacional de Técnica Aeroespacial (INTA).
2:40 PM - 3:00 PM **Extended R2Mx MW-Scale Plant Model for Solar Thermochemical Fuel Production** Stefan Brendelberger1. 1German Aerospace Center (DLR).	2:40 PM - 3:00 PM **Preliminary Study on Tubular Volumetric Absorbers for Concentrated Solar Power Plants** Rafael Pérez-Álvarez1. 1Department of Thermal and Fluids Engineering, Carlos III University of Madrid.	2:40 PM - 3:00 PM **Selective Coatings for high temperature Trough and Linear Fresnel receivers for use in air** Kaoru Tsuda1. 1NANO FRONTIER TECHNOLOGY Co.,LTD.	2:40 PM - 3:00 PM **Multiphase material compatibility of stainless steel 310N with MgCl2-NaCl-KCl salt at 800 °C for next generation molten salt thermal energy storage** Hem Barot1. 1German Aerospace Center (DLR e.V.).

3:00 PM - 3:20 PM **Implementation of Novel Perovskite Redox Materials in a Full-Cycle Multiphysics Reactor Model for Solar Thermochemical Fuel Production** Domenico Ferrero1. 1Energy Department (DENERG), Politecnico di Torino.	3:00 PM - 3:20 PM **Using Damage-Informed Heliostat Aiming Strategies to Improve Central Receiver Lifetimes** Jacob Wenner1. 1University of Wisconsin-Madison.	3:00 PM - 3:20 PM **Solar Radiation Impact on Solar Reflectors Performance: Results from Outdoor Exposure Experiments** Ricardo Sanchez-Moreno1. 1CIEMAT, Plataforma Solar de Almería.	3:00 PM - 3:20 PM **Solar-driven latent heat thermophotovoltaic batteries: A numerical assessment** Myrto Zeneli1. 1Universidad Politécnica de Madrid.
3:20 PM - 3:40 PM **Development of a Techno-Economic Analysis Framework for a Solar Thermochemical Fuel Production Process** Gregory Jackson1. 1Mines.	3:20 PM - 3:40 PM **Air-Cooled Secondary Concentrator for High Flux Applications** Kai Wieghardt1. 1German Aerospace Center (DLR), Institute of Solar Research, Linder Höhe, 51147 Köln, Germany.	3:20 PM - 3:40 PM **Comparative Analysis of Spectral-Splitting Multilayer Coatings for Compact PV-CST Hybridization** Antoine Grosjean1, 2. 1EPF Montpellier, 2PROMES-CNRS.	3:20 PM - 3:40 PM **A Demonstration System for Geological Thermal Energy Storage of Concentrating Solar Thermal** Guangdong Zhu1. 1NREL.
3:40 PM - 4:00 PM **Dry methane reforming Ni catalyst regeneration supported by thermodynamic predictions** Emeric Désilets1. 1UdeS.	3:40 PM - 4:00 PM **Experimental Analysis of Solid Particles Materials for High-Temperature Solar Receiver in Next-Generation CSP Plants** Khadija El Alami1. 1Green Energy Park.	3:40 PM - 4:00 PM **Novel Solar Mirrors Based on Tandem Silver-Aluminium Thin Films** Hosni Meddeb1. 1DLR, German Aerospace Center, Institute of Solar Research.	3:40 PM - 4:00 PM **Pilot plant design for Cascaded PCM-TES storage concept validation** Cristina Prieto1. 1University of Seville.

4:00 PM - 4:30 PM - **Coffee Break**			
4:30 PM - 6:30 PM - Sala 4 - La Fabriquilla **Solar Fuels and Chemical Commodities 3**	4:30 PM - 6:10 PM - Sala 6 - San Telmo **Hybrid Systems 1**	4:30 PM - 6:30 PM - SALA 2 - Nueva Almería **Advanced Materials, Manufacturing, and Components 3**	4:30 PM - 6:30 PM - SALA 1 - Las Salinas de Cabo de Gata **Thermal Energy Storage Materials, Media, and Systems 4**
4:30 PM - 4:50 PM **A Comprehensive Full-Cycle Model for Multiphysical Analysis of Solar Thermochemical Redox Reactors** Remo Schäppi1. 1Massachusetts Institute of Technology.	4:30 PM - 4:50 PM **Performance Evaluation of PV-CSP Hybrid Power Plants with Power-to-Heat Integration** Zahra Mahdi1. 1Solar-Institut Jülich of FH Aachen University of Applied Sciences.	4:30 PM - 4:50 PM **Surface Engineering concepts for Concentrating Solar Power materials: from simulation to almost-real operation** Ramón Escobar Galindo1. 1Departamento de Física Aplicada I, Escuela Politécnica Superior, Universidad de Sevilla (US), Virgen de África 7, 41011 Sevilla, Spain.	4:30 PM - 4:50 PM **Potential of waste refractory material as high temperature sensible storage materials** soukaina hrifech1. 1Green energy park.

4:50 PM - 5:10 PM **Techno-Economic Analysis STCH technology for hydrogen production** Ziyao Wu1. 1Massachusetts Institute of Technology.	4:50 PM - 5:10 PM **Environmental Assessment of a Hybrid CSP/PV System** Jeremy Sment1. 1Sandia National Laboratories.	4:50 PM - 5:10 PM **Durability and Optical Characterization of SiC and FeCrAl Under Concentrated Solar Thermal Conditions: An Accelerated Aging Study** Inmaculada Cañadas1. 1CIEMAT - Plataforma Solar de Almería.	4:50 PM - 5:10 PM **Mining byproducts for concentrated solar power (CSP) storage: concrete performance under thermal cycling** Ismail Amarray1, 2, Soukaina Hrifech1. 1Green Energy Park, 2Cadi Ayyad University.
5:10 PM - 5:30 PM **Optimization Strategies for Oxygen Partial Pressure Reduction in High-Temperature Solar Membrane Reactors** Asmaa Eltayeb1. 1German Aerospace Center.	5:10 PM - 5:30 PM **Evaluation of a Hybrid CAES-Reverse Osmosis Plant Driven by Concentrated Solar Power** Patricia Palenzuela1. 1CIEMAT-Plataforma Solar de Almería-CIESOL.	5:10 PM - 5:30 PM **Low-Power-Plasma Sprayed Inconel 625 Coatings for Solar Absorbers: Effect of High Temperature on the Absorptivity and Mechanical Integrity** Pedro Poza1. 1Rey Juan Carlos University.	5:10 PM - 5:30 PM **Long-term Service Effects on Thermophysical Properties and Structural Evolution of Molten Salts** Xin He1. 1Zhejiang University.

5:30 PM - 5:50 PM **Design of a Particle-Based Solar Receiver for Coupling with a Solar-Driven Pyrolysis Reactor** Megan Kirschmeier1. 1German Aerospace Center (DLR).	5:30 PM - 5:50 PM **Parametric analysis of optimised integrated CSP, PV and PTES plants** Antonio Rovira1. 1Universidad Nacional de Educación a Distancia (UNED).	5:30 PM - 5:50 PM **High temperature particle erosion of different coatings for the CentRec® collector ring** Ana Cleia González Alves1. 1German Aerospace Centre.	5:30 PM - 5:50 PM **Nanoadditive shields: A cure for jamming in Calcium-Looping energy storage systems** Francisco J. Durán-Olivencia1. 1Facultad de Física, Universidad de Sevilla, Avda. Reina Mercedes s/n, 41012 Seville, Spain.
5:50 PM - 6:10 PM **Designing Membrane Reactor Materials for Solar-Driven Syngas Production at High Temperatures** Alfonso J. Carrillo1. 1Instituto de Tecnología Química, UPV-CSIC.	5:50 PM - 6:10 PM **Design Considerations for a Commercial Scale Hybrid PV/CSP Power Plant** Jeremy Sment1. 1Sandia National Laboratories.	5:50 PM - 6:10 PM **Comparison of the efficiencies of different granular materials for CSP applications** Minerva Díaz1, 2. 1Universidad de Castilla-La Mancha, 2Instituto de investigación en Energías Renovables.	5:50 PM - 6:10 PM **Preliminary design of a storage module based on nanoparticle-enhanced phase-change materials to assess the use of magnetic fields for mitigating sedimentation issues** Francesco Rovense1. 1Enea Casaccia Research Centre.

