Tentative Technical Program of

2026 China Symposium on Sustainable Ironmaking and Steelmaking Technology

CSST 2026

November 3-5, 2026

Nanjing, Jiangsu Province, China

Organized by

The Chinese Society for Metals

Co-organized by

Shanghai University

University of Science & Technology Beijing

Conference Website: www.csst2026.com

Plenary Session

Tuesday, 3 November 2026, GMT+8 (Beijing)
8:30-11:55
Peace Hall (2nd Floor) of International Conference Hotel Nanjing

8:30-8:40	**Opening & Welcome Address**
8:40-9:05	**Control Technology of Nanoscale, Microscale, and Large-size Inclusions in High-quality Steel** Jian Yang, Shanghai University, China
9:05-9:30	**Pathways and Initiatives to Carbon Neutral Steelmaking - From Scrap Circularity to Hydrogen-Based Production** Johannes Schenk, Montanuniversitaet Leoben, Austria
9:30-10:05	**Technical and Economic Viability of Livestock Waste Codigestion for Biogas Production** Paulo Santos Assis, UFOP, Brazil
10:05-10:30	**Sustainable production of iron and steel via electric steelmaking routes for reduction of CO2 emissions** Joohyun Park, Hanyang University, Korea
10:30-10:40	**Break**
10:40-11:05	**Recent Advances in Hydrogen Metallurgy and Low-Carbon Ironmaking Technologies** Jianliang Zhang, University of Science & Technology Beijing, China
11:05-11:30	**Development of innovative decarburization technologies in JFE Steel** Naoki KIKUCHI, JFE Steel Corporation, Japan
11:30-11:55	**Re-thinking the processing of Magnetite Ores** Geoffrey Brooks, Swinburne University of Technology, Australia

A1 Metallurgical Technologies for Steels with Enhanced-Quality, High Performance and High Efficiency

Tuesday, 3 November 2026, GMT+8 (Beijing) Room A (2nd Floor) of International Conference Hotel Nanjing	
13:30-13:50	*Keynote* Application Effects of Electromagnetic Technologies in Continuous Casting Process **Lifeng Zhang**, North China University of Technology, China
13:50-14:10	*Keynote* Effect of wettability on the coagulation of inclusions and bubbles and the adhesion of inclusions to the inner wall in the pouring nozzle **Hiroshi Harada**, Nagoya University, Japan
14:10-14:25	Study on the Evolution and Control Technologies of Hydrogen Content in Rail Steel Across the Entire Manufacturing Process **Chaojun Guo**, HBIS HanSteel, China
14:25-14:40	Maintenance Management and Planning for Infrastructure in Temporarily Paralyzed Mines: A Case Study **Irce Fernandes Gomes Guimarães**, Federal University of Ouro Preto (UFOP), Brazil
14:40-14:55	Solidification characteristics and hot cracking behavior of high-manganese steel for LNG cryogenic storage tanks **Yang He**, University of Science and Technology Beijing, China
14:55-15:10	Effects of Small Size HBI on EAF Performance **Haley Hoover**, Midrex Technologies Inc., USA
15:10-15:25	RESEARCH STATUS AND PROSPECTS OF ARTIFICIAL INTELLIGENCE-BASED SCRAP STEEL INTELLIGENT GRADING SYSTEMS **Dongwei Zhao**, Yonyou Network Technology Co., Ltd., China
15:25-15:35 Break	
15:35-15:55	*Keynote* Development and Application of RH-SPI Powder Injection Technology for Desulfurization **Miaoyong Zhu**, Northeastern University, China
15:55-16:15	*Keynote* Sustainable continuous casting by improving steel quality **Qifeng Shu**, University of Oulu, Finland
16:15-16:30	Research on Sulfur Content Prediction and Process Parameter Optimization for Multi-Process KR-BOF-LF Route **Mingmei Zhu**, Chongqing University, China

16:30-16:45	Effect of permanent magnet arrayed magnetic field on the solidification process of Cr-Mo alloyed steel **Jie Zeng**, Central South University, China
16:45-17:00	Analysis of Factors Affecting Accurate Measurement of Converter Sublance and Its Improvement **Bing Sun**, Handan Iron & Steel Group Co.,Ltd., China
17:00-17:15	A Strategic Technology for Decision Support in Coal Blend Management Based on Machine Learning and Mathematical Optimization **Denilson Gomes Campos**, Federal University of Ouro Preto, Brazil
17:15-17:30	Effect of Chemical Erosions of Tundish Refractories on the Composition and Inclusion Evolution in Molten Steel **Dinghan Li**, Northeastern University, China

A2 Metallurgical Technologies for Steels with Enhanced-Quality, High Performance and High Efficiency

