

Meeting Program

Sep. 21, 2025 Sunday	
14:00 - 20:00	Registration & Reception at Holiday Inn, Shanghai Kangqiao
18:00 - 19:30	Reception at Winter Garden Hall, Holiday Inn
Sep. 22, 2025 Monday	Day 1
	Breakfast at hotel (1st floor)
9:00 - 10:00 <i>Lecture Hall</i>	Opening Ceremony <i>Chair: Jian Ding (丁健院士) (上海浦东新区科学技术协会主席, Chairman of the Association for Science and Technology of Pudong New Area)</i>
9:00 - 9:05	Opening remarks <i>Dave Ho-kwang Mao (毛河光院士) (大会荣誉主席 Honorary Chair)</i>
9:05 - 9:10	Opening remarks <i>Jincheng Wu (吴金城) (上海市政府副秘书长、浦东新区区委副书记、区长, Deputy Secretary-General of Shanghai Municipal People's Government, Deputy Secretary of CPC Pudong New Area Committee, Mayor of Pudong New Area)</i>
9:10 - 9:15	Opening remarks <i>Hua Wang (王华) (中国科学院副秘书长、中国科学院上海分院分党组书记、院长、沪区党委书记, Deputy Secretary-General of the Chinese Academy of Sciences (CAS), President of CAS Shanghai Branch, Secretary of the Communist Party of China (CPC) Leading Group of CAS Shanghai Branch, Secretary of the CPC Committee of Shanghai area of CAS)</i>
9:15- 9:50	Shanghai Academician Forum
10:00 - 10:05	Coffee Break

10:05 – 12:05	Shanghai Academician Forum & Session 1 Synchrotron Techniques <i>Chairs: Lisa Liu (SHARPS), Kamil Filip Dziubek (University of Vienna, Austria)</i>
10:05 – 10:10	Welcome from IUCr President – Pre-recorded video <i>Santiago Garcia-Granda 教授 (国际晶体学会联合会主席, University of Oviedo, Spain)</i>
10:10 – 10:15	Ceremony for IUCr Young and Early Career Scientist Awards 国际晶体学联合会 IUCr 青年科学家奖颁奖仪式 <i>International Program Committee 会议国际组委员会委员</i>
10:15 – 10:45	Academician Plenary Lecture: The Frontier of High-Pressure Crystallography <i>Dave Ho-kwang Mao (毛河光院士) (SHARPS & HPSTAR, China)</i>
10:45 – 11:15	Academician Plenary Lecture: More is different: the beauty of multiband in iron-based superconductors <i>Hong Ding (丁洪院士) (Shanghai Jiaotong University, China)</i>
11:15 – 11:40	Invited High-Flux Nano-XRD/XRF/XRI Beamline for Extreme Conditions at ESRF-EBS <i>Mohamed Mezouar (European Synchrotron Radiation Facility, France)</i>
11:40 – 12:05	Keynote: The Recent Status of High Energy Photon Source (HEPS) <i>Yuhui Dong (董宇辉) (Institute of High Energy Physics/CAS, China)</i>
12:10 – 13:40	Lunch at hotel (1st floor)
14:00 – 16:00	Session 1 Synchrotron Techniques and Users' Facilities <i>Chairs: Zhidan Zeng (HPSTAR, China), Mohamed Mezouar (ESRF, France)</i>
14:00 – 14:25	Invited Development and Application of In-Situ X-ray Diffraction Measurement System for Extreme Conditions <i>Saori Kawaguchi (河口 沙織) (Japan Synchrotron Radiation Research Institute; Now at DECTRIS, Japan)</i>
14:25 – 14:50	Invited Probing and Controlling Quantum Materials with X-ray Techniques Under Extreme Conditions <i>Ricardo Donizeth dos Reis (SIRIUS, Brazilian Synchrotron Light Laboratory, Brazil)</i>
14:50 - 15:15	Invited Deformation of metallic glasses studied by <i>in situ</i> high pressure transmission x-ray tomography <i>Qiaoshi Zeng (曾桥石) (HPSTAR, China)</i>
15:15 – 15:40	Invited In-advanced High-pressure and High-temperature Large-volume Press

