JOURNAL OF THERMAL SCIENCE CONTENTS

Volume 34, No. 1, January–February 2025

A Review on Thermal Management of Li-ion Battery: from Small-Scale Battery Module to	1
Large-Scale Electrochemical Energy Storage Power Station	
CHEN Zhifeng, JIA Li, YIN Liaofei, DANG Chao, REN Honglei, ZHANG Zhiqiang	
Numerical Study of Flow and Heat Transfer Characteristics of Shell-and-Tube Molten Salt Electric	24
Heater with Circularly Perforated Baffles	
LIN Yongjie, ZHANG Cancan, WU Yuting, ZHANG Yi, LU Yuanwei	
Turbulent Agglomeration of Microparticles in a Cylinder Wake Flow Using LES-DEM: Focusing on the	34
Effect of the Reynolds Number	
WANG Shuang, MU Lin, LI Xue, XIE Jun, DONG Ming	
Comparative Evaluation and Performance Analysis of Heat Exchangers Featured with Peened Surface	50
DINESHBABU Chinnadurai, SHIVA SANKARAN Nallasamy, VENKATESH RAJA Krishnan,	
VENKATESH Rathinavelu	
Numerical Simulation of Radiation Transport to Improve Microalgae Cultivation in an Air-Lift	62
Photobioreactor	
ZHANG Xianbin, LI Mingjia, HUNG Tzuchen, ZHANG Zixun	
Automatic and Rapid Throughflow-Based Optimal Design Method for Multi-Stage Axial-Flow Compressors	77
LEI Fan, ZHANG Xiawen, JU Yaping, ZHANG Chuhua	
Aerodynamic Optimization and Flow Mechanism for a Compressor Cascade at Low Reynolds Number	92
LI Lin, ZHANG Jianshe, CHEN Caiyan, TAN Wei, ZHANG Yanfeng	
Design and Application of Turbine Cascade Partitioned Endwall Profiling	110
ZENG Fei, JIANG Ruiqi, XUE Xingxu, DU Wei, LUO Lei, ZHOU Xun	
Control of Corner Separation for a Linear Compressor Cascade via Bionic Slanting Riblets at the Endwall	129
ZHANG Peng, LI Yonghong, CHENG Rixin	
A Wind Tunnel Experimental Study on the Wake Characteristics of a Horizontal Axis Wind Turbine	145
GUO Xingduo, LI Yinran, LI Rennian, MA Yulong, WEI Kui	
Impact of Startup Strategy and Buffer Tank Volume on the Compressor Inlet State for a 3-MW sCO ₂	159
Brayton Cycle	
ZHAO Decai, WANG Bo	
Experimental Research on a Feasible Building Insulation Material Based Reed in China	176
LIU Tiantian, PENG Yizhe, LIU Lifang, CAI Chenghan, WANG Shuang, LI Hongqiang	
Performance Analysis of a Coupled System based on Organic Rankine Cycle and Double Effect	188
Absorption Refrigeration for Waste Heat Recovery in Data Center	
LI Peng, XU Jiaqi, WANG Binbin, LIU Jianyang, ZHAO Wensheng, HAN Zhonghe	
Si-C Foam Porous-Medium Combustion Power-Generation System for Low-Calorific-Value	206
Biomass Syngas	
YANG Jianwen, CHEN Wei, CAO Bingwei, LIU Xinhui, LI Hang	
Melting Evaluation of Phase Change Materials Impregnated into Cascaded Metal Foams with	223
Regionalized Enhancement	
WEI Xinyi, ZHANG Nan, ZHANG Zhaoli, CAO Xiaoling, YUAN Yanping	

Experimental Study on Energy Storage Characteristics of Sintered Ore Particle Packed Beds	242
LAI Zhenya, DING Liwei, LYU Hongkun, HOU Chenglong, CHEN Jiaying, GUO Xutao,	
HAN Gaoyan, ZHANG Kang	
Experimental Study for Effect of Multi-Site Spark Ignition on Dedicated Hybrid Engine Performance	254
under High Dilution Condition	
YAN Bowen, WATERS Benjamin, HAINES Andrew, MCGHEE Mike, HU Tiegang, DENG Wei,	
PU Yongxian, MA Tianyu	
Experimental Study on Geometry Characteristics of Turbulent Premixed Flames for Natural	268
Gas/Air Mixtures	
ZHENG Weilin, WANG Qijiao, XIAO Huahua, CHEN Xiaoxiao, XIE Fan, ZENG Wen	
Nano-Enhanced Dairy Scum Biodiesel Blends: Unleashing the Power of Aluminium Oxide for	283
Sustainable and Efficient Engine Performance	
Veeranna MODI, Prasad B. RAMPURE, Sunil Kumar SHETTY, Madeva NAGARAL, Channa Keshava NAIK N	,
Johar MGM, Muhammad Irsyad ABDULLAH, Abdullah I. AL-MANSOUR, Shamshad ALAM	
Experimental Study on Diesel Spray and Flame Asymmetry Characteristics of Dual-Orifice Nozzles for a	303
Medium-Speed Engine	
JU Dehao, LIU Rui, ZHENG Liang, DENG Jiahui, ZHANG Wenzheng, HUO Jinlu, HUANG Li	
Gas-Solid Flow, Combustion Characteristics, and Gas Emissions in a 75 t/h CFB Boiler Based on the	323
CPFD Method	
HUANG Xiankun, BAI Zhang, ZHU Xiaoli, WANG Shuoshuo, MU Lin, GONG Liang	