Wednesday, 4 November 2026, GMT+8 (Beijing) Room A (2nd Floor) of International Conference Hotel Nanjing	
8:30-8:50	*Keynote* The steelmaking technology and future development for non-oriented silicon steel **Jian Gong**, Shougang Group, China
8:50-9:10	*Keynote* How Steel contributes to addressing the Triple Planetary Crisis **Jean-Pierre BIRAT**, IF Steelman, France
9:10-9:25	Fundamental research on evolution of Al-Ti-Si oxides in solid Fe-Al-Ti-Si alloy during isothermal heating **Minggang Li**, Central South University, China
9:25-9:40	Building Information Modeling Application for Sustainable Design Using Light Steel Framing Parametric Templates in the Brazilian Context **Irce Fernandes Gomes Guimarães**, Federal University of Ouro Preto (UFOP), Brazil
9:40-9:55	Thermal boundary condition reconstruction of a steel slab in an industrial reheating furnace using an inverse method **Ramin Khademi**, Akademi University, Finland
9:55-10:10	Physical-Statistical Model of Particle Interaction Applied to the Optimization of Coal Mixtures for Coking **Dimas Coura**, Federal University of Ouro Preto, Brazil
10:10-10:25	Experimental assessment of the potential of Thin Slab Casting and Rolling technologies for the production of high-quality steel grades under low-grade scrap green steelmaking conditions **Robert Littringer**, Montanuniversitaet Leoben, Austria

10:25-10:35 Break	
10:35-10:55	*Keynote* Intelligent RH decarbonization models and application **Jianhua Liu**, University of Science and Technology Beijing, China
10:55-11:15	*Keynote* Collaborative Metallurgical Engineering: Beyond Low-Carbon Steel toward Structural Transformation in China–Africa–Latin America Cooperation **Dulce Maria Pereira**, Universidade Federal de Ouro Preto(UFOP) / Universidade Federal do Maranhão(UFMA), Brazil
11:15-11:30	Study on Precipitation Regulation of S31254 Super Austenitic Stainless Steel **Yong Wang**, Wuhan University of Science and Technology, China
11:30-11:45	In situ the Composition Evolution of SrO-containing Slag Inclusions in Al-killed Steels **Guojun Chen**, North China University of Technology, China

A3 Metallurgical Technologies for Steels with Enhanced-Quality, High Performance and High Efficiency

Wednesday, 4 November 2026, GMT+8 (Beijing) Room A (2nd Floor) of International Conference Hotel Nanjing	
13:30-13:50	*Keynote* Recycling Welding Fluxes: Key Scientific Issues, Engineering Challenges and Pilot Demonstrations **Cong Wang**, Northeastern University, China
13:50-14:10	*Keynote* Thermodynamic Evaluation of Resulfurized Steel Grades **Wagner Viana Bielefeldt**, Federal University of Rio Grande do Sul, Brazil
14:10-14:25	Effects of Iron-Core Configuration on Electromagnetic Heating, Flow, and Temperature Uniformity in a Dual-Channel Multi-Strand Tundish **Yunyi Zhang**, University of Science and Technology Beijing, China
14:25-14:40	Experimental validation of evolution versus equilibrium of (Ti,Nb)N inclusions in Fe-18Cr-2Mo alloy **Weichen Xie**, The University of Tokyo, Japan
14:40-14:55	Modeling of inclusions collision coupled quantity and composition **Jujin Wang**, North China University of Technology, China

14:55-15:10	Development of a Direct Alloying Process Using Mn Ore for Medium Mn Steel Production **Sripushpa Kakara**, Tohoku University, Japan
15:10-15:25	Effect of Welding Heat Input on Ferrite Transformation and Prior Austenite Grain Growth in EH420 Marine Steel **Quanlei Zhou**, North China University of Technology, China
15:25-15:35 Break	
15:35-15:55	*Keynote* Key Technologies for High-quality Continuous Casting Billets of Long Profile **Jiongming Zhang**, University of Science and Technology Beijing, China
15:55-16:15	*Keynote* Research on Control Technology of Internal Intermediate Cracks in ultra Thick Continuous Casting Slabs for Low-alloy High-strength Steel **Longyun Xu**, Hunan Valin Xiangtan Iron and Steel Co. Ltd., China
16:15-16:35	Effect of magnesium deoxidation on the evolution of non-metallic inclusions in austenitic stainless steel **MINKWAN CHANG**, Hanyang University, Korea
16:35-16:50	Structural Optimisation and Reactivity Evaluation of Ferro Coke Produced using Australian Coals and Iron Ore **Salman Khoshk Rish**, The University of Newcastle, Australia
16:50-17:05	Study on the distribution of non-metallic inclusions in a gear steel continuous casting slab **Xinyang Liu**, Beijing University of Technology, China
17:05-17:20	Desulfurization Behavior of Stainless Steel by CaO-SiO2-Al2O3-Cr2O3-CaF2-MgO Slag System **Dongmin Park**, Hanyang University, Korea
17:20-17:35	Research and Optimization of 18-High Roll High-Strength Steel AGC Control System **Weifeng Tan**, Hunan Valin Lianyuan Iron & Steel Co., Ltd., China

