

Conference Program

Sep. 12, 08:30-12:00, Futureland Grand Ballroom, Plenary Meeting

Chair: Dr. Zhifeng Wang, Chairman of 2018 China Solar Thermal Energy Conference, Executive-vice chairman of China National Solar Thermal Energy Alliance, Vice-chairman of SolarPACES Executive Committee

08:30-09:00 Opening Ceremony

09:00-10:00
Keynote speech Building China's new generation energy system in energy transformation
Mr. Xiaoxin Zhou, Academician of Chinese Academy of Sciences/Honorary president of China Electric Power Research Institute

10:00-11:00
Keynote Speech Development status and future prospects of concentrating collectors and their heat storage technology
Dr. Yaling He, Academician of Chinese Academy of Sciences/Professor of Xi'an Jiaotong University

11:00-11:20 Coffee Break

Chair: Mr. Xiaoping Qin, Vice chairman of China National Solar Thermal Energy Alliance/ Executive director of Inner Mongolia Power (Group) Co., Ltd.

11:20-11:40
Keynote Speech The progress of CSP demo projects and its industrial development prospects in China
Yuechun Yi, Senior Engineer and Vice president of China Renewable Energy Engineering Institute/Chairman of China National Solar Thermal Energy Alliance

11:40-12:00 Promoting the decline of CSP costs through technological innovation
Ke Yu, General manager of Royal Tech CSP Co., Ltd

12:00-13:30 Lunch (Empire Ballroom, 2nd floor)

Sep.12, 13:30-18:00, Futureland Grand Ballroom, Plenary Meeting

Chair: Mr. Yuechun Yi, Senior engineer, Chairman of China National Solar Thermal Energy Alliance
Mrs. Ruomei Li, Member of the Executive Committee of WFEO, Former secretary general of China Society of Electrical Engineering

13:30-14:00 Keynote Speech	An assessment of the value of CSP with dispatchable thermal energy storage: methodology and results Mark Mehos, Director of Thermal Sciences group at NREL
14:00-14:20	Financing issues for solar thermal power projects Responsible person of Qinghai Branch of China Development Bank
14:20-14:40	State Grid Enterprise Standard: Technical regulations of accessing CSP plants into power grids Lingzhi Zhu, Deputy chief engineer of New Energy Research Center of China Electric Power Research Institute
14:40-15:00	Shouhang 10MW solar tower plant operation analysis and 100MW tower project progress Wenbo Huang, Beijing Shouhang IHW Resources Saving Technology Co., Ltd
15:00-15:10	Coffee Break
15:10-15:40 Keynote Speech	The complementary mechanism of renewable energy power source Dr. Weisheng Wang, Director of New Energy Research Center of China Electric Power Research Institute
15:40-16:00	Summary of National High-tech R&D Program funded project: Parabolic trough solar power technology research and demonstration Ershu Xu, Chief scientist of the Project, professor of Key Laboratory of the State Monitoring and Control of Power Station Equipment of Ministry of Education
16:00-16:20	Summary of National Key Technology R&D Program funded project: Solar thermal storage technology research and demonstration Xudong Yang, Chief scientist of the Project, Chang-Jiang Chair Professor and Deputy Director of the Institute of Built Environment, Tsinghua University
16:20-16:40	On multi-energy complementary heat utilization dominated by the solar energy Daorong Xue, General Manager of Beijing AOPU Star Tech Co., Ltd
16:40-17:00	Common technical problems in the feasibility study of CSP projects in China Jihong Sun, China Electric Power Planning & Engineering Institute
17:00-17:20	Experimental test for erosion impact of wind-sand flow acting on solar mirrors Bo Gong, Zhifeng Wang, Institute of Electrical Engineering, Chinese Academy of Sciences
17:20-17:40	The Role of CSP in the Internet of Energy Alina Gilmanova, Zhifeng Wang, Institute of Electrical Engineering, Chinese Academy of Sciences
19:00-21:00	Welcome banquet [Technology creates the sun flower•Beauty, Shouhang protects lucid waters and lush mountains•Dream]

Sep.13, 08:30-12:00, Parallel Session 1: cutting-edge technology, Futureland Grand BallroomA

