



# ICASI2025

<https://conference-lab.org/ICASI2025/index.html>

Date: September 11-13, 2025

Plenary Presentation (P-1~8) : 40 min.

Keynote Presentation (K-1~8) : 30 min.

Invited Presentation (I-1~6) : 20 min.

Oral Presentation (O-1~12) : 15 min.

**Thursday 11th**

**9:30-10:00 Opening, Photo**

**Plenary Presentation, ROOM-A**

P-1	10:00-10:40	Jiang Zhao	STANDARDIZATION OF MICROBEAM ANALYSIS – THE ESSENTIALS FOR STEEL QUALITY
P-2	10:40-11:20	Yunhai Jia	Characterization of Segregation Degree and Inclusions in Large-Scale Metallic Materials
P-3	11:20-12:00	Masao Kimura	How can we observe steel-related reactions using synchrotron radiation?

**12:00-13:00 Lunch**

**Keynote, Invited, Oral Presentation, ROOM-B**

K-1	13:00-13:30	Canceled	
K-2	13:30-14:00	Hiromi Eba	MECHANISM ELUCIDATION AND EFFICIENCY IMPROVEMENT OF HYDROGEN AND AMMONIA PRODUCTION AND CO <sub>2</sub> FIXATION REACTION USING IRON
I-1	14:00-14:20	Lei Zhao	High-Throughput Material Preparation and Characterization
O-1	14:20-14:35	Yujiro Hayashi	LAMINOGRAPHIC THREE-DIMENSIONAL X-RAY DIFFRACTION MICROSCOPY
O-2	14:35-14:50	Yusuke Kimura	THREE DIMENSIONAL OBSERVATION METHOD FOR NON-METALLIC INCLUSIONS

**14:50-15:10 Coffee Break**

**Keynote, Invited, Oral Presentation, ROOM-B**

K-3	15:10-15:40	Susumu Imashuku	THREE-DIMENSIONAL IONOLUMINESCENCE IMAGING OF NON-METALLIC INCLUSIONS IN STEEL
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I-2	15:40-16:00	Lixia Yang	Omni-directional Stress Characterization of High-Speed Railway Wheels
O-3	16:00-16:15	Miki Soma	QUANTITATIVE RECOVERY OF BARIUM SULFATE IN GRAVIMETRIC ANALYSIS OF SULFUR IN STEEL
O-4	16:15-16:30	Zhizhe Chen	Advanced Plasma Measurement and Simulation Methods
O-5	16:30-16:45	Changqing Shu	Physics-Enhanced Machine Learning for Predicting Strength of High-Carbon Chromium Steel during Thermomechanical Processing and Spheroidizing Annealing
O-6	16:45-17:00	Huaqing Qin	Accuracy Improvement of Coal Quality Analysis Across Different LIBS systems by Transfer Learning

## Friday 12th

### Plenary Presentation, ROOM-A

P-4	9:00-9:40	Irene Calliari	Low-density steel for forging application: optimization and characterization
P-5	9:40-10:20	Zhigang Yang	Construction and Practice of Material and Testing Standard Systems
P-6	10:20-11:00	Keiko Sasaki	Challenges in Materials Engineering for Circular Economy

### 11:00-11:20 Coffee Break

### Keynote, Invited, Oral Presentation, ROOM-B

K-4	11:20-11:50	Reiko Murao	CHARACTERIZATION OF MULTI COMPONENT CALCIUM-FERRITES (SFCA SERIES) IN IRON ORE SINTER BY EBSD METHOD
I-3	11:50-12:10	Peng Wang	CSTM Material Data Standard System Construction + ICASI Standardization Work Proposal

### 12:10-13:10 Lunch

### Keynote, Invited, Oral Presentation, ROOM-B

K-5	13:10-13:40	Xiaojia Li	Glow Discharge Mass Spectrometry Analysis Standard for Trace Elements in Superalloys
K-6	13:40-14:10	Noritaka Saito	REAL-TIME SENSING AND IMAGING OF MULTIPHASE SLAGS WITH AC FIELDS

I-4	14:10-14:30	Arinori Inagawa	VISUALIZATION OF COLLOSION PROCESS OF IRON MATERIALS IN CONTACT WITH FROZEN AQUEOUS SALT SOLUTIONS
O-7	14:30-14:45	Shoujie Li	High-throughput and 3D microanalysis of steel segregation using picosecond laser-induced breakdown spectroscopy
O-8	14:45-15:00	Jiajia Hou	CHARACTERIZATION AND CORRECTION METHODS OF SELF-ABSORPTION EFFECT IN LASER-INDUCED BREAKDOWN SPECTROSCOPY

### 15:00-15:20 Coffee Break

### Keynote, Invited, Oral Presentation, ROOM-B

K-7	15:20-15:50	Haiqing Yin	Cross-Process Integrated Computational Prediction of Properties and Data Standardization for Tire Cord Steels
I-5	15:50-16:10	Hiroyuki Matsuura	INTEGRATED CHARACTERIZATION OF NON-METALLIC INCLUSIONS GENERATED DURING SOLIDIFICATION OF MOLTEN STEEL
O-9	16:10-16:25	Langlang Wang	Plasma State and Analytical Performance Enhancement of LS-DP-LIBS for Multi-Element Analysis in Steel Samples
O-10	16:25-16:40	Xianmao Yang	A NOVEL PARTICLE FLOW STATE CONSTRAINT METHOD FOR ENHANCING LIBS PERFORMANCE IN COAL PARTICLE ANALYSIS
O-11	16:40-16:55	Zixiong Qin	Real-time Monitoring of Multiple Elements in Molten Steel Based on Multi-spectral LIBS Spectrometer
O-12	16:55-17:10	Kenichiro Tsuruta	TRIAL OF 3-DIMENSIONAL OBSERVATION OF REFRACTORY EROSION BEHAVIOR UNDER SIMULATED DRI MELTING PROCESS CONDITIONS

### Saturday 13th

### Plenary Presentation, ROOM-A

P-7	9:00-9:40	Pavel Pořízka	LASER-INDUCED BREAKDOWN SPECTROSCOPY (LIBS) FOR IN-SITU ANALYSIS IN INDUSTRY AND SPACE
P-8	9:40-10:20	Zhe Wang	Carbon Neutrality and Energy System Transformation (CNEST) Program Introduction

### 10:20-10:40 Coffee Break

### Keynote, Invited, Oral Presentation, ROOM-B

K-8	10:40-11:10	Zhenzhen Wang	Measurement Method of Different Elements in Steel Alloys Based on LIBS Technology
I-6	11:10-11:30	Yoshihiro Deguchi	Advanced Analysis and Control of Industrial Processes with Digital Twin Integrating Laser Diagnostics and CFD