A4 Metallurgical Technologies for Steels with Enhanced-Quality, High Performance and High Efficiency

Thursday, 5 November 2026, GMT+8 (Beijing)
Room A (2nd Floor) of International Conference Hotel Nanjing

8:30-8:50	*Keynote* Wettability study between liquid slags and refractories during a splash process of the converter **Yongsug Chung**, Tech University of Korea, Korea
8:50-9:10	*Keynote* Effect of refining slag composition dissolution on dissolution rate of inclusions in-situ observed using confocal scanning laser microscope **Ying Ren**, University of Science and Technology Beijing, China
9:10-9:25	Effect of atomization gas on cleanliness of steel powders manufactured by vacuum induction melting gas atomization (VIGA) process **Hao Su**, Hanyang University, Korea
9:25-9:40	Strengthening Mechanism of High Strength Low-alloy Steel by Strip Casting Process **Cheng Lu**, Institute of Research of Iron and Steel, Shasteel, China
9:40-9:55	Slag Eye Opening in RH Degassing: A Physical Modeling Study under Submerged Lance Injection **Davi Santos**, Federal University of Ouro Preto, Brazil
9:55-10:10	Biomass Green Reduction and Multi-element Synergistic Recovery of High-titanium Magnetite **Mingyuan Rao**, Northeastern University, China
10:10-10:25	Tailoring non-metallic inclusions to clarify their effects on rolling contact fatigue of high-carbon chromium bearing steel **Weicheng Zhang**, Yanshan University, China
10:25-10:35 Break	
10:35-10:55	*Keynote* The influence mechanism of inclusion crystallization behavior on its deformation characteristics **Wen Yang**, University of Science and Technology Beijing, China
10:55-11:15	*Keynote* Research on Control Technology of Internal Intermediate Cracks in ultra Thick Continuous Casting Slabs for Low-alloy High-strength Steel **Zhiyin Deng**, Northeastern University, China
11:15-11:30	Numerical Simulation of Spatial Distribution of Inclusions in Unsteady Continuous Casting Slabs **Wei Chen**, North China University of Technology, China
11:30-11:45	Governing Mechanisms of Grain-Growth Stagnation in Iron: The Role of Low-Energy Cusps in Microstructural Stabilization **Ooraphan Chirayutthanasak**, King Mongkut's University of Technology Thonburi, Thailand

A5 Metallurgical Technologies for Steels with Enhanced-Quality, High Performance and High Efficiency

Thursday, 5 November 2026, GMT+8 (Beijing) Room A (2nd Floor) of International Conference Hotel Nanjing	
13:30-13:50	*Keynote* Modelling on motion and dissolution of Al2O3 inclusions in argon-stirred ladles **Haojian Duan**, University of Science and Technology Beijing, China
13:50-14:10	*Keynote* Multiphase Simulation of Equiaxed Grain Formation and Macrosegregation in a Bearing Steel Ingot **Haijie Zhang**, North China University of Technology, China
14:10-14:25	Modeling the Precipitation and Growth of TiN Inclusions during Solidification of Ti-microalloyed High-Strength Steels **Haoyu Wang**, North China University of Science and Technology, China
14:25-14:40	Technological innovation and decarbonization in brazilian metallurgy and steelmaking **LAURA ELIZA FERREIRA SILVA**, Universidade Federal de Ouro Preto, Brazil
14:40-14:55	Development of a High-Strength Ni-Free Austenitic Stainless Steel by Powder Metallurgy **Krishnakant Phand**, INDIAN INSTITUTE OF TECHNOLOGY ROORKEE, ROORKEE, UTTARAKHAND, India
14:55-15:10	Machine Learning-Based Design of High-Manganese Steel Properties **Mingxuan Chen**, University of Science and Technology Beijing, China
15:10-15:25	Kinetic Model for Desulfurization of Molten Steel during RH Refining **Chunjie She**, University of Science and Technology Beijing, China
15:25-15:35 Break	
15:35-15:55	*Keynote* DEVELOPMENT OF NEW METHODS OF CONTROL, ANALYSIS AND OPTIMIZATION OF STEEL PRODUCTION TECHNOLOGIES **Konstantin Grigorovich,** Baikov Institute of Metallurgy and Materials Science of RAS, Russia
15:55-16:10	Influence of S content in steel on the collision trend of Al2O3 inclusions on the surface of molten steel **Minghui Wu**, University of Science and Technology Beijing, China
16:10-16:25	Thermodynamic Analysis of High-Nitrogen Non-Magnetic Steel during Electroslag Remelting Process **Jiyuan Zhu**, University of Science and Technology Beijing, China

16:25-16:40	Numerical Investigation of Charging Biochar-Containing Carbon Composite Briquettes into an Ironmaking Blast Furnace **Jin Xie**, University of New South Wales, Australia
16:40-16:55	Study on the deformation mechanism of inclusions during the cold rolling process of ultra-thin stainless steel plates **Guorui Liu**, Northeastern University, China