6:10 PM - 6:30 PM **Development of Cyclic Double Virtual Phase Model for Packed-bed Solar Gasification Reactor** Hongyang Zuo1. 1Huazhong University of Science and Technology State Key Laboratory of Coal Combustion.		6:10 PM - 6:30 PM **Dark Alumina/Titania Complex Ceramic Coatings For Solar Absorbers** Armando Salito1. 1Gulhfi AG.	6:10 PM - 6:30 PM **Assessment of Solar Salt Used in Commercial CSP Plants: Thermophysical Properties After Extended Service** Mehran Nabahat1, Mauro Henríquez1, 2. 1Iberian Centre for Research in Energy Storage, 2Centro de Desarrollo Energético de Antofagasta.

6:30 PM - 7:30 PM - Aisle in front of Sala 4

Poster Session Wednesday

Surface engineering solutions for improving efficiency in CSP technologies

Camila Barreneche1.

1Universitat de Barcelona.

Facility for Research into High Solar Flux Measurement

Jesus Ballestrin1.

1CIEMAT - PSA.

Design of an Optimized Utility-Scale Heliostat Field Coupled with a Particle Fluidized Bed Solar Receiver

Benjamin Grange1.

1CSP-Boost.

High-Resolution Flux Measurement using a Concentrated Photovoltaic Cell

Richard Felsberger1.

1Graz University of Technology.

Hydrodynamic, Thermal and Optical Evaluation of Ceramic Foam Solar Absorbers

Antonio Avila Marin1.

1CIEMAT-PSA.

Impact of natural cleaning with rain in a Linear Fresnel solar field for process heat

Antonio Cazorla Marín1.

1Universitat Politècnica de València. Institute for Energy Engineering.

The Powder-to-Power Project: A MW-scale Demonstrator of a Solar Plant Using Fluidized Particles as Heat Transfer and Storage Media

Alex Le Gal1.

1PROMES-CNRS.

Application of Molten Salt in Parabolic Troughs - Solar Receiver Preheating, Filling and Drainage

Sonja Kallio1.

1Deutsches Zentrum für Luft- und Raumfahrt / Institue of Solar Research.

Thermo-hydraulic and thermo-mechanical evaluation of a Direct Steam Generation solar receiver using conjugate simulations

Israel AGUILERA-CORTES1.

1Laboratoire PROMES CNRS.

A Direct Method to Characterize Thermal Ratcheting in Packed Bed Thermal Energy Storage and First Lab Scale Results

Moritz Bitterling1.

1Fraunhofer ISE.

Joint Effects of pitch angle and azimuth angles on the aerodynamic probability characteristics of heliostat

Wen Zhang1.

1Chang’an University.

Structural Analysis of Molten Salt Thermal Energy Storage Tanks During Startup at Different Salt Inflow Conditions

Guangdong Zhu1.

1National Renewable Energy Laboratory.

Research on Gas-solid Heat Transfer Characteristics and Enhancement Mechanism of Fluidized Bed Solid Particle/sCO2 Heat Exchanger

Qiang YU1.

1China Agricultural University.

An Experimental Investigation of Straight-Shaped Porous Discrete Structure Configuration on the Particle Flow Behavior of Particle Heating Receivers

Rageh Saeed1.

1Mechanical Engineering Department, King Saud University, P.O.Box 800, Riyadh 11421, Saudi Arabia.

Effect of Localised High-Velocity Ports on Particle Heating in Solar Fluidised Beds

Mustafa Alqudah1.

1Victoria University of Wellington.

A Novel method to estimate solar absorptivity of granular materials for CSP applications

Leonel Mario Cerutti Cristaldo1.

1Universidad De Castilla-la Mancha.

Experimental and Numerical Analysis of Receiver Tube Bending in Parabolic Trough Collectors

MARIA FERNANDEZ TORRIJOS1.

1Universidad Carlos III Madrid.

Particle heat exchanger for the integration of CST into a supercritical CO2 Brayton power cycle

Daniel Benitez1.

1DLR Institut für Solarforschung: Deutsches Zentrum fur Luft- und Raumfahrt DLR Institut fur Solarforschung.

Energy Analysis of a Biomass-Fired Rankine Cycle Power Plant Integrated with Solar Direct Steam Generation: A Case Study

Antonio Cristaudo1.

1University of Calabria.

A Comparison of the Exergy and LCOS Performance of Simple and Recompression Brayton PTES System Configurations

Javier Muñoz-Antón1.

1Universidad Politécnica de Madrid.

Corrosion Behavior of Ni-Based Alloys in Dynamic Molten Carbonate Conditions for CSP Applications.

Jaime Chaves González1.

1Complutense Univeristy of Madrid.

Optimizing thermodynamic and environmental performance of solar cogeneration systems through heat transfer fluid selection: An integrated energy and LCA approach

simin anvari1.

1Department of Applied Physics, University of Salamanca, 37008, Salamanca, Spain.

Development and experimental validation of a cable actuated heliostat

Craig McGregor1.

1Stellenbosch University.

Preliminary analysis of CO2+GeCl4 and CO2+Cl3FSi mixtures for CSP application

Vladimir Naumov1.

1Università degli Studi di Brescia.

Multi-Stage Solar Receiver with Inclined Obstacles for Optimized Thermal Efficiency in CSP Systems

Hajar Rati1.

1Energy and Materials Research Group, Al Akhawayn University in Ifrane.

Fluidized particle-driven CSP integration model for MW-scale commercial applications

Cristina Prieto Ríos1.

1Build To Zero S.L..

VoCoRec Receiver Prototype Achieves 900°C Air Outlet Temperature

Kai Wieghardt1.

1German Aerospace Center (DLR), Institute of Solar Research.

Long Heliostat Facets: Integrating Polished Metal Reflectors with Formed Metal Sheet Supports

Craig McGregor1.

1Stellenbosch University.

Closed-loop control of heliostats, using reflectivity- modulating retroreflectors

Bernhard Adams1.

1Heliosync.

COOPERANT: A High Performance CSP Volumetric Receiver Coupled with Hybrid TES for Next Generation Power Cycles

Antonio Avila-Marin1.

1CIEMAT-PSA.

SOLAR: A CSP Problem Suite to Benchmark Optimization Solvers

Xavier Lebeuf1, 2.

1Polytechnique Montréal,

2GERAD.

Advancing Towards Real-Time Flux Control for CSP and Solar Fuels: A Comparative Study of Interpolation Methods

Olaia Itoiz1.

1CENER.

Optical system for sunlight collection, fiber transport and distribution

Daniela Fontani1.

1CNR-INO.

HelioscharPlus: A Versatile and Precise Modular System for Heliostat Characterization Across All Scales and Applications

Marina Sevilla1.

1Zepren Solutions S.L.

Zr,Gd doped CeO2 membranes: chemical expansion and selective vacuum evaporation

Peter Mechnich1.

1Deutsches Zentrum für Luft- und Raumfahrt.

