ISS2009 Program (as of Oct. 14, 2009)

Oral Sessions

Nov. 2 (Mon.) Special Plenary Lecture Main Hall (2F)

Chairpersons:
T. Matsushita (Kyushu Institute of Technology)
H. Rogalla (University of Twente)

SPL-1-INV 10:20-11:00
IRON-BASED SUPERCONDUCTORS: CURRENT STATUS
H. Hosono (Tokyo Institute of Technology)

SPL-2-INV 11:00-11:40
STATUS OF APPLICATIONS FOR HIGH TEMPERATURE SUPERCONDUCTORS IN THE U.S
K. Marken (Los Alamos National Laboratory)

11:40-13:00 __ Lunch __

Nov. 2 (Mon.) Plenary Lecture Main Hall (2F)

Chairpersons:
T. Matsushita (Kyushu Institute of Technology)
H. Rogalla (University of Twente)

PL-1-INV 13:00-13:40
ELECTRIC FIELD INDUCED SUPERCONDUCTIVITY
Y. Iwasa (Tohoku University)

PL-2-INV 13:40-14:20
MICROSTRUCTURAL DESIGN OF YBCO BULK SUPERCONDUCTORS
P. Diko (Institute of Experimental Physics SAS)

PL-3-INV 14:20-15:00
R&D OF COATED CONDUCTORS FOR POWER APPLICATIONS IN JAPAN
T. Izumi, Y. Shiohara (Superconductivity Research Laboratory, ISTEC)

15:00-15:30 __ Coffee Break __

PL-4-INV 15:30-16:10
APPLICATIONS OF ULTRA-LOW FIELD MAGNETIC RESONANCE
M. Espy, Y. Araya, M. Flynn, J. Gomez, C. Hanson, R. Kraus, P. Magnelind, K. Maskaly, A. Matlashov, P. Nath, S. Newman, T. Owens, M. Peters, H. Sandin, I. Savukov, L. Schultz, A. Urbaitis, P. Volegov, V. Zotev (Los Alamos National Laboratory)

PL-5-INV 16:10-16:50
DEVELOPMENT OF SUPERCONDUCTING POWER DEVICES IN EUROPE
P. Tixador (Grenoble Institute of Technology/ Institut Neel)

PL-6-INV 16:50-17:30
DEVELOPMENT OF YBCO POWER DEVICES IN JAPAN
N. Fujiwara[1], H. Hayashi[2], S. Nagaya[3], Y. Shiohara[1]
([1]Superconductivity Research Laboratory, ISTEC, [2]Kyushu Electric Power Co., Inc, [3]Chubu Electric Power Co., Inc.)

Nov. 3 (Tue.) Wires, Tapes and Characterization Hall 300 (3F)

Chairpersons:

Y. Ma (Chinese Academy of Sciences)
H. Kumakura (National Institute for Materials Science)

WT-1-INV 9:30-9:55
ADVANCES IN INDUSTRIAL PRODUCTION OF MgB_2 WIRES
G. Grasso, S. Brisigotti, S. Berta, A. Tumino, D. Pietranera, M. Palombo, L. Rostila, R. Penco (Columbus Superconductors SpA)

WT-2-INV 9:55-10:20
FABRICATION OF MgB_2 MULTI-FILAMENTARY WIRES BY INTERNAL Mg DIFFUSION PROCESS
K. Togano, J.M. Hur, A. Matsumoto, H. Kumakura (National Institute for Materials Science)

WT-3 10:20-10:40
MECHANICALLY ALLOYED MgB_2: INFLUENCE OF THE MILLING TREATMENT ON THE SUPERCONDUCTING PROPERTIES
M. Herrmann[1], L. Schmolinga[2], A. Aubele[2], W. Haessler[1], C. Rodig[1], M. Schubert[1], A. Kario[1], K. Nenkov[1], J. Scheiter[1], K. Schlenga[3], B. Holzapfel[1], L. Schultz[1]
([1]IFW Dresden, [2]Bruker HTS GmbH, [3]Bruker EAS GmbH)

WT-4 10:40-11:00
STRONGLY ENHANCED J_c-B PROPERTIES IN MgB_2 TAPE CONDUCTORS BY NOVEL C_{60} DOPING
Y. Ma, X. Zhang, D. Wang (Chinese Academy of Sciences)

11:00-11:15 __ Coffee Break __

Chairpersons:
G. Grasso (Columbus Superconductors SpA)
Y. Nakamura (Toyohashi University of Technology)

WT-5-INV 11:15-11:40
IRREVERSIBILITY FIELD IN POLYCRYSTALLINE MgB_2 SUPERCONDUCTORS
T. Matsushita[1], M. Kiuchi[1], A. Yamamoto[2], J. Shimoyama[3], K. Kishio[3]
([1]Kyushu Institute of Technology, [2]National High Magnetic Field Laboratory, [3]The University of Tokyo)

WT-6-INV 11:40-12:05
RECENT PROGRESS OF HIGH PERFORMANCE Ag-SHEATHED Bi2223 WIRE
G. Osabe[1], N. Ayai[1], M. Kikuchi[1], K. Tatamidani[1], T. Nakashima[1], J. Fujikami[1], S. Kobayashi[1], K. Yamazaki[1], S. Yamade[1], N. Shizuya[1], K. Hayashi[1], K. Sato[1], K. Kitaguchi[2], H. Kumakura[2], K. Osamura[3], J. Shimoyama[4]
([1]Sumitomo Electric Industries, Ltd., [2]National Institute for Materials Science, [3]Research Institute for Applied Sciences, [4]The University of Tokyo)

WT-7 12:05-12:25
THE INFLUENCE OF ROLLING PARAMETERS IN THE INTERMEDIATE ROLLING PROCESS ON THE CRITICAL CURRENT DENSITY OF Bi-2223/Ag SUPERCONDUCTING TAPES
R. Liu[1], K. Shi[2], S.J. Zhang[1], M.T. Qu[2], H.X. Song[1], C.M. Hou[3], Q. Liu[4], H.Z. Han[2]
([1]Beijing Innova Superconductor Technology Co., Ltd., [2]Tsinghua University, [3]Tangshan Heave-duty Machine Tool Works, [4]Chongqing University)

WT-8 12:25-12:45
EFFECT OF FILAMENT TWIST AND HIGH RESISTIVE BARRIER ON THE PROPERTIES OF Ag-SHEATHED Bi2223 TAPE
Y. Nakamura, A. Nagaoka, Y. Fujiwara, R. Inada, A. Oota (Toyohashi University of Technology)

12:45-14:00 __ Lunch __

Chairpersons:
A. Usoskin (Bruker HTS GmbH)
K. Matsumoto (Kyushu Institute of Technology)

WT-9-INV 14:00-14:25
ROBUST AND RELIABLE 2G WIRE FOR HIGH PERFORMANCE CABLE AND COIL APPLICATIONS

A. Otto, J. Gannon, E. Podtburg, H. Cai, B. Carter, M. Rupich, P. Antaya
(American Superconductor Corporation)

WT-10-INV 14:25-14:50
FABRICATION OF HIGH J_c REBCO COATED CONDUCTORS BY TFA-MOD METHOD
M. Yoshizumi, K. Nakaoka, M. Miura, T. Izumi, Y. Shiohara
(Superconductivity Research Laboratory, ISTEC)

WT-11-INV 14:50-15:15
PROGRESS IN CHEMICAL SOLUTION APPROACHES TO NANOCOMPOSITE SUPERCONDUCTING FILMS
X. Obradors, T. Puig, A. Pomar, S. Ricart, A. Llordes, A. Palau, R. Vlad, H. Chen, K. Zalamova, F. Sandiumenge, P. Abellan, F. Martinez, M. Gibert, X. Granados
(Institut de Ciencia de Materials de Barcelona, CSIC)

WT-12-INV 15:15-15:40
2G WIRE WITH TEXTURED NON-MAGNETIC Cu/SUS316 LAMINATED TAPE
T. Doi[1], M. Daio[1], T. Uda[1], S. Kubota[2], K. Shima[2], N. Kashima[3], S. Nagaya[3]
([1]Kagoshima University, [2]Tanaka Kikinzoku Kogyo K.K., [3]Chubu Electric Power Co., Inc.)

WT-13 15:40-16:00
DEVELOPMENT OF $REBa_2Cu_3O_x$ SUPERCONDUCTING LAYERS ON 30 mm WIDE CLAD-TYPE TEXTURED METAL SUBSTRATES
Y. Shingai, T. Nagaishi, M. Konishi, H. Ota, K. Ohmatsu (Sumitomo Electric Industries, Ltd.)

16:00-16:15 __ Coffee Break __

Chairpersons:
A. Otto (American Superconductor Corporation)
M. Yoshizumi (Superconductivity Research Laboratory, ISTEC)

WT-14-INV 16:15-16:40
HIGH THROUGHPUT COATED CONDUCTOR PROCESSING BY LARGE-SCALE IBAD AND HOT-WALL PLD
Y. Iijima, K. Kakimoto, Y. Sutoh, S. Hanyu, M. Igarashi, N. Nakamura, K. Morita, D. Fujita, T. Yoshida, H. Kutami, M. Daibo, T. Saitoh (Fujikura Ltd.)

WT-15 16:40-17:00
LARGE SCALE HTS COATED CONDUCTORS FOR HIGH AND LOW FIELD APPLICATIONS
A. Usoskin, L. Kirchhoff, J. Knoke, B. Prause, A. Rutt, K. Schlenga (Bruker HTS GmbH)

WT-16 17:00-17:20
HIGH-RATE FABRICATION OF GdBCO AND GdBCO/BZO COATED CONDUCTORS BY UP-SCALED IN-PLUME PULSED LASER DEPOSITION TECHNIQUE
S. Lee, N. Chikumoto, K. Nakao, K. Tanabe, A. Ibi, S. Miyata, Y. Yamada, M. Yoshizumi, T. Izumi, Y. Shiohara (Superconductivity Research Laboratory, ISTEC)

WT-17 17:20-17:40
PLANARIZATION OF METALLIC SUBSTRATE USING MOD OXIDE LAYER FOR HIGHLY IN PLANE TEXTURED IBAD-MgO BUFFER LAYER
Y. Takahashi[1], M. Yoshizumi[1], T. Itoh[1], A. Ibi[1], S. Miyata[1], H. Hatakeyama[1], Y. Aoki[2], T. Hasegawa[2], T. Izumi[1], Y. Shiohara[1]
([1]Superconductivity Research Laboratory, ISTEC, [2]SWCC SHOWA CABLE SYSTEMS CO., LTD.)

17:40-18:00 __ Coffee Break __

Nov. 3 (Tue.) Memorial Session for Dr. Suenaga Hall 300 (3F)

Chairpersons:
D.O. Welch (Brookhaven National Laboratory)
Y. Yamada (Superconductivity Research Laboratory, ISTEC)

18:00-18:05
SHORT SPEECH IN MEMORY OF DR. MASAKI SUENAGA
D.O. Welch (Brookhaven National Laboratory)

MR-1-INV 18:05-18:25
HIGH PERFORMANCE NEW Nb_3Sn WIRES WITH Sn-BASED ALLOYS
K. Tachikawa[1], H. Sasaki[1], M. Yamaguchi[1], T. Takeuchi[2]
([1]Tokai University, [2]National Institute for Materials Science)

MR-2-INV 18:25-18:45
MASAKI SUENAGA AND SUPERCONDUCTOR MATERIALS SCIENCE AT BROOKHAVEN NATIONAL LABORATORY
D.O. Welch (Brookhaven National Laboratory)

MR-3-INV 18:45-19:05
BSCCO RESEARCH COLLABORATION WITH DR. MAS SUENAGA
K. Sato (Sumitomo Electric Industries, Ltd.)