B1 Recycling of Metallurgical Resources in Ironmaking and Steelmaking Process

Tuesday, 3 November 2026, GMT+8 (Beijing) Room B (2nd Floor) of International Conference Hotel Nanjing	
13:30-13:50	*Keynote* Mechanisms and Kinetics of Phase Evolution during Solidification of Cr-Containing Stainless Steel Slags **Il Sohn**, Yonsei University, Korea
13:50-14:10	*Keynote* Co-Production of High-Quality Steel and Cement Clinker in EAFs Through Slag Engineering **Zushu Li**, The University of Warwick, UK
14:10-14:25	Research on Key Technologies for Efficient Treatment of Steel Slag to Promote Internal Recycling **Lei Rao**, Maanshan Iron and Steel Company Limited, China
14:25-14:40	Segregation of a phosphorus rich phase during differential solidification of BOS slag under different cooling rates **Tuyen Nguyen**, School of Engineering, the University of Newcastle, Australia
14:40-14:55	The practice of solid waste recycling and flux economic replacement in steelmaking production **Chao Li**, Angang Steel Company Limited, China
14:55-15:10	Selective Recovery of Fe and Ni from Stainless Steel Scrap via the Carbonyl Process: Kinetic Analysis **SangHyun Jeon**, Inha University, Korea
15:10-15:25	Analysis of Low-Carbon Resource Recovery Pathways for Steel Mill Gas **Yunling Cao**, PIONEER, China
15:25-15:35 Break	

15:35-15:55	*Keynote* Defining Critical Tramp Element Thresholds for Sustainable Scrap-Based EAF Steel Production: Implications for Surface Hot Shortness and Circular Resource Use **Joonho Lee**, Korea University, Korea
15:55-16:15	*Keynote* Low-Carbon Iron Production: Opportunities and Recent Practices **Xue Feng Dong**, University of Wollongong, Australia
16:15-16:30	Efficient recovery and utilization of medium- and low-temperature waste heat and carbon reduction potential assessment in iron and steel industry based on process transformation **Fan Jiang**, Northeastern University, China
16:30-16:45	Zinc Circulation and Furnace Wall Accretion in High-Zinc Vanadium–Titanium Blast Furnaces **Wen Li**, Chongqing University, China
16:45-17:00	Comprehensive Evaluation of Steel-Chemical Co-production Pathways in China Based on the TOPSIS Model **Chengxi Wang**, Northeastern University, China

B2 Technologies for Controlled and Reduced Emissions in Iron and Steel Production

Wednesday, 4 November 2026, GMT+8 (Beijing) Room B (2nd Floor) of International Conference Hotel Nanjing	
8:30-8:50	*Keynote* Simulation of static and dynamic operation of the direct reduction furnace **Henrik Saxen**, Abo Akademi University, Finland
8:50-9:10	*Keynote* Current Progress on Electric Smelting Furnace Research at University of Newcastle **Tom Honeyands**, The University of Newcastle, Australia
9:10-9:25	Overview of CSIRO green ironmaking projects **Chunlin Chen**, CSIRO Mineral Resources, Australia
9:25-9:40	Enhancing machinability of high-sulfur free-cutting steel via adding Ti instead of Pb **Xiaoyong Gao**, Yanshan University, China
9:40-9:55	Steel Industry and Sustainability **Maria Luiza Abreum**, Universidade Federal de Ouro Preto, Brazil

9:55-10:10	Energy Efficiency and Use of Hydrogen in Preheating and Reheating **Joachim von Scheele**, Linde GmbH, Germany
10:10-10:25	Attribution as Strategy: Baseline-Stripping IoT and AI-Assisted Interpretation as an Environmental Attribution Capability for Steel Emissions Governance **Hanwen Zhang**, Victoria University of Wellington, New Zealand
10:25-10:35 Break	
10:35-10:55	*Keynote* Reduction of CO2 Emissions from Blast Furnace with Carbon Recycling Methane **Naoto Nakamura**, JFE Steel Corporation, Japan
10:55-11:15	*Keynote* Comments about Technologies to be used in Ironmaking and Steelmaking to reduce GHG **Paulo Santos Assis**, UFOP and HUST, Brazil
11:15-11:30	Study on the high-temperature stability mechanism of calcium adsorbent modified with Ca2Fe2O5 perovskite structure **Shuoyang Liang**, Soochow University, China
11:30-11:45	Transient CFD Analysis and Closed-Loop Stabilization of DRI Metallization during Hydrogen-Rich Transition in a Shaft Furnace **Yandong Zhai**, Åbo Akademi University, Finland
11:45-12:00	Recent Developments in Iron Making Technology and Journey towards Net Zero CO2 Emissions **Mahaboob Basha Shaik**, Tata Steel Ltd., India

B3 Technologies for Controlled and Reduced Emissions in Iron and Steel Production

