ATPC 2025

The 14th Asian Thermophysical Properties Conference (ATPC)

PROGRAM

Organizer: Thermal Properties Professional Committee of the Chinese Society for Measurement
Asian Union of Thermal Science and Engineering
Heat and Mass Transfer Branch of the Chinese Society of Engineering Thermophysics
Shanghai Polytechnic University

October 17 - 21, 2025
Shanghai, China

CONTENTS

Preface

The first Asian Thermophysical Properties Conference (ATPC) was held in 1986 in Beijing, P.R. China. ATPC is now one of the well-established international conferences and is taking part in the three most important world-wide conferences on thermophysical property organized regularly on triennial bases in North America, Europe, and Asia. Up to now, the ATPC conference has been held for 13 times. The ATPC 2025 is the 14th in a series of this event.

1st ATPC	1986, Beijing, China	2nd ATPC	1989, Sapporo, Japan
3rd ATPC	1992, Beijing, China	4th ATPC	1995, Tokyo, Japan
5th ATPC	1998, Seoul, Korea	6th ATPC	2010, Guwahati, India
7th ATPC	2004, Hefei, China	8th ATPC	2007, Fukuoka, Japan
9th ATPC	2010, Beijing, China	10th ATPC	2013, Jeju, Kroea
11th ATPC	2016, Yokohama, Japan	12th ATPC	2019, Xi'an, China
13th ATPC	2022, Sendai, Japan	14th ATPC	2025, Shanghai, China

The objective of ATPC 2025 is to provide a forum for reporting and discussing advances in experimental, theoretical, and applied research related to fluid and solid thermophysical properties, with a focus on discussing the latest developments and future directions in the field of thermophysics. The theme of this conference will cover a wide range from basic science to the application of various materials and systems.

We are looking forward to meeting you all in Shanghai.

Yours Sincerely,

谢华清

Prof. Huaqing Xie

President of Shanghai Polytechnic University

Conference Chair, ATPC 2025

Organizers

中国计量测试学会热物性专业委员会

Thermal Properties Professional Committee
of the Chinese Society for Measurement

AUTSE

Asian Union of Thermal Science and Engineering

中国工程热物理学会
传热传质分会

上海第二工业大学
Shanghai Polytechnic University

Committee

International Scientific Committee

ASSAEL Marc J.	Aristotle University, Greece
CHOI Yeon Suk	Korea Basic Science Institute, Korea
FUKUYAMA Hiroyuki	Tohoku University, Japan
HUBER Marcia L.	National Institute of Standards and Technology, USA
LEE Sanghyun	Korea Research Institute of Standards and Science, Korea
MANDELIS Andreas	University of Toronto, Canada
MUSCIO Alberto	Università di Modena e Reggio Emilia, Italy
MATSON Douglas	Tufts University, USA
OH Dong-Wook	Chosun University, Korea
POTTLACHER Gernot	Technische Universität Graz, Austria
SAIKIA Dip	Digboi College, India
SANTOS Luis	Universidade do Porto, Portugal
TAGUCHI Yoshihiro	Keio University, Japan
TAKAHASHI Koji	Kyushu University, Japan
TAKETOSHI Naoyuki	The National Institute of Advanced Industrial Science and Technology, Japan
TANG Dawei	Dalian University of Technology, China
WAKEHAM William A.	Royal Academy of Engineering, UK
WANG Deyi	The Madrid Institutes for Advanced Studies, Spain
WARY Ganesh Ch	Cotton College State University, India
XIE Huaqing	Shanghai Polytechnic University, China
ZHANG Jintao	National Institute of Metrology, China
ZHANG Xing	Tsinghua University, China

International Organizing Committee of ATPC

FUKUYAMA Hiroyuki	Tohoku University, Japan
KOJI Takahashi	Kyushu University, Japan
LEE Sanghyun	Korea Research Institute of Standards and Science, Korea
OH Dong-Wook	Chosun University, Korea
SAIKIA Dip	Digboi College, India
TAKETOSHI Naoyuki	The National Institute of Advanced Industrial Science and Technology, Japan
TANG Dawei	Dalian University of Technology, China
WARY Ganesh Ch	Cotton College State University, India
XIE Huaqing	Shanghai Polytechnic University, China
YEON Suk Choi	Korea Basic Science Institute, Korea
YOSHIHIRO Taguchi	Keio University, Japan
ZHANG Jintao	National Institute of Metrology, China
ZHANG Xing	Tsinghua University, China

National Executive Committee

Chair

ZHANG Xing	Tsinghua University, China

Vice-Chair

DAI Jingmin	Harbin Institute of Technology, China
HE Maogang	Xi'an Jiaotong University, China
TANG Dawei	Dalian University of Technology, China
XIE Huaqing	Shanghai Polytechnic University, China
ZHANG Jintao	National Institute of Metrology, China

Secretary General

QIU Ping	National Institute of Metrology, China

Deputy Secretary General

DONG Wei	National Institute of Metrology, China

Members

CAI An	Waters™ - TA Instruments, USA
CAI Jing	Avic Changcheng Institute of Metrology & Measurement, China
CHEN Yong	Nuclear Power Institute of China, China
DONG Chuanshuai	South China University of Technology, China
DONG Wei	Deputy Secretary General, National Institute of Metrology, China
DING Jiong	China Jiliang University, China
DUAN Yuanyuan	Tsinghua University, China
FENG Xiaojuan	National Institute of Metrology, China
GE Tianshu	Shanghai Jiao Tong University, China
HAN Dongxu	Beijing Institute of Petrochemical Technology, China
HE Fengmei	China Aerospace Science and Technology Corporation, China
HUANG Lei	China Academy of Space Technology, China
HUANG Jiaohong	Baotou Research Institute of Rare Earth, China
HUANG Zhibin	Huaqin Technology, China
HU Peng	University of Science and Technology of China, China
KE Hanbing	719 Research Institute of China State Shipbuilding Corporation Limited, China
KONG Wenwen	Xinjiang Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China
LEI Qingchun	Northwestern Polytechnical University, China
LI Bin	Zhengzhou Tobacco Research Institute, China
LI Gang	K-Analysis Instrument Trading (Shanghai) Co., Ltd. , China
LI Yiwen	Air Force Engineering University, China
LIU Bin	Tianjin University of Commerce, China
LIU Jinhui	Nanjing University of Science and Technology, China
LIU Linhua	Shandong University, China

LU Gui	North China Electric Power University, China
LYU Shushen	Sun Yat-sen University, China
MA Weigang	Tsinghua University, China
PAN Yonggao	Changzhou Inspection and Testing Standards Certification Institute, China
QIU Lin	University of Science & Technology Beijing, China
QIU Lu	Beihang University, China
SHEN Jun	Beijing Institute of Technology, China
SHI Lin	Tsinghua University, China
SHI Quan	Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China
SONG Bai	Peking University, China
SUN Hongsheng	Beijing Zhenxing Institute of Measurement and Testing, China
WANG Jianli	Southeast University, China
WANG Ningtao	Chengdu Aircraft Design & Research Institute, China
WANG Yuanyuan	Shanghai Polytechnic University, China
WANG Zhaoliang	China University of Petroleum, China
WANG Zhichao	China Academy of Building Research, China
WEE Liat Ong	Zhejiang University, China
WEI Dong	China Aerodynamics Research and Development Center, China
WU Junjun	Chongqing University, China
WU Jinlong	Aunion Tech Co., Ltd. , China
WU Qi	Shandong University, China
XU Jianxin	Kunming University of Science and Technology, China
YANG Jinsong	Sinosteel Luoyang Institute of Refractories Research Co., Ltd. , China
YANG Liping	Shanghai Institute of Ceramics, Chinese Academy of Sciences, China
YANG Ronggui	Huazhong University of Science and Technology, China
YUE Yanan	Wuhan University, China

ZHANG Chengbin	Southeast University, China
ZHANG Jincheng	China Testing & Certification International Group Beijing Co., Ltd. , China
ZHANG Lei	Avic Shenyang Aircraft Design & Research Institute, China
ZHANG Shengjun	China Aerospace Science and Technology Corporation, China
ZHANG Shu	Nanjing Forestry University, China
ZHANG Tong	Aecc Beijing Institute of Areonautical Materials Shandong Institute of Non-metallic Materials, China
ZHANG Xia	Guangzhou Institute of Energy Conversion, China
ZHANG Yu	Chinese Academy of Sciences, China
ZHANG Yufeng	Bohai University, China
ZHOU Tian	Central South University, China
ZHU Yuan	Southern University of Science and Technology of China, China
ZHU Yuhong	National Institute of Measurement and Testing Technology, China

Local Committee

Chair

XIE Huaqing	Shanghai Polytechnic University, China

Secretary General

WANG Yuanyuan	Shanghai Polytechnic University, China

DONG Lan	Shanghai Polytechnic University, China
LI Yifan	Shanghai Polytechnic University, China
SONG Mengxuan	Shanghai Polytechnic University, China
WANG Jun	Shanghai Polytechnic University, China
WU Zihua	Shanghai Polytechnic University, China
YAO Lin	Shanghai Polytechnic University, China
YU Wei	Shanghai Polytechnic University, China
YU Xiaoxiao	Shanghai Polytechnic University, China
ZHANG Bin	Shanghai Polytechnic University, China
ZHONG Jinxing	Shanghai Polytechnic University, China
ZHU Dahai	Shanghai Polytechnic University, China

Introduction to Shanghai Polytechnic University

Shanghai Polytechnic University (SSPU) is a municipal public university that focuses on Engineering and well-coordinated development of multi-disciplines.

SSPU was formerly known as Shanghai Part-time Polytechnic University established in 1960 and adopted its current name in 1984. It is the only university in Shanghai named by “Polytechnic University”. For more than 60 years, evolving from adult education to full-time undergraduate and higher vocational education and then to postgraduate education, SSPU adheres to the orientation of training applied technology talents to meet social demands and serve national strategies. The university has produced over 200,000 technical and applied talents of various kinds for Shanghai and nationwide, and cultivated a large number of talents who are later granted the title of Model Worker at national, provincial and ministerial levels, hence honored as “the cradle of model workers”. In recent years, the university has consistently expanded and improved talent cultivation both in scale and levels. It has optimized the structure and scale of undergraduate education and vigorously developed postgraduate education to establish a high-quality applied innovative talent training system.

SSPU has significant geographical advantages and strong teaching faculty. The main campus Jinhai Road Campus is located in Pudong New Area, Shanghai, adjacent to China (Shanghai) Pilot Free Trade Zone and a number of Fortune 500 companies. SSPU has 16 colleges and schools, over 16,000 full-time students and about 1,200 faculty and staff. It has over 80 faculty members supported by various talent programs, such as the National Science Fund for Distinguished Young Scholars, Chang Jiang Scholars Program, Ten Thousand Talents Plan, Program for New Century Excellent Talents in University under the Ministry of Education, etc.

SSPU advances connotative development in depth. The university is a doctoral degree awarding construction institution in Shanghai. It is included in the Construction Project (cultivation) of High-Level Universities in Shanghai and is selected as the Pilot Institution for Reform of Talent Cultivation Mode in Universities of Applied Sciences in Shanghai.

SSPU now offers 13 master’s degree programs, 50 bachelor’s degree programs and some high-quality higher vocational programs covering 8 fields of disciplines including Engineering, Management, Economics, Science, Arts, Literature, Education and Law. The discipline of Engineering ranks the top 1% of ESI global rankings. SSPU focuses on building two featured and advantageous disciplines, Mechanical Engineering (Intelligent Manufacturing Engineering) and Materials Science and Engineering (Energy Conservation and New Energy Materials), and emerging cross disciplines such as Artificial Intelligence, Energy and Environmental Protection, etc. The university also plans some future disciplinary directions, including Integrated Circuit Engineering, Standardization Engineering, Intelligent Medical Engineering, etc. The establishment of research institutes such as the Artificial Intelligence Research Institute, Integrated Circuit Research Institute, and Intelligent Medical Engineering Research Institute empowers the development of key engineering fields of the university. SSPU has 3 National Distinctive Programs and 3 National First-Class Undergraduate Program Construction Sites. And the programs of SSPU are selected into

over 30 projects such as Excellent Engineer Education Training Program of the Ministry of Education, Comprehensive Reform Pilot Program of Undergraduate Programs in Local Universities under the "Undergraduate Teaching Project" of the Ministry of Education, Applied Undergraduate Pilot Programs for Local Universities, Shanghai First-Class Undergraduate Program Construction Site, Shanghai Undergraduate Education Highland Construction Project, etc. SSPU also undertakes over 60 national and Shanghai Municipal projects, including Emerging Engineering Research and Practice Projects, Industry-University Cooperation Education Projects of the Ministry of Education, Shanghai New Humanities and Social Sciences Research and Reform Practice Projects, Shanghai Cultural Creativity & Industry-Education Integration Leading Projects, and Key Undergraduate Teaching Reform Projects in Shanghai Universities. In recent years, the university has built more than 200 national and Shanghai Municipal courses, including National First-Class Undergraduate Courses, Shanghai First-Class Undergraduate Courses, Shanghai Key Courses, etc. The faculty have won 2 second prizes of National Teaching Achievement Award, 1 special award, 3 first prizes and 8 second prizes of Shanghai Teaching Achievement Award; and the students have participated in more than 410 discipline and skill competitions of various kinds at the provincial and ministerial level and above, and won more than 2100 awards in total including nearly 800 national awards.