MR-4-INV 19:05-19:25
A REFLECTION ON THE INFLUENCE OF MASAKI SUENAGA ON THE UNDERSTANDING AND APPLICATIONS OF THE A15 COMPOUNDS AND OTHER LOW TEMPERATURE SUPERCONDUCTORS
D.C. Larbalestier, P. Lee (Florida State University)

MR-5-INV 19:25-19:45
DR. SUENAGA'S CONTRIBUTIONS TO YBCO AND COATED CONDUCTORS
K. Marken (Los Alamos National Laboratory)

MR-6-INV 19:45-20:00
AC LOSS PROPERTIES OF YBCO SUPERCONDUCTING TAPES WITH A MAGNETIC SUBSTRATE
M. Iwakuma[1], M. Mimura[2], T. Izumi[3], Y. Shiohara[3]
([1]Kyushu University, [2]FURUKAWA ELECTRIC CO., LTD., [3]Superconductivity Research Laboratory, ISTEC)

MR-7-INV 20:00-20:15
DEVELOPMENT OF CONVERSION PROCESS IN EX-SITU BaF_2 PROCESS
M. Yoshizumi (Superconductivity Research Laboratory, ISTEC)

Nov. 3 (Tue.) Physics and Chemistry Room 406 (4F)

Chairpersons:
A.D. Christianson (Oak Ridge National Laboratory)
A. Iyo (National Institute of Advanced Industrial Science and Technology)

PC-1-INV 9:30-9:55
SUPERCONDUCTIVITY AND PHASE DIAGRAM IN HIGH-T_c PNICTIDE SUPERCONDUCTORS
X. Chen (University of Science and Technology of China)

PC-2-INV 9:55-10:20
RELATIONSHIP BETWEEN CRYSTAL STRUCTURE AND SUPERCONDUCTIVITY IN IRON PNICTIDES
C.-H. Lee (National Institute of Advanced Industrial Science and Technology)

PC-3-INV 10:20-10:45
NEW IRON PNICTIDE OXIDES WITH THICK PEROVSKITE-TYPE OXIDE LAYER
H. Ogino[1], Y. Matsumura[1], S. Horii[2], K. Kishio[1], J. Shimoyama[1]
([1]The University of Tokyo, [2]Kochi University of Technology)

PC-4 10:45-11:00
ISOTOPE EFFECT IN IRON-BASED SUPERCONDUCTORS
P.M. Shirage[1], K. Kihou[1], K. Miyazawa[1,2], C.-H. Lee[1,3], H. Kito[1,3], Y. Yoshida[1], H. Eisaki[1,3], Y. Tanaka[1], A. Iyo[1,2,3]

([1]National Institute of Advanced Industrial Science and Technology, [2]Tokyo University of Science, [3]JST-TRIP)

PC-5 11:00-11:15
LOW TEMPERATURE PREPARATION AND SUPERCONDUCTIVITY OF F-DOPED SmFeAsO
Y. Chen[1], Y. Cui[1], C. Cheng[2], Y. Yang[1], L. Wang[1], Y. Li[1], Y. Zhang[1], Y. Zhao[1,2]
([1]Southwest Jiaotong University, [2]University of New South Wales)

11:15-11:30 __ Coffee Break __

Chairpersons:
I. Mazin (Naval Research Laboratory)
Y. Matsuda (Kyoto University)

PC-6-INV 11:30-11:55
SPIN EXCITATIONS IN Fe-BASED SUPERCONDUCTORS
A.D. Christianson (Oak Ridge National Laboratory)

PC-7 11:55-12:10
INTERGRANULAR CURRENT IN IRON-PNICTIDE SUPERCONDUCTORS
T. Tamegai[1], Y. Tsuchiya[1], Y. Nakajima[1], Y. Kamihira[2,3], H. Hosono[3]
([1]The University of Tokyo, [2]JST-TRIP, [3]Tokyo Institute of Technology)

PC-8 12:10-12:25
SUPERCONDUCTIVITY IN 5*d*-ELEMENTS Ir-DOPED IRON ARSENIDES $LaFe_{1-x}Ir_xAsO$
Y. Qi, L. Wang, Z. Gao, D. Wang, X. Zhang, Z. Zhang, Y. Ma (Chinese Academy of Sciences)

PC-9 12:25-12:40
INFLUENCE OF As-SITE DOPING IN $BaFe_2As_2$ SYSTEM
C. Zhang (Chinese Academy of Sciences)

PC-10 12:40-12:55
SUPERCONDUCTING PROPERTIES OF FeSe AND FeTe SYSTEMS
Y. Mizuguchi, K. Deguchi, S. Tsuda, T. Yamaguchi, H. Takeya, H. Kumakura, Y. Takano
(National Institute for Materials Science)

12:55-14:00 __ Lunch __

Chairpersons:
A.V. Balatsky (Los Alamos National Laboratory)
H. Kontani (Nagoya University)

PC-11-INV 14:00-14:25
GENERAL PROPERTIES OF THE $s_\pm$ SUPERCONDUCTORS
I. Mazin (Naval Research Laboratory)

PC-12-INV 14:25-14:50
UNCONVENTIONAL PAIRINGS ORIGINATING FROM DISCONNECTED FERMI SURFACES IN CORRELATED SUPERCONDUCTORS
K. Kuroki (The University of Electro-Communications)

PC-13 14:50-15:05
TWO-DIMENSIONALITY OF ELECTRONIC STRUCTURE AND STRONG FERMI-SURFACES NESTING IN HIGHLY-ANISOTRPIC IRON-BASED SUPERCONDUCTORS
M. Machida, H. Nakamura (Japan Atomic Energy Agency)

PC-14 15:05-15:20
NONMAGNETIC IMPURITY EFFECTS IN IRON PNICTIDES
S. Onari, H. Kontani (Nagoya University)

PC-15 15:20-15:35
TOPOLOGICAL STRUCTURE OF INTER-BAND PHASE DIFFERENCE SOLITON IN TWO-BAND SUPERCONDUCTIVITY
Y. Tanaka[1], A. Iyo[1], K. Tokiwa[2], T. Watanabe[2], A. Crisan[3,4], S. Athinarayanan[5], N. Terada[6]

(1National Institute of Advanced Industrial Science and Technology, 2Tokyo University of Science, 3National Institute of Materials Physics, 4University of Birmingham, 5Jawaharlal Nehru Centre for Advanced Scientific Research, 6Kagoshima University)

15:35-15:50 __ Coffee Break __

Nov. 3 (Tue.) Vortex Physics Room 406 (4F)

Chairperson:
X. Chen (University of Science and Technology of China)
T. Tamegai (The University of Tokyo)

VP-1-INV 15:50-16:15
THERMAL FLUCTUATIONS AND THE LIMITS TO VORTEX PINNING IN SUPERCONDUCTORS
L. Civale (Los Alamos National Laboratory)

VP-2-INV 16:15-16:40
THE MECHANICS OF INDIVIDUAL ISOLATED VORTICES
O.M. Auslaender (Israel Institute of Technology)

VP-3 16:40-16:55
IRREVERSIBILITY LINE UP TO 65 T IN NANOPARTICLE DISPERSED $Y_{1-x}Gd_xBa_2Cu_3O_y$ COATED CONDUCTORS DERIVED FROM THE TFA-MOD PROCESS
M. Miura1,2,3, S.A. Baily3, B. Maiorov3, L. Civale3, J.O. Willis3, T. Izumi1, K. Tanabe1, Y. Shiohara1
(1Superconductivity Research Laboratory, ISTEC, 2Japan Society for the Promotion of Science, 3Los Alamos National Laboratory)

VP-4 16:55-17:10
CRITICAL CURRENT DENSITIES AND FLUX CREEP RATE IN Co-DOPED $BaFe_2As_2$ WITH COLUMNAR DEFECTS INTRODUCED BY HEAVY-ION IRRADIATION
Y. Nakajima1, Y. Tsuchiya1, T. Taen1, T. Tamegai1, S. Okayasu2, M. Sasase3
(1The University of Tokyo, 2Japan Atomic Energy Agency, 3The Wakasa-wan Energy Research Center)

VP-5 17:10-17:25
MULTI-BAND NATURE OF SUPERCONDUCTING ANISOTROPY IN $PrFeAsO_{1-\delta}$ SINGLE CRYSTAL
D. Kubota1, T. Ishida1, M. Ishikado2, S. Shamoto2, H. Eisaki3, H. Kito3, A. Iyo3
(1Osaka Prefecture University, 2Japan Atomic Energy Research Institute, 3National Institute of Advanced Industrial Science and Technology)

VP-6 17:25-17:40
DYNAMIC PINNING AND MEMORY EFFECTS FOR VORTICES IN YNi_2B_2C
S. Okuma1, T. Ichimura1, H. Takeya2, K. Hirata2
(1Tokyo Institute of Technology, 2National Institute for Materials Science)

VP-7 17:40-17:55
MULTI-VORTEX VERSUS INTERSTITIAL VORTICES SCENARIO IN SUPERCONDUCTING ANTIDOT ARRAYS
A.D. Thakur1, S. Ooi1, P. Raychaudhuri2, K. Hirata1
(1National Institute for Materials Science, 2Tata Institute of Fundamental Research)

Nov. 3 (Tue.) Bulks and Characterization Room 201 (2F)

Chairpersons:
T. Oka (Niigata University)
R. Kita (Shizuoka University)

BL-1-INV 9:30-9:55
NANOMETER CERIUM: A TRIPLE ADVANTAGE OVER PLATINUM IN LARGE SINGLE GRAIN YBCO HIGH TEMPERATURE SUPERCONDUCTOR
R.-P. Sawh1, R. Weinstein1, D. Parks1, V. Obot2 (1University of Houston, 2Texas Southern University)

BL-2-INV 9:55-10:20
SUPERHEATING EFFECT OF REBCO THIN FILMS AND ITS APPLICATION TO A SEED CRYSTAL IN MELT-TEXTURED GROWTH
X. Yao[1], Y.Q. Cai[1], C.Y. Tang[1], X. Wang[1], L. Cheng[1], M. Oda[2], Y. Yoshida[2], H. Ikuta[2]
([1]Shanghai Jiao Tong University, [2]Nagoya University)

BL-3-INV 10:20-10:45
EFFECT OF ADDITION OF PLANETARY MILLED Gd-211 ON THE MICROSTRUCTURES AND SUPERCONDUCTING PROPERTIES OF AIRPROCESSED SINGLE GRAIN Gd-Ba-Cu-O/Ag BULK SUPERCONDUCTORS
K. Iida, K. Nenkov, G. Fuchs, G. Krabbes, B. Holzapfel, B. Buchner, L. Schultz
(Leibniz Institute for Solid State and Materials Research Dresden)

BL-4 10:45-11:05
LOW-COST AND HIGH PERFORMANCE GdBaCuO MELT PROCESSED TECHNOLOGY
M. Miryala, K. Suzuki, Y. Fukumoto, M. Tomita (Railway Technical Research Institute)

11:05-11:20 __ Coffee Break __

Chairpersons:
R.-P. Sawh (University of Houston)
M. Tomita (Railway Technical Research Institute)

BL-5-INV 11:20-11:45
APPLICATION OF BULK SUPERCONDUCTOR TO SPACE REENTRY FLIGHT
T. Abe (Japan Aerospace Exploration Agency)

BL-6-INV 11:45-12:10
MAGNETIC LENS USING BULK AND/OR SHEET SUPERCONDUCTORS
T. Kiyoshi[1], S. Choi[1], A. Uchida[1], T. Asano[1], S. Matsumoto[1], I. Itoh[2]
([1]National Institute for Materials Science, [2]Nippon Steel Corporation)

BL-7-INV 12:10-12:35
PROPERTIES OF FLUX TRAPPING AND APPLICATION OF BULK SUPERCONDUCTORS
M. Izumi, Y. Xu, K. Tsuzuki, Y. Zhang, Y. Kimura (Tokyo University of Marine Science and Technology)

BL-8 12:35-12:55
TEMPERATURE MEASUREMENTS IN SMALL HOLES DRILLED IN SUPERCONDUCTING BULK DURING PULSED FIELD MAGNETIZATION
H. Fujishiro, T. Naito, D. Furuta, K. Kakehata (Iwate University)

BL-9 12:55-13:15
ENHANCE J_c IN AIR-PROCESSED $GdBa_2Cu_3O_{7-\delta}$ SUPERCONDUCTORS GROWTHED BY THE ADDITIONS OF TWO SEED Nd_2BaCuO_5
Y. Zhang[1], M. Izumi[2], M. Murakami[3]
([1]Shanghai University of Electric Power, [2]Tokyo University of Marine Science and Technology, [3]Shibaura Institute of Technology)

13:15-14:00 __ Lunch __

Nov. 3 (Tue.) Films, Junctions and Electronic Devices Room 201 (2F)

Chairpersons:
S. Benz (National Institute of Standards and Technology)
S. Yorozu (NEC Corporation)

FD-1-INV 14:00-14:25
A SCALABLE SUPERCONDUCTING 8-QUBIT UNIT CELL FOR SOLVING OPTIMIZATION PROBLEMS
A.J. Berkley (D-Wave Systems Inc.)

FD-2-INV 14:25-14:50

CONTROL OF ENTANGLEMENT AND QUANTUM SUPERPOSITION OF SUPERCONDUCTING PERSISTENT CURRENT QUBIT FEW PHOTON SYSTEM
K. Semba (NTT Corporation)

FD-3-INV 14:50-15:15
REVERSIBLE COMPUTING USING SUPERCONDUCTING DEVICES
V. Semenov (The University of New York at Stony Brook)

FD-4-INV 15:15-15:40
DEVELOPMENTS TOWARD SUPERCONDUCTIVE REAL-TIME OSCILLOSCOPE
M. Hidaka, H. Suzuki, K. Nishii, M. Oikawa, Y. Hashimoto, M. Maruyama, K. Fujiwara, T. Satoh, K. Hinode, S. Nagasawa (Superconductivity Research Laboratory, ISTEC)

FD-5-INV 15:40-16:05
HYBRID TECHNOLOGY AUTO- AND CROSS-CORRELATION FOR ASTRONOMY AND COMMUNICATIONS
S.B. Kaplan (HYPRES, Inc.)