Experimental investigation of vertical electrical super-heater design for olivine particles in CSP

Taras Koturbash1.

1KTH Royal Institute of Technology.

Experimental investigation and optimisation of flow dynamics of gravity moving bed electric heater for olivine particles in CSP

Taras Koturbash1.

1KTH Royal Institute of Technology.

Validation of a local-adaptative solar radiation model combining real data and a high-resolution digital elevation model

Judit García-Ferrero1.

1Universidad de Salamanca.

Heat flux characterization on a receiver tube heated by an induction solar simulator

Fernando Hernández Jiménez1.

1Universidad Carlos III de Madrid.

A Computational Tool for optical performance and design of heliostat fields

A. Sánchez González1.

1Energy Systems Engineering Group (ISE), Department of Thermal and Fluid Engineering, Universidad Carlos III de Madrid, Av. Universidad, 30, 28911, Leganés, Madrid, Spain.

CFD Analysis of Wind Mitigation Strategies for Falling Particle Receivers

Alicia Crespo1.

1University Rovira I Virgili.

Accelerated aging tests of absorber coatings

Laura Campos Guzmán1.

1DLR, Institute of Solar Research, Spain.

Yield Check of Concentrating Solar Thermal Systems

Stefan Mehnert1.

1Fraunhofer Institute for Solar Energy Systems (ISE).

Measurement of Concentrated Solar Flux in Solar Simulator Using Optical Fiber-Based Radiometer

Manuel Jerez1.

1Electronic Engineering Department, E. T. S. de Ingeniería, Universidad de Sevilla.

Design Considerations for Heliostat Fields: A Wind Load Perspective

Maziar Arjomandi1.

1University of Adelaide.

IDEA4Sun project: Intelligent Design & Experimental Application of Spectral Splitting and Selective Surfaces for PV-CST compact hybridization

Audrey Soum-Glaude1.

1PROMES-CNRS.

Innovative high thermal inertia multi material receiver using additive manufacturing

Álvaro Chomon1.

1TEWER Engineering S.L..

Thermal loss analyses of domestic-scale non-evacuated stationary PTCs with sinusoidal absorbers

Jihen Mahdhi1, 2.

1MAHTEP Group, Dipartimento Energia “Galilo Ferraris” (DENERG), Politecnico di Torino,10129 Turin, Italy,

2Mechanical Modelling, Energy & Materials, National School of Engineers, Gabes University, Zrig, 6029, Gabes, Tunisia.

Evaluation of portable equipment to stablish cleaning strategy of parabolic-trough receivers

Gema San Vicente1.

1CIEMAT-PSA.

Unifying Heliostat Evaluation: Towards a Global Standard for On-Site Calibration with Beam Characterization Systems

Marcelino Sanchez1.

1Fundación CENER.

Effect of Dew on the Soiling of the Glass Covers for Parabolic-Trough Collector Receiver Tubes

Elena Carra1.

1CIEMAT-Plataforma Solar de Almería.

Scaling-up of a solar pressurized volumetric air receiver model for a Solar Power Tower plant

Rosa Pilar Merchán Corral1.

1Universidad de Salamanca.

Validation of a thermal storage model in the Virtual Solar Field software using operating data from the Évora Molten Salt Platform

Tobias Hirsch1.

1Deutsches Zentrum für Luft und Raumfahrt.

Camera Based Reflector Degradation Detection

Johannes Wette1.

1CIEMAT-PSA.

Development of a Method for Detecting Two-Phase Flow Patterns with a Vibration Sensor

Alex Brenner1.

1German Aerospace Center (DLR).

Development of a 2500 Sun Gardon Gauge

Jeremy Sment1.

1Sandia National Laboratories.

Design, test and analysis of a gyroid-based Heat Exchanger for CSP applications

William Ferretto1.

1Politecnico di Milano.

Electrocaloric, energy storage and dielectric properties of lead-free Ba0.85Ca0.15Zr0.1Ti0.9O3 ceramic prepared by hydrothermal-assisted sintering technique

El Houcine LAHRAR1.

1Laboratory of Inorganic Materials for Sustainable Energy Technologies (LIMSET), University Mohammed VI Polytechnic, Benguerir, 43150, Morocco.

Characterizing the Impact of Heliostat Size, Focus Method, and Optical Error on Concentrating Solar Tower Systems

Alexander Zolan1.

1National Renewable Energy Laboratory.

Elevating SolTrace's Capabilities for the Next Generation of Concentrating Solar Analysis

Michael Wagner1.

1University of Wisconsin - Madison.

On the feasibility of scaling-up surface cladding via Concentrated Solar Thermal Energy

Pandora Psyllaki1.

1Department of Mechanical Engineering, University of West Attica.

Development and Characterization of a Solar Furnace Prototype in Seville

MANUEL ANTONIO SILVA PÉREZ1.

1UNIVERSITY OF SEVILLE.

Passively Reducing Convective Losses from Rotating Cavity Receivers

Alexander Hirt1,

Eckhard Lüpfert1.

1German Aerospace Center (DLR), Institute of Solar Research.

Coupled MCRT and CFD Modeling of a High-Flux Solar Simulator and Metal Foam Solar Air Receiver

Baye Alioune Ndiogou1.

1Department of Mechanical Engineering, University of Detroit Mercy, Detroit, MI 48334, USA.

Techno-Economic Analysis of Optimized Multi-Flow Falling Particle Receivers

Peter Vorobieff1.

1The University of New Mexico.

Experimental Investigation on Optical and Thermal Properties of Translucent Particles for Concentrated Solar Power Applications

Pan Yao1, 2, 3.

1Institute of Electrical Engineering, Chinese Academy of Sciences,

2University of Chinese Academy of Sciences,

3Laboratory of Long-Duration and Large-Scale Energy Storage, Chinese Academy of Sciences.

UV cured silane anti-soiling coatings applied on solar glass

Ana Drinčić1.

1National institute of Chemistry.

Exploring high temperature operation of CSP absorbers via oxide-base diffusion barriers.

Teresa Cristina Rojas1.

1ICMS-Univ. Sevilla.

Exploring the potential of porous oxide ceramics and ceramic composites in concentrated solar thermal technology

Gözde Alkan1.

1DLR.

Analysis of soiling measurement devices for solar technologies

Rolando Lazaro Cabrera Dalés1.

1CIEMAT, Departamento de Energía.

Experimental demonstration of a two-color shortwave infrared thermometer for the opto-thermal characterization of receivers and hot surfaces

Marc Röger1.

1DLR (German Aerospace Center) Institute of Solar Research.

Ray-Tracing in CSP Systems with OTSunWebApp v2

Ramón Pujol-Nadal1.

1University of Balearic Islands.

Experimental Measurement of Solar Flux Distribution in CSP: Methodology and Application

Anita Haeussler1.

1PROMES-CnRS.

Lightweight solar concentrators for commercial heliostats

Cristopher Rozas1, 2.

1Project manager,

2Chief of Innovation Officer.

Radiation modelling for optical characterization of a Gyroid lattice as open volumetric receivers

Hossein Ebadi1.

1Politechnico di Torino.

Zinc melting and steam generation from the exhaust of a solar-dish gas turbine system

Jan Hendrik de Beer1.

1University of Pretoria.

An Uncertainty-informed and High-fidelity Performance Forecasting Framework for Heliostat Fields

Alexander Zolan1.

1National Renewable Energy Laboratory.

Protecting Solar Collector Fields from Sudden Wind Ramps Using Scanning Lidar

Laurie Pontreau1.

1Vaisala.

SCADA Deployment and Testing of Generation 3 Particle Pilot Plant

Luis Garcia Maldonado1.

1Computer Science.