	User facility and Multiple Applications <i>Zhaodong Liu (Synergetic Extreme Condition User Facility, Jilin University, China)</i>
15:40 – 16:05	Invited Advancing hydrostatic high-pressure techniques and exploring unconventional superconductivity near quantum criticality <i>Bosen Wang (王铂森) (Institute of Physics, CAS, China)</i>
16:05 – 16:20	Coffee Break / Poster Session
16:20 – 18:00	Session 1 Synchrotron Techniques and Others <i>Chairs: Mingxue Tang (University of Science and Technology Beijing, China), Asami Sano-Furukawa (J-PARC, Japan)</i>
16:20 – 16:45	Invited Introduction to the LVP stations at SSRF <i>Chunyin Zhou, Ke Yang (Shanghai Synchrotron Radiation Facility, China)</i>
16:45 – 17:10	Invited Structure and Transport Properties of TiZr-based Aperiodic Structures under Extreme Conditions <i>Jaeyong Kim (김재용 金載容) (Hanyang University, Korea)</i>
17:10 – 17:35	Invited Shear strain-induced transition of nano-graphite to lonsdaleite under pressure at room temperature <i>Alex V. Soldatov (Yanshan University, China)</i>
17:35 – 18:00	Invited High-pressure study of bilayer and trilayer nickelates <i>Hualei Sun (孙华蕾) (Sun Yat-sen University, China)</i>
18:00 – 18:20	Poster Session
18:20 – 19:30	Dinner at hotel
Sep. 23, 2025 Tuesday	Day 2
	Breakfast at hotel (1st floor)
8:30 – 10:00 <i>Lecture Hall</i>	Session 1 Synchrotron Techniques & Others <i>Chairs: Haozhe Liu (HPSTAR, China), Saori Kawaguchi (DECTRIS, Japan)</i>
8:30 – 8:55	Invited - Pre-recorded – Diamond Anvil Cell Program at GSECARS after APS-U <i>Vitali Prakapenka (GSECARS/APS, University of Chicago, USA)</i>
8:55 – 9:20	Invited Introduction of High Pressure Beamline at HEPS <i>Weiwei Dong (董伟伟) (Institute of High Energy Physics, CAS, China)</i>

9:20 – 9:45	Invited Atomic structure probed by advanced nuclear magnetic resonance <i>Mingxue Tang (University of Science and Technology Beijing, China)</i>
9:45 – 10:00	Invited The phase transition from graphite to hexagonal diamond <i>Liuxiang Yang (HPSTAR, China)</i>
10:00 – 10:20	Coffee Break / Poster Session
10:20 – 12:05	Session 2 Neutron Techniques <i>Chairs: Kuo Li (HPSTAR, China), Jaeyong Kim (Hanyang University, Korea)</i>
10:20 – 10:50	Keynote: Developing Neutron Techniques at Extreme Conditions: the High Pressure Neutron Diffractometer (HPND) at China Spallation Neutron Source (CSNS) <i>Yusheng Zhao (赵予生) (Eastern Institute of Technology, China)</i>
10:50 – 11:15	Invited High-pressure neutron diffractometer PLANET in J-PARC <i>Asami Sano-Furukawa (佐野 亜沙美) (J-PARC, Japan)</i>
11:15 – 11:40	Invited Progress of neutron diffraction and high-pressure research in CMRR <i>Hao Li (李昊) (Institute of Nuclear Physics and Chemistry, Chinese Academy of Engineering Physics; National Key Laboratory of Neutron Science and Technology, China)</i>
11:40 – 12:05	Invited Neutron Scattering of Quantum Magnetism in 2D Triangular Spin Lattices <i>Liusuo Wu (吴留锁) (Southern University of Science and Technology, China)</i>
12:05 – 13:40	Lunch at hotel (1st floor)
14:00 – 15:55	Session 2 Neutron Techniques <i>Chair: Binbin Yue (HPSTAR, China)</i>
14:00 – 14:25	Invited Current Status of High-Pressure Neutron Diffractometer at China Spallation Neutron Source <i>Le Kang (康乐) (Spallation Neutron Source Science Center, IHEP/CAS, China)</i>
14:25 – 14:50	Invited CARR (China Advanced Research Reactor) Neutron Facilities and Their Applications <i>Tianfu Li (李天富) (China Institute of Atomic Energy, China)</i>
14:50 – 15:15	Invited High pressure neutron diffraction and application in chemistry <i>Kuo Li (李阔) (HPSTAR)</i>
15:15 – 15:40	Invited High-resolution Neutron Diffractometer (TREND) at China Spallation Neutron Source

