# Poster Sessions

## *$MgB_2$ wire*

Chairperson: Akiyoshi Matsumoto (NIMS)

### WBP5-1 14:00–16:00

**Development of $MgB_2$ wire and coil for the next generation of MRI magnet**

*Minoru Maeda[1], Dipak Patel[2], Md Shahriar Al Hossain[2], Seyong Choi[3], Jung Ho Kim[2]

1. Nihon University; 2. University of Wollongong; 3. Korea Basic Science Institute

### WBP5-2 14:00–16:00

**Spatially Resolved Measurement of Local Critical Current Density Distribution and Compositional Variation in $MgB_2$ Thick Film**

*Kazutaka Harada[1], Kohei Higashikawa[1], Masayoshi Inoue[1], Takanobu Kiss[1], Hideaki Tanaka[2]

1. Department of Electrical Engineering, Kyushu University; 2. Research & Development Group, HITACHI Ltd.

### WBP5-3 14:00–16:00

**Numerical Simulations of Operations of Parallel-Type Superconducting Level Sensors for Liquid Hydrogen Using Experimental Results of Electrical Resistivity**

*Jumpei Koshio[1], Kazuhiro Kajikawa[1], Yutaka Yamada[2], Momoko Makino[3], Itsuo Aoki[3]

1. Kyushu University; 2. Tokai University; 3. Jecc Torisha Co., Ltd.

### WBP5-4 14:00–16:00

**Numerical Analysis of In-Field Magnetization in Mono-core MgB2 Wire with Magnetic Sheath**

*Hiroshi Tatara[1], Kohei Higashikawa[1], Masayoshi Inoue[1], Shyam Mohan[1], Akiyoshi Matsumoto[2], Hiroaki Kumakura[2], Takanobu Kiss[1]

1. Kyushu University; 2. NIMS

## *New materials*

Chairperson: Yoshiyuki Yoshida (AIST)

### WBP6-1 14:00–16:00

**Preparation and transport properties of superconducting $Sr_2VFeAsO_{3-\delta}$ wires fabricated by *ex-situ* powder-in-tube process**

*Suguru IWASAKI, Yoichi KAMIHARA, Masanori MATOBA

Keio University

### WBP6-2 14:00–16:00

**The angular dependence of irreversibility line in $BaZrO_3$ nanoparticles doped $BaFe_2(As_{0.66}P_{0.33})_2$ films**

*Akinori Okubo[1], Michio Sato[1], Masashi Miura[1], Keiichi Tanabe[2]

1. Seikei University; 2. SUSTERA

### WBP6-3 14:00–16:00

**Development of Fe-based superconducting wires for liquid hydrogen level sensors**

*Shigeyuki Ishida, Yoshinori Tsuchiya, Yasunori Mawatari, Hiroshi Eisaki, Akihiro Nakano, Yoshiyuki Yoshida

National Institute of Advanced Industrial Science and Technology (AIST)

### WBP6-4 14:00–16:00

**Large and field-insensitive critical current densities in $(Sr,Na)Fe_2As_2$ superconducting tapes**

*Takahiro Suwa[1], Sunseng Pyon[1], Akiyoshi Park[1], Tsuyoshi Tamegai[1], Yuji Tsuchiya[2], Satoshi Awaji[2], Kazuo Watanabe[2]

1. Department of Applied Physics, The University of Tokyo: 2. High Field Laboratory for Superconducting Materials, Institute for Materials Research, Tohoku University

## *REBCO bulk*

Chairperson: Yasunori Mawatari (AIST)

### WBP7-1 14:00–16:00

**Magnetic flux invasion in REBCO bulk magnets with varying pre-magnetized flux distributions in multiple-PFM processes**

Tetsuo Oka[1], Kensuke Hara[1], Akira Takeda[1], Jun Ogawa[1], Satoshi Fukui[1], Takao Sato[1], *Kazuya Yokoyama[2], Akira Murakami[3]

1. Niigata University; 2. Ashikaga Institute of Technology; 3. Ichinoseki National College of Technology

### WBP7-2 14:00–16:00

**Influence of Artificial Defects on Trapped Field Performance in a Superconducting Bulk Magnet**

*Kazuya Yokoyama[1], Kulawansha Eranda[2], Yuanding Zhao[2], Atsushi Katsuki[2], Atsuro Miura[2], Tetsuo Oka[3]

1. Ashikaga Institute of Technology; 2. Graduate School of Engineering, Ashikaga Institute of Technology; 3. Niigata University

### WBP7-3 14:00–16:00

**Effect of resin impregnation on Y-Ba-Cu-O bulk superconductors**

*Atsuhiro Ono, Kazuo Inoue, Muralidhar Miryala, Masato Murakami

Shibaura Institute of Technology

**WBP7-4** 14:00–16:00

### Effects of Carbon Nanotube Addition on Superconductivity in Y-Ba-Cu-O Bulk Superconductors

*Kazuo Inoue, Yuya Miyake, Muralidhar Miryala, Masato Murakami

Shibaura Institute of Technology

**WBP7-5** 14:00–16:00

### Effect of growth temperature on superconducting properties of bulk GdBa2Cu3Oy bulk superconductors grown by IG process