Compatibility test of stainless and carbon steels under cyclic and isothermal conditions in liquid nitrate salts

Marco D'Auria1.

1ENEA.

CFD study on a helical tube CST receiver with different heat transfer media

Joachim Fuchs1.

1KIT.

Simultaneous solar field and absorbing gas receiver optimization for high temperature process heat

Alejandro González Silvestre1.

1Politecnico di Milano.

Development and Commercialization of the Hydrogen Mitigation Process for Parabolic Trough Power Plants

Steffen Ulmer1.

1CSP Services.

Molten Salt Compatibility of Alloys 602 CA and N06230: A Corrosion and Mechanical Study

Vahid Safari1.

1uc3m.

CFD Analysis of an Open Volumetric Air Receiver and Comparison with 10 kWth Solar Tests

Laura C. Alonso-Pardo1.

1CIEMAT-PSA.

A Comparative Analysis for Direct and Indirectly Irradiated Particle Receivers

Alicia Crespo1, 2.

1Universitat Rovira i Virgili,

2Universidad Politecnica de Madrid.

Overview of Ageing Tests for Heat Transfer Fluids in Concentrated Solar Power (CSP) Applications

Aabla YAHYA1.

1Green Energy Park (UM6P/ Iresen) Benguerir, Morocco.

Advective Loss Mitigation Modeling for a 2 MW Falling Particle Receiver

Nathan Schroeder1.

1Sandia National Labs.

Proposal of a Pumped Thermal Energy Storage for a High-Temperature CSP with a sCO2-RB Power Block

Antonio J. Subires1.

1Universidad Nacional de Educación a Distancia.

Dynamic Simulation of a Recuperator with CO□-SO□ Mixture Using Aspen Plus Dynamics

Abubakr Ayub1.

1Teesside University.

Structure and Materials CFD/FEM Analysis Comparison for Heliostats Cost Reduction

Kenneth Armijo1.

1Sandia National Laboratories.

Solar preheating of a parabolic trough power plant with molten salt using a preheating mirror

Markus Reichart1.

1DLR-SF.

Manufacturing and Testing of Slotted Flow Bin for High-Temperature Particle Mass-Flow Measurement

Jeremy Sment1.

1Sandia National Laboratories.

Aging of solar selective coatings based on CrAlN multilayers for concentrating solar power collectors

Juan Carlos Sánchez López1.

1Instituto de Ciencia de Materiales de Sevilla (ICMS-CSIC).

Optoelectronic coatings for solar mirrors: a novel approach to soiling detection

Luca Turchetti1.

1ENEA.

Model Development and Verification for a 1350 °C Air Receiver Test System

Aaron Overacker1.

1Sandia National Laboratories.

Optimizing CCTM Composition for Thermochemical H2O/CO2 Splitting

Ivan Ermanoski1, 2.

1Arizona State University,

2ASU LightWorks.

7:30 PM - 10:15 PM -

Gala Dinner

Thursday, 25 September 2025

8:30 AM - 10:15 AM - Sala 4 - La Fabriquilla **Analysis and Simulation of CSP Systems 2**	8:30 AM - 10:00 AM - Sala 6 - San Telmo **Digital Tools and AI in Concentrating Solar Technology 1**	8:30 AM - 10:15 AM - SALA 2 - Nueva Almería **Measurement Systems, Devices, and Procedures 1**
8:30 AM - 8:50 AM **Reduced-Order-Model to optimize the thermohydraulic performance of a cavity receiver** Tom Todtenhaupt1, 2. 1Universidad de Sevilla, 2Virtualmech.	8:30 AM - 8:50 AM **Heliostat mirror reconstruction via machine learning trained with synthetic data** Jorge Moreno1. 1The Cyprus Institute.	8:30 AM - 8:50 AM **Optical Variation with Temperature for Two Different Heliostat Mirror Designs** Randy Brost1. 1Sandia National Laboratories.
8:50 AM - 9:10 AM **HEFESTO, a Novel Tool for Fast Design of Heliostat Fields and Receiver Flux Mapping** Mario Biencinto1. 1CIEMAT - Plataforma Solar de Almería.	8:50 AM - 9:10 AM **Development of an Online Digital Twin for a 100 MWel Parabolic Trough CSP Plant: A Case Study from South Africa** Gregor Bern1. 1Fraunhofer Institute for Solar Energy Systems ISE.	8:50 AM - 9:10 AM **Ground Truth for CSP Mirror Metrology** Randy Brost1. 1Sandia National Laboratories.
9:10 AM - 9:30 AM **Dual and Single Tube Receiver design in Linear Fresnel Systems: Thermal and Optical approach** Ahmed AL MERS1. 1Abdelamalek Essaadi University, ISI laboratory, National school of Applied Sciences Tetouan, Morocco.	9:10 AM - 9:30 AM **AI-Based Hybrid Evolutionary - Reinforcement Learning for Free-Form Heliostat Field Layout Optimization with SolarPILOT Integration** Sarah Yasir1. 1University of Derby.	9:10 AM - 9:30 AM **Advanced Heliostat Facet Characterization Methodology & Tool HIFACET** Ricardo Conceição1. 1IMDEA Energy.

9:30 AM - 9:50 AM

Impact of CO□ storage on thermochemical energy storage system for solar power tower

Alberto de la Calle1.

1Instituto de Catálisis y Petroleoquímica (ICP), CSIC, C/ Marie Curie 2, Madrid, 28049, Spain.

9:30 AM - 9:50 AM

Uncertainty Quantification for Inverse Deep Learning Raytracing

Leon Tim Engelbert Sievers1.

1DLR Institute of Solar Research.

9:30 AM - 9:50 AM

LiDAR based Optical Assessment of Reflectors

Maitane Ferreres Eceiza1.

1Fraunhofer Institute for Solar Energy Systems ISE.

9:50 AM - 10:10 AM

Simulation-Based Design of a Small-Scale Direct Steam Generation CSP Plant with Fresnel Collectors: A Platform for Innovation in Chile

Carlos Felbol1.

1Fraunhofer Chile Research.

9:50 AM - 10:10 AM

Understanding the BRDF of Soiled Mirrors

Maitane Ferreres Eceiza1.

1Fraunhofer Institute for Solar Energy Systems ISE.

8:30 AM - 10:15 AM - SALA 1 - Las Salinas de Cabo de Gata

Thermal Energy Storage Materials, Media, and Systems 5

8:30 AM - 10:30 AM - Sala 7

Workshop SCT4ALL

8:30 AM - 8:50 AM

Design of Moving Bed Heat Exchangers

Greg Mehos1.

1University of Rhode Island.