16:05-16:20 __ Coffee Break __

Chairpersons:
S. Kaplan (HYPRES, Inc.)
H. Myoren (Saitama University)

FD-6-INV 16:20-16:45
TUNABLE Nb-Si-BARRIER JOSEPHSON JUNCTIONS FOR VOLTAGE STANDARDS AND DIGITAL APPLICATIONS
S.P. Benz, D. Olaya, P.D. Dresselhaus (National Institute of Standards and Technology)

FD-7-INV 16:45-17:10
DEVELOPMENT OF JOSEPHSON ARBITRARY WAVEFORM SYNTHESIZER WITH OPTICAL DATA INPUT
N. Kaneko, C. Urano, M. Maruyama
(National Metrology Institute of Japan/ National Institute of Advanced Industrial Science and Technology)

FD-8-INV 17:10-17:35
HIGH-QUALITY Nb-BASED SIS JUNCTIONS FOR DETECTOR APPLICATION AT SUBMILLIMETER WAVELENGTHS
T. Noguchi, T. Suzuki, T. Tamura (National Astronomical Observatory of Japan)

FD-9-INV 17:35-18:00
PARALLEL SUPERCONDUCTING NANOSTRIP DETECTORS OF PHOTONS AND MOLECULES
R. Cristiano[1], M. Ejrnaes[1], A. Casaburi[1,2], S. Pagano[2], A. Gaggero[3], F. Mattioli[3], R. Leoni[3], K. Suzuki[4], N. Zen[4], S. Shiki[4], M. Ohkubo[4]
([1]CNR-Cybernetics Institute, [2]University of Salerno, [3]CNR-Institute of Photonic and Nanotechnology, [4]National Institute of Advanced Industrial Science and Technology)

FD-10 18:00-18:20
HIGH THROUGHPUT ANALYSIS OF PROTEIN COMPLEXES BY SUPER-TOF-MS
M. Ohkubo, M. Ukibe, K. Chiba-Kamoshida, S. Shiki
(National Institute of Advanced Industrial Science and Technology)

Nov. 3 (Tue.) Large Scale System Applications Room 202 (2F)

Chairpersons:
A.P. Malozemoff (American Superconductor Corporation)
T. Hamajima (Tohoku University)

SA-1-INV 9:30-9:55
RECENT DEVELOPMENTS IN 2G HTS WIRE AND ITS APPLICATION IN SUPERCONDUCTING POWER EQUIPMENT

Y.-Y. Xie[1], D. Hazelton[1], J. Llambes[1], V. Selvamanickam[1,2], J. Dackow[1], Y. Chen[1], X. Xiong[1], A. Rar[1], K. Lenseth[1], Y. Qiao[1], A. Knoll[1], G. Majkic[2], B. Zhang[2], A. Guevara[2], I. Kesign[2], Y. Zhang[2], A. Sundaram[2], S. Lee[2] ([1]SuperPower, Inc., [2]University of Houston)

SA-2-INV 9:55-10:20
RECENT DEVELOPMENTS IN SUPERCONDUCTIVITY AT CAMBRIDGE UNIVERSITY
T. Coombs (University of Cambridge)

SA-3 10:20-10:40
TEST RESULTS OF A 30-METER HTS CABLE PRE-DEMONSTRATION SYSTEM IN YOKOHAMA PROJECT
H. Yumura[1], Y. Ashibe[1], M. Ohya[1], H. Itoh[1], M. Watanabe[1], K. Yatsuka[1], T. Masuda[1], S. Honjo[2], T. Mimura[2], Y. Kitoh[2], Y. Noguchi[2] ([1]Sumitomo Electric Industries, Ltd., [2]Tokyo Electric Power Company)

SA-4 10:40-11:00
CONCEPTUAL DESIGN OF 275 kV CLASS HIGH-T_c SUPERCONDUCTING CABLE
S. Mukoyama[1], M. Yagi[1], N. Fujiwara[2], H. Ichikawa[2]
([1]FURUKAWA ELECTRIC CO., LTD., [2]Superconductivity Research Laboratory, ISTEC)

11:00-11:15 __ Coffee Break __

Chairpersons:
T. Coombs (University of Cambridge)
S. Mukoyama (FURUKAWA ELECTRIC CO., LTD.)

SA-5-INV 11:15-11:40
INSTALLATION OF A 13-kV, 24-MVA SUPERCONDUCTING FAULT CURRENT LIMITER INTO THE US ELECTRICAL GRID
L. Masur, F. Moriconi, F. De La Rosa, A. Singh (Zenergy Power, Inc.)

SA-6 11:40-12:00
CONSTRUCTION OF TESTING FACILITIES AND VERIFYING TESTS OF 22.9 kV/630 A CLASS SUPERCONDUCTING FAULT CURRENT LIMITER
S.W. Yim[1], S.-D. Yu[1], C.-R. Park[1], H.-R. Kim[1], O.-B. Hyun[1], J. Sim[2], K.-B. Park[2], K.-H. Lee[2]
([1]Korea Electric Power Research Institute, [2]LS Industrial Systems, Co., Ltd.)

SA-7 12:00-12:20
FAST RESPONSE AND RECOVERY IN RESISTIVE AND INDUCTIVE SFCL
A. Usoskin, B. Prause, A. Handaze, K. Schlenga (Bruker HTS GmbH)

SA-8 12:20-12:40
HIGH VOLTAGE FAULT CURRENT LIMITER BASED ON YBCO COATED CONDUCTORS
W. Schmidt[1], B. Gamble[2], W. Romanosky[2], D. Madura[2], A. Otto[2], H.-P. Kraemer[1], M. Kurrat[3], A. Henning[3], M. Blaz[3] ([1]Siemens AG, [2]American Superconductor Corporation, [3]University of Braunschweig)

SA-9 12:40-13:00
FACTORS AFFECTING THE FILM DAMAGE DUE TO HOT SPOTS IN 500 V/200 A FAULT-CURRENT-LIMITING MODULES MADE OF LARGE MODYBCO THIN FILMS WITH Au-Ag ALLOY SHUNT LAYERS
H. Yamasaki, K. Kaiho, Y. Nakagawa, M. Sohma, W. Kondo, I. Yamaguchi, H. Matsui, T. Kumagai
(National Institute of Advanced Industrial Science and Technology)

13:00-14:00 __ Lunch __

Chairpersons:
Y.-Y. Xie (SuperPower, Inc.)
K. Yoshida (Japan Atomic Energy Agency)

SA-10-INV 14:00-14:25
DESIGN OF A 600 MHz HTS INSERT FOR A 1.3 GHz LTS/HTS NMR MAGNET
S. Hahn, J. Bascunan, W. Yao, Y. Iwasa (Massachusetts Institute of Technology)

SA-11-INV 14:25-14:50

HITACHI'S ACTIVITY ON NMR/MRI
T. Wakuda, M. Okada (Hitachi, Ltd.)

SA-12-INV 14:50-15:15
HIGH FIELD SUPERCONDUCTING MAGNET DEVELOPMENTS AT THE HFLSM
S. Awaji, K. Watanabe, G. Nishijima (Tohoku University)

SA-13 15:15-15:35
THIN LARGE-DIAMETER LAYER-WOUND YBCO COIL AT HIGH HOOP STRESS
H.W. Weijers, U.P. Trociewitz, P. Noyes, Y. Viouchkov, D. Markiewicz, D.L. Larbalestier (Florida State University)

SA-14 15:35-15:55
DESIGN AND FABRICATION OF LAYER-WOUND YBCO SOLENOIDS
D. Uglietti, T. Kiyoshi (National Institute for Materials Science)

15:55-16:10 __ Coffee Break __

Chairpersons:
S. Hahn (Massachusetts Institute of Technology)
S. Awaji (Tohoku University)

SA-15-INV 16:10-16:35
DEVELOPMENT OF JT-60SA SUPERCONDUCTING MAGNET SYSTEM
K. Yoshida, K. Tsuchiya, K. Kizu, H. Murakami, K. Kamiya (Japan Atomic Energy Agency)

SA-16-INV 16:35-17:00
SUPERCONDUCTORS FOR FUSION: ACHIEVEMENTS, OPEN ISSUES, ROADMAP TO FUTURE
P. Bruzzone (EPFL-CRPP)

SA-17 **Cancelled**

SA-29 17:00-17:20
CURRENT DEPENDENCE OF THE INTERFACIAL STRESS IN A PELTIER CURRENT LEAD FOR SUPERCONDUCTING APPLICATIONS
T. Kawahara[1], H. Watanabe[1], M. Emoto[2], T. Fujii[1], M. Hamabe[1], S. Yamaguchi[1]
([1]Chubu University, [2]National Institute for Fusion Science)

SA-18 17:20-17:40
DETERMINATION OF STABILIZER THICKNESS FOR YBCO COATED CONDUCTORS BASED ON COIL PROTECTION
Y. Kawai[1], A. Ishiyama[1], H. Ueda[1], K. Shikimachi[2], N. Hirano[2], S. Nagaya[2]
([1]Waseda University, [2]Chubu Electric Power Co., Inc.)

SA-19 17:40-18:00
PROGRESS IN ASSEMBLED ROEBEL CABLES FROM COATED CONDUCTORS
W. Goldacker[1], S. Terzieva[1], A. Kling[1], A. Kudymow[1], R. Heller[1], F. Grilli[1], F. Gomory[2], M. Vojenciak[2] ([1]Karlsruhe Institute of Technology, [2]Slovak Academy of Science)

Nov. 4 (Wed.) Wires, Tapes and Characterization Hall 300 (3F)

Chairpersons:
X. Obradors (Institut de Ciencia de Materials de Barcelona, CSIC)
T. Doi (Kagoshima University)

WT-18-INV 9:30-9:55
IMPROVED RABiTS/ IBAD-MgO TEMPLATES FOR LOW-COST, HIGH PERFORMANCE YBCO COATED CONDUCTORS
M.P. Paranthaman (Oak Ridge National Laboratory)

WT-19-INV 9:55-10:20
STRONG *c*-AXIS CORRELATED PINNING BY NATURAL LINER DEFECTS IN REBCO COATED

CONDUCTORS
Y. Yoshida[1], H. Suzuki[1], Y. Ichino[1], Y. Takai[1], M. Yoshizumi[2], T. Izumi[2], Y. Shiohara[2], T. Kato[3], S. Awaji[4]
([1]Nagoya University, [2]Superconductivity Research Laboratory, ISTEC, [3]Japan Fine Ceramics Center, [4]Tohoku University)

WT-20 10:20-10:40
ENHANCEMENT OF FLUX PINNING IN YBCO/DyBCO MULTILAYERED FILMS PREPARED BY PULSED LASER DEPOSITION
K. Develos-Bagarinao[1], H. Yamasaki[1], K. Ohki[2]
([1]National Institute of Advanced Industrial Science and Technology, [2]Sumitomo Electric Industries, Ltd.)

WT-21 10:40-11:00
NANOSTRUCTURAL CHARACTERIZATION OF $Y_{1-x}Gd_xBa_2Cu_3O_y$ COATED CONDUCTOR WITH $BaZrO_3$ PARTICLES BY TRANSMISSION ELECTRON MICROSCOPY
T. Kato[1], R. Yoshida[1], M. Miura[2], M. Yoshizumi[2], Y. Yamada[2], T. Izumi[2], T. Hirayama[1], Y. Shiohara[2]
([1]Japan Fine Ceramics Center, [2]Superconductivity Research Laboratory, ISTEC)

11:00-11:15 __ Coffee Break __

Chairpersons:
M.P. Paranthaman (Oak Ridge National Laboratory)
T. Kiss (Kyushu University)

WT-22-INV 11:15-11:40
PROSPECTS FOR THE DEVELOPMENT OF ROUND WIRE MULTIFILAMENT FORMS OF HTS CONDUCTORS
D.C. Larbalestier (Florida State University)

WT-23-INV 11:40-12:05
UNIQUE STRAIN EFFECT IN YBCO COATED CONDUCTOR UNDER MAGNETIC FIELD
M. Sugano[1], K. Shikimachi[2], N. Hirano[2], S. Nagaya[2]
([1]Kyoto University, [2]Chubu Electric Power Co., Inc.)

WT-24-INV 12:05-12:30
EFFECT OF STRAIN ON THE CRITICAL CURRENT AND FLUX PINNING IN $YBa_2Cu_3O_{7-\delta}$ COATED CONDUCTORS
D.C. van der Laan[1,2], J.F. Douglas[2], C.C. Clickner[2], T.C. Stauffer[2], J.W. Ekin[2], L.F. Goodrich[2], T. J. Haugan[3], P.N. Barnes[3], D. Abraimov[4], F. Kametani[4], D.C. Larbalestier[4], M.W. Rupich[5], X.Y. Xie[6], A. Usoskin[7], H.C. Freyhardt[8], V. Selvamanickam[8]
([1]University of Colorado, [2]National Institute of Standards and Technology, [3]Air Force Research Laboratory, [4]Florida State University, [5]American Superconductor Corporation, [6]SuperPower Inc., [7]Bruker HTS GmbH, [8]University of Houston)

WT-25-INV 12:30-12:55
ABNORMAL ELECTROMAGNETIC BEHAVIOR OF REBCO SUPERCONDUCTING TAPES
M. Iwakuma[1], S. Yamasaki[1], Y. Iijima[2], T. Saitoh[2], A. Ibi[3], Y. Yamada[3], T. Izumi[3], Y. Shiohara[3]
([1]Kyushu University, [2]Fujikura Ltd., [3]Superconductivity Research Laboratory, ISTEC)

12:55-14:00 __ Lunch __

Chairpersons:
D.C. Larbalestier (Florida State University)
O. Tsukamoto (Yokohama National University)

WT-26-INV 14:00-14:25
AC LOSSES IN HTSC TAPES
F. Gomory, M. Vojenc˘iak[1], S. Safran[1,2], O. Cicek[1,2], J. Šouc[1] ([1]Slovak Academy of Sciences, [2]Ankara University)

WT-27-INV 14:25-14:50
APPROACHES TO AC LOSS REDUCTION IN POWER TRANSMISSION CABLES COMPRISING COATED CONDUCTORS
N. Amemiya[1], K. Takeuchi[1], T. Nakamura[1], M. Yagi[2], N. Fujiwara[3]

([1]Kyoto University, [2]FURUKAWA ELECTRIC CO., LTD., [3]Superconductivity Research Laboratory, ISTEC)

WT-28-INV 14:50-15:15
PROGRESS IN FABRICATION AND CHARACTERIZATION OF MULTI-FILAMENTARY COATED CONDUCTORS
K. Tanabe, T. Machi, T. Hato, K. Nakao (Superconductivity Research Laboratory, ISTEC)

WT-29 15:15-15:35
SPATIALLY-RESOLVED MEASUREMENT ON TIME-DEPENDENT ELECTROMAGNETIC BEHAVIOR IN ALTERNATING CURRENT CARRYING COATED CONDUCTOR
K. Higashikawa[1], Y. Honda[1], M. Inoue[1], M. Iwakuma[1], T. Kiss[1], K. Nakao[2], Y. Yamada[2], T. Izumi[2]
([1]Kyushu University, [2]Superconductivity Research Laboratory, ISTEC)

