

WEDNESDAY, 15 OCTOBER	
15:00–19:00	Registration
THURSDAY, 16 OCTOBER	
8:00–8:30	Registration
8:30–8:45	Welcome by Symposium Chairs
8:45–9:45	Keynote session 1. Chair: M. Pinar Mengüç Keynote lecture K-4: Sophia Haussener. Thermal science in photo-electrochemistry and solar thermochemistry
9:45–11:00	Technical session 1. Chair: Tuba Okutucu-Özyurt 9:45–10:15 Invited lecture I-3: Timothy Fisher. Scalable, sustainable solar-thermal synthesis of high-yield flake graphite and hydrogen 10:15–10:30 C-2: E. Garrido-Fayad and I. Salgado-Tránsito. Optimization of the operating modes of a solar thermal power plant to increase its economic profitability 10:30–10:45 C-11: A. Magdziarz et al. Circular solutions for marine plastic waste: sustainable thermochemical pathways from waste to resource 10:45–11:00 C-7: B. Heronimus et al. Solar-synthesized hydrogen and cylindrical graphite via direct concentrated pyrolysis
11:00–11:15	Coffee break
11:15–12:15	Technical session 2. Chair: Timothy Fisher 11:15–11:45 Invited lecture I-7: Tuba Okutucu-Özyurt. Thermal management solutions for electric vehicle batteries 11:45–12:00 C-18: R. Yang et al. Adaptive thermal energy storage with dynamic insulation envelopes for distributed thermal storage in buildings 12:00–12:15 C-17: S. Vişne et al. Comparative analysis of pseudo 2D and fully 3D electrochemical- thermal models for large-scale lithium-ion batteries
12:15–14:00	Lunch
14:00–15:00	Keynote session 2. Chair: Wojciech Lipiński Keynote lecture K-5: Gary Rosengarten. What’s hot and what’s not: From high flux cooling to powering the future
15:00–16:00	Keynote session 3. Chair: M. Pinar Mengüç Keynote lecture K-1: Oğuz Can. Energy transformation: Türkiye practices and targets to zero-carbon emissions
16:00–16:15	Coffee break
16:15–17:45	Technical session 3. Chair: Ali Koşar 16:15–16:45 Invited lecture I-1: Derek Baker. From SolarHub to HelioHub: A Greek–Turkish Solar Energy Excellence Hub 16:45–17:00 C-3: K. Gürel and M.P. Mengüç. A sectoral benchmarking analysis of industrial energy efficiency across Türkiye: challenges and opportunities 17:00–17:15 C-12: C.M. Özsoy et al. Identifying non-technical risks towards low-carbon energy transition: lessons learned from Turkish industrial sector 17:15–17:30 C-14: Y. Saglam and D. Viesi. A multi-objective optimization approach in defining the decarbonization strategy of a district heating network: the case study of Oslo 17:30–17:45 C-9: E.M.A. Klinac et al. A new heat integration approach for decarbonisation of non- continuous and semi-continuous processes
17:45–18:45	Keynote session 4. Chair: Timothy Fisher Keynote lecture K-3: Yogi Goswami. Decarbonizing industrial process heat is essential to achieving the net-zero carbon emissions goal
From 19:30	Dinner. Separate announcement will be made.
FRIDAY, 17 OCTOBER	
8:30–9:30	Keynote session 5. Chair: Timothy Fisher Keynote lecture K-2: Bassam Dally. Synergetic technologies for low carbon power and industry
9:30–10:30	Technical session 4. Chair: Tassos Karayiannis 9:30–10:00 Invited lecture I-4: Ofodike Ezekoye. Low-order heat transfer modeling of thermal runaway in a prismatic lithium-ion battery module 10:00–10:15 C-1: A. Biyikoglu et al. Experimental study for the recovery of low temperature flue gas waste heat using heat pipe 10:15–10:30 C-5: B. Halvaşı et al. Influence of radiation models and melt temperature on glass furnace efficiency
10:30–10:45	Coffee break
10:45–12:00	Technical session 5. Chair: Derek Baker 10:45–11:15 Invited lecture I-6: Wojciech Lipiński. Mixed metal oxides for enhanced solar fuel production via thermochemical redox cycling 11:15–11:30 C-8: M.A.E. Ismail et al. Shape memory alloys for next-generation low-carbon heat-pumps 11:30–11:45 C-10: J. Kubačka and T.G. Karayiannis. Comparative study of deep co-axial closed loop and u-shape wellbore geothermal systems 11:45–12:00 C-4: M. Georgiou et al. PROTEAS: A platform for advancing and demonstrating renewable energy and seawater desalination technologies
12:00–14:00	Lunch
14:00–15:00	Keynote session 6. Chair: Wojciech Lipiński Keynote lecture K-6: Wen-Quan Tao. Energy and carbon emission efficiency of data centres enabled by thermal management and hydrogen fuel cells
15:00–16:15	Technical session 6. Chair: Wojciech Lipiński 15:00–15:30 Invited lecture I-5: Ali Kosar. Energy efficiency and harvesting with phase change phenomena on functional surfaces and emerging applications 15:30–15:45 C-13: B.C. Park et al. Analysis of separation characteristics of inline type separator for water-oil two-phase flow separation 15:45–16:00 C-15: A. Shorbagy and J. Weber. A novel experimental investigation of poppet clearance effects on the dynamic behavior of direct-acting pressure relief valves
16:00–16:20	Digital poster session. Chair: Wojciech Lipiński
16:00–16:05	P-1: M. Bouanani et al. Coupled natural convection and radiation and in a square enclosure heated by a tilted square centric cylinder
16:05–16:10	P-2: Y.J. Kim et al. Comparison of experimental and numerical analysis results of inline type separator for water-gas two-phase flow separation
16:10–16:15	P-3: M. Misale et al. Experiments in a multi-connected natural circulation loops working by a water-glycerin mixture
16:15–16:20	P-4: N.S. Woo et al. Developing HILS based verification technology for offshore drilling and production plants
16:20–16:30	Coffee break
16:30–17:30	Technical session 7. Chair: Gary Rosengarten 16:30–17:00 Invited lecture I-2: Ozgur Bayer. Innovative strategies for PCM-based energy storage: From scientific insights to industrial practice 17:00–17:15 C-16: Y. Song et al. Deep learning-based diagnostic framework for electric submersible pump failure in thermal energy operations 17:15–17:30 C-6: K. Hamid et al. Development and experimental study of an oil-free high-temperature heat pump for industrial heating and cooling applications
17:30–18:30	Panel. Chair: M. Pinar Mengüç
18:30–18:45	Concluding remarks by Symposium Chairs