Wednesday, 4 November 2026, GMT+8 (Beijing) Room B (2nd Floor) of International Conference Hotel Nanjing	
13:30-13:50	*Keynote* Reactivity and Degradation of Coke in Simulated Top Gas Recycling Oxygen Blast Furnace Conditions **Arash Tahmasebi**, University of Newcastle, Australia
13:50-14:05	Research on a Mechanism-Model-Based Method for Energy Consumption Simulation and Diagnosis of Electric Arc Furnaces **Qiqi Li**, Northeastern University, China

14:05-14:20	Improving water circularity and sustainability in the steel industry through physical and chemical modelling and simulations **Valentina Colla**, Scuola Superiore Sant'Anna, Italy
14:20-14:35	Digital twins and Economic Model Predictive Control for CCUS optimization from steelworks off gases **Ismael Matino**, Scuola Superiore Sant'Anna, Italy
14:35-14:50	Evaluation of Iron Ore Tailings as Aggregate Replacement in Interlocking Concrete Blocks **Igor Pereira**, Universidade Federal de Ouro Preto, Brazil
14:50-15:05	Study and Practice on Resource Utilization of Coke Oven By-products **Hua Zhao**, Ansteel Iron & Steel Research Institutes, China
15:05-15:20	Softening and Melting Behaviour of Lump, Sinter and Mixed Ferrous Burdens in Gas Compositions Representative of Hydrogen Enriched Blast Furnace Operation **Nathan Barrett**, The University of Newcastle, Australia
15:20-15:35 Break	
15:35-15:50	Recent Advances in Blast Furnace Mathematical Modelling and Its Enabling Applications for Low-Carbon Ironmaking **ZIGUANG ZHAO**, The University of New South Wales, Australia
15:50-16:05	A Digital Twin Framework for Analysing the Experimental and Numerical Aspects of Porous Scrap Melting Dynamics **ZAINUL ABEDIN**, Indian Institute of Technology Kanpur, India
16:05-16:20	Direct reduction of low grade BHQ iron ore by ammonia **Sayantan Mukherjee**, IIT (BHU), India

B4 Technologies for Controlled and Reduced Emissions in Iron and Steel Production

Thursday, 5 November 2026, GMT+8 (Beijing) Room B (2nd Floor) of International Conference Hotel Nanjing	
8:30-8:50	*Keynote* Phosphorus in iron and steelmaking – an Australian perspective for Pilbara iron ores **Ray Longbottom**, University of Wollongong, Australia
8:50-9:05	Waste Heat Characterization and Recovery Strategies in Hot Strip Mill Downstream Processes **Ismael Matino**, Scuola Superiore Sant'Anna, Italy

9:05-9:20	Preparation and Metallurgical Behavior of Complex Iron Ore Pellets for COG-Based Direct Reduction and Low-Carbon Blast Furnace Application **Lu Chen**, Central South University, China
9:20-9:35	Solid-State Iron Ore Reduction in a Shaft Furnace Modelled as a Series of Plug Flow Reactors and Effect of Hydrogen Addition **Mengqing Zhao**, The University of Western Australia, Australia
9:35-9:50	Industrial Test of Biomass Charcoal Injection in Blast Furnace of WISCO Limited **Shanshan Yu**, Wuhan Iron and Steel Co., Ltd., China
9:50-10:05	Effect of mineralogy on iron ore reduction in NH3 atmosphere at different temperatures **Kaijie Li**, The University of Western Australia, Australia
10:05-10:20	Energy and carbon flow transition in hydrogen-based direct reduction iron electric arc furnace steelmaking **Meng Li**, Åbo Akademi University, Finland
10:20-10:35 Break	
10:35-10:50	Application Research on "Near-Zero Residual Oxygen" Combustion Control Technology for Heating Furnaces **Jinjun Zhou**, Maanshan Iron & Steel Company Limited, China
10:50-11:05	Numerical study on the injection of pre-reduced iron ore fines into a blast furnace **Ting Shi**, UNSW Sydney, Australia
11:05-11:20	Direct Reduction of Iron Ore Using Ammonia as Reductant: A Sustainable Alternative for Low-Carbon Ironmaking **Sudipta Patra**, Indian Institute of Technology, India

B5 Metallurgical Technologies with Long-Life and Reducing in Iron and Steel Production & Comprehensive Utilization of Waste Slag in Ironmaking and Steelmaking

Thursday, 5 November 2026, GMT+8 (Beijing) **Room B (2nd Floor) of International Conference Hotel Nanjing**	
13:30-13:50	*Keynote* Cleanliness of IF Steel Slabs during Ladle Exchange: Evaluation and Control **Xiaoxuan Deng**, Shougang Group, China