8:50 AM - 9:10 AM **Development of a High-Performance Particle-Supercritical Carbon Dioxide Heat Exchanger Employing Plate-Fin Bubbling Fluidized Beds** Jesse Fosheim1. 1Brayton Energy LLC.	
9:10 AM - 9:30 AM **Mechanical Performance and Fatigue Life of Molten Salt Thermal Storage Tank in a CSP Plant** Chuncheng Zang1. 1Institute of Electrical Engineering， Chinese Academy of Sciences.	
9:30 AM - 9:50 AM **Thermally induced tank stress in a single tank** Freerk Klasing1. 1Deutsches Zentrum für Luft und Raumfahrt e.V..	
9:50 AM - 10:10 AM **Concrete structured bed thermal energy storage with direct contact of the heat transfer fluid** Stefano Cardamone1. 1Eni.	
10:15 AM - 10:45 AM - **Coffee Break**	

10:45 AM - 12:30 PM - Sala 4 - La Fabriquilla **Solar Industrial Process Heat and Thermal Desalination 2**	10:45 AM - 12:25 PM - Sala 6 - San Telmo **Digital Tools and AI in Concentrating Solar Technology 2**	10:45 AM - 12:05 PM - SALA 2 - Nueva Almería **Measurement Systems, Devices, and Procedures 2**	10:45 AM - 12:05 PM - SALA 1 - Las Salinas de Cabo de Gata **Thermal Energy Storage Materials, Media, and Systems 6**
10:45 AM - 11:05 AM **Temperature, Azimuth and Location's Influence on Hybrid CST Heating Systems for Competitive Low-Emission Industrial Process Heat Generation** Marco Colombi1. 1Politecnico di Milano.	10:45 AM - 11:05 AM **Integration of solar radiation nowcasting models into a real-time modular weather station architecture** Javier Bonilla1. 1CIEMAT - Plataforma Solar de Almería.	10:45 AM - 11:05 AM **Through the Standardization and Harmonization of Optical Measurements in Solar Energy** Fabienne Sallaberry1. 1CENER.	10:45 AM - 11:05 AM **Validation of heat transfer and pressure drop in a packed bed of crushed rock** Jaap Hoffmann1. 1Stellenbosch University, South Africa.
11:05 AM - 11:25 AM **Solar Process Steam for Heineken Brewery in Valencia (Spain)** Miguel Frasquet1. 1SOLATOM.	11:05 AM - 11:25 AM **Parabolic trough solar field condition assessment using raw time series data and artificial intelligence** Alex Brenner1. 1Institute of Solar Research / German Aerospace Center (DLR).	11:05 AM - 11:25 AM **Distributed temperature sensors for monitoring high temperature solar salt systems** Margarita Rodríguez García1. 1CIEMAT - Plataforma Solar de Almería.	11:05 AM - 11:25 AM **Benchmark LCOS Analysis of T.E. Sandewirm** Michael Wagner1. 1University of Wisconsin-Madison.

11:25 AM - 11:45 AM **Linear Fresnel collectors and PV for solar industrial steam generation** Antonio Famiglietti1. 1Solatom.	11:25 AM - 11:45 AM **AI-Powered Fault Detection in Compound Parabolic Concentrators: A Case Study at the Green Energy Park, Morocco** Amine Moulay Taj1. 1Green Energy Park.	11:25 AM - 11:45 AM **Impact 2.0: development and new capabilities for the experimental rig** Reine Reoyo-Prats1. 1Promes - CNRS.	11:25 AM - 11:45 AM **Numerical Simulation and Optimization of Thermochemical Heat Storage Reactor** Tianchao Xie1. 1University of Twente.
11:45 AM - 12:05 PM **Experimental Investigation of Transient Phenomena in a Solar Direct Steam Generation Plant** Navina Konz1. 1German Aerospace Center, Institute of Solar Research.	11:45 AM - 12:05 PM **Thermo-Hydraulic Validation of a Molten Salt Test Receiver Model** Jonas Schulte1. 1Solar-Institut Jülich of FH Aachen University of Applied Sciences, Germany.	11:45 AM - 12:05 PM **Implementation of a Novel Active Tracking System at Bokpoort CSP Plant to Maximise Solar Field Performance** Oliver Vorbrugg1. 1Acwa-Power.	11:45 AM - 12:05 PM **Novel fluidized catalyst bed reactor development for solar-driven methane reforming** Gregory Jackson1. 1Colorado School of Mines.
12:05 PM - 12:25 PM **Uncovering the Economic Viability of Solar Process Heat Case Study: Feasibility of SHIP in Germany** Shahab Rohani1. 1Fraunhofer Institute for Solar Energy Systems ISE.			
12:45 PM - 2:00 PM - **Lunch Break**			

2:00 PM - 3:40 PM - Sala 4 - La Fabriquilla **Emerging and Disruptive Concepts**	2:00 PM - 4:00 PM - Sala 6 - San Telmo **Receivers and Heat Transfer Media: Linear Systems & Power Cycles**	2:00 PM - 3:20 PM - SALA 2 - Nueva Almería **Measurement Systems, Devices, and Procedures 3**
2:00 PM - 2:20 PM **Simulation of a Renewably Powered High Temperature Storage System with Combined Heat and Power Cycle for the supply of the District Heating Network in Kozani, Greece** Spiros Alexopoulos1. 1Solar-Institut Jülich of FH Aachen University of Applied Sciences, Germany.	2:00 PM - 2:20 PM **Heat Transfer Enhancement of a PTC receiver using nanofluids and wavy tape inserts** Carlos I. Rivera-Solorio1. 1Tecnologico de Monterrey.	2:00 PM - 2:20 PM **Camera-based flux density measurements supported by raytracing simulations** Christian Raeder1. 1DLR.
2:20 PM - 2:40 PM **COOLSPACES 4 Life: Solar cooling for an institutional building** Antonio M. Puertas López1, 2. 1Department of Chemistry and Physics, University of Almeria, Almería, Spain, 2CIESOL, Joint Centre of the University of Almería-CIEMAT, Almería, Spain.	2:20 PM - 2:40 PM **Design optimization of DETECTIVE receivers based on thermo-mechanical simulations** Hossein Ebadi1. 1Politechnico di Torino.	2:20 PM - 2:40 PM **Development and Utilization of Experimental Infrastructure for CST Systems with Solid Particle Thermal Storage** Tomas Melichar1. 1Centrum výzkumu Řež.

2:40 PM - 3:00 PM **Disruptive process for photo-thermo-catalytic production of clean hydrogen using CST** Tatiana Lopez1. 1Hysun.	2:40 PM - 3:00 PM **Study of Horizontal Water Boiling Flow Patterns via Shadowgraphy for Enhancing Direct Steam Generation Solar Receivers.** Israel AGUILERA-CORTES1. 1PROMES-CNRS Laboratory.	2:40 PM - 3:00 PM **Concentrated Solar Flux Measurements Based on Optical Fibers and Photodiodes** Manuel Jerez1. 1Departamento de Ingeniería Electrónica, E. T. S. de Ingeniería, Universidad de Sevilla.
3:00 PM - 3:20 PM **Techno-Economic Assessment of High-Temperature Air-based CSP Integrated with Compressed Air Energy Storage (CAES)** Javier Baigorri1. 1National Renewable Energy Centre (CENER), Solar Energy Technologies & Storage.	3:00 PM - 3:20 PM **Optimizing sCO□ Brayton power cycle performance in cold ambient conditions using working fluid blends** Javier Muñoz-Antón1. 1Universidad Politécnica de Madrid.	3:00 PM - 3:20 PM **Accuracy of Optical Flux Density Monitoring for External Central Receivers** Andreas Kämpgen1. 1CSP Services Espana S.L..
3:20 PM - 3:40 PM **The ASTERIx-CAESar Demonstration Prototype - Specifications and Design of a Small-scale Hybrid CAES-CSP-Desalination Plant** Fritz Zaversky1. 1CENER.	3:20 PM - 3:40 PM **Impact of Power Block Modeling Simplifications on Performance Estimation of CSP Systems** Eylül Gedik1. 1RWTH Aachen University, Institute of Power Plant Technology, Steam and Gas Turbines.	