Chair: Dr. Jie Ji, Professor of University of Science and Technology of China

Mr. Liming Xue, Senior engineer, Vice chairman of China National Solar Thermal Energy Alliance

08:30-09:00 Keynote Speech	Supercritical carbon dioxide heat exchange process Dr. Peixue Jiang, Dean of Energy and Power Engineering, Tsinghua University
09:00-09:20	Design boundary of concentrated solar receivers Jin-Soo Kim, Senior Researcher of CSIRO, Australia
09:20-09:40	Falling particle receiver technology for concentrating solar power Cliff Ho, Sandia National Laboratories
09:40-10:00	Research on solar thermal power generation system based on AMTEC and supercritical CO ₂ cycle Kaiyun Zheng, Shanghai Power Equipment Research Institute Co. Ltd.
10:00-10:10	Coffee Break
10:10-10:40 Keynote Speech	Micro-nano scale thermal radiation and its application in energy field Dr. Changying Zhao, Professor of Shanghai Jiao Tong University, Special expert of National "Thousand Talents Program"
10:40-11:00	Research in hierarchical porous structures Yu Li, Prof. of Wuhan University of Technology
11:00-11:20	The particle technology for the next generation of solar thermal power plants Gilles Flamant, PROMES-CNRS
11:20-11:40	Characteristics and technical challenges of the fourth generation solar thermal electricity system Fengwu Bai, Fuliang Nie, Zhiying Cui, Zhifeng Wang, Institute of Electrical Engineering, Chinese Academy of Sciences
11:40-12:00	Solar thermochemical energy storage technology based on chemical looping steam methane reforming Xinhe Wang, State Key Laboratory of Multiphase Flow in Power Engineering, Xi'an Jiaotong University
12:00-13:30	Lunch (Empire Ballroom, 2 nd floor)

Sep.13, 08:30-12:00, Parallel Session 2: Point-focusing solar collection technology, Futureland Grand Ballroom B

Chair: Dr. Bo Jiang, Prof. of Sichuan University

Dr. Zhihao Yao, Vice chairman of China National Solar Thermal Energy Alliance

08:30-09:00	Heliostat field control
Keynote Speech	Jianxiang Jin, President and chief engineer of Zhejiang Supcon Solar Technology Co., Ltd
09:00-09:20	Key Technologies involved in the Design Code of Solar Tower Power Plant Mr. Jigang Xu, Executive Vice-President of Engineering Institute of China Energy Engineering Corporation Limited
09:20-09:40	Introduction to measurement method of the concentrated solar flux density over the receiver aperture Feihu Sun, Zhifeng Wang, Institute of Electrical Engineering, Chinese Academy of Sciences
09:40-10:00	Study of high performance tracking and control system for heliostats in solar tower plant Wei Zhu, General Manager of Thermal Focus (Beijing) Renewable Energy Technology Co., Ltd
10:00-10:10	Coffee Break
10:10-10:40	Optical performance study on a single-mirror-facet linear heliostat with the azimuth-elevation dual axis tracking
Keynote Speech	Minghuan Guo, Zhifeng Wang, Institute of Electrical Engineering, Chinese Academy of Sciences
10:40-11:00	Simulation study on dynamic performance of molten salt receiver for solar power tower system Mei Xu, Bin Xiao, Zhi Zhou, Huaiwu Peng, Northwest Engineering Corporation Limited, POWERCHINA
10:40-11:00	Performance research of all-orientation tracking solar tower system Weidong Huang, University of Science and Technology of China
11:00-11:20	Simulation analysis for receiver safety in condition of heliostat field losing power Long Wen, Bin Xiao, Zhi Zhou, Huaiwu Peng, Xiao Wang, Northwest Engineering Corporation Limited, POWERCHINA
11:20-11:40	Wind tunnel studies of wind fences for reduction of wind flow and wind loads on heliostats Hong Liu, Bo Gong, Zhifeng Wang, Institute of Electrical Engineering, Chinese Academy of Sciences
11:40-12:00	Free time in Exhibition and Posters zone
12:00-13:30	Lunch (Empire Ballroom, 2nd floor)