Nov. 4 (Wed.) Physics and Chemistry Room 406 (4F)

Chairpersons:
O.M. Auslaender (Israel Institute of Technology)
T. Shibauchi (Kyoto University)

PC-16-INV 9:30-9:55
EXOTIC SUPERCONDUCTING STATE EMBEDDED IN THE HIDDEN ORDER PHASE OF ULTRACLEAN URu_2Si_2
Y. Matsuda (Kyoto University)

PC-17-INV 9:55-10:20
COLLECTIVE MODES AND BOGOLIUBOV ANGLE IN INHOMOGENEOUS SUPERCONDUCTORS
A.V. Balatsky[1], I. Grigorenko[1], J.X. Zhu[1], J.H. Lee[2], K. Fujita[2], H. Eisaki[3], S. Uchida[4], J.C. Davis[2,5], W.S. Lee[6], Z.X. Shen[6]
([1]Los Alamos National Laboratory, [2]Cornell University, [3]National Institute of Advanced Industrial Science and Technology, [4]The University of Tokyo, [5]Scottish Universities Physics Alliance/ University of St. Andrews, [6]Stanford University)

PC-18 10:20-10:35
ANOMALOUS VOLTAGE-CURRENT CHARACTERISTICS IN MICROFABRICATED Sr_2RuO_4-Ru EUTECTIC JUNCTION
H. Kambara[1], S. Kashiwaya[1], H. Yaguchi[2], Y. Asano[3], Y. Tanaka[4], Y. Maeno[5]
([1]National Institute of Advanced Industrial Science and Technology, [2]Tokyo University of Science, [3]Hokkaido University, [4]Nagoya University, [5]Kyoto University)

PC-19 10:35-10:50
THz CONDUCTIVITY OF $La_{2-x}Sr_xCuO_4$ IN THE PSEUDOGAP REGION AND IN THE SUPERCONDUCTIVITY STATE
A. Maeda[1], D. Nakamura[1], Y. Shibuya[1], Y. Imai[1], I. Tsukada[2]
([1]The University of Tokyo, [2]Central Research Institute of Electric Power Industry)

10:50-11:05 __ Coffee Break __

Chairpersons:
L. Civale (Los Alamos National Laboratory)
A. Maeda (The University of Tokyo)

PC-20 11:05-11:20
GROWTH BEHAVIORS OF $Sm_1Ba_2Cu_3O_{7-y}$ THIN FILMS INVESTIGATED BY OPTICAL METHODS
G. Kim[1], A.R. Jeong[1], W. Jo[1], A. Tsukada[2], R.H. Hammond[2], M.R. Beasley[2], D.Y. Park[3], H. Cheong[3]
([1]Ewha Womans University, [2]Stanford University, [3]Sogang University)

PC-21 11:20-11:35
MBE GROWTH AND PROPERTIES OF *T'*-La_2CuO_4 THIN FILMS
H. Yamamoto[1], O. Matsumoto[2], A. Tsukada[1,3], M. Naito[2]
([1]NTT Corporation, [2]Tokyo University of Agriculture and Technology, [3]Stanford University)

PC-22 11:35-11:50
CATION NONSTOICHIOMETRY EFFECT ON THE SUPERCONDUCTING PROPERTIES OF *T'* -Nd_2CuO_4
O. Matsumoto[1], A. Tsukada[2], H. Yamamoto[3], T. Manabe[3], M. Naito[1]
([1]Tokyo University of Agriculture and Technology, [2]Stanford University, [3]NTT Corporation)

PC-23 11:50-12:05
MBE GROWTH AND CHARACTERIZATION OF NdFeAsO THIN FILMS
T. Kawaguchi, H. Uemura, T. Ohno, R. Watanabe, M. Tabuchi, T. Ujihara, K. Takenaka, Y. Takeda, H. Ikuta (Nagoya University)

PC-24 12:05-12:20
FABRICATION OF Fe-Te-S SUPERCONDUCTING EPITAXIAL THIN FILMS BY PULSED LASER DEPOSITION USING $FeTe_{0.8}S_{0.2}$ TARGET
P. Mele[1], K. Matsumoto[1,2], Y. Haruyama[1], M. Mukaida[2,3], Y. Yoshida[2,4], Y. Ichino[2,4], T. Kiss[2,3]
([1]Kyushu Institute of Technology, [2]JST-TRIP, [3]Kyushu University, [4]Nagoya University)

PC-25 12:20-12:35
GROWTH OF THIN FILMS $FeSe_{1-x}Te_x$ WITH PbO-TYPE STRUCTURE BY PULSED LASER DEPOSITION METHOD
Y. Imai[1,2], R. Tanaka[1,2], T. Akiike[1,2], H. Takahashi[1,2], M. Hanawa[2,3], I. Tsukada[2,3], A. Maeda[1,2]
([1]The University of Tokyo, [2]JST-TRIP, [3]Central Research Institute of Electric Power Industry)

12:35-14:00 __ Lunch __

Nov. 4 (Wed.) Films, Junctions and Electronic Devices Room 201 (2F)

Chairpersons:
R. Cristiano (CNR-Cybernetics Institute)
M. Naito (Tokyo University of Agriculture and Technology)

FD-11-INV 9:30-9:55
HETEROEPITAXIAL THIN FILM GROWTH OF IRON-BASED PNICTIDE SUPERCONDUCTORS
H. Hiramatsu[1], T. Kamiya[2], M. Hirano[1], H. Hosono[2]
([1]Japan Science and Technology Agency, [2]Tokyo Institute of Technology)

FD-12 9:55-10:15
IRON PNICTIDE THIN FILMS: THE ROLE OF FLUX PINNING AND POSSIBLE APPLICATIONS
B. Holzapfel[1], M. Kidszun[1], S. Haindl[1], A. Kauffmann[1], K. Nenkov[1], T.D. Thersleff[1], N. Kozlova[1], J. Freudenberger[1], J. Werner[1], E. Reich[1], L. Schultz[1], F. Schmidl[2], P. Seidel[2]
([1]IFW Dresden, [2]Friedrich Schiller University Jena)

FD-13 10:15-10:35
CHARACTERIZATION AND THE PHYSICAL PROPERTIES OF MBE GROWN NdFeAsO THIN FILMS
H. Uemura[1,2], T. Kawaguchi[1], T. Ohno[1], R. Watanabe[1], M. Tabuchi[1], T. Ujihara[1], K. Takenaka[1], Y. Takeda[1], H. Ikuta[1] ([1]Nagoya University, [2]JST-TRIP)

FD-14 10:35-10:55
MBE GROWTH OF IRON BASED SUPERCONDUCTORS
S. Agatsuma, K. Yamagishi, S. Takeda, M. Naito
(Tokyo University of Agriculture and Technology)

10:55-11:10 __ Coffee Break __

Chairpersons:
M. Espy (Los Alamos National Laboratory)
A. Tsukamoto (Superconductivity Research Laboratory, ISTEC)

FD-15-INV 11:10-11:35
BIOMAGNETIC MEASUREMENTS WITH SQUIDS
J. Kawai (Kanazawa Institute of Technology)

FD-16-INV 11:35-12:00
SQUID APPLICATIONS IN NONDESTRUCTIVE EVALUATION (NDE)
M. Mueck (University of Giessen)

FD-17-INV 12:00-12:25
SQUID APPLICATION FOR MAGNETIC CONTAMINANT DETECTION
S. Tanaka[1], T. Akai[1], Y. Hatsukade[1], T. Ohtani[2], Y. Ikeda[2], S. Suzuki[2]
([1]Toyohashi University of Technology, [2]Advance Food Technology Co., Ltd.)

FD-18 12:25-12:45
PERFORMANCE OF HTS SQUID COUPLED TO COOLED-Cu/ SUPERCONDUCTOR PICKUP COIL
K. Enpuku, Y. Tsuji, S. Hirakawa, K. Ogawa, M. Matsuo (Kyushu University)

12:45-14:00 __ Lunch __

Nov. 4 (Wed.) Large Scale System Applications Room 202 (2F)

Chairpersons:
P. Tixador (Grenoble INP/ Institut Neel)
M. Izumi (Tokyo University of Marine Science and Technology)

SA-20-INV 9:30-9:55
RECENT DEVELOPMENT OF SUPERCONDUCTOR POWER EQUIPMENT
A.P. Malozemoff (American Superconductor Corporation)

SA-21-INV 9:55-10:20
DESIGN STUDY OF SUPERCONDUCTING SYNCHRONOUS MACHINES
H. Ohsaki (The University of Tokyo)

SA-22 10:20-10:40
DEVELOPMENT OF HIGH EFFICIENCY AND HIGH TORQUE DENSITY HTS INDUCTION/SYNCHRONOUS MACHINE FOR AUTOMOBILE
T. Nishimura[1], T. Nakamura[1], K. Matsumura[1], N. Amemiya[1], Y. Ito[2], T. Terazawa[2], T. Oka[3], K. Osamura[4]
([1]Kyoto University, [2]IMRA MATERIAL R&D CO., LTD., [3]Niigata University, [4]Research Institute for Applied Sciences)

SA-23 10:40-11:00
NUMERICAL ANALYSIS AND FINITE ELEMENT MODELLING OF AN HTS SYNCHRONOUS MOTOR
M.D. Ainslie, Y. Jiang, W. Xian, Z. Hong, W. Yuan, R. Pei, T. Flack, T. Coombs
(University of Cambridge)

11:00-11:15 __ Coffee Break __

Chairpersons:
H. Lee (Korea University)
T. Nakamura (Kyoto University)

SA-24-INV 11:15-11:40
MAGNETIC FORCE CONTROL TECHNIQUE IN INDUSTRIAL APPLICATION
S. Nishijima (Osaka University)

SA-25 11:40-12:00
MAGNETIC SEPARATION TECHNIQUE FOR ENVIRONMENTAL WATER PURIFICATION BY STRONG MAGNETIC FIELD GENERATOR LOADING HTS BULK MAGNETS
T. Oka[1], K. Tanaka[1], T. Kimura[1], D. Mimura[1], S. Fukui[1], J. Ogawa[1], T. Sato[1], M. Ooizumi[1], K. Yokoyama[2], M. Yamaguchi[3]
([1]Niigata University, [2]Ashikaga Institute of Technology, [3]Japanese Super-Conductivity Organization)

SA-26 12:00-12:20
GRAVITATIONAL WAVE DETECTOR REALIZED BY A SUPERCONDUCTOR
K. Ishidoshiro[1], M. Ando[2], A. Takamori[1], K. Okada[1], K. Tsubono[1]

([1]The University of Tokyo, [2]Kyoto University)

SA-27 12:20-12:40
TWO APLLICATION ISSUES OF HIGH-TEMPERATURE SUPERCONDUCTING MAGLEV IN THE EVACUATED TUBE TRANSPORTATION
Y. Zhang[1], Y. Zhao[2], B. Liu[1] ([1]Xijing University, [2]Southwest Jiaotong University)

SA-28 12:40-13:00
INTERACTION BETWEEN PROPULSION AND LEVITATION SYSTEM IN THE HTSC-PERMANENT MAGNET CONVEYANCE SYSTEM
S. Ohashi, R. Nishio, T. Hashikawa (Kansai University)

13:00-14:00 __ Lunch __

Nov. 4 (Wed.) Closing Address Hall 300 (3F)

Chairpersons:
T. Matsushita (Kyushu Institute of Technology)
H. Rogalla (University of Twente)

CA-1 16:00-16:15
Physics and Chemistry
S. Okuma (Tokyo Institute of Technology)

CA-2 16:15-16:30
Bulks and Characterization
K. Iida (Leibniz Institute for Solid State and Materials Research Dresden)

CA-3 16:30-16:45
Wires, Tapes and Characterization
M. P. Paranthaman (Oak Ridge National Laboratory)

CA-4 16:45-17:00
Films and Junctions/ Electronic Devices
S. Benz (National Institute of Standards and Technology)

CA-5 17:00-17:15
Large Scale System Applications

CA-5-1
P. Tixador (Grenoble Institute of Technology/ Institut Neel)

CA-5-2
T. Coombs (University of Cambridge)

Nov. 4 (Wed.) Closing Remarks Hall 300 (3F)

Closing Speech 17:15-17:30
Y. Kiyokawa (ISTEC)

Poster Sessions

Poster Session I

Nov. 3 (Tue.) 18:00 - 20:00 Room 101+102 & Multi-Purpose Hall (1F)

Wires, Tapes and Characterization

Chairpersons:

M. Mukaida (Kyushu University)
Y. Yoshida (Nagoya University)

WTP-1 **FABRICATION AND SUPERCONDUCTING PROPERTIES OF POWDER-IN-TUBE-PROCESSED MULTIFILAMENTARY MgB_2/NbZr/Cu WIRES**
P. Zhang[1], G. Yan[1], Q. Wang[1], G. Liu[1], G. Jiao[1], Y. Feng[1], A. Sulpice[2], E. Mossang[3]
([1]Northwest Institute for Nonferrous Metal Research, [2]Institut Neel/ CNRS-UJF, [3]LCMI/ CNRS)

WTP-2 **AC TRANSPORT CURRENT LOSS IN MgB_2 SUPERCONDUCTING WIRES**
S. Choi[1], T. Kiyoshi[1], J.H. Kim[1], S.X. Dou[2]
([1]National Institute for Materials Science, [2]University of Wollongong)

WTP-3 **EFFECT OF PROCESSING PARAMETERS ON THE MICROSTRUCTURE OF IN-SITU REACTED MgB_2 SUPERCONDUCTORS**
J.-H. Ahn[1], S. Oh[2], K. Kim[1] ([1]Andong National University, [2]National Fusion Research Institute)