2:00 PM - 4:00 PM - SALA 1 - Las Salinas de Cabo de Gata **Thermal Energy Storage Materials, Media, and Systems 7**	2:00 PM - 4:00 PM - Sala 7 **Workshop SOLARX**

2:00 PM - 2:20 PM **Enhancing Performance of SrCO□-Based Materials for High-Temperature Thermochemical Energy Storage with Advanced Additives** Adriana Santamaria Padilla1, 2. 1Iberian Centre for Research in Energy Storage CIIAE, 2Universidad Autónoma Metropolitana Iztapalapa.	
2:20 PM - 2:40 PM **Structured sulphur trioxide splitting catalysts in the context of a solid sulphur-based thermochemical cycle for solar thermal energy storage** Christos Agrafiotis1. 1DLR/German Aerospace Center - Institute for Future Fuels.	
2:40 PM - 3:00 PM **Monolithic porous perovskite ceramics for hybrid sensible/thermochemical heat storage in air-operated Concentrated Solar Power plants** Christos Agrafiotis1. 1DLR/German Aerospace Center-Institute of Future Fuels.	
3:00 PM - 3:20 PM **Fe- and Cu- Impregnated Limestone Sorbents for Improved Solar Energy Absorption in Calcium Looping for Thermochemical Energy Storage** Claudio Tregambi1. 1Università degli Studi del Sannio, Dipartimento di Ingegneria.	

3:20 PM - 3:40 PM **Transient Operation of a Solar Fluidized Bed Autothermal Reactor for Calcium Looping** Stefano Padula1. 1Istituto di Scienze e Tecnologie per l'Energia e la Mobilità Sostenibili (CNR).			
4:00 PM - 4:30 PM - **Coffee Break**			
4:30 PM - 6:30 PM - Sala 4 - La Fabriquilla **Solar Resource Assessment**	4:30 PM - 6:30 PM - Sala 6 - San Telmo **Hybrid Systems 2**	4:30 PM - 6:10 PM - SALA 2 - Nueva Almería **Solar Collector Systems 1**	4:30 PM - 6:10 PM - SALA 1 - Las Salinas de Cabo de Gata **Thermal Energy Storage Materials, Media, and Systems 8**
4:30 PM - 4:50 PM **Solar Resource Clustering for Strategic Concentrating Solar Power Plant Siting in South Africa** Caitlin Ridout1. 1Stellenbosch University.	4:30 PM - 4:50 PM **Optimization of an Air-driven Hybrid PV-CSP Plant for Power Generation and Industrial Heat Decarbonization** Salvatore Guccione1. 1KTH/Head of Division of Heat and Power.	4:30 PM - 4:50 PM **Improving Near-Surface Wind Data for CSP Collector Design and Performance** Guangdong Zhu1. 1National Renewable Energy Laboratory.	4:30 PM - 4:50 PM **In-situ Electrochemical Determination of Nitrite Ions in Solar Salt for Quality and Aging Assessment** Jun Zheng1. 1Technical University of Munich.

4:50 PM - 5:10 PM **Particulate matter measurements in the southeast of Spain and the impact on DNI** Joaquín Alonso-Montesinos1, 2. 1CIESOL, 2University of Almería.	4:50 PM - 5:10 PM **Hybrid Receiver Sizing of a Central Concentrated Solar Thermal Electric Power Plant** Cody Anderson1. 1Politecnico di Milano.	4:50 PM - 5:10 PM **Field Measurements of Wind Loads on Heliostats in an Operational CSP Tower Plant** Guangdong Zhu1. 1NREL.	4:50 PM - 5:10 PM **Permittivity measurements of different inorganic heat storage media for microwave heating** Cristobal Valverde1. 1Plataforma Solar de Almería.
5:10 PM - 5:30 PM **Generative AI for Intra-hour DNI Forecasts** Stefan Wilbert1. 1DLR.	5:10 PM - 5:30 PM **Use of Spillage with Concentrating Photovoltaics: Simulation and Experimental campaign** Eckhard Lüpfert1. 1DLR.	5:10 PM - 5:30 PM **Heliostat Size Optimization with Regard to Cost and Yield** Andreas Pfahl1. 1DLR German Aerospace Center.	5:10 PM - 5:30 PM **Innovative induction heated Packed Bed Thermal Energy Storage for industrial heating** Antonio Famiglietti1, 2. 1Universidad Politecnica de Madrid, 2Solatom.
5:30 PM - 5:50 PM **Semantic Cloud Segmentation Models for Solar Applications with Synthetic Data** Eduardo Saez1. 1German Aerospace Center (DLR), Institute for Solar Research, Germany.	5:30 PM - 5:50 PM **Design and Optimization of a Shell and Tube Molten Salt Electrical Heater with a Novel Baffles Type** Hussein Alawai Ibrahim Al-Saaidi1. 1University of Seville.	5:30 PM - 5:50 PM **Photon Evo: New smart cable-driven heliostat** Egoitz San Miguel San Miguel1. 1TEWER Engineering S.L..	5:30 PM - 5:50 PM **A validated thermo-mechanical modelling approach to simulate Thermal Ratcheting in Packed Bed Thermal Energy Storage systems** Ivan Torrano1. 1CIC energiGUNE.

5:50 PM - 6:10 PM **Direct Normal Irradiance in a Changing Climate: Trends and Apparent Anomalies from 25 Years of Data in Seville** Miguel Larrañeta1. 1Universidad de Sevilla, Spain.	5:50 PM - 6:10 PM **Resilient Hybrid Solar Systems & Economic Sensitivity to Operational Constraints & Financing** Jeremy Sment1. 1Sandia National Laboratories.	5:50 PM - 6:10 PM **Investigation of Interference Mechanisms in Staggered and Tandem Heliostat Configurations** Yin Liu1. 1School of Civil Engineering, Chang'an University.	5:50 PM - 6:10 PM **Preliminary Design of a Heat Extraction Mechanism for Volumetrically Absorbing Modular Concentrated Solar Thermal Systems** Muhammad Taha Manzoor1. 1Assistant Professor.
6:10 PM - 6:30 PM **Deep Learning for Cloud Height Detection with Remote Sensing Image Enhancement and Thermal Camera** Joaquín Alonso-Montesinos1, 2. 1University of Almería, 2CIESOL.	6:10 PM - 6:30 PM **Smart Energy Management for Data Centers: Leveraging CSP, Gas Turbines, and Carnot Batteries** José Ignacio Linares1. 1Comillas Pontifical University.		
6:30 PM - 7:30 PM - Sala 9 (downstairs) **Poster Session Thursday**		6:30 PM - 8:00 PM - Sala 8 - Downstairs **Women+ in CS Happy Hour**	
Solar Extinction Map of Spain Noelia Simal1. 1CIEMAT - Plataforma Solar de Almería.			
Use of thermal solar energy in industrial processes Elise Vouriot1. 1ArcelorMittal Global R&D.			

Deterministic Variable-Based Optical Quality Analysis of CESA Heliostats via a Computational Optimization Algorithm Daniel Sanchez-Señoran1. 1CIEMAT-PSA.	
Sunflower and Cornfield Solar field design : A comparison with Radial Staggered pattern of work SANJOY CHATTERJEE1. 1IIT JODHPUR.	
Hybrid Central Receiver System with Peaker Gas Turbine. Night-time Dispatch and Firmness for Capacity Markets José Ignacio Linares1. 1Comillas Pontifical University.	
Ray-level deep-learning-based correction for universal flux density predictions Sergio Díaz Alonso1. 1German Aerospace Center (DLR).	
Bringing EU-SOLARIS to its Zenith: the SOLARIZE project Diego Martinez-Plaza1. 1EU-SOLARIS ERIC.	
Force analysis-based condition monitoring of flexible pipe connectors in parabolic trough collectors Sonja Kallio1. 1DLR (German Aerospace Center) Institute of Solar Research.	
A Case for Solar Aided Power Generation in South Africa Tenzin Koetsier1. 1Masters Student.	