Sep.13, 08:30-12:00, Parallel Session 3: High-temperature thermal storage and heat transfer technology, Futureland Grand Ballroom C

Chair: Mr. Jun Zong, Senior engineer, Vice chairman of China National Solar Thermal Energy Alliance
 Dr. Fengwu Bai, Researcher of Institute of Electrical Engineering, Chinese Academy of Sciences

08:30-09:00 Keynote Speech	Solar thermal chemical storage Dr. Jinjia Wei, Prof. of Xi'an Jiaotong University
09:00-09:20	Research and application progress on heat transfer and storage characteristics of high temperature molten salt Zhongfeng Tang, Researcher of Shanghai Institute of Applied Physics, Chinese Academy of Sciences
09:20-09:40	Research progress on solar thermal power generation high temperature heat storage and Stirling engine Gang Xiao, Professor of Zhejiang University
09:40-10:00	Thermal and mechanical performance of the heat storage tank in concentrated solar power system Zhenjie Wan, Jinjia Wei, State Key Laboratory of Multiphase Flow in Power Engineering, Xi'an Jiaotong University
10:00-10:10	Coffee Break
10:10-10:40 Keynote Speech	Development and application of molten salt high temperature heat transfer and heat storage technology Chongfang Ma, Yuting Wu, Professor of Beijing University of Technology
10:40-11:00	Thermal-structural coupling finite element analysis about the base of hot molten salt tank Pengfei Chen, Yingchun Chen, Zhi Zhou, Huaiwu Peng, Northwest Engineering Corporation Limited, POWERCHINA
11:00-11:20	Development and application of the localization of molten salt valve in light and heat generation Jinhuan Chen, President of Beijing Jiajie Energy New Energy Saving Technology Co., Ltd
11:20-11:40	Research and development of molten salt pump for CSP plant Dalong Cao, Zhikuan Xue, Zhefu Shi, Changzhou Solar Molten Salt Pump Valve Technology Co. Ltd
11:40-12:00	Preparation and Thermal Properties of Nitrate / nano-SiO ₂ / Expanded Graphite Composite as Phase Change Material Qiang Yu, Yuanwei Lu, Beijing University of Technology
12:00-13:30	Lunch (Empire Ballroom, 2 nd floor)

Sep.13, 14:00-17:50, Parallel Session 4: System Design, Futureland Grand Ballroom A

Chair: Mr. Tingzhou Lei, Researcher, expert of National High-tech R&D Program of 12th Five-Year Plan
Dr. Jinjia Wei, Prof. of Xi'an Jiaotong University

14:00-14:30 Keynote Speech	CSP tower technology+molten salt: EU research plan & strategy Dr. Julian Blanco Galvez, Director of CIEMAT-PSA
14:30-14:50	The establishment of China's solar thermal history data set Wenjun Tang, Researcher of Institute of Tibetan Plateau Research Chinese Academy of Sciences
14:50-15:10	Common technical problems in the design of CSP plant Xiaohui Zhao, Chief engineer of New Energy Development Company of Northwest Electric Power Design Institute Co., Ltd
15:10-15:30	Study on the comparison between parabolic trough and solar tower power generation Musen Qiao, Bu Ren, Liangxiao Shi, Xiaoyu Yan, Yuhong Wang Inner Mongolia Electric Power Survey & Design Institute Co., Ltd
15:30-15:40	Coffee Break
15:40-16:10 Keynote Speech	On the Control of concentrating solar thermal power systems Dr. Eduardo Camacho, Professor of University of Seville, Spain
16:10-16:30	CMI Molten Salt receiver for the Haixi Luneng project Licai Zhao, Head of CMI Energy China Office
16:30-16:50	Stirling engine - the driving force of energy change Zhensheng Wang, Chairman of Oriental Great Ocean New Energy Technology Development Co., Ltd
16:50-17:10	Study on Optical and Cooling Performance of LFR Solar Cooling System HaNeol Kim, Youngheack Kang, Korea Institute of Energy Research
17:10-17:30	Study on the efficiency of solar thermal power generation by coupling of trough tower Xiaoyu Yan, Zhiyong Wang, Bu Ren, Musen Qiao, Liangxiao Shi, Inner Mongolia Electric Power Survey & Design Institute Co., Ltd
17:30-17:50	Risks and counter measures of CSP plant Jiancheng Zhang, Senior scholar of solar thermal power generation field
19:00-21:00	Gala Banquet [Innovation, green, future, Royal Tech CSP never forget why we started to build a solar thermal dream]