SSPU keeps meeting the needs of society and improving its service capability. The university has undertaken over 100 national projects, including major programs supported by National Natural Science Foundation of China (NSFC), National Key R&D Program, etc. SSPU has over 10 scientific research platforms, such as Shanghai Engineering Research Center of Advanced Thermal Functional Materials, Shanghai Collaborative Innovation Center for Reverse Logistics and Supply Chain, Shanghai Professional Technology Service Platform of Big Data for Thermophysical Properties, Shanghai Standardization Innovation Center, Shanghai Green and Low Carbon Service Institution, Shanghai Digital Cultural Tourism Design and Innovation Center, etc. In addition, SSPU has the first batch of Education Bases of the Spirit of Scientists in China, Shanghai Science Popularization Base, Energy Science Popularization Education Base under China Energy Research Society, etc. Great importance is attached to the integration of industry and education and all-round cooperation is carried out with famous enterprises and research institutes such as COMAC Shanghai Aircraft Manufacturing Co., Ltd., CSSC Power (Group) Co., Ltd., Baoshan Iron & Steel Co., Ltd., Huahong Group, Shanghai Electric Group, Shanghai Inspection, Testing & International Certification Co., Ltd., Bank of China Shanghai Branch, Shanghai Disney Resort, Shanghai Academy of Spaceflight Technology, Shanghai Institute of Ceramics of Chinese Academy of Sciences, Shanghai Institute of Computing Technology Co., Ltd., Shanghai Research Institute of Materials Co., Ltd., etc. And 22 technology transfer workstations and two industrial institutes are set up in the Yangtze River Delta region to promote transformation of scientific and technological achievements and industrial incubation. The Intelligent Manufacturing Industrial Technology Institute, jointly set up by SSPU and Wuyi County, Zhejiang Province, and SSPU Qidong Institute, jointly built by SSPU and Qidong City of Jiangsu Province, have achieved prominent results and become demonstration models by adopting the modes like "open competition mechanism for selecting the best candidates to lead research projects" and "free trial of scientific and technological achievements first, payment for transfer later" to help local industries upgrade. SSPU has been selected as a Demonstrative Unit of Patent Work in Shanghai, a branch of Shanghai Intellectual Property Information Service Platform, a Demonstrative Unit of Technical Contract Management of Universities in Shanghai and a Pilot Unit of Innovation and Reform in Technological Achievement Transfer in Shanghai. In the past three years, the university has won a number of first prizes at provincial or municipal level and influential prizes awarded by industry associations, over 30 in total. It has taken the lead or participated in establishing and publishing over 10 national standards. Over 30 special reports on decision-making and consultation were adopted by higher authorities. The university has also won over 10 science popularization awards such as Shanghai Science Popularization Competition, Shanghai Scientific Experiment Exhibition, Shanghai Science Popularization Education Innovation Award, etc.

SSPU continuously enhances internationalization. The university has established stable partnerships with over 170 universities and institutions in 38 countries and regions. There is 1 Chinese-foreign cooperatively-run school and 2 Chinese-foreign cooperatively-run educational projects. Nearly 150 student overseas exchange programs including over 50 joint education programs are open to students. Currently there are nearly 120 international degree students from 25 countries studying in SSPU. The university offers 7 English-taught programs and 127 undergraduate English-taught courses among which there are 9 Shanghai demonstrative English-taught courses and 9 Shanghai demonstrative English-taught courses for international students. The university has 18 international joint laboratories and research centers and 10 Erasmus+ programs which were applied with foreign partners. SSPU has successfully held distinctive international exchange activities such as SSPU Global Partnership Week, French Day, etc.

At a new starting point, SSPU will carry forward its fine educational traditions, adhere to the new development philosophy, and integrate into the new development pattern, training applied innovative talents who are professional, responsible and innovative and possess engineering practical abilities, digital technology, and green development concepts. SSPU strives to build the university into a high-level innovative and domestically first-class university of applied sciences with close collaboration of industry, university and research, with distinctive strengths in technology and widely recognition by industries, making it a highland for cultivating high-end equipment talents and an important base for talent development in integrated circuits and green low-carbon fields.

Introduction to School of Energy and Materials

School of Energy and Materials of Shanghai Polytechnic University was established in 2021. The College consists of the Department of Energy Engineering and the Department of Materials Engineering. The Department of Energy Engineering includes the majors of New Energy Science and Engineering and Energy Storage Science and Engineering; the Department of Materials Engineering includes the majors of Materials Science and Engineering (New Energy Materials and Engineering), Materials Chemistry and Composites Manufacturing Engineering. There are two master programs, which are Materials and Chemical Engineering and Energy and Power. The school is a PhD program construction unit and Pudong New Area post-doctoral innovation practice bases construction unit, approved by the new energy power generation engineering category of national vocational education dual-teacher teacher training bases and vocational education national training program demonstration training bases, with the Shanghai Engineering Research Center of Advanced Thermal Functional Materials, Shanghai Thermal Properties of big data. It also has Shanghai Engineering Research Center of Advanced Thermal Functional Materials, Shanghai Thermophysical Big Data Professional Technical Service Platform, and Shanghai Key Laboratory for Application and Evaluation of Engineering Materials.

There are more than 60 faculties in the school, and 100% of the full-time teachers have doctoral degrees, including 19 professors and 19 associate professors, including the Ministry of Education's New Century Outstanding Talents, East Scholars Distinguished Professor, Shuguang Scholars, Oriental Talents Program, Shanghai Rising-Star Program, Chen Guang Project supported by SMEC and SEDF, Yang Rising-Star Program, Shanghai Rising-Star Program, Shanghai Guang Project supported by SMEC and SEDF, Baosteel Excellent Teachers, the world's top 100,000 scientists, and the list of the top 2% of the world's scientists, etc..

The research of the school focuses on the field of dual-carbon, with thermo-functional materials and energy-saving and new energy materials. The discipline of Materials Science and Engineering were established in 2008. After more than ten years of construction, it is now a key discipline (Class B) in Shanghai, a plateau disciplines in Shanghai High-Level Universities in Shanghai, and a key discipline of the university. The disciplines of Energy and Power Engineering and Thermal Science and Engineering focus on research fields including new energy conversion and utilization, thermal energy management and utilization, energy storage and emission reduction, and smart energy. They are emerging interdisciplinary disciplines prioritized for development by the university. In recent years, the school teachers have won the Shanghai Natural Science Award, China Industry-University-Research Cooperation Innovation Achievement Award and other awards. More than 20 national level funds were approved, including the National Natural Science Foundation of China (NSFC) major project topics, key program of the National Natural Science Foundation of China and so on. Meanwhile, more than 50 provincial and ministerial-level projects were approved, such as Shanghai Municipal Natural Science Foundation, project of the Shanghai Municipal Science and Technology Commission, etc..

The School of Energy and Materials attaches great importance to the integration of industry and education and has built practice bases for collaborative education and production with more than 30 large enterprises, such as Shanghai Huahong, Shanghai Solar Energy Engineering Technology Research Center, COMAC, etc. The school adheres to the system of school-enterprise dual tutor, and employs R&D engineers of Zhejiang Xinhua Chemical Industry, Shanghai XX Metallurgical Industry, Sugo Group, etc., to serve as tutors for the enterprises. Large-scale joint training programs for professional master's students are also carried out with Shanghai Research Institute of Materials (SRIM), Shanghai Institute of Silicate of Chinese Academy of Sciences (SICCAS), Sinopec (Shanghai) Petrochemical Research Institute and other units. It also undertakes the cultivation of master's degree in Resources and Environment as well as master's degree in materials and chemicals related to Shanghai Vocational & Technical Teacher Education School and Shanghai Model Worker College. The school has established 6 work stations for technology transfer in Yangtze River Delta, elected as the fifth chairman of Shanghai Polytechnic University in Pudong New Area, led the establishment of Shanghai Polytechnic University Qidong Research Institute, jointly established the SSPU Qidong Institute of Carbon Neutrality and Proof-of-Concept Center with the National University Science and Technology Parks of Shanghai Polytechnic University, jointly established the Carbon Neutrality Standard and Advanced Chemical Industry Research Institute of SSPU Qidong Institute of the National Information Center, and jointly established the Carbon Neutrality Standard and Advanced Chemical Industry Research Institute of Shanghai Polytechnic University. The Carbon Neutral Standard and Advanced Technology Industry-Education Fusion Center has been established with the Higher Institute for Energy Research in Madrid, Spain, the University of Hull, UK, Penn State University, The State University of New Jersey, Florida State University, ATMI, USA, etc. A number of scientific and technological research partnerships have been approved. The school has established joint research relationships with The State University of New Jersey, Florida State University, ATMI Corporation, etc. We have been approved the High-end Foreign Experts Introduction Program by the Ministry of Science and Technology of the People's Republic of China under the National Foreign Experts Program, which has greatly enhanced the influence of the discipline in the domestic and international academic and industrial circles.

The school actively supports students to participate in high-level competitions such as Internet+, Challenge Cup, National University Students' Energy Conservation and Emission Reduction Social Practice and Science and Technology Competition, China Graduate Students' Dual-Carbon Innovation and Creativity Competition, Shanghai New Materials Innovation and Creativity Competition, etc. Students have won more than 20 international gold medals, national awards, and more than 100 provincial and ministerial awards, and many students and teams have won the President Award of Shanghai Polytechnic University. The school attaches importance to the construction of academic style and guides students to strive for higher learning goals. A number of students were admitted to master's degree and doctoral degree programs in different universities all over the world, such as University of Tsukuba in Japan, University of Science and Technology of Denmark, Fudan University, Tongji University, Sun Yat-sen University, East China University of Science and Technology, East China Normal University, and so on. The employment rate of the graduates has remained high for many years and the graduates are honored by Employing Enterprise.

Important Information

Registration Desk

Registration Desk will be located at **the entrance of the lobby at Hilton Shanghai Zhangjiang Science City**. Please check the Office hours below.

Date	Open Hours	Location
October17	10:00-21:00	Hotel's lobby
October 18	07:00-18:00	Hotel's lobby
October 19	08:00-18:00	Hotel's lobby
October 20	08:00-18:00	Hotel's lobby

On-site registration fee	
Regular	USD 660 / CNY 4800
Student	USD 380 / CNY 2800
Accompanying person	USD 110 / CNY 800

Instructions for Chairs

The chairs are required to be seated at the chairs' seats no later than 10 minutes before their session starts. The chairs are asked to ensure that all presentations start and finish punctually as scheduled. The conference staff will assist with timing.

Emergencies

In case of medical or other serious emergencies, dial 120.
In case of being involved in a crime, dial 110.
During the opening hours, please don't hesitate to ask the conference staff for help.

Oral Presentation Guidelines

- Plenary Lectures: 35 min. Presentation + 5 min. Discussion (total 40 min).
- Keynote Lectures: 25 min. Presentation + 5 min. Discussion (total 30 min).
- Invited Lectures: 25 min. Presentation + 5 min. Discussion (total 30 min).
- Oral presentation: 15 min. Presentation + 5 min. Discussion (total 20 min.)

It is critical that talks are kept on time. Please do not exceed your allotted time.
The official conference language will be English, and no simultaneous translation will be available.
All speakers must meet in the room at least 5 minutes prior to the beginning of the session. Please check your laptop with the equipment on the podium before your session starts. If you need, the conference staff will support you.

Proceedings

The abstracts are available in the U-disk, which is in the conference package.

Publication of your presented papers

Excellent papers will be recommended for publication in special proceeding issues of the following journals:
Thermochimica Acta
High Temperatures-High Pressures
International Journal of Thermophysics
Please visit the website (http://www.atpc2025.org/Speciallssues.html) for detail information.