WTP-4 **MICROSTRUCTURE AND TRANSPORT CRITICAL CURRENT PROPERTIES OF MgB_2 WIRE WITH A DENSE MONO-CORE**
Y. Watanabe[1], H. Matsuoka[1], M. Maeda[2], Y. Kubota[1] ([1]Nihon University, [2]University of Wollongong)

WTP-5 **EFFECTS OF CORE REDUCTION ON THE CRITICAL CURRENT DENSITY OF MgB_2 SUPERCONDUCTOR WIRES WITH DIFFERENT SHEATHS**
M. Maeda[1], J. Kim[1], Y. Zhao[1], S.X. Dou[1], Y. Watanabe[2], Y. Kubota[2], T. Nakane[3], H. Kumakura[3]
([1]University of Wollongong, [2]Nihon University, [3]National Institute for Materials Science)

WTP-6 **IMPROVEMENT OF CRITICAL CURRENT DENSITY OF THE EX-SITU PROCESSED MgB_2 WIRE**
J. Joo[1], W. Kim[1], C.M. Lee[1], S.M. Hwang[1], J.H. Choi[1], J.H. Park[1], C.-J. Kim[2], B.-H. Jun[2]
([1]Sungkyunkwan University, [2]Korea Atomic Energy Research Institute)

WTP-7 **EFFECT OF POLYACRYLONITRILE (PAN) DOPING ON MICROSTRUCTURE AND SUPERCONDUCTING PROPERTIES OF MgB_2 WIRE**
J. Joo[1], K. Sung[1], S.M. Hwang[1], C.M. Lee[1], J.H. Lim[1], W.N. Kang[1], B.-H. Jun[2], C.-J. Kim[2], J.H. Yi[2]
([1]Sungkyunkwan University, [2]Korea Atomic Energy Research Institute)

WTP-8 **IMPROVEMENT OF THE HIGH-FILED J_c PROPERTIES OF MgB_2/Fe TAPES BY ACETONE DOPING**
D. Wang[1], Z. Gao[1], Z. Xianping[1], L. Wang[1], Y. Qi[1], Z. Zhang[1], Y. Ma[1], S. Awaji[2], G. Nishijima[2], K. Watanabe[2], E. Mossang[3]
([1]Chinese Academy of Sciences, [2]Tohoku University, [3]Grenoble High Magnetic Field Laboratory)

WTP-9 **CHEMICAL FABRICATION APPROACH FOR LOW TEMPERATURE SYNTHESIS OF MgB_2**
T. Nakane, H. Abe, H. Kumakura, T. Naka (National Institute for Materials Science)

WTP-10 **INFLUENCE OF HEAT TREATMENT ON THE CRITICAL CURRENT DENSITY OF MgB_2/Fe WIRE FABRICATED USING BALL-MILLED AND GLYCERIN-TREATED BORON POWDER**
B.-H. Jun[1], J.H. Lee[1], J.H. Yi[1], S. Oh[2], C.-J. Kim[1]
([1]Korea Atomic Energy Research Institute, [2]National Fusion Research Institute)

WTP-11 **INVESTIGATION OF CELLULOSE ACETATE DOPING AS A NOVEL CARBON SOURCE IN MgB_2 WIRE**
J. Joo[1], C.M. Lee[1], S.M. Hwang[1], J.H. Choi[1], S.M. Lee[1], G.C. Park[1], C.-J. Kim[2], B.-H. Jun[2], D.-B. Kim[2] ([1]Sungkyunkwan University, [2]Korea Atomic Energy Research Institute)

WTP-12 **INFLUENCE OF HOT-PRESSING ON THE MgB_2/Nb/MONEL WIRES**
J.H. Kim[1], H. Kumakura[1], A. Matsumoto[1], Y. Yamada[2], K. Wada[2], K. Tachikawa[2], S.X. Dou[3]
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WTP-13 **SYNTHESIS OF THE SUPERCONDUCTING MgB_2 DEPOSITED ON THE W-WIRE BY CO-EVAPORATION METHOD**
Y.J. Lim, C.J. Kim, H.J. Lee, J.Y. Maeng, S.C. Park (Gyeongsang National University)

WTP-14 **INFLUENCE OF Mg VAPOR PRESSURE ON THE MgB_2/CARBON FIBER FABRICATED BY**

THE CO-EVAPORATION SYSTEM
S.C. Park, C.J. Kim, Y.J. Lim (Gyeongsang National University)

WTP-15 **STUDY ON CURRENT DISTRIBUTION IN DI-BSCCO TAPE BASED ON THE SCANNING HALL PROBE MAGNETIC MICROSCOPY**
Y. Honda[1], K. Higashikawa[1], M. Inoue[1], T. Kiss[1], N. Ayai[2], M. Kikuchi[2], K. Hayashi[2], K. Sato[2]
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WTP-16 **EFFECT OF FATIGUE LOADING ON CRITICAL CURRENT IN STAINLESS STEEL-LAMINATED DI-BSCCO SUPERCONDUCTING COMPOSITE TAPE**
M. Hojo[1], K. Osawa[1], T. Adachi[1], Y. Inoue[1], K. Osamura[2], S. Ochiai[1], N. Ayai[3], K. Hayashi[3]
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WTP-17 **EFFECT OF NUMBER OF FILAMENTS ON THE CRITICAL CURRENT DENSITY IN MULTIFILAMENTARY Bi-2223 TAPE**
S. Ueno[1], S. Yamashita[1], M. Kiuchi[1], S.E. Otabe[1], T. Matsushita[1], N. Ayai[2], M. Kikuchi[2], K. Hayashi[2], K. Sato[2] ([1]Kyushu Institute of Technology, [2]Sumitomo Electric Industries, Ltd.)

WTP-18 **ANISOTROPIC THERMAL TRANSPORT IN DOUBLE-PANCAKE COIL WOUND WITH DI-BSCCO TAPE**
T. Naito[1], H. Fujishiro[1], Y. Yamada[2] ([1]Iwate University, [2]Sumitomo Electric Industries, Ltd.)

WTP-19 **THE EFFECT ON IMPURITY PHASES OF Bi-2212 ROUND WIRES WITH DIFFERENT NOMINAL COMPOSITIONS**
A. Matsumoto[1], H. Kitaguchi[1], H. Kumakura[1], Y. Hikichi[2], T. Nakatsu[2], J. Nishioka[2], T. Hasegawa[2]
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WTP-20 **MICROSTRUCTURE AND SUPERCONDUCTING PROPERTIES OF Bi-2223/Ag TAPES FABRICATED IN THE PRESSING-MELTING-SINTERING PROCESS**
X. Lu[1], H. Chen[2], A. Nagata[1], K. Sugawara[1] ([1]Akita University, [2]Changchun University of Technology)

WTP-21 **NON-DESTRUCTIVE EVALUATION OF LONGITUDINAL UNIFORMITY FOR TWISTED Bi2223 TAPES USING SCANNING HALL-PROBE MICROSCOPY**
R. Inada[1], T. Makihara[1], S. Baba[1], Y. Nakamura[1], A. Oota[1], S. Sakamoto[2], C. Li[3], P. Zhang[3]
([1]Toyohashi University of Technology, [2]Kisarazu National College of Technology, [3]Northwest Institute for Nonferrous Metal Research)

WTP-22 **COMPARISON OF AC LOSS CHARACTERISTICS FOR Bi2223 TAPES WITH RESISTIVE Ag-ALLOY MATRIX OR OXIDE BARRIERS**
R. Inada[1], Y. Nakamura[1], A. Oota[1], C. Li[2], P. Zhang[2]
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WTP-23 **MODELING ANALYSIS OF IRREVERSIBLE BENDING STRAIN DISTRIBUTION AND CRITICAL CURRENT DISTRIBUTION AT LOW BENDING STRAINS OF Bi2223- COMPOSITE TAPE**
S. Ochiai[1], H. Okuda[1], M. Sugano[1], M. Hojo[1], K. Osamura[2], T. Kuroda[3], H. Kumakura[3], H. Kitaguchi[3], K. Itoh[3], H. Wada[4]
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WTP-24 **EFFECTS OF GROWTH CONDITIONS ON 1D NANOROD GROWTH IN $REBa_2Cu_3O_{7-\delta}$ FILMS**
H. Kai[1], S. Horii[2], A. Ichinose[3], R. Kita[4], K. Matsumoto[5], Y. Yoshida[6], T. Fujiyoshi[7], R. Teranishi[1], N. Mori[1], M. Mukaida[1]
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WTP-25 **EFFECT OF PROCESSING CONDITION ON PINNING PROPERTIES OF GdBCO TAPES FABRICATED BY IN-PLUME PLD PROCESS**
N. Chikumoto, S. Lee, K. Tanabe (Superconductivity Research Laboratory, ISTEC)

WTP-26 **THREE-DIMENSIONAL CHARACTERIZATION OF BZO NANORODS IN A GdBCO COATED CONDUCTOR BY TEM-CT**
K. Yamada[1], K. Furuya[1], R. Hadi[1], K. Kaneko[1], S. Sadayama[2], T. Kato[3], T. Matsushita[4], A. Ibi[5],

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WTP-27 **GROWTH MECHANISM OF NANORODS BASED ON MICROSTRUCTURE OBSERVATION**
A. Ichinose[1], H. Kai[2], M. Mukaida[2], S. Horii[3], R. Kita[4], K. Matsumoto[5], Y. Yoshida[6]
([1]Central Research Institute of Electric Power Industry, [2]Kyushu University, [3]Kochi University of Technology, [4]Shizuoka University, [5]Kyushu Institute of Technology, [6]Nagoya University)

WTP-28 **IMPROVEMENT OF CRITICAL CURRENT DENSITY OF Y-Ba-Cu-O THIN FILMS DEPOSITED ON STO SUBSTRATES WITH ASSEMBLED Au NANOPARTICLES**
S.-K. Oh[1], C.Y. Lee[1], G.E. Jang[1], H.D. Tran[1], B.W. Kang[1], O.B. Hyun[2]
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WTP-29 **EFFECT OF Sn ADDITION ON THE SUPERCONDUCTING PROPERTIES OF $SmBa_2Cu_3O_y$ FILAMENTS**
E. Ban[1], Y. Ikebe[1], T. Suzuki[1], G. Nishijima[2], K. Watanabe[2] ([1]Meijo University, [2]Tohoku University)

WTP-30 **POTENTIAL OF Nd:YAG PULSED LASER DEPOSITION METHOD FOR COATED CONDUCTOR PRODUCTION**
Y. Ichino[1], Y. Yoshida[1], T. Yoshimura[1], Y. Takai[1], M. Yoshizumi[2], T. Izumi[2], Y. Shiohara[2]
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WTP-31 **IN-SITU OBSERVATION AND SIMULATION OF GROWTH PROCESS OF FACETED RE123 CRYSTALS**
N. Mori[1], T. Maebatake[1], R. Teranishi[1], M. Mukaida[1], M. Miura[2], M. Yoshizumi[2], T. Izumi[2]
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WTP-32 **DEVELOPMENT OF SUPERCONDUCTING JOINT OF YBCO-COATED CONDUCTOR (CC) USING HEAT TREATMENTS UNDER A REDUCED OXYGEN PARTIAL PRESSURE**
H. Lee, H.S. Kim, J.B. Song, N.Y. Kwon, J.H. Lee (Korea University)

WTP-33 **SUPERCONDUCTING PROPERTIES IN MAGNETIC FIELDS OF YBCO FILMS FABRICATED IN VARIOUS OXYGEN ANNEALING CONDITIONS**
S. Takagi[1], Y. Yoshida[1], Y. Ichino[1], Y. Takai[1], A. Ichinose[2], K. Matsumoto[3], M. Mukaida[4]
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WTP-34 **SELF-EPITAXY OF PLD-CeO_2 LAYER ON IBAD-MgO AND LMO BUFFER LAYERS**
H. Hatakeyama, S. Miyata, M. Yoshizumi, R. Kuriki, A. Ibi, Y. Yamada, T. Izumi, Y. Shiohara
(Superconductivity Research Laboratory, ISTEC)

WTP-35 **HIGH - SPEED DEPOSITION OF RE123 FILM WITH LARGE CURRENT CAPACITY BY HOT-WALL TYPE PLD SYSTEM**
M. Igarashi, K. Kakimoto, Y. Hanada, T. Hayashida, C. Tashita, K. Morita, S. Hanyu, Y. Sutoh, H. Kutami, Y. Iijima, T. Saitoh (Fujikura Ltd.)

WTP-36 **LONG-LENGTH IBAD-MgO BUFFER LAYERS FOR HIGH-PERFORMANCE RE123 COATED CONDUCTORS BY A LARGE ION BEAM SOURCE**
S. Hanyu, C. Tashita, T. Hayashida, Y. Hanada, K. Morita, Y. Sutoh, N. Nakamura, H. Kutami, M. Igarashi, K. Kakimoto, S. Fujita, Y. Iijima, T. Saitoh (Fujikura Ltd.)

WTP-37 **DEVELOPMENT OF BUFFER LAYERS ON 30 mm-WIDTH TEXTURED METAL SUBSTRATES FOR REBCO COATED CONDUCTORS**
T. Yamaguchi, H. Ota, K. Ohki, Y. Shingai, K. Ohmatsu (Sumitomo Electric Industries, Ltd.)

