

PASREG 2025

28th - 30th Nov. 2025, Tokyo, Japan

Tokyo University of Marine Science and Technology



28th November, Friday

17:30 - 19:30 Welcome Reception

29th November, Saturday

8:45 - 9:15 Opening day: Registration & Coffee break

9:15 - 9:20 Welcome Speech

Session 1: REBCO bulk processing 1

- 1-1 9:20 - 9:40 Filip Antoncik (invited)
Recent Advances and Industrial Applicability of Single-Direction Melt Growth
- 1-2 9:40 - 10:00 Takanori Motoki (invited)
Recent advancements in Single-Direction Melt Growth (SDMG) for homogeneous and scalable REBCO bulks
- 1-3 10:00 - 10:15 Wanmin Yang
The thickness effect of the solid phase pellets on the crystal growth morphology and properties of the single domain GdBCO bulks
- 1-4 10:15 - 10:30 Yufeng Zhang
An in situ self-assembly strategy for high-performance GdBCO bulks with controlled crystallization

10:30 - 10:50 Coffee break & Preparing for poster session

Session 2: Innovative applications and characterization 1

- 2-1 10:50 - 11:10 Jean L  v  que (invited)
Superconducting machine using bulk for aircraft application
- 2-2 11:10 - 11:30 Ingann Chen (invited)
Simulation and observation of the motion trajectory of micron-sized iron particles in a Y-Ba-Cu-O HTS bulk with strong trapped magnetic fields
- 2-3 11:30 - 11:50 Takashi Nakamura (invited)
Mobile NMR spectrometer practically implemented with bulk superconducting magnets
- 2-4 11:50 - 12:05 Philippe Vanderbemden
Thermal properties of bulk $\text{GdBa}_2\text{Cu}_3\text{O}_7$ / Ag superconductors prepared by Single Direction Melt Growth (SDMG) process

12:05 - 13:00 Lunch

13:00 - 14:00 Coffee break & Poster presentation



Session 3: MgB₂ and iron-based superconductors

- 3-1 14:00 - 14:20 Jacques Noudem (invited)
Toward to overcome the magnetic flux jumps of the bulk MgB₂ superconductors processed by Spark Plasma synthesis and sintering
- 3-2 14:20 - 14:40 Muralidhar Miryala (invited)
Advancing Critical Currents: Powering Compact MgB₂ superconductors
- 3-3 14:40 - 15:00 Shiv Singh (invited)
Superconducting properties of bulk Sm-based oxypnictide processed by high gas pressure, cubic anvil, and spark plasma sintering techniques
- 3-4 15:00 - 15:15 Michael Eisterer
Field and temperature-dependence of grain boundary currents in K-doped BaFe₂As₂ bi-crystalline films
- 3-5 15:15 - 15:30 Nur Rahmawati Ayukaryana
Investigation of Mechanical Alloying Effects on Lattice Parameters and Y-As Phase Formation in Y-doped Ba_{0.6}K_{0.4}Fe₂As₂ Superconducting Bulks
- 15:30 - 16:10 Coffee break & Poster presentation

Session 4: Characterization and simulation

- 4-1 16:10 - 16:25 Santiago Guadarrama
3D Multiphysics simulation of HTS bulks with artificial holes during pulsed-Field magnetization
- 4-2 16:25 - 16:40 Satsuki Okumura
Three-dimensional numerical analysis of levitation forces of radial superconducting magnetic bearings
- 4-3 16:40 - 16:55 Michela Fracasso
Magnetic Shielding Performance of Bi-2223 Bulk and Hybrid Layouts: an experimental and 3D Modelling Investigation
- 4-4 16:55 - 17:10 Yanxing Cheng
Redescription of inhomogeneity and anisotropy in bulk superconductors of high-temperature superconducting pinning maglev
- 4-5 17:10 - 17:30 Mark Ainslie (invited, remote)
Numerical modelling of Ba122 bulk superconductor magnetisation
- 18:00 - 20:00 Banquet



30th November, Sunday

9:00 - 9:30 Registration & Coffee break

Session 5: REBCO bulk processing 2

- 5-1 9:30 - 9:50 Pavel Diko (invited)
Microstructure and properties of REBCO bulks: influence of TSMG, SDMG and high temperature post annealing
- 5-2 9:50 - 10:10 Difan Zhou (invited)
Recent progress on processing and magnetization of HTS bulks superconductors at Shanghai University
- 5-3 10:10 - 10:25 Xiwen Zhang
The microstructure and superconducting properties of YBCO bulks prepared by combined-modified precursor powders
- 5-4 10:25 - 10:40 Hiroto Hakoishi
Machining of Ag-added GdBCO bulk into a ring shape using a lathe and its trapped field characteristics
- 5-5 10:40 - 10:55 Mayin Si
The influence of semi-spherical shallow pit on the equivalent magnetic susceptibility of HTS bulk