Conference Venue

Hilton Shanghai Zhangjiang Science City
No. 1398, Haike Road, Pudong District, Shanghai, 201210, China

Transportation

From Shanghai Pudong International Airport to Hilton Shanghai Zhangjiang Science City:
Route 1: By Taxi, around 26 km, 100 RMB, 30-40 min.
Route 2: Take Metro Line 2 to Longyang Road Station, change to Metro Line 16 to Huaxia Middle Road Station, and change to Metro Line 13 to Xuelin Road Station. Walk 300 meters to the hotel. The journey takes approximately 73 min. The total cost is about 6 RMB.

From Shanghai Hongqiao International Airport to Hilton Shanghai Zhangjiang Science City:
Route 1: By Taxi, around 36 km, 200 RMB, 40-50 min.
Route 2: Take Metro Line 10 to Major venue. Xintiandi Metro Station, change to Metro Line 13 to Xuelin Road Station. Walk 300 meters to the hotel. The journey takes approximately 75 min. The total cost is about 6 RMB.

From Shanghai Railway Station to Hilton Shanghai Zhangjiang Science City:
Route 1: By Taxi, around 25 km, 100 RMB, 40-50 min.
Route 2: Walk 291 meters from Shanghai Railway Station to Shanghai Railway Subway Station, take Metro Line 1 to Hanzhong Road Station, and change to Metro Line 13 to Xuelin Road Station. Walk 300 meters to the hotel. The journey takes approximately 62 min. The total cost is about 5 RMB.

From Shanghai South Railway Station to Hilton Shanghai Zhangjiang Science City:
Route 1: By Taxi, around 22 km, 90 RMB, 40-50 min.
Route 2: Walk 57 meters from Shanghai South Railway Station to Shanghai South Railway Subway Station, take Metro Line 1 to South Shaanxi Road Station, change to Metro Line 10 to Major venue. Xintiandi Metro Station, and change to Metro Line 13 to Xuelin Road Station. Walk 300 meters to the hotel. The journey takes approximately 74 min.The total cost is about 5 RMB.

From Shanghai Hongqiao Railway Station to Hilton Shanghai Zhangjiang Science City:
Route 1: By Taxi, around 38 km, 200 RMB, 60-70 min.
Route 2: Walk 118 meters from Shanghai Hongqiao Railway Station to Shanghai Hongqiao Railway Subway Station, take Metro Line 10 to Major venue. Xintiandi Metro Station, and change to Metro Line 13 to Xuelin Road Station. Walk 300 meters to the hotel. The journey takes approximately 76 min. The total cost is about 6 RMB.

TRANSPORTATION

Subway station

Xuelin Road Station (Line 13)0.3km

Railway Station

Shanghai Railway Station, 26km

Shanghai South Railway Station,22km

Shanghai Hongqiao Railway Station,35km

Airport

(PVG) Shanghai Pudong Int'l Airport, 26km

(SHA) Shanghai Hongqiao Int'l Airport, 35km

Floor map of Hilton Shanghai Zhangjiang Science City

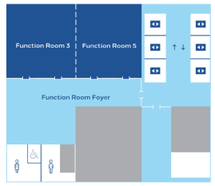
FLOOR PLAN

FLOOR MAP KEY

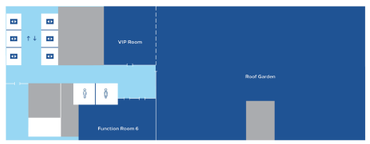
- Meeting Room/Conference Room
- Public Space
- Amenities
- Private

3rd Floor

5th Floor



26th Floor



Services Group

General coordinator

Conference Secretary: Yuanyuan Wang, wangyuanyuan@sspu.edu.cn, Tel: +86-15618887805

Registration

Lan Dong, donglan@sspu.edu.cn, Tel: +86-18301959865

Bin Zhang, zhangbin@sspu.edu.cn, Tel: +86-17721052050

Traffic Assistance

Lin Yao, yaolin@sspu.edu.cn, Tel: +86-15900696897

Technology support

Yifan Li, liyf@sspu.edu.cn, Tel: +86-13166343816

Jun Wang, junwang@sspu.edu.cn, Tel: +86-13817181724

Program at a Glance

Time	Activity	Location
Oct 17, Hilton Shanghai Zhangjiang Science City		
10:00-21:00	Registration	Hotel's Lobby
18:30-20:00	Dinner, Buffet Restaurant	
Oct 18, Hilton Shanghai Zhangjiang Science City		
8:30-8:50	Opening Ceremony	Grand Ballroom
8:50-11:50	Plenary Lectures	Grand Ballroom
12:00-13:30	Lunch, Buffet Restaurant	
14:00-18:00	Keynote, Invited, Oral Lectures	Ballroom1-2, Function Room 1-3, 5-6, SOMA
18:00-20:00	Dinner, Buffet Restaurant	
Oct 19, Hilton Shanghai Zhangjiang Science City		
8:30-12:00	Keynote, Invited, Oral Lectures	Ballroom1-2, Function Room 1-3, 5-6, SOMA
12:00-13:30	Lunch, Buffet Restaurant	
14:00-18:00	Keynote, Invited, Oral Lectures	Ballroom1-2, Function Room 1-3, 5-6, SOMA
19:00-21:00	Conference Banquet, Grand Ballroom	
Oct 20, Hilton Shanghai Zhangjiang Science City		
8:30-12:00	Keynote, Invited, Oral Lectures	Ballroom1-2, Function Room 1-3, 5-6, SOMA
12:00-13:30	Lunch, Buffet Restaurant	
14:00-18:00	Keynote, Invited, Oral Lectures	Ballroom1-2, Function Room 1-3, 5-6, SOMA
18:00-20:00	Dinner, Buffet Restaurant	

Opening ceremony and plenary

OCT 18, 2025

Address: Grand Ballroom at Hilton Shanghai Zhangjiang Science City

8:30-8:50	Opening Ceremony	Chair: Yuanyuan Wang
8:50-9:30 Plenary Lecture	Prof. Bo Gao Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China Title: Precise primary gas thermometry at low temperatures	Chair: Akira Nagashima
9:30-10:10 Plenary Lecture	Prof. Xiaodong Liang Technical University of Denmark, Denmark Title: Equations of state: Achievements, challenges, and opportunities	
10:10-10:30	Coffee Break	
10:30-11:10 Plenary Lecture	Prof. Cheng-Wei Qiu National University of Singapore, Singapore Title: When heat transfer meets metamaterials and topological physics	Chair: Marc J. Assael
11:10-11:50 Plenary Lecture	Prof. Koji Takahashi Kyushu University, Japan Title: Bridging the gap between nanoscopic and macroscopic studies of phase change heat transfer	
12:00-13:30	Lunch, Buffet Restaurant	

Plenary Lecture

Precise primary gas thermometry at low temperatures

Speaker: Bo Gao
Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China

Bo Gao is deputy director of the Technical Institute of Physics and Chemistry of the Chinese Academy of Sciences (TIPC-CAS), the director of the State Key Laboratory of Cryogenic Science and Technology, and the deputy director of the TIPC-LNE Joint Laboratory on Cryogenic Metrology Science and Technology. She serves as council members of both the Chinese Society for Measurement (CSM） and the Chinese Association of Refrigeration (CAR), Chairman of Sub-technical Committee of Instrument Test Result Traceability Standardization in the Field of Scientific Test Facilities/Scientific Test Device Technology/Scientific Test under the China Association for Standardization of Materials and Testing. Dr. Gao is an invited expert in the Contact Thermometry Working Group, Consultative Committee on Thermometry (CCT) of the International Committee of Weights and Measures (CIPM).

In the field of thermophysical properties, Dr. Gao has led more than 10 high-level programs, including three National Key R&D Program funds by the Ministry of Science and Technology (MOST) of China, and one Distinguished Young Scholar Program supported by the National Natural Science Foundation of China (NSFC). She has also contributed to three European Partnership on Metrology projects, co-financed under the EU Horizon 2020 research and innovation programme.

Dr. Gao earned her Ph.D. degree from TIPC-CAS in 2008. Then she conducted postdoctoral research at Tsinghua University from 2009 to 2011. Subsequently, she joined TIPC-CAS as an Associate Professor and was promoted to Professor in 2018. Her research focuses on low-temperature metrology and thermophysical properties of cryogenic fluids. Dr. Gao pioneered a novel method of single-pressure refractive-index gas thermometry for thermodynamic temperature measurements, developing experimental apparatus that achieved world-leading measurement uncertainties in low temperature range. Her results contributed to the revision of the International Temperature Scale of 1990 (ITS-90). Additionally, she designed and built customized cryogenic thermostats for the Conservatoire National des Arts et Métiers (CNAM) and LNE in France, which directly supported the establishment of primary standards for quantum-based pressure and cryogenic temperature measurements.

In recognition of her contributions to international metrology, Dr. Gao received several awards: the György Striker Junior Paper Award at the XXII IMEKO World Congress (2018), the Oral Best Paper Award at the 19th International Metrology Congress (2019), Distinguished Women Scientists of the Association of Academies and Societies of Sciences in Asia (2018); the China Youth Science and Technology Award (2022), and the Hu Gangfu Experimental Physics Award from the Chinese Physical Society (2020), the National Hundred, Thousand and Ten Thousand Talent Project (2020) and the National March 8th Red-Banner Individual Holders (2023). Her

research achievements have also been selected as key exhibition item in national exhibitions such as the Zhongguancun Forum (2023) and the National 13th Five-Year Plan Science and Technology Innovation Achievements Exhibition (2021).

Abstract

Low-temperature measurements are vital for cutting-edge scientific research, large-scale facilities, and deep space exploration. Historically, temperature scales such as ITS-90 and PLTS-2000 have been used in this range. The 2019 redefinition of the kelvin, directly linked to the Boltzmann constant, has enabled more accurate temperature realization at low temperatures. However, achieving high-accuracy thermodynamic temperature measurements remains a significant challenge in modern metrology. To address this, researchers worldwide have made significant advances in practical primary thermometry. At Technical Institute of Physics and Chemistry of the Chinese Academy of Sciences (TIPC-CAS), we have developed a novel method called single-pressure refractive-index gas thermometry (SPRIGT). Based on the method, two SPRIGT experimental apparatuses were designed and constructed, achieving thermodynamic temperature measurements from 2 K to 25 K with uncertainties better than 0.17 mK. These advances will facilitate international comparisons among different primary thermometry under the DireK-T project, funded by the European Partnership on Metrology. For temperatures below 1 K, a dilution refrigerator has been established at TIPC-CAS to disseminate temperatures traceable to PLTS-2000. In future, we will focus on direct realization of the PLTS-2000 scale and the new kelvin through the development of a Johnson noise thermometry.

Equations of state: Achievements, challenges, and opportunities

Speaker: Xiaodong Liang

Technical University of Denmark, Denmark

Dr. Xiaodong Liang received his PhD in Chemical Engineering from the Technical University of Denmark in 2014 and is currently an Associate Professor in the Department of Chemical and Biochemical Engineering at the same university. His research focuses on thermodynamics and process systems engineering, with a growing interest in the integration of AI and machine learning techniques. Dr. Liang has authored over 130 peer-reviewed articles across more than 40 journals and has supervised more than 20 PhD students, including serving as the main supervisor for nine of them. Dr. Liang was awarded a research grant from the Independent Research Fund Denmark in 2023 for benchmarking and developing predictive molecular thermodynamic models. In 2024, he received a prestigious European Research Council (ERC) Consolidator Grant to support his project on revolutionizing molecular thermodynamics by water and electrolytes.

Abstract

Equations of state (EOS) are fundamental to thermodynamic modeling, underpinning a wide range of applications across chemical, petroleum, environmental, and other engineering disciplines. Since the van der Waals equation of state, both classical and advanced molecular models have demonstrated remarkable potential. Over more than 150 years, these models have evolved to describe diverse systems and conditions with increasing accuracy.

This presentation provides the authors' perspective on the capabilities, limitations, current status, and future challenges and opportunities of EOS [1]. It begins with a benchmark assessment of various EOS, including those incorporating polar terms, in predicting phase equilibria – a core aspect of chemical engineering thermodynamics[2]. The discussion then extends to their ability to predict other key properties, such as heat capacities, speed of sound, compressibility, and expansivity[3]. Strategies for enhancing predictive capabilities, such as leveraging quantum chemical calculations, will also be explored[4].

Despite significant advancements, no existing general EOS can simultaneously describe the thermodynamic properties of water and electrolyte solutions – an area of growing interest in the context of the green transition of the society. The final part of the talk will examine the limitations of current state-of-the-art models for these systems and consider whether they offer a pathway to transformative developments in molecular EOS.

References

[1] G. M. Kontogeorgis, X. Liang, A. Arya, I. Tsivintzelis. Equations of state in three centuries. Are we closer to arriving to a single model for all applications? Chem. Eng. Sci. X., 2020, 7, 100060.