	<i>Ping Miao (缪平) (IHEP/CAS, China)</i>
15:40 – 15:55	High-Temperature Superconductivity of Thermodynamically Stable Fluorite type Hydrides at Ambient Pressure <i>Hongyu Huang (Ningbo University, China)</i>
15:55 – 16:15	Coffee Break / Poster Session
16:15 – 18:00	Session 3 Other High Pressure Related Applications <i>Chairs: Asami Sano-Furukawa (佐野 亜沙美) (J-PARC, Japan), Hao Li (李昊) (Institute of Nuclear Physics and Chemistry, CAEP, China)</i>
16:15 – 16:40	Invited New structural motifs in polyhydrides of heavy lanthanides and actinides above 1 Mbar <i>Dmitrii V. Semenov (HPSTAR, China)</i>
16:40 – 17:05	Invited Exploration of MgBi-based superconducting materials under pressure <i>Yazhou Zhou (周亚洲) (Institute of Physics, CAS, China)</i>
17:05 – 17:30	Invited Pressure-induced tetrahedral-hexahedral-octahedral transition of GeO ₂ glass at high pressure <i>Xinguo Hong (HPSTAR, China)</i>
17:30 – 17:45	Unveiling pressurized bulk superconductivity and generic electronic structure in Pr ₄ Ni ₃ O ₁₀ single crystals <i>Cuiying Pei (Shanghai Tech University, China)</i>
17:45 – 18:00	Theoretical Investigation of Superconductivity in Ternary A ₂ XH ₁₆ type and Quaternary Double Perovskites Hydrides at Moderate Pressure <i>Min Wang (Ningbo University, China)</i>
18:00 – 18:20	Poster Session
	No dinner Free night
Sep. 24, 2025 Wednesday	Day 3
	Breakfast at hotel (1st floor)
8:30 – 10:00 <i>Lecture Hall</i>	Session 4 Calculations and Simulations <i>Chairs: Duckyoung Kim (HPSTAR, China), Ricardo Donizeth dos Reis (SIRIUS, Brazilian Synchrotron Light Laboratory, Brazil)</i>
8:30 – 8:55	Invited Short-range order stabilizes a cubic iron alloy in Earth's inner core <i>Sandro Scandolo (ICTP, Italy)</i>

8:55 – 9:20	Invited Theoretical design of hydrogen-rich high-temperature superconductors <i>Ying Sun (孙莹) (Jilin University, China)</i>
9:20 – 9:45	Invited Superionic phases in the deep Earth: Linking atomic-scale behavior to core dynamics <i>Shichuan Sun (孙士川) (Nanyang Technological University, Singapore)</i>
9:45 – 10:00	Superconductivity and Double Superionicity in Lithium-rich Compounds under High Pressure <i>Shumin Guo (Jilin University, China)</i>
10:00 – 10:20	Coffee Break / Poster Session
10:20 – 11:55	Session 4 Calculations and Simulations <i>Chairs: Sandro Scandolo (ICTP, Italy), Kuo Li (HPSTAR, China)</i>
10:20 – 10:45	Invited Unravelling water diffusion mechanism in silicate melts <i>via</i> dynamic bonding analysis <i>Yunguo Li (李云国) (University of Science and Technology of China)</i>
10:45 – 11:10	Invited Superionicity in the deep interior of rocky planets <i>Duckyoung Kim (HPSTAR, China)</i>
11:10 – 11:25	A physics-informed long-range polarizable potential based on deep learning <i>Zhi Li (李陟) (ICTP, Italy)</i>
11:25 – 11:40	AI-driven theoretical design of hafnium-based oxides: optimization of dielectric/ferroelectric properties and prediction of electronic structures <i>Zhe Su (苏哲) (Shanghai University, China)</i>
11:40 – 11:55	Orbital-Free Density Functional Theory for Accurate and Efficient Warm Dense Matter Simulations <i>Xuecheng Shao (Jilin University, China)</i>
12:10 – 13:40	Lunch at hotel (1st floor)
14:00 – 15:45	Session 5 Superconducting Materials <i>Chairs: Hongbo Lou (SHARPS, China), Xiancheng Wang (望贤成) (Institute of Physics, CAS, China)</i>
14:00 – 14:25	Invited Bulk superconductivity in nickelate superconductors under hydrostatic pressure <i>Di Peng (彭帝) (SHARPS, China)</i>
14:25 – 14:50	Invited Superconductivity and crystal structure in hydrides under high pressures <i>Panpan Kong (孔盼盼) (Institute of Physics, CAS, China)</i>