13:50-14:10	*Keynote* Challenges and opportunities in Pelletising of Low-grade Hematite – Goethite Fines for Low Carbon Ironmaking Processes **Liming Lu**, CSIRO Mineral Resource, Australia
14:10-14:25	Role of Water Vapor in Carburization, Morphological Evolution, and Swelling of Iron Ore Pellets during H2–CO Reduction **Ahmadreza Mohammadian Soodmand**, University of Oulu, Finland
14:25-14:40	Research on the Failure Mechanism and Microstructure Evolution of Cast Iron Cooling Staves in Blast Furnaces **Jian Sun**, Shougang Group, China
14:40-14:55	Preparation of Iron-Bearing Solid Waste Cold-Bonded Briquettes with Double-layer **Sheng Liu**, Chongqing University, China
14:55-15:10	Carbon-Regulated Sulfur Removal and Chlorine Retention during MgCl2-Assisted Roasting of Electrolytic Manganese Residue **Mengchuan Li**, Central South University, China
15:10-15:25	In-Situ Cemented Backfill Curing Condition Estimation using The Twin Curing Apparatus **Yue Zhao**, North China Institute of Science and Technology, China
15:25-15:35 Break	
15:35-15:50	Processing of metallurgical slag in a blast furnace **Oleksii Merkulov Liekexie A**, Suzhou SICUI Welding Technology Research Institute Co,.Ltd., China
15:50-16:05	Synthesis of LiFePO4 from steelmaking slag as an alternative phosphorus source **Wenfeng GU**, Tohoku University, Japan
16:05-16:20	Aluminum-Dross-Assisted Smelting Reduction of Steel Slag for Reductive Dephosphorization and Iron Recovery **Xi Lu**, Central South University, China
16:20-16:35	Utilization of chromite ore processing residue in the sintering process: Effect of FeCr2O4 on the wetting behavior of calcium ferrite melt **Ju Xu**, Wuhan University of Science and Technology, China
16:35-16:50	Valorization of Steelmaking By-Products for Sustainable Production: Pig Iron and Mold Powder **HOSSAM AHMED MOHMED**, CENTRAL METALLURGICAL RESEARCH AND DEVELOPMENT INSTITUTE, CMRDI, EGYPY
16:50-17:05	GPU-Accelerated CFD-DEM-FEA Coupling Study on Gas-Solid Reactive Flow and Tuyere Wear in Blast Furnace **Tianyue Jia**, University of New South Wales, Australia

C1 New Technologies & Processes in the Fields of Ironmaking and Steelmaking under the Carbon Peak and Carbon Neutrality Circumstances

Tuesday, 3 November 2026, GMT+8 (Beijing) Room C (2nd Floor) of International Conference Hotel Nanjing	
13:30-13:50	*Keynote* Accelerating Low-Cost Green Ironmaking: Emerging R&D Methods, Progress, and Challenges **Yansong Shen**, University of New South Wales, Australia
13:50-14:10	*Keynote* Innovation and Progress on Blast Furnace Ironmaking Technology at Shougang **Fuming Zhang**, Shougang Group Co., Ltd., China
14:10-14:25	Innovative Strategies for Effective Removal and Harm Reduction of Nitrogen Based on EAF Steelmaking Process **Shaoyan Hu**, Soochow University, China
14:25-14:40	Geopolymers: a sustainable alternative for the mining and metallurgical industry **Davi Vieira**, UFOP Universidade Federal de Ouro Preto, Brazil
14:40-14:55	An Improved CFD Study of Direct Reduction Shaft Furnace for Low-Carbon Ironmaking **Rui Hong**, UNSW, Australia
14:55-15:10	Numerical Study on Hydrogen Reduction of Iron Oxide Pellets in a Shaft Furnace with Selective Gas Recycling **Chenxi Zhao**, Northeastern University, China
15:10-15:25	Reduction studies of low-grade banded hematite quartz **Anil Kumar**, IIT Roorkee, Brazil
15:25-15:35 Break	
15:35-15:55	*Keynote* The effect of ESG initiatives in Brazil: government's role, financial performance and interlinkages on net-zero economy transition **Breynner Oliveira**, Federal University of Ouro Preto, Brazil
15:55-16:15	*Keynote* Qisunny Methodology: Emergent Physicochemical Rules and Metallurgical Performance of Ore-Coke-CO-H2 System **Qi Wang**, University of Science and Technology Liaoning, China

16:15-16:30	Complementary Trade-off in Phosphorus Enrichment Capacity between Melting Slag and Tapping Slag during EAF Continuous Slag Discharge Process: The Influence of Basicity **Han Sun**, Shanghai University, China
16:30-16:45	Removal of inclusions in high-purity FeSi alloy using crystalline silicon debris as Si source **Guangyu Chen**, Ningxia University, China
16:45-17:00	Behavior of Alkali Metals in Synthetic Blast Furnace Slags under Reducing Conditions **Cesar Yuji Narita**, Institute for Technological Research (IPT), Brazil

C2 New Technologies & Processes in the Fields of Ironmaking and Steelmaking under the Carbon Peak and Carbon Neutrality Circumstances