[2] K. Li, Z. Ye, X. Liang. Comparative Study of Phase Equilibrium Modeling with Cubic and Association Equations of State. J. Chem. Eng. Data, 2024, 69, 4261-4279.

[3] J. Amanabadi, G. M. Kontogeorgis, X. Liang. Evaluation of thermodynamic models for the prediction of derivative properties for non-polar compounds. Fluid Phase Equilib., 2025, 114366.

[4] C. S. Beraldo, X. Liang, L. A. Follegatti-Romero. Predicting imidazolium ionic liquid properties with a simple molecular volume-based SAFT-VR Mie approach. Chem. Eng. Sci. 2025, 301, 120748.

When heat transfer meets metamaterials and topological physics

Speaker: Cheng-Wei Qiu
National University of Singapore, Singapore

Prof. Cheng-Wei Qiu is Provost's Chair Professor in National University of Singapore, NUS. He is Fellow of Academy of Engineering, Singapore. He is Foreign Fellow of Chinese Optical Society, Fellow of APS, Optica, SPIE and The Electromagnetics Academy, US. He was the recipient of President's Science Award 2023, the highest science accolade in Singapore. He was elected Fellow of ASEAN Academy of Engineering and Technology. He is well known for his research in structured light and interfaces. He has published over 580 peer-reviewed journal papers. He was the recipient of URSI Young Scientist Award in 2008, NUS Young Investigator Award in 2011, MIT TR35@Singapore Award in 2012, Young Scientist Award by Singapore National Academy of Science in 2013, Faculty Young Research Award in NUS 2013, SPIE Rising Researcher Award 2018, Young Engineering Research Award 2018, and Engineering Researcher Award 2021 in NUS, and World Scientific Medal 2021 by Institute of Physics, Singapore, Achievement in Asia Award (Robert T. Poe Prize) by International Organization of Chinese Physicists and Astronomers in 2022. He was Highly Cited Researchers in 2019-2024 by Web of Science. He has been serving in Associate Editor for various journals such as JOSA B, PhotoniX, Photonics Research, and Editor-in-Chief for eLight. He also serves in Editorial Advisory Board for Laser and Photonics Review, Advanced Optical Materials, and ACS Photonics.

Abstract

The well-known three modes of heat transfer, including conduction, convection, and radiation, pave the way of flexibly controlling thermal distributions by varied implementations, thus further contributing to the emerging thermal time-varying metamaterials. In this talk, we will introduce new developments of hybrid thermal materials with artificial meta-structures to realize extremely high effective thermal conduction. We will also introduce our more recent breakthrough in topological thermal materials by constructing an orthogonal convective space with two pairs of counter-motion convections for encircling exceptional points (EPs). Configurable phase transitions were subsequently demonstrated by adjusting the EP quantities in the orthogonal convective space. Further, we report the realization of Weyl exceptional ring in thermal diffusion by using two pairs of spatiotemporal advections to obtain three imitated dimensions. The spatiotemporal thermal coupling can give rise to diffusive Fizeau drag, which features different speeds of temperature field propagation in opposite directions. We further tailor the modulated Hermiticity in both space and time, and establish an advective paradigm by periodically stacked fluid surfaces. Topological edge and conventional bulk states, as well as interface states and topological manipulations, are revealed in thermal diffusion for the first time. Those works pave the foundation of the area of topological thermal metamaterials.

Bridging the gap between nanoscopic and macroscopic studies of phase change heat transfer

Speaker: Koji Takahashi
Kyushu University, Japan

Koji Takahashi received his Doctor of Engineering from the University of Tokyo, Japan in 1992. He is currently a Professor in Aeronautics and Astronautics at Kyushu University, WPI Principal Investigator at the International Institute for Carbon-Neutral Energy Research, and a Vice-President of Japan Society of Thermophysical Properties. He was awarded the Scientific Award of the Heat Transfer Society of Japan in 2008 and 2020, JSME (The Japan Society of Mechanical Engineers) Medal for Outstanding Paper in 2012, and Thermal Engineering Achievement Award of JSME in 2016. His major interests are micro/nanoscale heat transfer and thermal property of nanomaterials.

Abstract

It has been more than 30 years since a major movement started to try to understand bubbles and droplets from the nanoscale. Though many phenomena have been elucidated, it is still on the way of being bridging the gap between nanoscopic and macroscopic phenomena of phase change heat transfer. In this talk, recent advances in experimental techniques are addressed, which can enable us to investigate the trans-scale research targets, for example, wetting and dewetting, precursor film, contact angle hysteresis, microlayer evaporation, etc.

The dynamics of contact line in boiling and condensation is a combination of these unresolved phenomena. A new experimental study using coherence scanning interferometry (CSI) is introduced, which can simultaneously measure the nanoscale surface roughness and the motion of a macroscopic contact line. Contact angles of nanodroplets measured by atomic force microscopy (AFM) suggests the strong role of pinning of contact line. Graphene and 2D materials provide a new way to validate molecular simulation results at liquid/solid interface that assume perfectly flat surface. However, such flat surfaces quickly become contaminated and most experiments of liquid-vapor phase change include the effects of contamination-induced pinning. Cell technologies for transmission electron microscopy (TEM) are also addressed, which are suitable to explore the 3D structure and dynamics of sub-nano/nanoscale volatile liquid.

This talk will be concluded that a pathway from nano to macroscale thermo-fluid phenomena will eventually open up by applying these cutting-edge microscopy technologies and their further development driven by strong passions of researchers in thermal science and engineering.

SESSION 1

OCT 18, 2025
Topic: Molecular Theory and Simulation
Chair: Nuo Yang, Guangzhao Qin
Address: Function Room 1

No.	Time	Authors	Title	Affiliation
1	14:00-14:30 Keynote Lecture	Hua Bao	Cryogenic thermophysical properties and their Implications for Cryo-CMOS thermal performance	Shanghai Jiao Tong University, China
2	14:30-15:00 Invited Lecture	Guangzhao Qin	Anisotropic heat transfer by atomic-level design	Hunan University, China
3	15:00-15:30 Invited Lecture	Zheyong Fan	Molecular dynamics simulations of heat transport using machine-learned potentials: A lecture based on GPUMD	Bohai University/Aalto University, Finland
4	15:30-15:50	Weijing Ding	A molecular dynamics study on diffusion behaviors in confined space	Shandong University of Technology, China
	16:00-16:20	Coffee Break		
5	16:20-16:40	Nan Zhang	All-atom force field parameters for vapor-liquid phase equilibrium simulations of the HFE-7000	Wuhan University, China
6	16:40-17:00	Yuxiang Ji	Molecular-scale adsorption mechanisms of HFO-1336mzz(Z)/HFC-245fa in MOF-200 via GCMC simulations	Quanzhou Institute of Equipment Manufacturing, Chinese Academy of Sciences, China; Fuzhou University, China; Fujian College, University of Chinese Academy of Sciences, China
7	17:00-17:20	Haiyu Fu	Molecular dynamics simulation of thin liquid R32 film evaporation from channeled surfaces at low ambient pressures	North China Electric Power University, China
8	17:20-17:40	Zikang Guo	Transformer-based variational encoder framework for advanced dielectric crystals research	Shanghai Jiao Tong University, China
	18:00-20:00	Dinner, Buffet Restaurant		

SESSION 2

OCT 18, 2025
Topic: Thermophysical Properties of Solids
Chair: Xiaoliang Zhang, Jing Li
Address: Ballroom 2

No.	Time	Authors	Title	Affiliation
9	14:00-14:30 Keynote Lecture	Dip Saikia	Performance optimization of polymer composites reinforced with new novel cellulosic natural fibers	Digboi College (Autonomous), India
10	14:30-15:00 Keynote Lecture	Yanhui Feng	Aerogel-based phase change thermal insulation material and its irradiation damage mechanism	University of Science and Technology Beijing, China
11	15:00-15:30 Invited Lecture	Yichuan He	Investigation on boiling heat transfer enhancement by hybrid thermal conductivity via Lattice Boltzmann method	University of Science and Technology Beijing, China
12	15:30-16:00 Invited Lecture	Lizhong Yang	Synergistic effects of carbon chain length and pore structure in shape-stabilized composite biochar and fatty acid materials	Nanjing University of Aeronautics and Astronautics, China
	16:00-16:20	Coffee Break		
13	16:20-16:40	Feng Tao	Significantly enhanced thermal conductivity of supported MoS_2 by introducing Ga vacancies in GaN substrate	Dalian University of Technology, China
14	16:40-17:00	Xijun Zhang	Heat transfer characterization of carbon fibers in liquid phase environment	Qingdao University of Science and Technology, China
15	17:00-17:20	Hengyun Zhang	Measurement control system for thermal and electrical parameter characterization of lithium-ion batteries	Shanghai University of Engineering Science, China
16	17:20-17:40	Zide Wu	Thermophysical properties calculation and experimental validation of $La_2Zr_2O_7$ using machine learning potentials	Dalian University of Technology, China
17	17:40-18:00	Hanying Zou	Thermal conductance enhancement mechanism of CNT interface with Polypyrroles embed	University of Science and Technology Beijing, China
	18:00-20:00	Dinner, Buffet Restaurant		

SESSION 3

OCT 18, 2025
Topic: Thermophysical Properties of Multi-Phase, Phase Change
Chair: Liwei Wang, Marco Marengo
Address: Function Room 2

No.	Time	Authors	Title	Affiliation
18	14:00-14:30 Keynote Lecture	Qiaoqiang Gan	Unlocking new opportunities using passive cooling strategies in the Middle East	King Abdullah University of Science and Technology, Saudi Arabia
19	14:30-15:00 Invited Lecture	Long Jiang	Themodynamic model of quaternary ammonium for direct air capture	Zhejiang University, China
20	15:00-15:30 Invited Lecture	Xuancan Zhu	CO_2 adsorption/desorption properties of amine-functionalized materials	Shanghai Jiaotong University, China
21	15:30-15:50	Mengfei Xu	Characterization of solar thermoelectric generator system based on D-mannitol/-multi-walled carbon nanotubes phase change composite materials	Shanghai Polytechnic University, China
	16:00-16:20	Coffee Break		
22	16:20-16:40	Roland Span	A new fundamental mixture model for hydrogen+water mixtures and its application to hydrate modeling	Ruhr University Bochum, Germany
23	16:40-17:00	Jianguo Yin	Experimental investigation for the solubilities of 2,3,3,3-tetrafluoroprop-1-ene (HFO-1234yf) in POE lubricant oil	Taiyuan University of Technology, China
24	17:00-17:20	Haichen Yao	Accelerating the solar-thermal energy storage via graded triply periodic minimal surface structures	Nanjing University of Aeronautics and Astronautics, China
25	17:20-17:40	Kangsen Chen	Molecular dynamics study of thermophysical properties for supercritical $H_2O/CO_2/CH_4$ mixtures from supercritical water gasification	Xi'an Jiaotong University, China
26	17:40-18:00	Xinlei Zhou	Study on bubble dynamics in porous media using LBM with self-tuning equation of state	China Aerodynamics Research and Development Center, China
	18:00-20:00	Dinner, Buffet Restaurant		

SESSION 4

OCT 18, 2025
Topic: Thermal Management of Electric Device
Chair: Bingyang Cao, Haidong Wang
Address: SOMA

No.	Time	Authors	Title	Affiliation
27	14:00-14:30 Keynote Lecture	Kazuya Tatsumi	Thermal and electrical transport pathways in network-structured materials	Kyoto Institute of Technology, Japan
28	14:30-15:00 Invited Lecture	Taeyong Kim	Origin of high thermal conductivity in disentangled ultra-high molecular weight polyethylene films: Ballistic phonons within enlarged crystals	Seoul National University, South Korea
29	15:00-15:30 Invited Lecture	Ruoyu Dong	Soft matter approaches to developing functional materials for thermal management	Beihang University, China
30	15:30-15:50	Juan Xue	Colossal thermal conductivity enhancement in MoS_2 via subtle compressive strain engineering	Tsinghua University, China
	16:00-16:20	Coffee Break		
31	16:20-16:40	Youngjo Kwon	High-performance graphene aerogel thermal switch: An approach for thermal control in harsh conditions	Gyeongsang National University, Korea
32	16:40-17:00	Zhijie Wang	Applying the concept of ecological balance to optimize the distribution of multiple heat sources	Tsinghua University, China
33	17:00-17:20	Naoki Nakamura	Non-contact characterization of Peltier devices via laser heating and infrared thermography	Nagoya University, Japan
34	17:20-17:40	Shigeo Maruyama	Synthesis and applications of various 1D vdW heterostructures based on single-walled carbon nanotubes	Zhejiang University, China; The University of Tokyo, Japan; Nagoya University, Japan
35	17:40-18:00	Mingzhen Zhang	Development and application of frequency-extended TDTR for thermal transport characterization	Huazhong University of Science and Technology, China
	18:00-20:00	Dinner, Buffet Restaurant		