14:50 – 15:15	Invited Pressure-induced superconductivity in transition-metal borides <i>Yanpeng Qi (齐彦鹏) (Shanghai Tech University, China)</i>
15:15 – 15:30	High-pressure structural evolution and unusual superconducting characteristics in compressed tellurium powder <i>Tianyu Wu (Hanyang University, Korea)</i>
15:30 – 16:00	Coffee Break / Poster Session
16:00 – 17:50	Session 6 High Pressure Chemistry <i>Chair: Dmitrii V. Semenok (HPSTAR, China)</i>
16:00 – 16:25	Invited - Pre-recorded: High-pressure diffraction studies of molecular crystals. Retrospect and prospects (a personal view) <i>Elena Boldyreva (Novosibirsk State University, Russia)</i>
16:25 – 16:50	Invited High-pressure chemistry in a diamond anvil cell: uncovering the role of carbon through comprehensive analysis of reaction products <i>Maxim Bykov (Goethe-University in Frankfurt, Germany)</i>
16:50 – 17:15	Invited Sulfur chains glass formed by fast compression <i>Lei Su (苏磊), Kaiyuan Shi (SHARPS, China)</i>
17:15 – 17:40	Invited Relating the high and low pressure phases <i>via</i> group theory <i>Emre S. Tasci (Hacettepe University, Turkey, and Shanghai University, China)</i>
17:40 – 17:55	High pressure pseudoelasticity of nanograined nickel <i>Mingzhi Yuan (袁名之) (HPSTAR, China),</i>
17:55 – 18:20	Poster Session
18:20 – 20:30	Banquet at hotel (next room of lecture hall)
Sep. 25, 2025 Thursday	Day 4
	Breakfast at hotel (1st floor)
8:30 – 10:00 Lecture Hall	Session 7 Novel Materials <i>Chairs: Panpan Kong (孔盼盼) (Institute of Physics, CAS, China), Fuyang Liu (刘扶阳) (HPSTAR, China)</i>
8:30 – 8:55	Invited - Pre-recorded: Pressure-induced inversion of pyramidal IO_3^- ions <i>Daniel Errandonea (University of Valencia, Spain)</i>
8:55 – 9:20	Invited Magnetic properties and Kondo effect in Ce_3TiBi_5 under high pressure <i>Xiancheng Wang (望贤成) (Institute of Physics, CAS, China)</i>

9:20 – 9:45	Invited High-temperature and high-pressure preparation and performance regulation of typical light-element compound transparent ceramics <i>Shuailing Ma (Ningbo University, China)</i>
9:45 – 10:00	Polyamorphic transitions in metallic glasses under high-pressure <i>Hongbo Lou (SHARPS/HPSTAR, China)</i>
10:00 – 10:20	Coffee Break / Poster Session
10:20 – 11:55	Session 8 High Pressure Chemistry and Novel Materials <i>Chairs: Youjun Zhang (Sichuan University, China), Yufei Meng (HPSTAR, China)</i>
10:20 – 10:50	Keynote: Crystallography and crystal chemistry of high pressure carbonates <i>Björn Winkler (Goethe-University in Frankfurt, Germany)</i>
10:50 – 11:15	Invited Single Crystal growth and physical properties modulation of Kitaev spin-liquid candidate material RuBr ₃ under high pressure <i>Runze Yu (于润泽) (HPSTAR, China)</i>
11:15 – 11:40	Invited Pressure induced multiple superconductivity in transition metal dichalcogenides HfS ₂ <i>Binbin Yue (HPSTAR, China)</i>
11:40 – 11:55	Pressure-induced enhancement of charge conductivity and ferromagnetic transition temperature in Fe ₃ GaTe ₂ <i>Lei Sun (Hanyang University, Korea)</i>
11:55 – 14:00	Lunch at hotel (1st floor)
14:00 – 15:55	Session 9 Mineral Physics and Mineral Chemistry <i>Chairs: Qingyang Hu (HPSTAR, China), Maxim Bykov (Goethe-University in Frankfurt, Germany)</i>
14:00 – 14:25	Invited Argon in planetary materials: passive retention or binding at depth? <i>Chrysteale Sanloup (Sorbonne University, France)</i>
14:25 – 14:50	Invited High pressure behavior and phase transition of gypsum under extreme conditions <i>Yu Wang (Goethe-University in Frankfurt, Germany)</i>
14:50 – 15:15	Invited The FeNi phase diagram and Earth's inner core structure <i>Yang Sun (Xiamen University, China)</i>
15:15 – 15:40	Invited High-pressure chemistry of bridgmanite under Fe ₂ O ₃ and SiO ₂ -saturated conditions <i>Artem Chanyshhev (University of Bayreuth, Germany)</i>
15:40 – 15:55	Enabling In-Situ X-Ray Studies Beyond 10 GPa in the Large-Volume Press

