



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



上海大学
Shanghai University

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	<i>Keynote</i> Application Effects of Electromagnetic Technologies in Continuous Casting Process Lifeng Zhang , North China University of Technology, China
13:50-14:10	<i>Keynote</i> 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	<i>Keynote</i> Development and Application of RH-SPI Powder Injection Technology for Desulfurization Miaoyong Zhu , Northeastern University, China
15:55-16:15	<i>Keynote</i> 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	<i>Keynote</i> The steelmaking technology and future development for non-oriented silicon steel Jian Gong , Shougang Group, China
8:50-9:10	<i>Keynote</i> 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	<i>Keynote</i> Intelligent RH decarbonization models and application Jianhua Liu , University of Science and Technology Beijing, China
10:55-11:15	<i>Keynote</i> 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	<i>Keynote</i> Recycling Welding Fluxes: Key Scientific Issues, Engineering Challenges and Pilot Demonstrations Cong Wang , Northeastern University, China
13:50-14:10	<i>Keynote</i> 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	<i>Keynote</i> Key Technologies for High-quality Continuous Casting Billets of Long Profile Jiongming Zhang , University of Science and Technology Beijing, China
15:55-16:15	<i>Keynote</i> 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-SiO ₂ -Al ₂ O ₃ -Cr ₂ O ₃ -CaF ₂ -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	<i>Keynote</i> 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	<i>Keynote</i> 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	<i>Keynote</i> The influence mechanism of inclusion crystallization behavior on its deformation characteristics Wen Yang, University of Science and Technology Beijing, China
10:55-11:15	<i>Keynote</i> 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	<i>Keynote</i> Modelling on motion and dissolution of Al ₂ O ₃ inclusions in argon-stirred ladles Haojian Duan , University of Science and Technology Beijing, China
13:50-14:10	<i>Keynote</i> 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	<i>Keynote</i> 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 Al ₂ O ₃ 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 Electros slag 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	<i>Keynote</i> Mechanisms and Kinetics of Phase Evolution during Solidification of Cr-Containing Stainless Steel Slags Il Sohn , Yonsei University, Korea
13:50-14:10	<i>Keynote</i> 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	<i>Keynote</i> 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	<i>Keynote</i> 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	<i>Keynote</i> Simulation of static and dynamic operation of the direct reduction furnace Henrik Saxen , Abo Akademi University, Finland
8:50-9:10	<i>Keynote</i> 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	<i>Keynote</i> Reduction of CO ₂ Emissions from Blast Furnace with Carbon Recycling Methane Naoto Nakamura , JFE Steel Corporation, Japan
10:55-11:15	<i>Keynote</i> 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 Ca ₂ Fe ₂ O ₅ 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 CO ₂ 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	<i>Keynote</i> 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 Sayantana 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	<i>Keynote</i> 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 NH ₃ 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	<i>Keynote</i> Cleanliness of IF Steel Slabs during Ladle Exchange: Evaluation and Control Xiaoxuan Deng , Shougang Group, China
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13:50-14:10	<i>Keynote</i> 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, EGYPT
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	<i>Keynote</i> Accelerating Low-Cost Green Ironmaking: Emerging R&D Methods, Progress, and Challenges Yansong Shen, University of New South Wales, Australia
13:50-14:10	<i>Keynote</i> 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	<i>Keynote</i> The effect of ESG initiatives in Brazil: government's role, financial performance and interlinkages on net-zero economy transition Breyner Oliveira, Federal University of Ouro Preto, Brazil
15:55-16:15	<i>Keynote</i> 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	<i>Keynote</i> Study on the degradation of iron ore briquette during reduction Youngjo Kang , Dong-A University, Korea
8:50-9:10	<i>Keynote</i> 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/H ₂ 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	<i>Keynote</i> Multidimensional Measurement and Control of Molten Slag for Carbon-Neutral Steelmaking Noritaka Saito , Kyushu University, Japan
15:55-16:15	<i>Keynote</i> 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/CO ₂ environment during BOF Giwon Kim , Tech University of Korea, Korea
16:30-16:45	Distribution Behavior of Impurity Elements During the Smelting of H ₂ -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	<i>Keynote</i> Multi-view feasibility study of the innovative co-injection of H ₂ and coal in blast furnaces for viable net-zero ironmaking Yiran Liu , University of Western Australia, Australia
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8:50-9:10	Keynote Molten CaCl₂-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