SESSION 5

OCT 18, 2025
Topic: AI Empowerment of Thermophysical Property Investigation
Chair: Huaqing Xie, Peng Gao
Address: Function Room 3

No.	Time	Authors	Title	Affiliation
36	14:00-14:30 Keynote Lecture	Yibin Xu	Leverage data to accelerate innovation of thermal functional materials	Basic Research on Materials, National Institute for Materials Science, Japan
37	14:30-15:00 Invited Lecture	Xiaokun Gu	Extending thermal conductivity limits in layered materials	Shanghai Polytechnic University, China
38	15:00-15:20	Rui Zhang	Thermophysical properties of molten salts: Insights from the TCSALT database	Thermo-Calc Software AB, Sweden
39	15:20-15:40	Fengjun Wang	Intelligent prediction of thermal behavior of multilayer explosive-containing structure based on machine learning	Huazhong University of Science and Technology, China; Institute of systems Engineering, China Academy of Engineering Physics, China
40	15:40-16:00	Yidan Wu	A machine learning perspective of ionic thermoelectric materials	Tsinghua University, China
	16:00-16:20	Dinner, Buffet Restaurant		
41	16:20-16:40	Gang Wang	Deep learning-enhanced extended corresponding state method for accurate prediction of the residual thermodynamic properties of fluorinated refrigerants	University of Science and Technology of China, China
42	16:40-17:00	Jianan Wang	A machine learning model for the high pressure density of diesel, biodiesel, and butanol isomer blends based on pseudo-component approach	Xi'an Jiaotong University, China
43	17:00-17:20	Han Xie	A scattering rate model for accelerated evaluation of lattice thermal conductivity bypassing anharmonic force constants	Shanghai Polytechnic University, China
44	17:20-17:40	Yanbiao Xu	Gradient harmonization deep feedforward neural networks correction model for viscosity prediction of low GWP refrigerants	North China Electric Power University, China
45	17:40-18:00	Chenbo Guo	Gas viscosity prediction model integrating molecular structural characteristics and macroscopic parameters	North China Electric Power University, China
	18:00-20:00	Dinner, Buffet Restaurant		

SESSION 6

OCT 18, 2025
Topic: Special Panel I Thermal Metamaterials
Chair: Ying Li
Address: Function Room 6

No.	Time	Authors	Title	Affiliation
46	14:00-14:30 Keynote Lecture	Jie Chen	Phonon transport and heat conduction in low-dimensional systems	Tongji University, China
47	14:30-15:00 Keynote Lecture	Jian Xiong	Transient nonreciprocity heat transfer with inhomogeneous materials	Harbin Institute of Technology, China
48	15:00-15:30 Keynote Lecture	Mi Xiao	Multiscale topology optimization for thermal metamaterials	Huazhong University of Science and Technology, China
49	15:30-16:00 Keynote Lecture	Masahiro Nomura	Heat transfer in semiconductor nanostructures: Photonic perspective	The University of Tokyo, Japan
	16:00-16:20	Coffee Break		
	16:20-18:00 **Expert Salon**	Thermal metamaterials: Challenges and applications		
	18:00-20:00	Dinner, Buffet Restaurant		

SESSION 7

OCT 18, 2025
Topic: Special Panel II Energy Storage Materials
Chair: Xing Zhang
Address: Ballroom 1

No.	Time	Authors	Title	Affiliation
50	14:00-14:30 Keynote Lecture	Masahiro Nomura	Adding new thermal functionality to graphite: Beyond high thermal conductivity	The University of Tokyo, Japan
51	14:30-15:00 Keynote Lecture	Yutaka Ohno	Flexible triboelectric nanogenerators for wearable sensors	Nagoya University, Japan
52	15:00-15:30 Keynote Lecture	Lingyun Zhu	Sulfide-electrolyte-based all-solid-state batteries	Anhui University, China
53	15:30-16:00 Keynote Lecture	Shigeo Maruyama	Thermal and electronics issues in 1D and 2D vdW heterostructures	Zhejiang University, China; The University of Tokyo, Japan; Nagoya University, Japan
	16:00-16:20	Coffee Break		
54	16:20-16:40	Wenbo Tian	Solid-state norbornadiene photo-thermal films for efficient solar energy storage	Zhengzhou University, China
55	16:40-17:00	Yi Han	Thermophysical properties of solid particle candidates as high-temperature thermal energy storage materials	Institute of Engineering Thermophysics, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China
	18:00-20:00	Dinner, Buffet Restaurant		

SESSION 8

OCT 18, 2025
Topic: Thermal Radiative Properties
Chair: Ying Zhang, Dongliang Zhao
Address: Function Room 5

No.	Time	Authors	Title	Affiliation
56	14:00-14:30 Keynote Lecture	Zhenyuan Xu	Heat and mass transport enhancement for efficient solar distillation and crystallization	Shanghai Jiaotong University, China
57	14:30-15:00 Keynote Lecture	Chi Yan Tso	The future trend of smart building shells: Towards carbon neutrality and sustainable environmental protection	City University of Hong Kong, China
58	15:00-15:30 Invited Lecture	Roman Belikov	Multi-wavelength pyrometer for temperature and optical properties diagnostics	Goethe University Frankfurt, Germany
59	15:30-15:50	Junyu Chu	Perfect infrared absorption at the atomic layer approaching the optical limit	Harbin Institute of Technology, China
	16:00-16:20	Coffee Break		
60	16:20-16:40	Taoran Liu	Spray-deposited solar selective coating with enhanced stability and efficiency for next-generation CSP	Central South University, China
61	16:40-17:00	Mizuto Kubota	Proposal of origami-based flexible V-groove structure and characterization of the performance based on a thermal mathematical model	Nagoya University, Japan
62	17:00-17:20	Caiyan Qin	Effects of nanoparticle aggregation and agglomeration on plasmonic optical properties	Harbin Institute of Technology, China
63	17:20-17:40	Zengen Li	Research on the design of fluid loop radiators for nuclear powered spacecraft	Shandong University of Aeronautics, China; Harbin Institute of Technology, China
	18:00-20:00	Dinner, Buffet Restaurant		

SESSION 9

OCT 19, 2025
Topic: Molecular Theory and Simulation
Chair: Hua Bao, Yanguang Zhou
Address: Function Room 1

No.	Time	Authors	Title	Affiliation
64	8:30-9:00 Keynote Lecture	Nuo Yang	Research progress on studies of phonon engineering——Targeted phonon excitation	National University of Defense Technology, China
65	9:00-9:30 Invited Lecture	Yanguang Zhou	Thermal transport spectroscopy across Interfaces: Algorithm and applications	The Hong Kong University of Science and Technology, China
66	9:30-10:00 Invited Lecture	Xiaoliang Zhang	A modified Müller-Plathe method for thermal transport calculations	Dalian University of Technology, China
67	10:00-10:20	Fèlix Llovell	A multi-tool computational framework for tailored CO_2-based refrigerant blends in low-temperature cascade cycles	Universitat Rovira I Virgili, Spain
	10:20-10:40	Coffee Break		
68	10:40-11:00	Isaias Huenuvil	Applying an advanced SAFT thermodynamic model for the Ad-hoc study of greenhouse gases absorption and separation	Universidad de Concepción, Chile; Universitat Rovira I Virgili, Spain
69	11:00-11:20	Jin Shiomi	Molecular dynamics study of the effects of Ni dissolution on the ionic conductivity and crystal structure of YSZ	Kyoto University, Japan
70	11:20-11:40	Shukai Cheng	Molecular dynamics investigation of thermal conductivity in sugar alcohol-based phase change materials	Tohoku University, Japan
71	11:40-12:00	Shuo Qiao	Observation of phonon Anderson localization in compositionally graded alloys	Peking University, China
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 10

OCT 19, 2025
Topic: Instrumentation and Measurement Techniques
Chair: Tingting Miao, Xinyu Wang
Address: Function Room 2

No.	Time	Authors	Title	Affiliation
72	8:30-9:00 Keynote Lecture	Xudong Zhang	Improving the thermal performance of liquid metal thermal interface materials: The role of intermetallic compounds at the gallium/copper interface	Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China
73	9:00-9:20	Youwei Yang	Using DSPI to measure coefficient of thermal expansion in ultra-low temperature	Harbin Institute of Technology, China
74	9:20-9:40	Fuma Harada	Inverse estimation of heat transfer coefficients in active magnetic regenerators using temperature waveforms measured by thermography	Nagoya University, Japan
75	9:40-10:00	Shengfu Wei	Multimodal spectroscopic decomposition enables operando imaging of battery interfaces	Tsinghua University, China
76	10:00-10:20	Su-Min Jeong	Flow visualization of natural convection around heated vertical plate using background oriented schlieren	Chosun University, Korea
	10:20-10:40	Coffee Break		
77	10:40-11:00	Jiadong Sun	Development of a vapor-liquid equilibria analyzer for fluid mixtures from 85 to 350 K under pressures to 15 MPa and measurement for He-CH_4 mixtures	Shanghai Jiao Tong University, China
78	11:00-11:20	Ming'ao Xie	Imaging temperature distribution with micrometer spatial resolution using NV ensemble-based thermometer	Tsinghua University, China; National Institute of Metrology, China
79	11:20-11:40	Sho Umeda	Practical implementation of thermal property distribution imaging based on lock-in thermography	Nagoya University, Japan
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 11

OCT 19, 2025
Topic: Thermophysical Properties of Fluids
Chair: Maogang He, Waheed Afzal
Address: Ballroom 1

No.	Time	Authors	Title	Affiliation
80	8:30-9:00 Keynote Lecture	Xiangyang Liu	Generating ionic liquid for low energy consumption CO_2 capture	Xi'an Jiaotong University, China
81	9:00-9:30 Invited Lecture	Dale Hume	Review of steady-state and transient methods of measuring thermophysical properties	Thermtest Inc., Canada
82	9:30-9:50	Monika Thol	LKP-SJT: A modification of the Lee-Kesler-Plöcker equation of state for the application to long-chain hydrocarbons	Ruhr-University Bochum, Germany
83	9:50-10:10	Maelenn Le Mener	Measurement of the specific heat capacity and emissivity of liquid metals by aerodynamic levitation	Université Bretagne-Sud, France
	10:20-10:40	Coffee Break		
84	10:40-11:00	Xin Xu	Porous liquids based on MOF-808@UiO-66-NH_2 for enhanced CO_2 adsorption and diffusion	Xi'an Jiaotong University, China
85	11:00-11:20	Bowen Sheng	Density measurements for hydrogen-blended natural gas by a compact single-sinker densimeter	Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China
86	11:20-11:40	Julien Joliat	Modelling thermodynamic properties of reactive fluids for energy applications by Monte Carlo simulations	Université de Lorraine, LRGP, France
87	11:40-12:00	Wanying Wu	Solid-fluid equilibrium of the n-Decane and methane binary	University of Western Australia, Australia; Future Energy Exports Cooperative Research Centre, Australia
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 12

OCT 19, 2025
Topic: Thermophysical Properties of Fluids
Chair: Xiangyang Liu, Pavel V. Skripov
Address: Ballroom 2

No.	Time	Authors	Title	Affiliation
88	8:30-9:00 Keynote Lecture	Xiaoxian Yang	Thermophysical constants of thousands of fluids for the calculation of all important thermophysical properties	Chemnitz University of Technology, Germany
89	9:00-9:30 Invited Lecture	Mattias Gustavsson	Measurement of thermal transport properties of solids and liquids using the Hot Disc method	Hot Disk AB, Sweden
90	9:30-9:50	Marcel Felix Schneegans	Investigation on the chain length dependency of LKP parameters for asymmetric n-alkane mixtures	Technische Universität Dresden, Germany
91	9:50-10:10	Rixin Zhang	Density and thermal conductivity of ternary (Al_2O_3+SiO_2+ MWCNT)/ethylene glycol aqueous composite nanofluids	Xi'an Jiaotong University, China
	10:20-10:40	Coffee Break		
92	10:40-11:00	Erqi Wang	Experimental measurement of the transcritical pvTx property for the binary mixture of CO_2 and HFOs by using the Burnett method	Tsinghua University, China
93	11:00-11:20	Xiongwei Wang	Thermal conductivity model for liquid fluids based on corresponding state principle	Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China
94	11:20-11:40	Qiangqiang Huang	Simultaneously modulating solvation and water structure for high-performance anti-freezing n-type liquid thermocells	Huazhong University of Science and Technology, China
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 13

OCT 19, 2025
Topic: Properties of Thermal Interface Materials
Chair: Rong Sun, Junwei Gu
Address: SOMA