Sep.13, 14:00-17:50, Parallel Session 5: Line-focusing solar collection technology, Futureland Grand Ballroom C

Chair: Dr. Zhongfeng Tang, Researcher of Shanghai Institute of Applied Physics, Chinese Academy of Sciences
Dr. Gang Xiao, Prof. of Zhejiang University

14:00-14:30 Keynote Speech	Quantitative analyses and a novel optimization strategy on negative energy region in parabolic trough solar receivers Gang Pei , Jie Ji, University of Science and Technology of China
14:30-14:50	The analysis of freeze blocking problem of parabolic trough type solar thermal power generation system with the heat conduction Jun li, Qiangqiang Zhang, Zhi Li, Zhifeng Wang, Institute of Electrical Engineering, Chinese Academy of Sciences
14:50-15:10	Failure mechanism analysis of parabolic trough tube receivers Dongqiang Lei, Yucong Ren, Zhifeng Wang, Institute of Electrical Engineering, Chinese Academy Sciences
15:10-15:30	Selective absorption film Bo Jiang, Prof. of Sichuan University
15:30-15:40	Coffee Break
15:40-16:10	New compact hydraulic drive and tracking device for trough concentrator XiaoTing Zhou, O-man New Energy Technology (Tianjin) Co., Ltd
16:10-16:30	Thermal loss analysis of a linear Fresnel heat collecting loop Northwest Engineering Corporation Limited of POWERCHINA/ Xi'an Jiaotong University
16:30-16:50	Design and optical analysis of a novel solar concentrator structure Pengzhu Lin, Jianlan Li, Huazhong University of Science and Technology
16:50-17:10	Technical improvement and performance guarantee under the large-scale industrialization of heat collecting tubes Lei Zhang, Royal Tech CSP Co., Ltd
17:10-17:30	Prediction of Working Fluid Parameters in Solar Field of DSG Trough Su Guo, HOHAI University
17:30-17:50	Numerical calculation on radial heat transfer characteristics of collector tube Junfen Li, Hang Guo, Yuting Wu, Fang Ye, Chongfang Ma, Beijing University of Technology
19:00-21:00	Gala Banquet [Innovation, green, future, Royal Tech CSP never forget why we started to build a solar thermal dream]

Sep.14, 09:00-12:00, Solar Heating Session, Futureland Grand Ballroom A

Chair: Prof. Li Zhao, Tianjin University
Prof. Yuting Wu, Beijing University of Technology

09:00-09:30 Keynote Speech	Long-term heat storage heating system in combination with solar energy and industrial waste heat Xudong Yang, Fang Guo, Tsinghua University
09:30-09:50	Solar heating policy and market development Runqing Hu, Associate researcher of Energy Research Institute of National Development and Reform Commission
09:50-10:10	Research on large temperature difference energy storage heating system Zhiqiang Du, Prof. of Tianjin Sino-German University of Applied Sciences
10:10-10:30	Case Analysis of Single Salt Tank Thermal Storage Heating Project Yinhe Zhang, Postgraduate of Beijing University of Technology
10:30-10:40	Coffee Break
10:40-11:10 Keynote Speech	Inter-seasonal heat storage and clean area heating technology Jianhua Fan, Prof. of Department of Civil Engineering, Technical University of Denmark
11:10-11:30	Research on complementary heating technology of solar energy and geothermal energy Binshou Tian, Senior engineer of Gansu Building Materials Academy
11:30-12:00 Closing Ceremony	Chair: Mr. Jixin Shao, Vice Chairman of China National Solar Thermal Energy Alliance/ President and Secretary of the Party Leadership Group of Gansu Building Materials Academy
12:00-13:30	Lunch
14:00-16:30	Visit the first public show of solar salt melting operation, LIANTES Energy Co., Ltd

(Note: There might be some adjustment of the speakers and topics)