*Yuta Nakanishi, Miryala Muralidhar, Kazuo Inoue, Masato Murakami

Department of Materials Science and Engineering, Shibaura Institute of Technology, Japan

**WBP7-6** 14:00–16:00

### Superconducting Performance, Microstructure and SEM by EDX Analysis of IG Processed $YBa_2Cu_3O_y$ Bulk Superconductors by Top and Interior Seeding Methods

*Naoki Ide[1], Miryala Muralidhar[1], Monika Radusovska[2], Diko Pavel[2], Jirsa Milos[3], Masato Murakami[1]

1. Department of Materials Science and Engineering, Shibaura Institute of Technology; 2. Institute of Experimental Physics, Slovak Academy of Sciences, Material Physics Laboratory; 3. Institute of Physics ASCR

**WBP7-7** 14:00–16:00

### Property of the GdBCO-Ag Bulk Superconductors Fabricated by Cooling-Rate-Controlled-Melt-Growth

*Ryo Matsuumi[1], Mitsuru Izumi[1], Xin Yao[2]

1. Tokyo University of Marine Science and Technology; 2. Shanghai Jiao Tong University

**WBP7-8** 14:00–16:00

### Stress-strain behavior of Gd123 superconducting bulk material under repeated loading

*Ryuto Kubo[1], Akira Murakami[1], Akifumi Iwamoto[2]

1. National Institute of Technology, Ichinoseki College; 2. National Institute for Fusion Science

**WBP7-9** 14:00–16:00

### Mechanical properties of EuBaCuO superconducting bulk material at liquid nitrogen temperature

*Akira Murakami[1], Akifumi Iwamoto[2]

1. National Institute of Technology, Ichinoseki College; 2. National Institute for Fusion Science

## *$MgB_2$ bulk*

Chairperson: Hiroshi Ikuta (Nagoya University)

### WBP8-1 14:00–16:00

### Bending properties of spark plasma sintered $MgB_2$ superconducting bulk materials

*Shinya Chiba[1], Akira Murakami[1], Jacques Noudem[2], Akifumi Iwamoto[3]

1. National Institute of Technology, Ichinoseki College; 2. CRISMAT-CNRS/UNICAEN-ENSICAEN; 3. National Institute for Fusion Science

### WBP8-2 14:00–16:00

### Effects of Ag content on bending strength of $MgB_2$ superconducting bulk material

*Akira Murakami[1], Miryala Muralidhar[2], Akifumi Iwamoto[3]

1. National Institute of Technology, Ichinoseki College; 2. Shibaura Institute of Technology; 3. National Institute for Fusion Science

### WBP8-3 14:00–16:00

### Improved Critical Current Densities in Bulk $MgB_2$ Fabricated using Nano Amorphous Boron Combined with Optimal Processing Conditions

Muralidhar Miryala[1], *Kotaro Kitamoto[1], Higuchi Masaki[1], Michael Rodolf Koblischka[2], Masato Murakami[1]

1. Graduate School of Science and Engineering, Shibaura Institute of Technology; 2. Experimental Physics, Saarland University

### WBP8-4 14:00–16:00

### Production and Characterization of Bulk $MgB_2$ Material made by the Combination of Crystalline and Carbon Coated Amorphous Boron Powders

*Hiroki Kobayashi[1], Muralidhar Miryala[1], Koblischka Rudolf Michael[2], Masato Murakami[1]

1. Superconducting Materials Laboratory, Department of Materials Science and Engineering, Shibaura Institute of Technology; 2. Experimental Physics, Saarland University

### WBP8-5 14:00–16:00

### Microstructure and critical current densities in bulk $MgB_2$ using carbon-coated amorphous boron

*Masaki Higuchi[1], Miryala Muralidhar[1], Pavel Diko[2], Masato Murakami[1]

1. Superconducting Materials Laboratory, Department of Materials Science and Engineering, Shibaura Institute of Technology; 2. Institute of experimental Physics, SAS

## WBP8-6 14:00–16:00

### Influences of Co substitution on FeSe Superconductors with High-Energy Ball milling Aided Sintering Process

*Feng Jianqing, Zhang Shengnan, Liu Jixing, Li Chengshan, Zhang Pingxiang

Northwest Institute of Nonferrous Metal Research

## WBP8-7 14:00–16:00

### Growth of $FeTe_{0.6}Se_{0.4}$ bulk single crystals and critical current properties under high magnetic field

*Yuji Tanaka, Yoshikazu Mizuguchi, Osuke Miura

Tokyo Metropolitan University