Wednesday, 4 November 2026, GMT+8 (Beijing) Room C (2nd Floor) of International Conference Hotel Nanjing	
8:30-8:50	*Keynote* Study on the degradation of iron ore briquette during reduction **Youngjo Kang**, Dong-A University, Korea
8:50-9:10	*Keynote* Exploration of the Optimal Pellet Proportion in Blast Furnace Burden **Weidong Zhang**, Shougang Group Co., Ltd., China
9:10-9:25	Reduction behavior of hematite concentrates with hydrogen in a flash ironmaking reactor **Devendra Nama**, Indian Institute of Technology Kanpur, India
9:25-9:40	Industrial Study on Low-Carbon Substitution of Biomass Char Injection in a Super-Large Blast Furnace **Nan Zhang**, Henan Advanced Iron and Steel Materials Industry Research Institute, China
9:40-9:55	Characterization of Blast Furnace Raw Materials for Alkali Input Assessment **Ivan Mauricio Daza Prada**, Institute for Technological Research (IPT), Brazil
9:55-10:10	Feasibility Study on Low-Carbon Coking with Microwave Preheating of Coking Coal **Hua Zhao**, Ansteel Iron & Steel Research Institutes, China
10:10-10:25	Heterogeneous reduction behavior of iron oxides in CO/H2 atmospheres revealed by multiscale characterization **Yuzhao Wang**, University of Oulu Nano and Molecular Systems Research Unit, Finland

10:25-10:35 Break	
10:35-10:55	*Keynote* The impact of different charges in electric-based ironmaking and steelmaking: a simulation investigation **Valentina Colla**, Scuola Superiore Sant'Anna, Italy
10:55-11:15	*Keynote* Degradation Behavior of Coke Structure and Properties under Blast Furnace Conditions and Coke Quality Evaluation Methods **Shengfu Zhang**, Chongqing University, China
11:15-11:30	Integrated Process Modelling for Low-Carbon Ironmaking and Steelmaking: From Physics-Based Simulation to Machine Learning Surrogates **Xiaobing Yu**, UNSW, Australia
11:30-11:45	Softening–Melting–Dripping Behavior of Segregated High-Pellet Burdens **Xi Zhang**, Chongqing University, China
11:45-12:00	Research on the Application of Pretreatment and Carbon Capture Technologies for Blast Furnace Gas **Jinsong Li**, Research Institute of Technology of Shougang Group Co., Ltd., China
12:00-12:15	STATUS OF DRI DUST REUSE IN HYDROGEN-BASED SHAFT FURNACE OF ZHANGXUAN TECHNOLOGY **Yu Qin**, Hebei Zhangxuan High Technology Co., Ltd., China

C3 New Technologies & Processes in the Fields of Ironmaking and Steelmaking under the Carbon Peak and Carbon Neutrality Circumstances

Wednesday, 4 November 2026, GMT+8 (Beijing) Room C (2nd Floor) of International Conference Hotel Nanjing	
13:30-13:50	*Keynote* Study of the potential of corymbia bark for energy and biochar production **Ricardo Barros**, ArcelorMittal, Brazil
13:50-14:10	*Keynote* Deep melt purification technology for recycled steel **Guangsheng Wei**, University of Science and Technology Beijing, China
14:10-14:25	Reactive CFD-DEM modelling of particle-scale gas-solid flows in an industrial ironmaking blast furnace **Haoyong Kan**, The University of New South Wales, Australia

14:25-14:40	Effect of Hydrogen Addition on the Wetting Behavior between Blast Furnace Slag and Coke **Hyeonwoo Shin**, Dong-A University, Korea
14:40-14:55	Whole-Process Coupling Modeling and Energy–Carbon–Cost Analysis of the Pelletizing–Shaft Furnace Direct Reduction–Electric Arc Furnace Steelmaking Route **Xiangyuan Fu**, University of Science and Technology Beijing, China
14:55-15:10	Synergizing Attention-Guided Graph Convolutions with Transfer–Incremental Learning for Interactive Many-Objective Performance–Efficiency–Emission Balancing on Smelting Reduction vessel **Deyue Qin**, Northeastern University, China
15:10-15:35 Break	
15:35-15:55	*Keynote* Multidimensional Measurement and Control of Molten Slag for Carbon-Neutral Steelmaking **Noritaka Saito**, Kyushu University, Japan
15:55-16:15	*Keynote* Novel techniques and processes for the preparation of green and low-carbon blast furnace burden **Zhiyun Ji**, Central South University, China
16:15-16:30	Degradation Behavior of MgO-C with Antioxidants in CO/CO2 environment during BOF **Giwon Kim**, Tech University of Korea, Korea
16:30-16:45	Distribution Behavior of Impurity Elements During the Smelting of H2-Reduced DRI **Mahmoud Soliman Abdelgawwad Abdelgalil**, Central South University, China
16:45-17:00	Study on titanium extraction via ammonia reduction-nitriding and low-temperature chlorination of titanium concentrate **Yi Zhang**, Chongqing University, China

C4 New Technologies & Processes in the Fields of Ironmaking and Steelmaking under the Carbon Peak and Carbon Neutrality Circumstances