WTP-38 **HIGH I_c REBCO COATED CONDUCTORS WITH HIGH PRODUCTION RATE BY USING IBAD/MPMT-PLD METHOD**
A. Ibi, S. Miyata, H. Hatakeyama, M. Yoshizumi, T. Ito, Y. Yamada, T. Izumi, Y. Shiohara
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WTP-39 **DEVELOPMENT OF CeO_2 BUFFER LAYER FOR COATED CONDUCTORS BY RF-SPUTTERING**

T. Nakanishi[1], T. Koizumi[1], Y. Aoki[1], T. Hasegawa[1], Y. Iijima[2], T. Saitoh[2], Y. Takahashi[3], M. Yoshizumi[3], T. Izumi[3], Y. Shiohara[3]
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WTP-40 **DEVELOPMENT OF CeO_2/IBAD-GZO-BASED BUFFER LAYERS FOR REBCO COATED CONDUCTORS**
M. Kasahara[1], Y. Okuno[1], H. Fukushima[1], M. Matsui[1], A. Nakai[1], R. Nakasaki[1], K. Yamamoto[1], N. Kashima[2], T. Watanabe[2], S. Nagaya[2]
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WTP-41 ***EX-SITU*** **CONVERSION OF $SmBa_2Cu_3O_{7-\delta}$ FILMS ON THE IBAD-MgO SUBSTRATE**
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WTP-42 **ENHANCED FLUX PINNING OF $YBa_2Cu_3O_{7-\delta}$ - $BaCeO_3$ COMPOSITE FILMS FABRICATED BY METAL-ORGANIC DEPOSITION**
G.-M. Shin[1], S.-H. Moon[2], S.-I. Yoo[1]
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WTP-43 **ENHANCED FLUX-PINNING IN FLUORINE-FREE MOD YBCO FILMS BY CHEMICAL DOPING**
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WTP-44 **GRAIN SHAPE CONTROL STUDIES OF ELECTRODEPOSITED NICKEL ON HASTELLOY METAL TAPE**
M. Sugimoto[1], R. Teranishi[1], S. Ooue[1], M. Mukaida[1], N. Mori[1], H. Fukushima[1], M. Miura[2], M. Yoshizumi[2], T. Izumi[2], K. Nakao[2], Y. Yamada[2] ([1]Kyushu University, [2]Superconductivity Research Laboratory, ISTEC)

WTP-45 **THE EPITAXIAL GROWTH OF $BaSnO_3$ BUFFER LAYER ON IBAD-MgO TEMPLATE AND ITS EFFECTS ON $GdBa_2Cu_3O_{7-\delta}$ FILM**
K.P. Ko[1], R.K. Ko[2], H.K. Kim[3], S.H. Moon[3], S.S. Oh[2], S.I. Yoo[1]
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WTP-46 **THE COMPARATIVE STUDY OF MAGNETIC PROPERTIES FOR ReBCO COATED CONDUCTORS BASED ON BOTH RABiTS AND IBAD TEMPLATES**
K. Song[1], S. Kang[1], S.H. Kim[2], K.D. Sim[2], R.K. Ko[2], S.S. Oh[2], S.H. Moon[3], C. Park[3], S.-I. Yoo[3]
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WTP-47 **J_c ANISOTROPY FOR MAGNETIC FIELD ANGLE IN YBCO COATED-CONDUCTOR ON IBAD-MGO BUFFERD METAL TAPES**
H. Suzuki[1], Y. Yoshida[1], Y. Ichino[1], Y. Takai[1], S. Awaji[2], K. Watanabe[2], M. Yoshizumi[3], T. Izumi[3], Y. Shiohara[3], T. Kato[4]
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WTP-48 **INFLUENCE OF NANOPARTICLES ON FLUX PINNING PROPERTIES IN TFA-MOD PROCESSED YBdBCO COATED CONDUCTOR**
F. Matsutani[1], Y. Takahashi[1], M. Kiuchi[1], S.E. Otabe[1], T. Matsushita[1], M. Miura[2], T. Izumi[2], Y. Shiohara[2]
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WTP-49 **EFFECT OF WATER VAPOR PRESSURE ON MORPHOLOGY AND CRYSTALLINITY OF YBCO FILMS PREPARED BY CSD METHOD**
L. Jin, Y. Zhang, Z. Yu, G. Yan, C. Li, Y. Lu (Northwest Institute for Nonferrous Metal Research)

WTP-50 **DEPOSITION OF YBCO THIN FILM BY AACVD USING INORGANIC METAL PRECURSORS**
G.-W. Hong[1,2], B.-J. Kim[1], Y.-S. Yoo[1], J.-G. Kim[2], H.-G. Lee[1], J.M. Driscoll[3], A. Kursumovic[3], L. Dunlop[3], J.-H. Kim[2], S.X. Dou[2]
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WTP-51 **RELATIONSHIP BETWEEN CRYSTALLIZATION PROCESS AND SUPERCONDUCTING PROPERTIES OF YBCO FILMS BY TFA-MOD METHOD USING STARTING SOLUTIONS WITH VARIOUS COMPOSITIONS**
K. Nakaoka, M. Yoshizumi, T. Izumi, Y. Yamada, Y. Shiohara
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WTP-52 **CHARACTERIZATION OF SILVER STABILIZER LAYER USING SILVER COMPLEX INK BY DIP COATING METHOD**
J.B. Lee[1], S.S. Kim[2], H.G. Lee[1], J.H. Kim[3], S.X. Dou[3], G.W. Hong[1]
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WTP-53 **IMPROVEMENT OF FILM THICKNESS UNIFORMITY IN TFA-MOD COATED CONDUCTORS**
H. Hirano[1], Y. Takahashi[1], K. Nakaoka[1], M. Miura[1], M. Yoshizumi[1], Y. Yamada[1], T. Izumi[1], Y. Aoki[2], T. Hasegawa[2]
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WTP-54 **EFFECT OF PREFIRING TIME ON CRYSTALLINITY AND J_c OF MOD-DERIVED Y123 FILMS**
I. Yamaguchi, W. Kondo, H. Matsui, M. Sohma, K. Tsukada, K. Kamiya, Y. Nakagawa, T. Kumagai, T. Manabe (National Institute of Advanced Industrial Science and Technology)

WTP-55 **INFLUENCE OF TIN-COMPOUNDS ADDITION ON CRYSTALLINITY AND MICROSTRUCTURE FOR YBCO FILMS**
R. Teranishi[1], Y. Miyanaga[1], K. Yamada[1], N. Mori[1], M. Mukaida[1], M. Miura[2], M. Yoshizumi[2], T. Izumi[2], Y. Yamada[2], K. Nakao[2] ([1]Kyushu University, [2]Superconductivity Research Laboratory, ISTEC)

WTP-56 **FORMATION OF ARTIFICIAL PINNING CENTERS IN MOD-$GdBa_2Cu_3O_y$ FILMS USING FLOURINE-FREE SOLUTIONS**
N. Hosoya[1], T. Nakamura[1], R. Kita[1], O. Miura[2], A. Ichinose[3], K. Yamada[4], K. Kaneko[4], S. Horii[5]
([1]Shizuoka University, [2]Tokyo Metropolitan University, [3]Central Research Institute of Electric Power Industry, [4]Kyushu University, [5]Kochi University of Technology)

WTP-57 **SUPERCONDUCTING PROPERTIES OF (Sm, Eu, Gd)$Ba_2Cu_3O_y$ FILMS BY METAL-ORGANIC DEPOSITION USING METAL 2-ETHYLHEXANATES**
T. Nakamura[1], R. Kita[1], O. Miura[2], A. Ichinose[3], K. Yamada[4], K. Kaneko[4]
([1]Shizuoka University, [2]Tokyo Metropolitan University, [3]Central Research Institute of Electric Power Industry, [4]Kyushu University)

WTP-58 **ENHANCEMENT OF J_c PROPERTY OF YBCO FILM WITH Sn COMPOUND ADDITION BY TFA-MOD METHOD**
Y. Miyanaga[1], R. Teranishi[1], K. Yamada[1], N. Mori[1], M. Mukaida[1], T. Kiss[1], M. Inoue[1], T. Izumi[2], M. Miura[2], M. Yoshizumi[2], K. Watanabe[3], S. Awaji[3], M. Nanba[3]
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WTP-59 **INVESTIGATION OF MASS PRODUCTION OF YBCO COATED CONDUCTOR USING TFA-MOD PROCESS**
T. Koizumi[1], T. Nakanishi[1], Y. Aoki[1], T. Hasegawa[1], Y. Iijima[2], T. Saitoh[2], Y. Takahashi[3], M. Yoshizumi[3], T. Izumi[3], S. Miyata[3], Y. Yamada[3], Y. Shiohara[3]
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WTP-60 **STRUCTURAL INVESTIGATION OF THE $BaSnO_3$-$YBa_2Cu_3O_{7-\delta}$ SYSTEM**
S. Nagao[1], P. Mele[1], K. Matsumoto[1], A. Ichinose[2], M. Mukaida[3], Y. Yoshida[4], S. Horii[5], R. Kita[6]
([1]Kyushu Institute of Technology, [2]Central Research Institute of Electric Power Industry, [3]Kyushu University, [4]Nagoya University, [5]The University of Tokyo, [6]Shizuoka University)

WTP-61 **CHARACTERIZATION OF SURFACE ROUGHNESS OF BIAXIALLY-TEXTURED IBAD-MgO FILMS**
S. Miyata[1], A. Ibi[1], Y. Yamada[1], T. Izumi[1], Y. Shiohara[1], T. Kato[2], T. Hirayama[2]
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WTP-62 **MICROSTRUCTURE AND CRITICAL CURRENT PROPERTIES OF YBCO THIN FILM**

PREPARED BY TFA-MOD METHOD
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WTP-63 **CRITICAL CURRENT DEGRADATION BEHAVIORS OF REBCO COATED CONDUCTOR TAPES UNDER PRESSURIZED LIQUID NITROGEN**
H.-S. Shin, M. Dedicatoria, E. Famularcano (Andong National University)

WTP-64 **THERMAL/ELECTRICAL ANALYSIS OF THE YBCO-COATED CONDUCTOR (CC) WITH VARIOUS STABILIZER THICKNESSES UNDER AC OVER-CURRENT CONDITION**
H. Lee[1], N.Y. Kwon[1], K.L. Kim[1], H.S. Kim[1], S. Hahn[2], H.-R. Kim[3], O.-B. Hyun[3]
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WTP-65 **DEGRADATION CHARACTERISTICS OF YBCO COATED CONDUCTORS DUE TO FAULT-CURRENT IN POWER CABLE APPLICATIONS**
H. Kono[1], X. Wang[1], H. Ueda[1], A. Ishiyama[1], T. Saitoh[2], Y. Aoki[3], M. Yagi[4], S. Mukoyama[4], N. Fujiwara[5]
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WTP-66 **EFFECTS OF JOINING CONDITIONS ON THE STRUCTURES AND PROPERTIES OF JOINTS OF REBCO COATED CONDUCTORS**
T. Maebatake[1], Y. Miyanaga[1], K. Yuuki[1], H. Kai[1], N. Mori[1], K. Yamada[1], R. Teranishi[1], M. Mukaida[1], N. Chikumoto[2], N. Sakai[2], M. Miura[2], M. Yoshizumi[2], Y. Yamada[2], T. Izumi[2]
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WTP-67 **ESTIMATION OF ENERGY CONSUMPTION FOR THE CURRENT LEAD USING PELTIER MODULES**
T. Fujii[1], S. Fukuda[1], J. Sun[1], M. Sugino[1], T. Kawahara[1], M. Emoto[2], M. Hamabe[1], H. Watanabe[1], S. Yamaguchi[1] ([1]Chubu University, [2]National Institute for Fusion Science)

WTP-68 **FATIGUE TESTS OF YBCO COATED CONDUCTORS**
H. Ueda[1], Y. Kawai[1], A. Ishiyama[1], K. Shikimachi[2], N. Hirano[2], S. Nagaya[2]
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WTP-69 **STRAIN ESTIMATION ON SUPERCONDUCTING LAYER IN YBCO COATED CONDUCTOR UNDER APPLIED LOADS BY NEUTRON DIFFRACTION AT CRYOGENIC TEMPERATURES**
Y. Tsuchiya[1], H. Suzuki[2], T. Umeno[3], S. Machiya[4], K. Osamura[5]
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WTP-70 **A METHOD OF EVALUATING DELAMINATION PROPERTIES OF COATED CONDUCTORS BY EPOXY RESIN**
K. Suzuki, M. Tomita (Railway Technical Research Institute)

WTP-71 **INFLUENCE OF TENSILE DAMAGE ON *V-I* CURVE AND CRITICAL CURRENT OF DyBCO COATED CONDUCTOR**
A. Toda[1], T. Arai[1], S. Ochiai[1], H. Okuda[1], H. Matsubayashi[1], M. Sugano[1], K. Osamura[2], W. Prusseit[3]
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WTP-72 **FRACTURE BEHAVIOR OF COATED LAYER AND ITS INFLUENCE ON CRITICAL CURRENT OF DyBCO COATED CONDUCTOR**
T. Arai[1], J. Shin[1], A. Toda[1], S. Ochiai[1], H. Okuda[1], M. Sugano[1], K. Osamura[2], W. Prusseit[3]
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WTP-73 **LASER SCRIBING PROCESS AND CHARACTERIZATION FOR MULTI-FILAMENTARY COATED CONDUCTORS**
T. Machi, K. Nakao, K. Tanabe (Superconductivity Research Laboratory, ISTEC)

WTP-74 **Cancelled**

WTP-75 **ANGULAR DEPENDENCE OF CRITICAL CURRENT DENSITIES IN YBCO THIN FILMS WITH CROSSED COLUMNAR DEFECTS**
T. Sueyoshi[1], S. Yutani[1], T. Sogo[1], A. Adachi[1], K. Yonekura[1], T. Fujiyoshi[1], F. Mitsugi[1], T. Ikegami[1],

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WTP-76 **ESTIMATION OF MAGNETIC RELAXATION PROPERTY FOR CVD PROCESSED YBCO COATED CONDUCTORS**
Y. Takahashi[1], M. Kiuchi[1], S.E. Otabe[1], T. Matsushita[1], K. Shikimachi[2], T. Watanabe[2], N. Kashima[2], S. Nagaya[2] ([1]Kyushu Institute of Technology, [2]Chubu Electric Power Co., Inc.)