Drone-Based Quantification of Soiling Losses for Heliostats in Solar Power Tower Plants Rone Yousif1. 1German Aerospace Center (DLR), Institute of Solar Research, Spain.	
Integration of Solar Energy and Thermal Energy Storage with High Temperature Electrolysis Patricia Santamaría Prado1. 1RPow Consulting SL.	
Enhancing Integrated Energy System Performance for Clean Fuel Production through Data-Driven and Active Learning-Based Surrogate Optimization Ting Ren1. 1Institute of Electrical Engineering, Chinese Academy of Sciences.	
Study On Optimal Dispatching Strategy for Wind-PV-CSP Integrated Power Station Based On Spot Trading Market In Western Inner Mongolia Yuan Wan1. 1COSIN SOLAR TECHNOLOGY CO., LTD.,.	
The First EU MSCA Doctoral Network on Concentrated Solar Thermal: the TOPCSP Project Celia Sobrino1. 1Universidad Carlos III de Madrid.	

Comparison of Reanalysis-Based Surface PMx with Ground Measurements for Soiling Rate Assessment Chiara Lupi1, 2. 1Politecnico di Milano, 2Queensland University of Technology.	
Reinforcement Learning in Differentiable Simulation for Heliostat Control Max Pargmann1. 1German Aerospace Center.	
Quick response of a shallow absorbing medium to concentrated solar flash Gilles Flamant1. 1PROMES CNRS.	
Using solar concentrated energy for a recycling space plant Ludovic Charpentier1. 1PROMES-CNRS.	
SUNSON: Concentrated Solar Energy Storage at Ultra-High Temperatures and Solid-State Conversion Alejandro Datas1. 1Instituto de Energía Solar - Universidad Politécnica de Madrid.	
Development of practical solar optics for medium-concentration applications Arend Moelich1. 1Stellenbosch University.	

A Novel Solar Cavity Receiver Design for High-Efficiency Hydrogen Production Using the Sulfur-Iodine Thermochemical Cycle Ahmed Aldubayyan1, 2. 1Cranfield University, Cranfield MK43 0AL, U.K, 2Department of Mechanical Engineering, College of Engineering, Qassim University, Buraydah 51452, Saudi Arabia.	
Partial-Load Performance of a Multi-Stream Superheater-Reheater for Solar Power Towers Darío Pardillos-Pobo1. 1University Carlos III of Madrid.	
Physics-Based Digital Twin for the Generation 3 Particle Pilot Plant Jeremy Sment1. 1Sandia National Laboratories.	
Calibrating Stress Relaxation Phenomena in Receiver Materials with Experimental Measurements Chiara Lupi1, 2. 1Politecnico di Milano, 2Queensland University of Technology.	
Techno-economic Assessment of High-Temperature Air-based CSP integrated with Redox Oxides-Based Dual-Bed Thermochemical Energy Storage Javier Baigorri1. 1National Renewable Energy Centre (CENER), Solar Energy Technologies & Storage.	

Review of Existing and Developing Standards in the Field of CSP Lourdes González Martínez1. 1Ciemat.	
Solar-Assisted Hybrid Sulfur Cycle Using CSP and PV for Hydrogen and Oxygen Production in the Chilean Copper Industry Gregor Bern1, 2. 1Head of Group Concentrating Collectors and Optics, 2Fraunhofer ISE.	
Performance Testing of Salt-Gas Heat Exchangers for Pumped Thermal Energy Storage Marco Prenzel1. 1German Aerospace Center (DLR), Institute of Engineering Thermodynamics.	
Heliostat Field Array Control Software Upgrade with Closed Loop Integration Luis Garcia Maldonado1. 1Computer Science.	
Software system for training CSP plant operators Michael Wagner1. 1University of Wisconsin-Madison.	
Advancing Heliostat Aiming Strategies in Solar Tower Plants Jose Antonio Carballo1. 1CIEMAT-PLataforma Solar de Almeria.	

Thermo-Mechanical Analysis of Austenitic Steels using Solar Salt. Sergio Andrés Ardila-Parra1. 1Universitat de Barcelona.	
Analysis of the physical differences between satellite imagery-based and measured solar radiation Chang Ki Kim1. 1Korea Institute of Energy Research.	
A GIS-based approach analysis of the solar and wind energy potential in Andalusia David Vazquez1. 1Department of Physics, University of Jaen, and Andalusian Institute for Earth System Research IISTA-CEAMA, 23071, Jaen, Spain.	
Monte Carlo Method applied to PV-CSP hybrid compact plants Zacharie MENARD1, 2. 1PROMES - UOR CNRS 8521 - Odeillo, France, 2RAPSODEE - UMR CNRS 5302 - Mines Albi, Campus Jarlard, France.	
Enhancing Solar Utilization in Hybrid PVT Systems by Spectral Splitting Integration Manuel Pérez García1, Arantxa Fernandez2. 1University of Almería-CIESOL, 2CIEMAT, Plataforma Solar de Almería.	

Sensitivity study on the gains on the flux collected by solar power towers Mustapha Moulana1. 1HYGEOS.	
An all-in-one, harmonized planning-to-Digital Twin tool Daniel Carbonell1. 1DCarbo Energy Consulting.	
Optimizing Carnot Battery-Based Storage System Placement in the Portuguese Power System Radia Cadi1. 1Renewable Energies Chair, University of Évora.	
Exploring the Potential of Solar Thermal Energy in Steelmaking: Challenges and Perspectives Elise Vouriot1. 1ArcelorMittal Global R&D.	
Share of concentrated solar thermal technologies in the energy mix in West Africa Gaëlle Kafira KO1. 1Laboratoire Interdisciplinaire de Recherche en Sciences Appliquées, Ecole Normal Supérieure.	
The BLAZETEC project: solid-state converters for thermal batteries Alejandro Datas1. 1IES-UPM.	

Thermal performance assessment of an advanced CPV receiver Desideri Regany11. 1Universitat de Lleida.	
Thermocline TES system hybrid-piloted by CSP and other renewable resource: Experimental testing Marco D'Auria1. 1ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development.	
Linear solar receiver fracture angle assessment exploiting elastic waves with artificial neural networks Rodolphe Barlogis1. 1PROMES-CNRS / University of Perpignan Via Domitia.	
Performance Characterization of Modular Particle Generating Valve Nathan Schroeder1. 1Sandia National Labs.	
Spectral Ray-Tracing of an Asymmetric Enclosed PVT Solar Concentrator Ramón Pujol-Nadal1. 1University of Balearic Islands.	
Experimental investigation of impacting ceramic particles on different materials at high temperature Markus Reichart1. 1German Aerospace Center, Institute of Solar Research.	

Some details about the third rejuvenation of the Thémis solar tower: flexible and reliable heliostats Emmanuel Guillot1. 1PROMES-CNRS.	
Raw Meal Calcination via a Heated CO2/H2O Stream for Solar Decarbonization of Cement Production Jeremy Sment1. 1Sandia National Labs.	
High-Temperature Particle Curtain Characterization Nathan Schroeder1. 1Sandia National Laboratories, Mechanical Engineer, MS.	
Novel Stochastic Numerical Method for Modeling of heat transfer in solar receivers Manira Elena Narvaez Saucedo1, Patricio Javier Valdés Pelayo2. 1Instituto de energìas renovables, 2Ingenieria electrica, tecnologico nacional de mexico.	
Extensions and Updates from the Evora Molten Salt Platform Kathrin Ingenwepelt1. 1DLR Institute of Solar Research.	
Towards Efficient Solar Field Cleaning: Laboratory-Based Estimation of Water Consumption of self-cleaning solar mirrors Luca Turchetti1. 1ENEA.	