No.	Time	Authors	Title	Affiliation
95	8:30-9:00 Keynote Lecture	Zhen Yang	Modulation of phonon transport across van der Waals interfaces by molecular bridge	Tsinghua University, China
96	9:00-9:30 Keynote Lecture	Jia Zhu	Manipulating the flow of light & heat at nanoscale	Nanjing University, China
97	9:30-9:50	Wenjie Liu	Fabricating thermal interface materials with honeycomb-board-mimetic filler structure via centrifugal casting	Shanghai Jiaotong University, China
98	9:50-10:10	P.S. Grinchuk	Advanced percolation model of thermal conductivity for filled polymer composite	A.V. Luikov Heat and Mass Transfer Institute of the National Academy of Sciences of Belarus, Belarus
	10:20-10:40	Coffee Break		
99	10:40-11:00	Pauline Pradal	Direct thermal conductivity measurement of unprocessed single microparticles for TIMs	The University of Tokyo, Japan
100	11:00-11:20	Zexu Wang	In-situ measurement of layer-dependent interfacial thermal transport in graphene/PDMS composites	China University of Petroleum-Beijing, China
101	11:20-11:40	Meng Han	The origin of high thermal contact resistance in polymer-based thermal interface materials with spherical fillers	Shanghai Polytechnic University, China
102	11:40-12:00	Xiao Wan	Machine learning potential for thermal transport in transition metal dichalco-genide heterostructures	Tsinghua University, China
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 14

OCT 19, 2025
Topic: Thermophysical Properties of Solids
Chair: Jin Zhao, Osamu Matsuda
Address: Function Room 3

No.	Time	Authors	Title	Affiliation
103	8:30-9:00 Keynote Lecture	Lin Qiu	Ultra-efficient heat transport across a “2.5D” all-carbon sp^2/sp^3 hybrid interface	University of Science and Technology Beijing, China
104	9:00-9:30 Invited Lecture	Guice Yao	Data driven methods for prediction and optimization of thermal properties.	Beihang University, China
105	9:30-10:00 Invited Lecture	Mu Li	Thermal conductivity switching in Sn doped Iron sulfide (tentative)	Dalian University of Technology, China
106	10:00-10:20	Baitong Wang	Effect of thermophysical properties on intermediate temperature electrolytes in SOFC	Dalian University of Technology, China
	10:20-10:40	Coffee Break		
107	10:40-11:00	Xinyu Zhang	Understanding thermal transport in magnesium solid solutions by first principles approaches and machine learning	Shanghai Jiao Tong University, China
108	11:00-11:20	Yueze Song	A simplified method for nonlinear heat transfer with temperature-dependent thermal conductivity via the Kirchhoff transformation	Harbin Institute of Technology, China
109	11:20-11:40	Ziyang Wang	Machine learning-driven data analysis for three-layer time-domain thermore-flectance measurements	Dalian University of Technology, China
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 15

OCT 19, 2025
Topic: Thermal Radiative Properties
Chair: Hongliang Yi, Fangyuan Sun
Address: Function Room 6

No.	Time	Authors	Title	Affiliation
110	8:30-9:00 Keynote Lecture	Yi Long	Some recent progress in thermochromic smart windows	The Chinese University of Hong Kong, China
111	9:00-9:30 Invited Lecture	Dongliang Zhao	Optical information encryption based on thermal radiation manipulation	Southeast University, China
112	9:30-9:50	Guicheng Cui	Near-field radiative heat transfer enhancement based on metasurface effects	Harbin Institute of Technology, China; Key Laboratory of Aerospace Thermophysics, Ministry of Industry and Information Technology, China
113	9:50-10:10	Haifei Yang	Tunable near-field radiative heat transfer across SiC planar with randomly distributed nanoparticles	Shanghai Jiao Tong University, China
	10:20-10:40	Coffee Break		
114	10:40-11:00	Yiquan Gong	Synchronous measurements of thermal conductivities and radiative properties of molten salts based on radiation-conduction coupled model	Harbin Institute of Technology, China
115	11:00-11:20	Dongxu Li	Colossal near-field radiative heat transfer mediated by GaAs	Harbin Institute of Technology, China
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 16

OCT 19, 2025
Topic: AI Empowerment of Thermophysical Property Investigation
Chair: Dip Saikia, Xuning Feng
Address: Function Room 5

No.	Time	Authors	Title	Affiliation
116	8:30-9:00 Keynote Lecture	Xinyan Huang	AI-powered calorimetry in fire safety research	The Hong Kong Polytechnic University, China
117	9:00-9:20	Qixiang Zhang	Accelerating energy materials discovery: Evolution of NLP to large language models for MOF and perovskite data extraction	Shanghai Jiao Tong University, China
118	9:20-9:40	An Li	A predictive model for high-performance oxygen and nitrogen separation in metal-organic frameworks based on MOF-SLICES	Xi'an Jiaotong University, China
119	9:40-10:00	Zhuo Li	Modeling dilute gas viscosity using the corresponding state principle and symbolic regression	Tsinghua University, China
120	10:00-10:20	Junwei Cui	Thermodynamic property model based on physics-informed neural network (PINN) and chaos theory	Xi'an Jiaotong University, China
	10:20-10:40	Coffee Break		
121	10:40-11:00	Zhiyong Yin	A physics-informed neural network architecture with domain decomposition and gradient-adaptive weights for short-pulse boundary problems	Harbin Institute of Technology, China
122	11:00-11:20	Haobo Yang	High-throughput thermal property microscopy via compressive sensing frequency-domain thermoreflectance	Huazhong University of Science and Technology, China
123	11:20-11:40	Xiayao Peng	Modified mixing rule of speed of sound explored by thermodynamics-assisted interpretable machine learning	Tsinghua University, China
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 17

OCT 19, 2025
Topic: Thermophysical Properties of Fluids
Chair: Zhen Yang, Xudong Zhang
Address: Ballroom 1

No.	Time	Authors	Title	Affiliation
124	14:00-14:30 Keynote Lecture	Hua Tian	Critical and combustible property of CO_2 based mixtures	Tianjin University, China
125	14:30-15:00 Keynote Lecture	Marc J. Assael	Ab-initio computations and reference correlations for the viscosity and thermal conductivity of fluids over extended temperature and pressure conditions: To measure or to compute?	Aristotle University, Greece; National Institute of Standard and Technology, USA; Helmut-Schmidt-Universität, Germany
126	15:00-15:30 Invited Lecture	An Cai	Melt viscosity measurements at high temperatures	Waters, TA, China
127	15:30-15:50	Md. Owaleur Rahman	Measurement of thermal conductivity of R-454C in liquid phase by using the transient hot-wire method	Saga University, Japan; Jashore University of Science and Technology, Bangladesh
	16:00-16:20	Coffee Break		
128	16:20-16:40	Tan-Trieu-Giang Nguyen	Ideal-gas properties of hydrogen revisited	Ruhr-University Bochum, Germany
129	16:40-17:00	Junwei Cui	Reference correlation of the viscosity of n-propanol and 2-propanol from 153 to 618 K and up to 118 MPa	Chang'an University, China
	19:00-21:00	Conference Banquet, Grand Ballroom		

SESSION 18

OCT 19, 2025
Topic: Thermophysical Properties of Solids
Chair: Lin Qiu, Yuting Guo
Address: Ballroom 2

No.	Time	Authors	Title	Affiliation
130	14:00-14:30 Keynote Lecture	Osamu Matsuda	Spatiotemporal imaging of acoustic waves in two-dimensional phononic crystals and metamaterials	Hokkaido University, Japan
131	14:30-15:00 Invited Lecture	Fangyuan Sun	The application of femtosecond laser TDTR system in the measurement of diamond thermal conductivity and interfacial thermal resistance	University of Science and Technology Beijing, China
132	15:00-15:30 Invited Lecture	Ya Feng	Thermal properties of carbon nanotubes and their emerging applications	Dalian University of Technology, China
133	15:30-16:00 Invited Lecture	Han Meng	High thermoelectric figure-of-merit of metastable crystalline ST12 germanium allotrope	National University of Defense Technology, China
	16:00-16:20	Coffee Break		
134	16:20-16:40	Zihan Liu	Two-dimensional data storage of PCM devices based on nanoscale LTA thermal probe	University of Science and Technology Beijing, China
135	16:40-17:00	Weikang Li	Thermal properties of amorphous silicon nitride from machine learning module dynamic study	Shanghai Jiao Tong University, China
	19:00-21:00	Conference Banquet, Grand Ballroom		

SESSION 19

OCT 19, 2025
Topic: Thermophysical Properties of Multi-Phase, Phase Change
Chair: Wei Wu, Long Jiang
Address: Function Room 1

No.	Time	Authors	Title	Affiliation
136	14:00-14:30 Keynote Lecture	Marco Marengo	Exploring surface wettability effects on boiling and nucleation phenomena	Università degli Studi di Pavia, Italy
137	14:30-15:00 Invited Lecture	Peng Gao	A novel high-efficiency solar photovoltaic/thermal cooling and power synergistic system for decarbonizing data centers	University of Shanghai for Science and Technology, China
138	15:00-15:30 Invited Lecture	Shaofei Wu	Gas-solid interface ammonia sorption mechanisms of metal-organic frameworks for refrigeration in hot regions	Shanghai Electric Power University, China
139	15:30-15:50	Idoko Job John	Performance analysis of modified apparatus for liquid CO_2 boil-off study with liquid nitrogen	The University of Western Australia, Perth, Australia
	16:00-16:20	Coffee Break		
140	16:20-16:40	Jingjing Xu	Study on mechanism and optimization of aircraft windshield defogging	China Aerodynamics Research and Development Center, China
141	16:40-17:00	Kang Qing	A new generalized corresponding-state correlation equation for the latent heat of vaporization	Tsinghua University, China
142	17:00-17:20	Dongsheng Chen	Visualizing thermal transport pathways in methane hydrate-bearing sediments under three-phase coexistence	Tsinghua University, China
143	17:20-17:40	Yuqing Zhao	Investigation on solid-liquid equilibrium for nonflammable binary mixtures containing tetrafluoromethane (CF_4)	Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China
144	17:40-18:00	Kexin Ren	Towards sustainable development: A high-accuracy crossover Peng-Robinson equation of state of the low-GWP refrigerant HFO-1234ze(Z)	Xi'an Jiaotong University, China
145	18:00-18:20	Wenyu Li	An improved setup for speed of sound measurement by Brillouin scattering and its application to isopentane	Xi'an Jiaotong University, China
	19:00-21:00	Conference Banquet, Grand Ballroom		

SESSION 20

OCT 19, 2025
Topic: Nano/Micro-scale Thermophysical Properties
Chair: Guice Yao, Mu Li
Address: SOMA

No.	Time	Authors	Title	Affiliation
146	14:00-14:30 Invited Lecture	Yunshan Zhao	Novel phonon thermal transport in quantum two-dimensional materials	Nanjing Normal University, China
147	14:30-15:00 Invited Lecture	Haidong Wang	Precise measurement of twist-controlled thermal rectification at the atomic scale	Tsinghua University, China
148	15:00-15:20	Ho Khac Hieu	Thermodynamic nanoarchitectonics of gold & rhodium nanoparticles: Size, shape and temperature effects	Duy Tan University, Vietnam
149	15:20-15:40	Hanseung Sung	Investigation of dynamic wetting behaviors on suspended graphene using environmental scanning electron microscopy	Kyushu University, Japan
150	15:40-16:00	Xiaona Huang	Observation of enhanced heat transfer between a nanotip and substrate at nanoscale distances via direct temperature probing with Raman spectroscopy	Wuhan University, China
	16:00-16:20	Coffee Break		
151	16:20-16:40	Kosuke Kokura	Crystallinity control of silicon thin films by in-situ annealing in transmission electron microscopy	Kyushu University, Japan
152	16:40-17:00	Kun Cheng	Water slip flow combined with capillary evaporation in graphene nanochannels	Henan University of Science and Technology, China
153	17:00-17:20	Chenghao Diao	Boron nitride nanosheets preserving functionalization strategy for enhancing thermal transport across van der Waals heterostructure	Tsinghua University, China
154	17:20-17:40	Fei Song	Ion conveying electron enabling electrodeless osmotic energy harvesting	Zhengzhou University, China
155	17:40-18:00	Yilun Yang	Development and validation of a vibrating-wire viscometer for natural gas containing helium down to 80 K	Shanghai Jiao Tong University, China
156	18:00-18:20	Tengyu Li	Research on the effects of metallic microparticles on the thermophysical properties of composite resins	Keio University, Japan
	19:00-21:00	Conference Banquet, Grand Ballroom		

