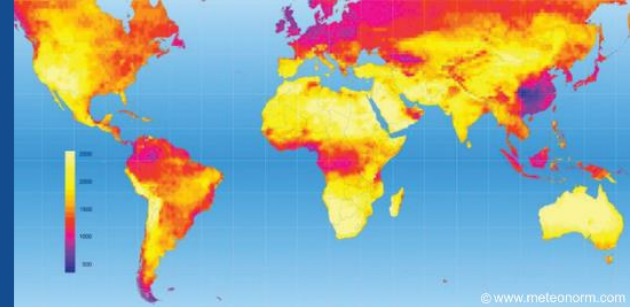


September 27 - October 1, 2021
Online Event

27th SolarPACES Conference



SolarPACES 2021 Online Conference Program

All times are shown in UTC!

Monday, September 27

13:00 Opening Session

Opening and Welcome from SolarPACES
Robert Pitz-Paal, German Aerospace Center (DLR)
Welcome Message from IEA
Paolo Frankl, IEA

13:30 Plenary: New Projects and Opportunities in the World

Chair: Eduardo Zarza (Plataforma Solar de Almeria)

- 1 CSP in China
Fengli Du, NSTA
- 2 CSP market in Chile
Fernando Gonzalez, Cerro Dominador
- 3 An Update on CSP Developments in Namibia
Grant H. Muller, Namibia Power Corporation (Pty) Ltd
- 4 Spanish CSP Auctions Overview
Gonzalo Martín, Protermosolar
- 5 Is the Italian CSP market nearing a turning point?
Luca Turchetti, ENEA
- 6 The global CSP market: state of play and outlook
Johan Lilliestam, IASS Potsdam

15:30 *Break – visit our sponsors*

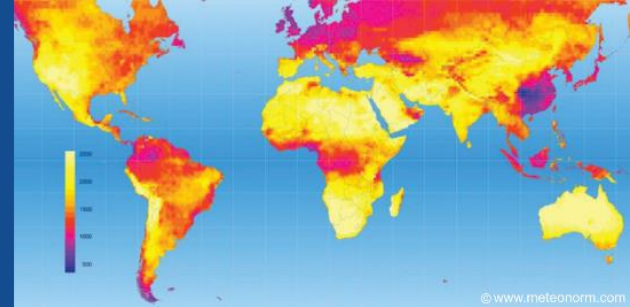
16:00 Poster Session 1

A - Advanced materials, manufacturing, and components | B - Analysis and Simulation of CSP and Hybridized Systems | C - Commercial Projects | D - CSP Integration, Markets, and Policy | E - Emerging and Disruptive Concepts

- A-01 Characterization of Frictional Properties of Different Particulate Materials to be Used in Particle-Based CSP Systems
Hany Al-Ansary, King Saud University
- A-02 Characterization of Solid Particles for Use as Storage and Heat Transfer Media in CSP Systems
Hany Al-Ansary, King Saud University