WTP-77 **DIRECT OBSERVATION OF MAGNETIC FLUXES PENETRATING INTO YBCO BY ELECTRON HOLOGRAPHY**
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WTP-78 **ASYMMETRIC ANGULAR DEPENDENCE OF J_c IN COATED CONDUCTORS PRIOR TO AND AFTER FAST NEUTRON IRRADIATION**
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WTP-79 **IMPROVEMENT OF SPATIAL HOMOGENEITY IN GdBCO/IBAD-MgO COATED CONDUCTOR**
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WTP-80 **CURRENT TRANSPORT PROPERTY IN GdBCO COATED CONDUCTOR WITH ARTIFICIAL PINNING CENTERS IN A WIDE RANGE OF TEMPERATURE, MAGNETIC FIELD UP TO 27 T, AND FIELD ANGLE**
M. Inoue[1], R. Fuger[1], K. Higashikawa[1], T. Kiss[1], M. Namba[2], S. Awaji[2], K. Watanabe[2], A. Ibi[3], S. Miyata[3], Y. Yamada[3], T. Izumi[3]
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WTP-81 **NUMERICAL SIMULATION OF PERMANENT MAGNET METHOD: INFLUENCE OF EXPERIMENTAL CONDITIONS ON ACCURACY OF J_c-DISTRIBUTION**
T. Takayama, A. Kamitani, A. Tanaka (Yamagata University)

WTP-82 **THICKNESS DEPENDENCE OF THE CRITICAL CURRENT IN $YBa_2Cu_3O_y$ FILMS BY USING Nd:YAG-PLD METHOD**
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WTP-83 **INCREASED CRITICAL CURRENT DENSITY AND PINNING IN Ag/YBCO QUASI-MULTILAYERS**
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WTP-84 **EXAMNINATION OF THE RELATIONSHIP BETWEEN J_c AND $R_{s\,int}$ OF YBCO THIN FILMS WITH VARIOUS THICKNESS**
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WTP-85 **CRITICAL CURRENT DENSITY IN HIGH MAGNETIC FIELD OF COBALT DOPED NSG123 FILAMENTS**
Y. Ikebe[1], E. Ban[1], G. Nishijima[2], K. Watanabe[2] ([1]Meijo University, [2]Tohoku University)

WTP-86 **A STUDY ON THE REDUCTION OF PERPENDICULAR MAGNETIZATION LOSS IN STRIATED YBCO COATED CONDUCTOR BY LOAD**
Y.-S. Yoo[1], B.-J. Kim[1], J.-B. Lee[1], S.-K. Park[1], J.G. Kim[2], M.-H. Doh[1], G.-W. Hong[1], H.-G. Lee[1]
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WTP-87 **EVALUATION OF GEOMETRICAL EFFECT ON MAGNETIZATION LOSS IN GdBCO COATED CONDUCTORS**
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WTP-88 **AC LOSS PROPERTIES OF THE REPAIRED MULTIFILAMENTARY REBCO SUPERCONDUCTING TAPES**
M. Iwakuma[1], R. Yamasaki[1], J. Kato[2], N. Chikumoto[2], K. Tanabe[2], T. Izumi[2], Y. Shiohara[2]
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WTP-89 **ANALYTICAL EXPRESSIONS OF AC LOSSES IN INFINITE SLAB WITH DIRECT AND ALTERNATING TRANSPORT CURRENTS IN EXTERNAL AC MAGNETIC FIELD**
K. Kajikawa[1], K. Funaki[1], K. Shikimachi[2], N. Hirano[2], S. Nagaya[2]
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WTP-90 **INDIRECT MEASUREMENT OF AC CURRENT DISTRIBUTIONS IN HTS TAPES BY A GROUP OF PICKUP COILS**
S. Kawabata, K. Miyahara (Kagoshima University)

WTP-91 **AC LOSSES OF POWER TRANSMISSION CABLES WITH BENT SUPERCONDUCTING TAPES**
Y. Mawatari[1], A.P. Malozemoff[2], T. Izumi[3], N. Fujiwara[3], K. Tanabe[3], Y. Shiohara[3]
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Large Scale System Applications

Chairpersons:
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SAP-1 **DESIGN AND DEVELOPMENT OF 500 m LONG HTS CABLE SYSTEM IN THE KEPCO POWER GRID, KOREA**
S.-H. Sohn[1], J.H. Lim[1], B.M. Yang[1], S.K. Lee[2], H.M. Jang[2], Y.H. Kim[2], H.S. Yang[3], D.L. Kim[3], H.R. Kim[1], S.W. Yim[1], Y.J. Won[4], S.D. Hwang[1]
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SAP-2 **COMPUTER SIMULATION OF FAULT CURRENT CHARACTERISTICS IN 275 kV CLASS YBCO POWER CABLE**
S. Sato[1], X. Wang[1], H. Ueda[1], A. Ishiyama[1], M. Yagi[2], S. Mukoyama[2], T. Saitoh[3], Y. Aoki[4], N. Fujiwara[5]
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SAP-3 **DESIGN AND EVALUATION OF 66 kV CLASS RE-123 SUPERCONDUCTING CABLE**
T. Minamino[1], M. Ohya[1], H. Yumura[1], T. Masuda[1], T. Nagaishi[1], Y. Shingai[1], A. Ishiyama[2], H. Ueda[2], X. Wang[2], N. Fujiwara[3]
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SAP-4 **NUMERICAL SIMULATION ON FAULT CURRENT CONDITION IN 66 kV CLASS RE-123 SUPERCONDUCTING CABLE**
X. Wang[1], H. Ueda[1], A. Ishiyama[1], M. Ohya[2], H. Yumura[2], N. Fujiwara[3]
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SAP-5 **DESIGN OF HTS TRI-AXIAL CABLE IN STEADY-STATE OPERATION**
N.N. Hu, M. Toda, N.A. Ozcivan, T. Yagai, M. Tsuda, T. Hamajima (Tohoku University)

SAP-6 **TRANSPORT CHARACTERISTICS OF THE KEPCO 100 m HTS-CABLE SYSTEM FOR BALANCED THREE-PHASE CURRENTS**
Z.Y. Li[1], Y.H. Ma[1], H.B. Jin[1], K.W. Ryu[1], S.H. Sohn[2], S.D. Hwang[2]
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SAP-7 **AC LOSSES IN SHIELD LAYERS AND CONDUCTOR LAYERS IN SUPERCONDUCTING POWER TRANSMISSION CABLES COMPRISING COATED CONDUCTORS**
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SAP-8 **Moved to SA-29**

SAP-9 **STUDY ON DEGRADATION CHARACTERISTIC OF REBCO COATED CONDUCTOR UNDER VARIOUS ENVIRONMENTAL STRESSES**
N. Sakai, K. Nakao, T. Machi, N. Chikumoto, K. Tanabe
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SAP-10 **AC LOSS CHARACTERISTIC ANALYSIS OF HIGH CAPACITY DC HTS POWER CABLE**
J.G. Kim[1], D.-W. Kim[1], A.-R. Kim[1], M. Park[1], I.-K. Yu[1], J. Cho[2], K. Sim[2], S. Kim[2]
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SAP-11 **FULL SCALE MESUREMENTS OF 3 PHASE UN-BALANCED LOAD CHARACTERISTICS FOR 22.9 kV UNDERGROUND HTS POWER CABLE**
H.S. Ryoo[1], Y.I. Koo[1], J.H. Lim[2], S.H. Sohn[2], S.D. Hwang[2], J.Y. Koo[1]
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SAP-12 **THE PERFORMANCE AND SYSTEM DESIGN OF HYBRID CRYOGENIC SYSTEM COMBINING WITH THE LARGE CAPACITY STIRLING CRYOCOOLER FOR KEPCO HTS CABLE SYSTEM**
J.H. Lim[1], S.H. Sohn[1], S.D. Hwang[1], D.L. Kim[2], H.S. Yang[2], H.S. Ryoo[3], H.O. Choi[3]
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SAP-13 **SHORT-CIRCUIT TEST OF 154 kV/1 GVA SUPERCONDUCTING POWER CABLE WITH YBCO TAPES**
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SAP-14 **PROTOTYPE OF DIRECT-CURRENT SUPERCONDUCTING CABLE FOR RAILWAY SYSTEM**
M. Tomita, Y. Fukumoto, K. Suzuki, M. Miryala (Railway Technical Research Institute)

SAP-15 **DEVELOPMENT OF 275 kV 3 kA CLASS YBCO HTS POWER CABLE**
T. Nomura[1], M. Yagi[1], T. Yonemura[1], S. Mukoyama[1], Y. Aoki[2], T. Saito[3], N. Amemiya[4], A. Ishiyama[5], N. Fujiwara[6], H. Ichikawa[6]
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SAP-16 **DC LOSS MEASUREMENT OF HIGH TEMPERATURE SUPERCONDUCTING POWER CABLE USING CALORIMETRY METHOD**
D.-W. Kim[1], J.-G. Kim[1], A.-R. Kim[1], M.-W. Park[1], I.-K. Yu[1], K.-D. Sim[2], S.-H. Kim[2], J.-W. Cho[2]
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SAP-17 **FABLICATION OF HEAT LEAKAGE MEASUREMENT SYSTEM OF CRYOGENIC PIPES FOR DC SUPERCONDUCTING POWER CABLE**
M. Hamabe[1], M. Sugino[1], I. Yury[1], H. Watanabe[1], T. Kawahara[1], S. Yamaguchi[1], Y. Ishiguro[2], O. Shinshi[2]
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SAP-18 **THE MEASUREMENT SYSTEM FOR A 200 METER DC SUPERCONDUCTING POWER CABLE**
J. Sun[1], M. Emoto[2], K. Yoshimura[1], H. Watanabe[1], M. Hamabe[1], T. Kawahara[1], S. Yamaguchi[1]
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SAP-19 **AC LOSSES OF BSCCO CABLES WITH SHIELD**
Y.H. Ma[1], Z.Y. Li[1], H.B. Jin[1], K.W. Ryu[1], J.H. Lim[2], S.H. Sohn[2], S.D. Hwang[2]
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SAP-20 **MAGNETIC FIELD ANALYSIS FOR DESIGNING OF SUPERCONDUCTING DC TRANSMISSION CABLES**
H. Watanabe, M. Sugino, J. Sun, M. Hamabe, T. Kawahara, S. Yamaguchi (Chubu University)

SAP-21 **ANALYSIS MODEL DEVELOPMENT AND SPECIFICATION PROPOSAL OF HYBRID SUPERCONDUCTING FAULT CURRENT LIMITER**
S.R. Lee[1], J.-Y. Park[1], J.-Y. Yoon[1], B. Lee[2]
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SAP-22 **STUDY ON CURRENT LIMITING CHARACTERISTICS ACCORDING TO FAULT TYPE AND FAULT ANGLE DURING CONNECTION BETWEEN THE WIRES FOR CURRENT LIMITER AND CABLE USING YBCO THIN FILM TYPE WIRE**
H.-I. Du[1], B.-S. Han[1], T.-H. Sung[2], S.-C. Han[2]
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SAP-23 **AC OVER-CURRENT CHARACTERISTICS OF YBCO COATED CONDUCTOR WITH COPPER STABILIZER LAYER CONSIDERING INSULATION CONDITION**
H.-I. Du, M.-J. Kim, S.-G. Doo, D.-H. Lee, B.-S. Han (Chonbuk National University)

SAP-24 **CURRENT LIMITING AND VOLTAGE COMPENSATING CHARACTERISTICS OF SFCLs USING MAGNETIC COUPLING OF TWO COILS**
S.-H. Lim, I.-K. You, J.-S. Kim, J.-F. Moon, J.-C. Kim (Soongsil University)

SAP-25 **STUDY ON CURRENT LIMITING CHARACTERISTICS OF SFCL WITH TWO TRIGGER CURRENT LEVELS**
S.-H. Lim, J.-C. Kim (Soongsil University)

SAP-26 **THE STABILITY OF THREE-PHASE SFCL AGAINST BREAK-DOWN OF SUPERCONDUCTING UNITS**
B.I. Jung[1], Y.S. Cho[1], H.S. Choi[1], D.C. Chung[2] ([1]Chosun University, [2]Woosuk University)

SAP-27 **INVESTIGATION OF REAL FIELD APPLICATION ISSUES FOR RESISTIVE TYPE SUPERCONDUCTING FAULT CURRENT LIMITERS FOR DISTRIBUTION ELECTRIC POWER NETWORKS**
B. Lee, T. Park, S. Lee (Hanyang University)

SAP-28 **RECORVERY CHARACTERISTICS OF MATRIX-TYPE SFCL WITH 2 x 3 MATRIX**
B.H. Yoo[1], D.C. Chung[1], Y.S. Cho[1], B.I. Jung[2], B.S. Hang[3], H.I. Doo[3]
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SAP-29 **QUENCH CHARACTERISTICS OF MATRIX-TYPE SFCL WITH AND WITHOUT MAGNETIC**
D.C. Chung[1], B.H. Yoo[1], Y.S. Cho[2], B.I. Jung[2], H.I. Doo[3], B.S. Han[3]
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SAP-30 **RATED-VOLTAGE ENHANCEMENT BY FAST-BREAKING OF THE FAULT CURRENT FOR A RESISTIVE SUPERCONDUCTING FAULT CURRENT LIMITER COMPONENT**
C.-R. Park, O.-B. Hyun, H.-R. Kim, S.-W. Yim, S.-D. Yu (Korea Electric Power Research Institute)