SESSION 21

OCT 19, 2025
Topic: Properties for Fuels and Energy Systems
Chair: Yu Wu, Junxian Hou
Address: Function Room 3

No.	Time	Authors	Title	Affiliation
157	14:00-14:30 Keynote Lecture	Guihua Tang	Thermal transport performances in amorphous silica and Cu/GaN heterojunctions with fractal rough interfaces	Xi'an Jiaotong University, China
158	14:30-15:00 Invited lecture	Meng An	Micro/Nano scale phonon transport and thermal energy conversion	Yangtze Delta Region Academy in Jiaxing, Beijing Institute of Technology, China
159	15:00-15:20	Taotao Zhan	Modeling and comparative study of thermophysical properties of JP-10 using multiparameter, PR, PC-SAFT equations of state and modified friction theory	National University of Defense Technology, China
160	15:20-15:40	Xingyu Chen	Differentiable thermophysical property modeling for gradient-based optimization of supercritical dioxide Brayton cycles	Shanghai Polytechnic University, China
161	15:40-16:00	Liang An	Energizing fuel cells with an electrically rechargeable liquid fuel	The Hong Kong Polytechnic University, China
	16:00-16:20	Coffee Break		
162	16:20-16:40	Shijian Yu	Exploring the influence of microenvironment on multi-carbon products selectivity of CO_2 electroreduction by in-situ spectroscopy technology	Nanjing University of Science and Technology, China; Xi'an Jiaotong University, China
163	16:40-17:00	Haiyi Sun	Experimental and molecular dynamics study on the effect of steam concentration on the performance of solid oxide fuel cells	Kyoto University, Japan
164	17:00-17:20	Jialin Fu	Synergistic dynamics of heat and ion transfer: Unlocking high ionic thermoelectric efficiency	Zhengzhou University, China
165	17:20-17:40	Shengjie Zhou	Composite bipolar plates for PEMFCs: A comprehensive review on performance optimization, material design and manufacturing technologies	Shanghai Polytechnic University, China
166	17:40-18:00	Jun Wang	Desalination based on thermo-osmosis of water molecules through Janus membranes	Beijing University of Technology, China
167	18:00-18:20	Lei Yang	A robust propagation-coherence model for thermal conductivity of amorphous solids	Tsinghua University, China
	19:00-21:00	Conference Banquet, Grand Ballroom		

SESSION 22

OCT 19, 2025
Topic: Thermal Management of Electric Device
Chair: Gongming Xin, Yunshan Zhao
Address: Function Room 5

No.	Time	Authors	Title	Affiliation
168	14:00-14:30 Keynote Lecture	Xingyi Huang	On-demand preparation of boron nitride nanosheets and their application in thermally conductive composites	Shanghai Jiao Tong University, China
169	14:30-15:00 Keynote Lecture	Bingyang Cao	TDA (Thermal Design Automation) for multiscale thermal managements of electronics	Tsinghua University, China
170	15:00-15:30 Invited Lecture	Jun Hirotani	Estimating depth-directional thermal conductivity profiles in frequency domain thermoreflectance	Kyoto University, Japan
171	15:30-16:00 Invited Lecture	Xinyu Wang	Multi-faceted thermal management techniques for flexible electronic devices	Shandong University, China
	16:00-16:20	Coffee Break		
172	16:20-16:40	Zumeng Shan	Interfacial thermal transport under electron–phonon coupled thermal transport in GAAFET	China University of Petroleum, China
173	16:40-17:00	Thi Nhan Nguyen	Study on heat transfer coefficient of dielectric liquids of immersion cooling system for data center	Jeonbuk National University, Korea
174	17:00-17:20	Zhifeng Chen	Two-phase immersion cooling experiments for high-power multi-chip servers	Beijing Jiaotong University, China
175	17:20-17:40	Lin Lin	CHF enhancement in honeycomb porous copper via optimal pore size modulation	Sun Yat-sen University, China; Guangdong Engineering Technology Research Centre for Advanced Thermal Control Material and System Integration (ATCMSI), China
176	17:40-18:00	Yang Yang	High-performance vapor chamber used as the integrated heat spreader of computing chips and its heat transfer characteristics evaluation	South China University of Technology, China
	19:00-21:00	Conference Banquet, Grand Ballroom		

SESSION 23

OCT 19, 2025
Topic: Special Panel I Thermal Metamaterials
Chair: Xiangying Shen, Liujun Xu
Address: Function Room 6

No.	Time	Authors	Title	Affiliation
177	14:00-14:30 Keynote Lecture	Liujun Xu	Free-form and multi-physical metamaterials with forward conformality-assisted tracing	Graduate School of China Academy of Engineering Physics, China
178	14:30-15:00 Keynote Lecture	Ying Li	Non-Hermitian thermal coupling sensor	Zhejiang University, China
179	15:00-15:30 Keynote Lecture	Run Hu	Anomalous heat conduction in active thermal metamaterials	Huazhong University of Science and Technology, China
180	15:30-16:00 Invited Lecture	Mengyao Chen	Manipulating the flow field with the hydrodynamic metamaterials	Shenzhen Institute of Advanced Technology, Chinese Academy of Science, China
	16:00-16:20	Coffee Break		
181	16:20-16:50 Keynote Lecture	Xiangying Shen	Nonreciprocal heat transfer enabled all-solid elastocaloric device with high cooling heat flux and long operational life	Sun-Yat-Sen University, China
182	16:50-17:20 Invited Lecture	Fubao Yang	Chameleon-like hydrodynamic concentrator based on extreme viscosity anisotropy	Graduate School of China Academy of Engineering Physics, China
183	17:20-17:50 Invited Lecture	Bin Wang	Meta-hydrodynamic theory for freely manipulating fluid flows	East China University of Science and Technology, China
	19:00-21:00	Conference Banquet, Grand Ballroom		

SESSION 24

OCT 19, 2025
Topic: Special Panel II Energy Storage Materials
Chair: Xing Zhang
Address: Function Room 2

No.	Time	Authors	Title	Affiliation
184	14:00-14:30 Invited Lecture	Aoran Fan	Comprehensive interface characterization and optimization of all-solid-state lithium-ion batteries	Tsinghua University, China
185	14:30-14:50	Guangbo Liu	Characterization on the anisotropic effective thermal conductivity and its dependence on operating conditions for lithium-ion battery pouch cells	Zhejiang University, China
186	14:50-15:10	Zhengcheng Gu	Anode-initiated or grain boundary-initiated mechanisms for dendrite formation in all-solid-state lithium metal batteries	Tsinghua University, China
187	15:10-15:30	Hongyang Li	Dual-function of thermal management and fire alarm of polyimide aerogel composite phase change material used in battery thermal management	Hebei University of Technology, China
188	15:30-15:50	Yuxuan Lin	Effect of nanoparticle surface modification on compatibility and thermal properties of composite phase change materials	Guangdong University of Technology, China
	16:00-16:20	Coffee Break		
189	16:20-16:40	Fayang Guan	Surface-modified graphite anode for 6C long-cycling in sulfide all-solid-state batteries	Tsinghua University, China
	19:00-21:00	Conference Banquet, Grand Ballroom		

SESSION 25

OCT 20, 2025
Topic: Instrumentation and Measurement Techniques
Chair: Weigang Ma, Wang Han
Address: Function Room 1

No.	Time	Authors	Title	Affiliation
190	8:30-9:00 Keynote Lecture	Jie Zhu	Investigations on interfacial thermal transport of metal-semiconductor heterojunctions	Dalian University of Technology, China
191	9:00-9:30 Invited Lecture	Liang Guo	Phonon dynamics detected by femtosecond spectroscopy	South University of Science and Technology of China, China
192	9:30-9:50	Hyeong-Jun Jo	Analysis of thermal contact resistance of PDMS by using the 3ω method	Chosun University, Korea
193	9:50-10:10	Mengjun Chen	Experimental investigation of influence factors on thermal accommodation coefficient between rarefied gases and solid surfaces	Guilin University of Electronic Technology, China
	10:20-10:40	Coffee Break		
194	10:40-11:00	Jorge de A. Rodrigues Jr.	Is calorimetry the adequate tool to identify the critical micellization temperature (CMT) in pluronics?	Federal University of Rio de Janeiro - UFRJ, Brazil
195	11:00-11:20	Fengyi Li	An electric-opto combined measurement method for identifying filled traps in the off-state of HEMTs with high spatial resolution	Shanghai Polytechnic University, China
196	11:20-11:40	John Popp	Sub-micrometer thermal diffusivity measurement method based on modulated laser excitation and atomic-force-microscopy	Technical University of Applied Sciences Würzburg-Schweinfurt, Germany
197	11:40-12:00	Yunjie Wang	Simultaneous local temperature measurement and hot electron characterization in photothermal catalytic methane dry reforming	Nanjing University of Science and Technology, China
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 26

OCT 20, 2025
Topic: Thermophysical Properties of Fluids
Chair: Qiu Zhong, Xiaoxian Yang
Address: Ballroom 1

No.	Time	Authors	Title	Affiliation
198	8:30-9:00 Keynote Lecture	Hui Jin	A study of self-diffusion coefficient of nano-confined supercritical water	Xi'an Jiaotong University, China
199	9:00-9:30 Invited Lecture	Henrik Pamp	Development of a new fundamental EOS for the mixture of helium and neon	Ruhr-University Bochum, Germany
200	9:30-9:50	Lu Ai	Interfacial tension of hydrogen-brine systems: Experimental investigation and implications for natural hydrogen production	Imperial College London, United Kingdom
201	9:50-10:10	Štefan Kocian	Physico-chemical characterization of hydrofluoroethers, alternative refrigerants	University of Chemistry and Technology Prague, Czech Republic
	10:20-10:40	Coffee Break		
202	10:40-11:00	Jialin Shi	Phase behavior modeling for CO_2 EOR and storage	East China University of Science and Technology, China
203	11:00-11:20	Riley Latcham	Low-uncertainty phase behaviour measurements with ever-increasing automation	Imperial College London, United Kingdom
204	11:20-11:40	Kanata Murai	Study of the gas separation characteristics of different semiclathrate hydrates for CO_2/CH_4 mixed gases	Toyama Prefecture University, Japan
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 27

OCT 20, 2025
Topic: Thermophysical Properties of Solids
Chair: Yichuan He, Zheyong Fan
Address: Ballroom 2

No.	Time	Authors	Title	Affiliation
205	8:30-9:00 Keynote Lecture	Simão Pedro Pinho	Choline chloride thermophysical properties in its impact on the description of eutectic systems	Instituto Politécnico de Bragança, Portugal
206	9:00-9:30 Invited Lecture	Daili Feng	Multi-level thermal conductivity enhancement strategies for composite phase change materials and application in thermal management of electronic devices	University of Science and Technology Beijing, China
207	9:30-10:00 Invited Lecture	Yuting Guo	Transport and reaction behavior in Ni-YSZ anodes of solid oxide fuel cells: Insights from molecular dynamics and first-principles calculations	Kyoto University, Japan
	10:20-10:40	Coffee Break		
208	10:40-11:10 Invited Lecture	Qinyi Li	Wetting and flow behaviors on nanocarbon materials	Kyushu University, Japan
209	11:10-11:30	Haimo Li	Thermal conductance enhancement mechanism at copper/graphene interfaces with symmetric tilt grain boundary	University of Science and Technology Beijing, China
210	11:30-11:50	Mónia A. R. Martins	Machine learning-driven selection of green solvents for recycling 3D printing waste	Instituto Politécnico de Bragança, Campus de Santa Apolónia, Portugal
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 28

OCT 20, 2025
Topic: Thermophysical Properties of Multi-Phase, Phase Change
Chair: Qiaoqiang Gan, Hua Tian
Address: Function Room 2

No.	Time	Authors	Title	Affiliation
211	8:30-9:00 Keynote Lecture	Wei Wu	Versatile absorption thermal batteries	City University of Hong Kong, China
212	9:00-9:30 Invited Lecture	Zixuan Wang	Experimental and numerical investigation of ammonia decomposition in a multi-zone fixed-bed reactor	Harbin Institute of Technology, China
213	9:30-10:00 Invited Lecture	Jiayun Wang	Adsorption-based atmospheric water harvesting: From materials to devices to applications	University of Shanghai for Science and Technology, China
214	10:00-10:20	Dawei Li	Observation of nanoconfined bubble dynamics with transmission electron microscopy	Kyushu University, Japan
	10:20-10:40	Coffee Break		
215	10:40-11:00	Yuxin Song	Experimental study on the performance difference of pulsating heat pipe using R170 and R134a as working fluids	University of Shanghai for Science and Technology, China
216	11:00-11:20	J P Martin Trusler	Speed of sound measurements in highly compressed hydrogen gas	Imperial College London, United Kingdom
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 29