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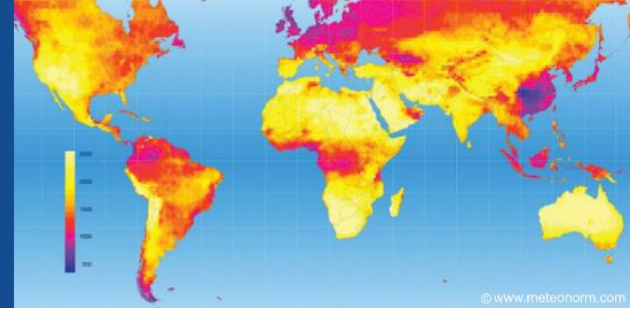
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- A-03 Material Compatibility Between Discrete Structures and Candidate Particulates in a Particle Heating Receiver of a CSP System
Hany Al-Ansary, King Saud University
- A-05 Results of Molten Salt Component Tests with the TESIS:com Facility
Niklas Carl Dicke, German Aerospace Center
- A-06 Analysis and Evaluation of the Spectral Variability of the Atmospheric Attenuation Phenomena in the Performance of Solar Tower Plants.
Sonia Escorza, National Renewable Energy Centre (CENER)
- A-07 Thermal Stability and Failure Mechanisms of Pyromark 2500 for High-temperature Solar Receivers
Sahar Hosseini, Australian National University
- A-08 Spectroscopic Chemical Testing Methods Towards Evaluating the Efficiency of Solar Mirrors Protective Coatings
Sara Lakhoul, Moroccan Foundation for Advanced Science, Innovation and Research
- A-09 Characterization of Receiver Tubes Coated with Black Nickel for Parabolic Trough Collectors
Francisco Lizama-Tzec, CINVESTAV-Mérida
- A-10 Tribology of High Toughness NiWC Components in Molten Ternary Chloride Salt
Evan Ogren, University of Wisconsin-Madison
- A-11 Advanced High-Temperature Control Valve Design for Present and Future CSP Systems
Jeff Parish, Flowserve
- A-12 Investigations on DMV310Nsolar as Possible Tube Material for Molten Salt Solar Receivers
Michael Spiegel, Salzgitter Mannesmann Forschung GmbH
- A-13 Novel Durable Anti-Soiling Coatings under Outdoor Conditions
Johannes Wette, Ciemat-PSA
- A-14 Analysis on NREL Newly Developed Solar Mirror Material Database (SMMD)
Guangdong Zhu, National Renewable Energy Laboratory
- B-01 Techno-Economic Optimization of Solar Tower Systems: Comparison of Different Sites in Chile
Francisco Torres Sartori, Fraunhofer Institute for Solar Energy Systems ISE
- B-04 Validation and Comparison of a Software Based on Mathematical Approximation in Optical Performance Calculations of Solar Central Receiver Plants.
Olaia Itoiz, National Renewable Energy Centre
- B-05 Minimizing Water Consumption of a CSP Plant, by Using an Online Optimization Algorithm for Cleaning Decisions
Matthias Loevenich, Institute of solar research, German Aerospace Center (DLR)
- B-06 Modeling of the Process Control of a High Performance Molten Salt Tower Receiver System Via State Machines
Christian Schwager, Solar-Institut Jülich, FH Aachen University of Applied Sciences
- B-07 Heliostat Aimpoint Strategy Development for a Central Receiver System Plant in Pakistani Climate
Alexander Zolan, National Renewable Energy Laboratory
- B-08 Industrial By-Products and Commercial Solid Particles to be used in Concentrating Solar Power plants: A comparison
Marc Majó, University of Barcelona

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- B-09 Thermo-economic Study of two CSP Geometries at Different Latitudes
Rosa Pilar Merchán Corral, University of Salamanca
- B-10 Solar-Aided Limestone Calcination in Tandem with Thermochemical Energy Storage and CO₂ Capture
Athanassios Nikolakopoulos, National Technical University of Athens
- B-11 Development of TRNSYS Macros for Solar Resource Integration in a District Heating and Cooling Network: W.E. DISTRICT Project
Juan José Roncal Casano, Universidad Politécnica de Madrid (UPM)
- B-12 Dynamic Modelling of Print Circuit Heat Exchanger in 10MWe Supercritical CO₂ Recompression Brayton Cycle
Xin Sui, Henan University of Science and Technology
- B-13 Techno-economic Comparison of Direct Particle and Air Based sCO₂ CSP Plant
Silvia Trevisan, KTH Royal Institute of Technology
- C-01 Solar Hybridization Plant Design Based on The Storage and Peak Regulation Ability of CSP
Jianhua Li, Cosin Solar Technology Co., Ltd.
- C-02 Calculated Levelized Energy Cost of a Kuwaiti Based 50MWe Molten Salt Heat Storage Parabolic Trough Power Plant
Adel Naser, Ratingen Solar
- D-02 Using Solar Thermal Energy in the Sludge Drying Process of a Wastewater Treatment Plant
Isak Svensson, Absolicon Solar Collector AB
- D-03 Socio-economic Impact of Concentrated Solar Power in China: Example of a 50 MW Parabolic Trough Plant
Francisco Torres Sartori, Fraunhofer Institute for Solar Energy Systems ISE
- E-01 Novel Collector Design for High-Temperature Direct Steam Generation in a PTC Plant
Mohammad Moghimi Ardekani, Staffordshire University
- E-02 1000-MW CSP with 100-Gigawatt-hour Crushed-rock Heat Storage to Replace Dispatchable Fossil-fuel Electricity
Charles Forsberg, Massachusetts Institute of Technology
- E-03 Towards a High-Concentration Line-Focus Concentrator: Étendue-Squeezing and Tracking Integration
Håkon Jarand Dugstad Johnsen, NTNU, Department of Mechanical and Industrial Engineering
- E-04 Estimating the Value of Automated Technologies in the Concentrating Solar Power (CSP) Industry
Laura McNamara, Sandia National Laboratories