	with Novel Low-Z Materials <i>Longjian Xie (HPSTAR, China)</i>
15:55 – 16:15	Coffee Break / Poster Session
16:15 – 18:00	Session 10 Novel Materials, Data Format and Women under Pressure <i>Chairs: Haozhe Liu (HPSTAR, China), Wenge Yang (HPSTAR, China)</i>
16:15 – 16:40	Invited Approaches to Functional High-Pressure Phases: Pressure Aging and Structural Mimicry <i>Xujie Lü (吕旭杰) (HPSTAR, China)</i>
16:40 – 17:05	Invited Hierarchical superionic transition in high-pressure H ₂ CO ₃ <i>Qingyang Hu (HPSTAR, China)</i>
17:05 – 17:20	Ethic related topic discussions <i>Sandro Scandolo (ICTP, Italy), Haozhe Liu (HPSTAR, China)</i>
17:20 – 17:40	Women under high pressure: Forum discussions <i>Panel: Lisa Liu, Zhidan Zeng, Binbin Yue, Chrystele Sanloup, Sakura Pascarelli, Kamil Filip Dziubek</i>
17:40 – 18:10	Poster Session
18:10 – 19:45	Dinner at hotel (1st floor)
Sep. 26, 2025 Friday	Day 5
	Breakfast at hotel (1st floor)
8:30 – 10:10 <i>Lecture Hall</i>	Session 11 Dynamic Compression <i>Chairs: Artem Chanyshv (University of Bayreuth, Germany), Mu Li (Shenzhen Technology University, China)</i>
8:30 – 8:55	Invited - Pre-recorded: Shock-ramp compression of MgO up to 400 GPa on the Z machine <i>Steven D. Jacobsen (University of Colorado, USA)</i>
8:55 – 9:20	Invited Electromagnetically Driven Quasi-Isentropic Loading Techniques and Its Applications in High Pressure Material Properties <i>Binqiang Luo (Institute of Fluid Physics/CAEP, China)</i>
9:20 – 9:45	Invited Time-dependent anisotropic phase transformation of CaMg(CO ₃) ₂ under shock compression

	<i>Youjun Zhang (Sichuan University, China)</i>
9:45 – 10:10	Invited Multi-Scale <i>In Situ</i> Diagnostics of Extreme High-Pressure Material Dynamics: From Macroscopic to Microscopic Insights <i>Zhiyu He (Shanghai Institute of Laser Plasma, CAEP, China & Universität Rostock, Germany)</i>
10:10 – 10:30	Coffee Break
10:30 – 11:55	Session 11 Dynamic Compression Chairs: <i>Björn Winkler (Goethe-University in Frankfurt, Germany), Zhidan Zeng (HPSTAR, China)</i>
10:30 – 11:00	Keynote: New scientific opportunities for High Energy Density Science at the European X-ray Free Electron Laser <i>Sakura Pascarelli (European X-Ray Free-Electron Laser (XFEL) facility, Germany)</i>
11:00 – 11:25	Invited Experimental Study on High-Pressure Melting of Aluminum up to 500 GPa <i>Mu Li (Shenzhen Technology University, China)</i>
11:25 – 11:50	Time-resolved structure investigation in shocked coesite with X-ray free electron laser <i>Wenge Yang (HPSTAR China)</i>
11:50 - 11:55	Closing Remarks <i>Lisa Liu (SHARPS, China) & Haozhe Liu (HPSTAR, China)</i>
12:00 – 12:30	Facilities Tour Bus from hotel to SSRF
12:30 – 14:00	Lunch at Cafeteria of Shanghai Synchrotron Radiation Facility (SSRF)
14:00 – 15:00	High pressure beamlines at SSRF
15:00 - 16:00	Lab tour at HPSTAR and SHARPS
16:00 – 17:00	Returning bus to hotel