

Second circular

# **Innovation of Ironmaking Technologies and Future International Collaboration**

**- to Overcome Energy & Resource Restrictions  
in Accordance with Environments -**

**November 10-11, 2014**

**TOKYO TECH FRONT**

**(Tokyo Institute of Technology)**

**Tokyo, JAPAN**

**Organized by  
the 54th Committee on Ironmaking  
of Japan Society for Promotion of Science**

<http://www.material.tohoku.ac.jp/~saisei/event/141110/index.html>



Japan Society for the Promotion of Science  
独立行政法人 日本学術振興会

# Introduction

The conference will be sponsored and organized by the 54th Committee on Ironmaking, Japan Society for the Promotion of Science (JSPS), to invite participants to bring along different knowledge, ideas and ways of thinking, and to discuss the issues on the restrictions such as depletions and price-rising of energy & resource and the strategies toward their solutions.

The attenders will be able to exchange and share the advanced information of the fundamental researches on the innovative principles and the application studies on the next-generation technologies relating to the above issues and demands.

It will attract attenders from both Japan and abroad.

## Keynote lecturers

**Tatsuro Ariyama** (Tohoku University, Japan)

**Jianliang Zhang** (University of Science and Technology Beijing, China)

**Alexander Babich** (RWTH Aachen, Germany)

**Koji Saito** (NSSMC, Japan)

**Sang Ho Yi** (POSCO, Korea)

**Sharif Jahanshahi** (CSIRO, Australia)

## Registration

Download [an application form](#) and send to [the contact person](#) an application form to attend by e-mail before Oct. 10, 2014.

Registration Fees(including buffet party in 10 Nov.)

Regular: 10,000 JPY

Student: 5,000 JPY

**Conference attendance fees will be collected at the event reception in cash.**

## Contact

Taichi Murakami, Assoc. Prof., Tohoku University

taichi@material.tohoku.ac.jp,

Phone: +81 (0)22-795-4896

<http://www.material.tohoku.ac.jp/~saisei/event/141110/index.html>

# **Sponsors**

- The Japan Research and Development Center for Metals (JRCM)
- Division of High-Temperature Processes, The Iron and Steel Institute of Japan
- Iron-making Process Forum, The Iron and Steel Institute of Japan
- Resources and Energy Forum, The Iron and Steel Institute of Japan
- Green Energy Forum, The Iron and Steel Institute of Japan

## **Organized Committee Members**

### **Chairman**

**Kazuya Kunitomo (Kyushu University)**

### **Committee Members**

**Kunihiko Ishii (JFE Steel Corporation)**

**Seiji Nomura (Nippon Steel & Sumitomo Metal Corporation)**

**Kentaro Nozawa (KOBE STEEL, LTD.)**

**Katsushi Moriya (Nisshin Steel Co. LTD)**

**Takashi Orimoto (Nippon Steel & Sumitomo Metal Corporation)**

**Michitaka Sato (JFE Steel Corporation)**

**Tomohiro Akiyama (Hokkaido University)**

**Miyuki Hayashi (Tokyo Institute of Technology)**

**Taichi Murakami (Tohoku University)**

**Ko-ichiro Ohno (Kyushu University)**

**Yasuaki Ueki (Nagoya University)**

**Takashi Watanabe (Tokyo Institute of Technology)**

# Program ~1<sup>st</sup> day (Nov.10th)~

8:40~9:30 Registration

(Chair: K. Kunitomo/ S. Nomura)

9:30~9:50 Opening Welcome

**E. Kasai** (President of the 54<sup>th</sup> Committee on Ironmaking of JSPS)

9:50~11:50 Keynote lectures

**Tatsuro Ariyama** (Tohoku Univ.) *“Current Subjects of Steel Industry in Japan and Redesigning of Ironmaking Process for Future”*

**Jianliang Zhang** (University of Science and Technology Beijing)  
*“Recent Progress and Future Strategy on the Researches & Technologies of Ironmaking in China”*

**Alexander Babich** (RWTH Aachen) *“Use of Renewable Biomass Products, Organic Wastes, and Off-gases in Ironmaking Technologies”*

11:50~13:10 Lunch

(Chair: M.Sato/ M.Hayashi)

13:10~13:50 Keynote Lecture

**Koji Saito** (NSSMC) *“Current Status and Future Impacts of Japanese Steel Industry on Global Environments”*

13:50~15:05 Lectures

**Timo Fabritius** (University of Oulu) *“Potential usage of biomass as reductant in metallurgical processes at Nordic countries”*

**Yoshiaki Kashiwaya** (Kyoto Univ.) *“Influence of Hydrogen Injection into Blast Furnace using Mathematical Model based on Multi-phase Fluid Dynamics”*

**Hiroshi Nogami** (Tohoku Univ.) *“Fundamental Study on Motion of Dispersed Phases in Blast Furnace”*

15:05~15:25 Break

(Chair: T.Akiyama/ K.Moriya)

15:25~17:05 Lectures

**Taihei Nouchi** (JFE Steel) *“New Ironmaking Process to Enhance the Flexibility of Energy Supply and Resource Degradation”*

**Mauricio Bagatini** (Federal Univ. of Minas Gerais )  
*“Production and Use of the Charcoal in Brazil”*

**Miyuki Hayashi** (Tokyo Inst. Tech.) *“Microstructure change and primary slag melting of sinter in the cohesive zone of a blast furnace”*

**Junya Kano** (Tohoku Univ.) *“Simulation of Powder Processing for Ironmaking”*

17:05~18:00 (set up a buffet party)

Laboratory tours

18:00~20:00 Buffet party

# Program ~2<sup>nd</sup> day (Nov.11th)~

8:20~9:00 Registration

(Chair: K. Nozawa/ K. Ohno)

9:00~9:40 Keynote lecture

**Sharif Jahanshahi** (CSIRO) “Recent progress in R&D on use of sustainable biomass/designer chars for steel production”

9:40~10:05 Lecture

**Ichiro Naruse** (Nagoya Univ.) “*Precise ash behaviors during pulverized coal combustion*”

10:05~10:25 Break

10:25~11:40 Lecture

**Brian Monaghan** (Univ. of Wollongong) “*A Novel Approach to Mineral Effects on Coke Reactivity*”

**Seiji Nomura** (NSSMC) “*Recent Progress of Cokemaking Technology in Japan*”

**Masashi Kaimoto** (Nisshin Steel) “*Effect of coke breeze addition timing on sinter quality*”

11:40~13:00 Lunch

(Chair: T. Orimoto/ T. Murakami)

13:00~13:40 Keynote lecture

**Sang Ho Yi** (POSCO) “*Recent Update of BF & FINEX route Ironmaking Technologies in Korea*”

13:40~14:55 Lectures

**Jan van der Stel** (Tata Steel) “*Sustainable hot metal production with Blast Furnace and Hisarna smelting reduction process technologies*”

**Hadi Purwanto** (Int. Islamic Univ. Malaysia) “*Utilization of Biomass from Palm Oil Industry for Treatment of Low grade iron ore*”

**Hidetoshi Tanaka** (KOBELCO) “*Resources Trend and Use of Directly Reduced Iron in Steelmaking Process*”

14:55~15:05 Closing ceremony

**K.Kunimoto** (Chairman)