OCT 20, 2025
Topic: Thermal Radiative Properties
Chair: Wei Li, Daili Feng
Address: Function Room 3

No.	Time	Authors	Title	Affiliation
217	8:30-9:00 Keynote Lecture	Ying Zhang	Fiber optic sensors for hydrogen concentration detection	Xi'an Jiaotong University, China
218	9:00-9:30 Keynote Lecture	Bong Jae Lee	Near-Field thermal radiation & thermophotovoltaic energy conversion	Korea Advanced Institute of Science and Technology, South Korea
219	9:30-10:00 Invited Lecture	Yong Zhang	Synthetic electromagnetic field control of near-field heat transfer in time-modulated systems	Harbin Institute of Technology, China
220	10:00-10:20	Xiaoqi Sun	Low-loss polariton propagation characteristics in honeycomb boron allotropes	Harbin Institute of Technology, China
	10:20-10:40	Coffee Break		
221	10:40-11:00	Jingjing Mao	Smart window for dynamic switching between transparent and opaque radiative cooling based on reversible metal electrodeposition	Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, China; Northeast Forestry University, China
222	11:00-11:20	Zhengtong Li	Nanopore-engineered evaporator with micro-interfacial vapor thermal resistance for enhanced solar-driven desalination	Tsinghua University, China
223	11:20-11:40	Hao Sun	Inversion of molten salt thermophysical properties buy using dual-peak information pattern search method	Harbin Institute of Technology, China
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 30

OCT 20, 2025
Topic: Nano/Micro-scale Thermophysical Properties
Chair: Lifa Zhang, Aoran Fan
Address: SOMA

No.	Time	Authors	Title	Affiliation
224	8:30-9:00 Invited Lecture	Jianli Wang	Development and applications of a measurement system for anisotropic thermal property characterizations in thin films	Southeast University, China
225	9:00-9:20	Dezhao Huang	Optical force-driven and tip-enhanced plasmonic bubble generation	Wuhan University, China
226	9:20-9:40	Haosen Sun	Theoretical and experimental surface light scattering method for fluid surface tension measurement under microscale conditions	Taiyuan University of Technology, China
227	9:40-10:00	Koji Miyazaki	Non-contact measurements of thermal diffusivity using high-speed infrared camera	Kyushu University, Japan
228	10:00-10:20	Chunyu Zhao	Annealing temperature tuning of thermoelectric properties in conductive polymers: Transition from electronic to ionic thermoelectrics	Tsinghua University, China
	10:20-10:40	Coffee Break		
229	10:40-11:00	Shuai Shao	Abnormal thermal conductivity in thin antiferromagnet $CrPS_4$ nanoribbons: Effect of elastic stiffening and magnon-phonon coupling	Tongji University, China
230	11:00-11:20	Yanhui Zhang	Three-dimensional thermophysical properties of highly oriented carbon fiber composites	Southeast University, China
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 31

OCT 20, 2025
Topic: Properties of Thermal Interface Materials
Chair: Dezhao Huang, Meng An
Address: Function Room 5

No.	Time	Authors	Title	Affiliation
231	8:30-9:00 Keynote Lecture	Rong Sun	Advanced packaging materials for integrated circuits-research, application and development	Shenzhen Advanced Technology Research Institute, Chinese Academy of Sciences, China
232	9:00-9:30 Keynote Lecture	Xiangfan Xu	Non-Fourier thermal conduction of polymers and their interfaces	Tongji University, China
233	9:30-10:00 Invited Lecture	Jing Li	Thermophysical properties of interface-engineered graphene oxide/polyethylene glycol phase change composites	Chongqing University, China
	10:20-10:40	Coffee Break		
234	10:40-11:10 Invited Lecture	Wenyang Ding	From discovery to understanding: A human-AI integrated framework for tailoring thermal transport in 2D van der Waals heterostructures	Tsinghua University, China
235	11:10-11:30	Yaohui Zhang	Functionalization-controlled boron nitride nanosheets for simultaneous improvement thermal and mechanical properties of composite film	China University of Petroleum-Beijing, China
236	11:30-11:50	Zexin He	Preparation and characterization of porous carbon-based composite phase change materials based on wood biomass	Huazhong University of Science and Technology, China
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 32

OCT 20, 2025
Topic: Thermal Management of Electric Device
Chair: Kazuya Tatsumi, Taeyong Kim
Address: Function Room 6

No.	Time	Authors	Title	Affiliation
237	8:30-9:00 Invited Lecture	Gongming Xin	Research progress in thermal management of electronic devices	Shandong University, China
238	9:00-9:20	Mickael Courtois	Experimental determination of surface tension and viscosity of liquid metals via aerodynamic levitation with the help of multiphysics modeling	Université Bretagne Sud, France
239	9:20-9:40	Yitao Shen	Experimental study of embedded manifold staggered pin-fin microchannel heat sink	University of Science and Technology of China, China
240	9:40-10:00	Yuqin Zhang	Research on multidimensional filler collaborative optimization of thermal conductivity of polymer composite films	Shanghai Polytechnic University, China
241	10:00-10:20	Zijin Zeng	Extended transient plane source method for characterizing two-layered structures	Hot Disk AB, Sweden; Chalmers University of Technology, China
	10:20-10:40	Coffee Break		
242	10:40-11:00	Fufang Yang	Associative electrolyte PC-SAFT (aePC-SAFT) modeling of thermodynamic properties of electrolytes in aqueous, non-aqueous, and mixed solvents	Norwegian University of Science and Technology, Norway; Laboratoire de Chimie, ENS Lyon and CNRS, France
243	11:00-11:20	Baiyang Yue	Transient flow characteristics of high-pressure hydrogen-containing mixtures during discharge through orifices	Hebei University of Science and Technology, China
	12:00-13:30	Lunch, Buffet Restaurant		

SESSION 33

OCT 20, 2025
Topic: Instrumentation and Measurement Techniques
Chair: Mengyao Chen, Jun Hirotani
Address: Ballroom 1

No.	Time	Authors	Title	Affiliation
244	14:00-14:30 Invited Lecture	Sunmi Shin	Experimental race to detect heat transfer mediated by surface phonon polaritons	National University of Singapore, Singapore
245	14:30-14:50	Hongkai Zhang	Efficient photothermal therapy of mammary glands	Wuhan University, China
246	14:50-15:10	Chunsuo Xin	Study of thermal conductivity testing technique based on the guarded heat flow meter technique	Aerospace Materials and Technology Research Institute, China
247	15:10-15:30	Chang-Ui Jeon	Temperature amplitude of a suspended microheater depending on the vacuum pressure	Chosun University, Korea
248	15:30-15:50	Zhiying Liu	Systematic error in measuring thermal conductivity of insulation materials by transient plane source techniques	Tsinghua University, China
	16:00-16:20	Coffee Break		
249	16:20-16:40	Qiu Zhong	Analysis and research on Influencing factors of high-temperature melt density measurement in the containerless materials processing rack of the China space station	Shanghai Institute of Ceramics of the Chinese Academy of Sciences, China
250	16:40-17:00	David Landry	Advancing slab characterization with the transient plane source	Thermtest Inc., Canada
	18:00-20:00	Dinner, Buffet Restaurant		

SESSION 34

OCT 20, 2025
Topic: Thermophysical Properties of Fluids
Chair: Hui Jin, Henrik Pamp
Address: Ballroom 2

No.	Time	Authors	Title	Affiliation
251	14:00-14:30 Keynote Lecture	Wang Han	Gaseous hydrogen/liquid oxygen autoignition under transcritical condition	Beihang University, China
252	14:30-14:50	Ningyuan Guo	A performance evaluation method for cubic equation of state based on the α-function	Tsinghua University, China
253	14:50-15:10	Silvia Lasala	A multiscale methodology to calculate thermodynamic properties of reactive working fluids for thermodynamic cycles	Université de Lorraine, France
254	15:10-15:30	Yuhang Chen	Thermal diffusivity of HFO-1234ze(Z) from (298.15–473.15) K and up to 8 MPa in the near-critical region by dynamic light scattering method	Xi'an Jiaotong University, China
255	15:30-15:50	Tianyu Zhou	Experimental investigation and thermodynamic modeling for liquid organic hydrogen carriers (LOHC) of BT + DBT and H_{12}-BT + H_{18}-DBT	Xi'an Jiaotong University, China
	16:00-16:20	Coffee Break		
256	16:20-16:40	Jessica Buchenfeld	New approaches for the development of Helmholtz energy based mixture models for limited data	Ruhr University Bochum, Germany
257	16:40-17:00	Yuki Kawasu	Research on high-viscosity droplet manipulation and enhancement of dielectrophoretic force	Keio University, Japan
258	17:00-17:20	Monjur Morshed	Method for calculating binary interaction parameters in extended corresponding states thermal conductivity models for refrigerant mixtures	Saga University, Japan
259	17:20-17:40	Riku Takeuchi	Development of high-speed, non-contact dry eye syndrome diagnostic method using optical viscometry	Keio University, Japan
	18:00-20:00	Dinner, Buffet Restaurant		

SESSION 35

OCT 20, 2025
Topic: Thermophysical Properties of Fluids
Chair: Fubao Yang, Bin Wang
Address: Function Room 1

No.	Time	Authors	Title	Affiliation
260	14:00-14:30 Keynote Lecture	Waheed Afzal	Gas–liquid solubilities: Six complementary methods for reliable thermophysical data	University of Aberdeen, United Kingdom
261	14:30-15:00 Invited Lecture	Pavel V. Skripov	Phenomenon of superheat of liquids: Research history and key findings	Institute of Thermal Physics Ural Branch of RAS, Russian
262	15:00-15:20	Monia A. R. Martins	Enhancing the bioavailability of antimalarial drugs with natural excipients	Instituto Politécnico de Bragança, Portugal
263	15:20-15:40	Chenyu Gao	Flow characterization during Fe catalyst preparation by atomization pyrolysis based on les	Qingdao University of Science and Technology, China
264	15:40-16:00	Chieko Kondou	Prediction of global warming potential of newly candidated refrigerants	Nagasaki University, Japan
	16:00-16:20	Coffee Break		
265	16:20-16:40	Bo Tang	Group contribution models for predicting the critical properties of mixtures	Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China
266	16:40-17:00	Yingying Yang	Critical tensile force flow inside a spherical shell fluid layer in Poiseuille pipe flow transition	China University of Mining and Technology, China
267	17:00-17:20	Shengtong Zhang	Investigation of thermal conductivity measurement of refrigerants under high-pressure conditions	Southeast University, China
	18:00-20:00	Dinner, Buffet Restaurant		

SESSION 36

OCT 20, 2025
Topic: Thermal Radiative Properties
Chair: Jianli Wang, Ya Feng
Address: Function Room 2

No.	Time	Authors	Title	Affiliation
268	14:00-14:30 Keynote Lecture	Wei Li	Directional thermal radiation	Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China
269	14:30-15:00 Keynote Lecture	Boxiang Wang	Dynamic control of light and thermal radiation based on nanophotonic cavities and reversible metal electrodeposition	Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, China
270	15:00-15:20	Qingyun Zhou	Bioinspired gradient structure design for high-temperature Infrared stealth via synergistic spectral regulation	Harbin Institute of Technology, China
271	15:20-15:40	Yue Ma	Broadband unidirectional thermal emission	Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China
272	15:40-16:00	Gaomin Tang	Modulating thermal radiation through Floquet driving	Graduate School of China Academy of Engineering Physics, China
	16:00-16:20	Coffee Break		
273	16:20-16:40	Erwei Gui	Design of high-figure-of-merit broadband directional thermal emitters based on multilayer ENZ films and Bayesian optimization	Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, China; Shanghai Jiao Tong University, China
274	16:40-17:00	Haonan Wu	Hierarchical inversion strategy for photothermal properties of molten salt via radiation-conduction temporal decoupling at high temperatures	Harbin Institute of Technology, China
275	17:00-17:20	Vincent Linseis	Innovative approaches for heat transport characterization in nano materials, with a focus on anisotropy and high conductivity materials	Linseis Messgeräte GmbH, Germany
276	17:20-17:40	Yun Li	Efficient multi-objective co-optimization design of selective, ultra-high transparency radiative cooling glass	Shandong University, China
277	17:40-18:00	Yue Zhang	Scalable low-emissivity material for all-year heating and cooling energy conservation	Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China; University of Chinese Academy of Sciences, China
	18:00-19:30	Dinner, Buffet Restaurant		

The 14th Asian Thermophysical Properties Conference

The 14th Asian Thermophysical Properties Conference

The 14th Asian Thermophysical Properties Conference

The 14th Asian Thermophysical Properties Conference