Integration of Solar and Wind Energy with Electrolyzers and Fuel Cells to generate Green Hydrogen and Electricity in Valparaíso Roberto Leiva-Illanes1. 1Universidad Técnica Federico Santa María.	
Integration of a Calcium Looping Gasification with Solar Energy Alberto Gomez-Barea1. 1CIUDEN.	
8:00 PM - 10:00 PM - **Young Professionals Dinner**	

Friday, 26 September 2025

8:30 AM - 10:30 AM - Sala 4 - La Fabriquilla **Analysis and Simulation of CSP Systems 3**	8:30 AM - 9:50 AM - Sala 6 - San Telmo **CSP Integration, Markets, and Policy & Commercial Projects 1**	8:30 AM - 10:15 AM - SALA 1 - Las Salinas de Cabo de Gata **Operations, Maintenance, and Component Reliability 1**	8:30 AM - 10:15 AM - SALA 2 - Nueva Almería **Solar Industrial Process Heat and Thermal Desalination 3**
8:30 AM - 8:50 AM **Optimization of the dispatch strategy of a small-scale CSP plant for flexible electricity and hydrogen production** Simone Girelli1. 1Politecnico di Milano.	8:30 AM - 8:50 AM **Revisiting the Key Performance Indicators for CSP** Eylül Gedik1. 1RWTH Aachen University, Institute of Power Plant Technology, Steam and Gas Turbines.	8:30 AM - 8:50 AM **Predictive maintenance of flexible pipe connectors in parabolic trough collectors using artificial neural networks** Benedikt Kölsch1, Sonja Kallio1. 1German Aerospace Center (DLR).	8:30 AM - 8:50 AM **Integrating Concentrating Solar Thermal Energy into the Bayer Alumina Process** Woei Saw1. 1The University of Adelaide.
8:50 AM - 9:10 AM **Optimization of a CPCM based CSP plant by implementing an extra electrically charged step** Anton Lopez-Roman1. 1University of Seville.	8:50 AM - 9:10 AM **CSPs and the Water-Energy-Food Nexus: Displacing Sector Siloes with Integrated Policies** Elisabeth Shrimpton1. 1Cranfield University.	8:50 AM - 9:10 AM **Maps of long-term soiling losses in Europe considering partial cleaning by rain** Stefan Wilbert1. 1German Aerospace Center (DLR).	8:50 AM - 9:10 AM **Direct Steam Generation for an aerosol factory in Mexico** Miguel Frasquet1. 1SOLATOM.

9:10 AM - 9:30 AM **Flexible operation of a dispatchable air-based hybrid solar power plant via supercritical CO2 Brayton cycle** RUI CHEN1. 1Imdea energy.	9:10 AM - 9:30 AM **Simulation of energy arbitrage strategies to enhance the profitability of solar thermal power plants in the Spanish electricity market.** Joaquín Vargas1, 2. 1CIEMAT-PSA, 2UPM.	9:10 AM - 9:30 AM **Soiling forecasts for concentrating solar technologies considering partial cleaning by rain** Stefan Wilbert1. 1DLR Institute of Solar Research, Qualification.	9:10 AM - 9:30 AM **Solarization of cement plant for CO2-neutral operation by calciner and carbonator: Detailed technical assessment** Gkiokchan Moumin1. 1DLR.
9:30 AM - 9:50 AM **Yearly Simulation of a Combined Cooling System Integrated into a Concentrating Solar Power Plant** Juan Miguel Serrano1. 1CIEMAT-Plataforma Solar de Almería.	9:30 AM - 9:50 AM **Cost reduction through learning curve effects at CSP power plants in China** Axel Schweitzer1. 1sbp sonne gmbh.	9:30 AM - 9:50 AM **Ray Tracing Enhanced Soiling Assessment of LFR Systems for Industrial Heat Applications** Giovanni Picotti1. 1Queensland University of Technology.	9:30 AM - 9:50 AM **Solar Carboreduction of LiCoO2 from Li-ion Batteries: An Eco-friendly Pyrometallurgical Process** Ahmed Benamar1. 1PROMES-CNRS, France.
9:50 AM - 10:10 AM **Validation of a Dynamic Process Model of a Thermochemical System for Solar Fuel Production** Falko Schneider1. 1Solar-Institute Jülich.		9:50 AM - 10:10 AM **Durability studies of solar plant reflectors for over ten years** Valery Vuillerme1. 1CEA.	

10:10 AM - 10:30 AM **Multiphysics simulation of a receiver tube for a concentrated solar power plant** Luigi Mongibello1. 1ENEA.			
10:15 AM - 10:45 AM - **Coffee Break**			
10:45 AM - 12:05 PM - Sala 6 - San Telmo **CSP Integration, Markets, and Policy & Commercial Projects 2**	10:45 AM - 12:45 PM - SALA 1 - Las Salinas de Cabo de Gata **Operations, Maintenance, and Component Reliability 2**	10:45 AM - 12:25 PM - SALA 2 - Nueva Almería **Solar Collector Systems 2**	
10:45 AM - 11:05 AM **CST4ALL: Insights for Hybridization Frontiers of CST** Peter Heller1. 1DLR.	10:45 AM - 11:05 AM **Boosting Electricity Yield by up to 5% through Advanced Monitoring and Simulation of Dry Cooling Systems in CSP Plants** Shahab Rohani1. 1Fraunhofer Institute for Solar Energy Systems ISE.	10:45 AM - 11:05 AM **Novel test plant for photo-thermo-catalytic production of hydrogen using a new fixed tube parabolic trough** Egoitz San Miguel1. 1TEWER Engineering S.L..	

11:05 AM - 11:25 AM **Designing and Testing Of A Novel Particle heater for High-Temperature Applications** Jeremy Sment1. 1Sandia National Laboratories, Mechanical Engineer, MSSandia National Laboratories, Mechanical Engineer, MS.	11:05 AM - 11:25 AM **PROMETHEUS: Predictive and Optimized Control of Heliostats for Future Solar Fields** Michael Wagner1. 1University of Wisconsin-Madison.	11:05 AM - 11:25 AM **Butterfly Mirror: A New Concept of Flux Homogenizer in a Solar Furnace** Aurelio González-Pardo1. 1CIEMAT-PSA.
11:25 AM - 11:45 AM **Hybrid CSP-PV system for a city in the North of Chile** Frank Dinter1. 1Main Author.	11:25 AM - 11:45 AM **Automated Supervisory Control Logic for the Generation 3 Particle Pilot Plant** Jeremy Sment1. 1Sandia National Laboratories.	11:25 AM - 11:45 AM **Beam Splitter for Modular Prototype Receiver Testing in a Solar Furnace** Thorsten Denk1. 1Ciemat-PSA.
11:45 AM - 12:05 PM **Optimum Sizing of Concentrated Solar Powered Reverse Osmosis Desalination Systems** Athanasios Theodorakopoulos1. 1Soft Energy & Environmental Protection Laboratory, Mechanical Engineering Dept., University of West Attica, Athens, Greece.	11:45 AM - 12:05 PM **Best Practice of Rankine Cycle Components for Concentrating Solar Power Plants** Steven Kung1. 1Electric Power Research Institute.	11:45 AM - 12:05 PM **Innovative UV-Cured Protective Coatings for Second-Surface Solar Reflectors** Ivan Jerman1. 1National institute of Chemistry.
		12:05 PM - 12:25 PM **Heat transfer and pressure drop in a U-tube of an evacuated tube collector with a compound parabolic concentrator** Christa Nsanzubuhoro1. 1Student.

12:45 PM - 2:00 PM -

Lunch Break

2:00 PM - 4:00 PM - SALA 1 - Las Salinas de Cabo de Gata

Closing Session

Conference Wrap Up

Eduardo Zarza-Moya1.

1Solar Energy.