Thursday, 5 November 2026, GMT+8 (Beijing) Room C (2nd Floor) of International Conference Hotel Nanjing	
8:30-8:50	*Keynote* Multi-view feasibility study of the innovative co-injection of H2 and coal in blast furnaces for viable net-zero ironmaking **Yiran Liu**, University of Western Australia, Australia

8:50-9:10	*Keynote* Molten CaCI2-Based Carbothermal ironmaking **Xiao Yang**, Westlake University, China
9:10-9:30	*Keynote* Challenges on sustainable EAF steelmaking in China **Alberto N. Conejo**, University of Science and Technology Beijing, China
9:30-9:45	Technical Practice and Technological Breakthroughs in High-Grade Steel Plate Production via the Electric Furnace Route at Baosteel Zhanjiang Iron and Steel Co., Ltd. **Bohan Tian**, Baoshan Iron & Steel Co., Ltd., China
9:45-10:00	Numerical Simulation of Ammonia-Coal Composite Injection in Blast Furnace Ironmaking **Yuzhe Sun**, University of Science and Technology Beijing, China
10:00-10:15	Reduction and Magnetic Separation of Ludwigite Ore Using Agricultural Straw as Green Reductant **Xuyang Wang**, Northeastern University, China
10:15-10:35 Break	
10:35-10:55	*Keynote* Master alloys and Stainless Steels via Hydrogen Reduction of Blended Oxides **Jie Qi**, Hong Kong University of Science and Technology (Guangzhou), China
10:55-11:15	*Keynote* Preparation Technology and Industrial Application of Fluxed Pellets Using Ultra-fine Magnetite-Hematite Mixed Iron Concentrate **Mingshun Zhou**, Iron and steel research institute of Angang Group, China
11:15-11:30	Mechanism of Reduction Atmosphere on Defect Evolution of Wüstite and Iron Whisker Growth **Lin Wang**, Chongqing University, China
11:30-11:45	A novel technology of co-injecting hydrogen and biomass (CoHB) in blast furnaces for a sustainable carbon-neutral ironmaking **Ming Jiang Gan**, UNSW Sydney, Australia

Poster Session

The design concept of the high-flow RH multi-functional top lance **Yonge Ding**,Baosteel Engineering & Technology Group Ltd.,Co.,China
STUDY OF THE INFLUENCE OF %MgO CONTENT IN CaO-SiO2-Al2O3 SLAG ON THE DENSITY OF NON-METALLIC INCLUSIONS IN STEEL **Nelson de Freitas Costa**,Universidade Federal do Rio Grande do Sul,Brazil
Investigation on the Spatial Distribution of TiN Inclusions in 439Ti-Stabilized Ferritic Stainless Steel Slabs **Mukesh Kumar Yadav**, IIT Bombay, India
Evaluation of an Integrated Gravity and Magnetic Separation Route for Iron Recovery from Tailings **Igor Pereira**, Universidade Federal de Ouro Preto, Brazil
Technological Integration and Innovation of a High-Parameter Reheat CDQ Waste Heat Power Generation Project **LIN LI**, Beijing JC Energy & Environment Engineering Co., Ltd, China
High-Efficiency Power Generation from Metallurgical Waste Heat in SG: Key Technologies and Future Prospects **Liyun WU**, Beijing Shougang International Engineering & Technology Co. Ltd, China
Study on Sintering Ore Blending of Nanjing Iron and Steel Based on Optimization of Basic Properties of Iron Ore Fines **Heming Ju**, Nanjing Iron & Steel Co.,Ltd., China
Technological Innovation of Green & Low-Carbon Cycle Utilization of Metallurgical Resources in SG Jingtang **Liyun WU**, Beijing Shougang International Engineering & Technology Co. Ltd, BSIET, China
Innovative Pathways for Replacing Coke with Coal: Application of Lump Anthracite as Sintering Fuel and Direct Charge in Blast Furnace Ironmaking **Yingjie Fan**, University of science and technology Beijing, China
Practice and Progress in Green and Low-Carbon Smelting Technologies of SG Jingtang **Wancai HE**, Beijing Shougang International Engineering & Technology Co. Ltd, China

Basicity-regulated oxidation kinetics and consolidation mechanisms of fluxed pellets prepared from fine magnetite concentrates **Jing Yang**, School of Minerals Processing and Bioengineering, Central South University, China
Exploration of Sustainable Steel Metallurgy Technology **Gao Shimin**, Dezhou Economic and Information Technology Bureau, Province, China
Studies of Phenomena that Promote the Formation of Scaffold in Blast Furnaces **Guilherme Russo**, Fundação de Apoio ao Instituto de Pesquisas Tecnológicas de São Paulo, Brazil
Intelligent Optimization of Ironmaking Process for Energy Saving, Emission Reduction and Low-Carbon Sustainable Metallurgy **Hongyang Li**, Yanzhao Iron and Steel Laboratory, China