10:55 - 11:30 Coffee break & Group photo

Session 6: Innovative applications and characterization 2

- 6-1 11:30 - 11:50 Mitsuru Izumi (invited)
An HTS rotor for a ship propulsion application
- 6-2 11:50 - 12:10 Zigang Deng (invited)
The development status and prospect of HTS pinning maglev in SWTJU
- 6-3 12:10 - 12:30 Guomin Zhang (invited)
Researches on a New-type Superconducting Flywheel Energy Storage System
- 6-4 12:30 - 12:45 Tetsuo Oka
Levitation property of permanent magnets on cryocooler-cooled superconducting bulk magnet and its application to contactless mixer
- 6-5 12:45 - 13:00 Peng Zhao
Lateral drag performance of HTS translational levitation above different superconductor combinations used for satellite semi-physical simulation

13:00 - 13:20 Conclusions & End of the conference



Poster Session

29th 13:00 - 14:00 and 15:30 - 16:10

- P1 Ingyeong Park
The effect of seed numbers on the magnetic levitation force of melt-growth processed YBCO bulk superconductors with multi seeding
- P2 Chan-joong Kim
Production of large grain YBCO bulk superconductors by a melt growth process with multi-seeding
- P3 Ryutaro Ashioi
Crystal growth and superconducting properties of YBCO bulks fabricated by the SDMG method using a SmBCO seed plate
- P4 Ryo Asako
Control of the carrier doping state for REBCO melt-textured bulks grown by the SDMG method
- P5 Jun Endo
Misfit angles and superconducting properties of REBCO melt-textured bulks grown on multiple seed plates by the SDMG method
- P6 Naoya Matsunaga
Preparation of GdBCO melt-textured bulks by TSMG and SDMG method
- P7 Keita Kunitomo
Preparation of SDMG processed REBCO bulks with dilute impurity doping and their field-trapping properties
- P8 Serua Tursyntay
Synthesis and Characterization of BSCCO-Based High-Temperature Superconducting Ceramics
- P9 Malik Shadab
Optimizing the Powder-to-Solution Ratio in Boron Ultrasonication to Enhance Bulk MgB₂ Superconductors
- P10 Gaetan Simon
Synthesis of NbB₂ particles in bulk MgB₂ superconductors using Nb₂O₅ and metallic Nb
- P11 Yota Kakumae
Fabrication and trapped field properties of MgB₂ bulks using Mg-vapor under self-pressure
- P12 Yusuke Somazawa
Preparation and magnetic field trapping properties of MgB₂ bulks using B powder refined by ultrasonic irradiation or ball milling
- P13 Nodoka Shimizu
Search for new iron-based superconductor with FeSi layer
- P14 Fumiya Shimoyama
Study on Hydrogen-doping to SmFeAsO Polycrystalline Bulks Using Metal Hydrides
- P15 Shunya Tomioka
Fluorination / Hydrogenation of SmFeAsO bulk samples via topotactic reaction
- P16 Ichiro Mizuto
Critical properties of K-Ba122 bulk using spark plasma sintering with high milling energy
- P17 Yoshihisa Kamiya
CaKFe₄As₄ superconducting bulk: reducing oxides to improve J_c



- P18 Michela Fracasso
Cryogenic Scanning Hall Probe Magnetometry for Local Magnetic Characterisation of Bulk and Coated Superconductors
- P19 Yuto Hirumi
Three-dimensional numerical analysis of superconducting magnetic bearings for reducing electromagnetic rotational losses
- P20 Li Wang
Dynamic Response of YBCO Bulks Maglev System Under High Frequency Excitation
- P21 Chong Lv
Motion Stability of the Levitation and Suspension with $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ HTS Bulks and NdFeB Magnets under Electromagnetic Compensation Subsystem
- P22 Kazuya Yokoyama
Improvement of pulsed-field magnetization by simple approach: FAVS method (First Applying a Very Small magnetic field)
- P23 Naomichi Sakai
Development of single-sided diffusion NMR device using the high magnetic field gradient on the surface of a RE-Ba-Cu-O bulk superconducting magnet
- P24 Mio Ito
Image Analysis of Superconductor Microstructures Using Deep Learning
- P25 Muneo Futamura
Improved Vertical Stability of Bulk Superconducting Levitation by Auxiliary Permanent Magnets
- P26 Tetsuya Ida
Trapped magnetic field by a single pulse magnetic field using waveform control technology in HTS bulk
- P27 Toshiteru Kii
Insertion Device using bulk Superconductor for Future Light Sources