SAP-31 **THERMAL ANALYSIS OF THREE PHASE AIR-CORE TRANSFORMER USED IN VOLTAGE COMPENSATION TYPE ACTIVE SUPERCONDUCTING FAULT CURRENT LIMITER**
M. Song[1], Y. Tang[1], Y. Zhou[2], L. Chen[1], Z. Li[1], J. Li[1]
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SAP-32 **EFFECTS OF A VOLTAGE COMPENSATION TYPE ACTIVE SUPERCONDUCTING FAULT CURRENT LIMITER ON DISTANCE RELAY**
L. Chen[1], Y. Tang[1], J. Shi[1], L. Ren[1], M. Song[1], S. Cheng[1], Y. Hu[2], X. Chen[2]
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SAP-33 **STUDY ON TRANSPORT CURRENT CHARACTERISTICS OF THE WIRE FOR CABLE ACCORDING TO FAULT TYPE DURING CONNECTION BETWEEN THE WIRE FOR CABLE AND SFCL USING 2G HTS WIRE**
H.-I. Du, Y.-J. Kim, B.-S. Han (Chonbuk National University)

SAP-34 **DESIGN OF THE SUPERCONDUCTING DISTRIBUTION SYSTEM WITH DISTRIBUTED SWITCHING STATIONS**
J.-Y. Park, S.-R. Lee, J.-Y. Yoon (Korea Electrotechnology Research Institute)

SAP-35 **QUENCH PROTECTION SYSTEM FOR TWO-LAYER SUPERCONDUCTING COILS BY AN ACTIVE POWER METHOD**
T. Inoue, K. Sasaki, N. Nanato, S. Murase (Okayama University)

SAP-36 **TRANSIENT CHARACTERISTICS OF THREE-PHASE TRANSFORMER-TYPE SFCL UNDER UNSYMMETRICAL AND SYMMETRICAL FAULTS**
Y.-S. Cho[1], B.-I. Jung[1], H.-S. Choi[1], D.-C. Chung[2] ([1]Chosun University, [2]University of Woosuk)

SAP-37 **INSULATION DESIGN OF HTS TRANSFORMER WITH THE USE OF CONTINUOUS TRANSPOSED CONDUCTOR**
S.H. Kim, H.G. Cheon, J.H. Choi, J.W. Choi, T.S. Park (Gyeongsang National University)

SAP-38 **INVESTIGATION OF PARTIAL DISCHARGE PHENOMENA IN HTS TRANSFORMER ADOPTING DIFFERENT TYPE OF SENSORS**
S. Lee, J. Koo, B. Lee (Hanyang University)

SAP-39 **STABILIZING LAYERS CHARACTERISTICS OF Y-BASED COATED CONDUCTORS FOR SUPERCONDUCTING POWER TRANSFORMERS**
H. Okamoto[1], H. Hayashi[1], M. Iwakuma[2], T. Saito[3], Y. Aoki[4], T. Ito[5], K. Tanabe[5], Y. Shiohara[5]
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SAP-40 **CHARACTERISTICS OF NORMAL ZONE PROPAGATION AT THE END-RING OF FIELD COIL IN HTS MOTOR**
T. Kadota[1], S.B. Kim[1], J.-H. Joo[1], H. Sano[1], S. Murase[1], H.M. Kim[2], Y.-K. Kwon[2]
([1]Okayama University, [2]Korea Electrotechnology Research Institute)

SAP-41 **ELECTRICAL PERFORMANCE ANALYSIS OF HTS SYNCHRONOUS MOTOR BASED ON 3D FEM**
S. Baik[1], Y.K. Kwon[1], H.M. Kim[1], J.D. Lee[1], G.S. Park[2]
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SAP-42 **OPERATIONAL CHARACTERISTIC ANALYSIS OF CONDUCTION COOLING HTS SMES FOR REAL TIME DIGITAL SIMULATOR BASED POWER QUALITY ENHANCEMENT SIMULATION**
A.-R. Kim[1], D.-W. Kim[1], K.-M. Kim[1], H.-Y. Park[1], M. Park[1], I.-K. Yu[1], S.-H. Kim[2], K. Sim[2], K.-C. Seong[2]
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SAP-43 **A STUDY ON INSULATION CHARACTERISTICS ACCORDING TO COOLING METHODS OF THE HTS SMES**
S.H. Kim[1], J.H. Choi[1], H.G. Cheon[1], J.W. Choi[1], H.J. Kim[2], K.C. Seong[2]
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SAP-44 **DETERMINATION FOR SMES CAPACITY TO ENHANCE THE DYNAMIC STABILITY OF POWER SYSTEM**
J. Shi, T. Yuejin, R. Li, L. Jingdong, C. Shijie (Huazhong University of Science and Technology)

SAP-45 **HEAT CHARACTERISTIC ANALYSIS OF CONDUCTION COOLING TOROIDAL TYPE SMES**
K.M. Kim[1], A.-R. Kim[1], J.-G. Kim[1], M. Park[1], I.-K. Yu[1], K.-C. Seoung[2], S.-H. Kim[2], K. Sim[2]
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SAP-46 **MOBILE CONDUCTION-COOLED HTS SMES**
L. Ren, Y. Tang, J. Shi, J. Li, J. Wen (Huazhong University of Science and Technology)

SAP-47 **THE DESIGN OF 3 T LTS/HTS MAGNET FOR NMR RESEARCH AND THE RESEARCH ABOUT MANUFACTURING UNCERTAINTY**
S. Choi[1], S.E. Yang[1], Y.J. Kim[1], H.M. Kim[2], T.K. Ko[1] ([1]Yonsei University, [2]Korea Electrotechnology Research Institute)

SAP-48 **CHARACTERISTICS OF THE TRAPPED MAGNETIC FIELD BY HTS BULK ANNULI ARRANGED WITH GAPPING FOR COMPACT NMR MAGNETS**
M. Imai, R. Takano, K. Kashima, S.B. Kim (Okayama University)

SAP-49 **THERMAL PROPERTIES OF A LARGE-BORE CRYOCOOLED 10 T SUPERCONDUCTING**

MAGNET FOR A HYBRID MAGNET
M. Ishizuka[1,2], T. Hamajima[2], T. Itou[1], J. Sakuraba[1], G. Nishijima[2], S. Awaji[2], K. Watanabe[2]
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SAP-50 **MEASUREMENT OF THE RESIDUAL MAGNETIC FIELD AND RELAXATION IN YBCO COILS**
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SAP-51 **THERMAL STABILITY OF YBCO COATED CONDUCTOR WITH DIFFERENT Cu STABILIZER THICKNESS**
J.H. Bae, H.Y. Park, B.Y. Eom, M.H. Sohn, K.C. Seong (Korea Electrotechnology Research Institute)

SAP-52 **THE CONTACTLESS DETECTION OF LOCAL NORMAL TRANSITIONS IN SUPERCONDUCTING COILS BY USING POYNTING'S VECTOR METHOD**
K. Habu[1], S. Kaminohara[1], T. Kimoto[1], A. Kawagoe[1], F. Sumiyoshi[1], H. Okamoto[2]
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SAP-53 **STUDY ON THE LIGHTNING IMPULSE BREAKDOWN CHARACTERISTICS OF GASEOUS INSULATION MEDIA FOR THE DESIGN OF HIGH VOLTAGE SUPERCONDUCTING POWER APPARATUSES**
H. Kang[1], J.B. Nah[2], D.K. Bae[3], M.C. Ahn[4], T.K. Ko[1]
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SAP-54 **QUENCH PROTECTION TECHNIQUE FOR HTS COILS WITH ELECTRONIC WORKBENCH**
J.-H. Joo[1], S.B. Kim[1], T. Kadota[1], H. Sano[1], S. Murase[1], H.M. Kim[2], Y.-K. Kwon[2]
([1]Okayama University, [2]Korea Electrotechnology Research Institute)

SAP-55 **QUENCH AND RECOVERY CHARACTERISTICS OF SOLID NITROGEN (SN_2)-COOLED YBCO-COATED CONDUCTORS WITH VARIOUS STABILIZERS**
H. Lee[1], J.B. Song[1], H.S. Kim[1], K.L. Kim[1], K.J. Kim[1], J.H. Lee[1], H.M. Kim[2], H.-R. Kim[3], O.-B. Hyun[3]
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SAP-56 **A STUDY ON AN OPTIMAL ARRANGEMENT METHOD WITH THREE PAIRS OF CURRENT LEADS FOR HIGH-CURRENT ELECTRICAL POWER DEVICES**
H. Lee, J.H. Lee, J.B. Song, K.L. Kim, K.J. Kim (Korea University)

SAP-57 **EXPERIMENTAL STUDY ON THE DIELECTRIC CHARACTERISTICS OF LIQUID NITROGEN WITH RESPECT TO VARIOUS PRESSURES**
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SAP-58 **INSULATION DESIGN AND TEST OF A BUSHING FOR HTS POWER APPARATUSES**
S.H. Kim, J.W. Choi, H.G. Cheon, J.H. Choi, M.S. Pang (Gyeongsang National University)

SAP-59 **DEVELOPMENT OF CURRENT LEADS PREPARED BY THE TFA-MOD PROCESSED YBCO COATED CONDUCTOR**
K. Shiohara[1], S. Sakai[1], Y. Ishii[1], Y. Yamada[1], K. Tachikawa[1], T. Koizumi[2], Y. Aoki[2], T. Hasegawa[2], H. Tamura[3], T. Mito[3]
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SAP-60 **EXPERIMENTAL INVESTIGATION OF OPTICAL FIBER TEMPERATURE SENSORS AT CRYOGENIC TEMPERATURE AND IN HIGH MAGNETIC FIELDS**
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SAP-61 **COMPACT COUNTER-FLOW COOLING SYSTEM WITH SUBCOOLED GRAVITY-FED CIRCULATING LIQUID NITROGEN**
Y.V. Ivanov[1], A. Radovinsky[2], A. Zhukovsky[2], A. Sasaki[1], T. Kawahara[1], S. Yamaguchi[1]
([1]Chubu University, [2]Massachusetts Institute of Technology)

SAP-62 **FABRICATION OF APPARATUS FOR SLUSH NITROGEN PRODUCTION**
N. Nakamura, T. Komagome, R. Ono, M. Ikeuchi, H. Yaguchi, A. Machida
(MAYEKAWA MFG. CO., LTD)

SAP-63 **INVESTIGATION OF OPTIMAL MAGNETIC DISTRIBUTION FOR CYLINDRICAL TYPE POWER SUPPLY**
Y.D. Chung[1], D.K. Bae[2], Y.S. Yoon[3], T.K. Ko[4]
([1]The University of Suwon, [2]Chungju National University, [3]Ansan College of Technology, [4]Yonsei University)

SAP-64 **STATIC PROPERTIES OF HIGH TEMPERATURE SUPERCONDUCTOR BEARING FOR 10 kWh SUPERCONDUCTOR FLYWHEEL ENERGY STORAGE SYSTEM**
B.J. Park, Y.H. Han, S.Y. Jung, C.H. Kim, J.P. Lee, B.C. Park, S.C. Han, T.H. Sung
(Korea Electric Power Research Institute)

SAP-65 **A STUDY OF AN ACTIVE MAGNETIC SHIELDING METHOD FOR THE SUPERCONDUCTING MAGLEV**
K. Nemoto, M. Komori (Kyushu Institute of Technology)

SAP-66 **BASIC STUDY OF HTS MAGNET USING 2G WIRES FOR MAGLEV TRAIN**
M. Ogata, Y. Miyazaki, H. Hasegawa, T. Sasakawa, K. Nagashima
(Railway Technical Research Institute)

SAP-67 **STRUCTURAL PARAMETER OPTIMIZATION DESIGN FOR HALBACH PERMANENT MAGLEV RAIL**
F. Guo, J.Y. Tang, D.J. Li, L. Ren (Huazhong University of Science and Technology)

SAP-68 **DAMPING CHARACTERISTICS IN A MAGNETIC LEVITATION TYPE SUPERCONDUCTING SEISMIC ISOLATION DEVICE WITH EDDY CURRENT DAMPER**
S. Sasaki[1], K. Shimada[1], T. Yagai[1], M. Tsuda[1], T. Hamajima[1], N. Kawai[2], K. Yasui[2]
([1]Tohoku University, [2]Okumura Corporation)

SAP-69 **MAGNETIZING TECHNIQUE FOR THE PERMANENT MAGNETS BY INTENSE STATIC FIELDS GENERATED BY HTS BULK MAGNET**
N. Kawasaki[1], T. Muraya[1], J. Imai[1], S. Fukui[1], T. Sato[1], T. Oka[1], J. Ogawa[1], T. Terasawa[2], Y. Ito[2]
([1]Niigata University, [2]IMRA MATERIAL R&D CO., LTD.)

SAP-70 **PURIFICATION OF WASTEWATER FROM PAPER FACTORY BY SUPERCONDUCTING MAGNETIC SEPARATION**
D.-W. Ha[1], T.-H. Kim[1], J.-M. Kwon[1], M.-H. Sohn[1], S.-K. Baik[1], S.-S. Oh[1], R.-K. Ko[1], H.-S. Kim[1], H.-S. Ha[1], K.-C. Seong[1], Y.-H. Kim[2] ([1]Korea Electrotechnology Research Institute, [2]Andong National University)

SAP-71 **THE STUDY ON OPTIMIZATION ISSUES FOR MAGNETIC SEPARATION BY MAGNETIC CHROMATOGRAPHY**
R. Iwamoto[1], S.B. Kim[1], K. Kataoka[1], S. Noguchi[2] ([1]Okayama University, [2]Hokkaido University)

SAP-72 **REMOVAL OF PERSISTENT DISSOLVED ORGANIC MATTERS IN WATER BY SUPERCONDUCTING MAGNETIC SEPARATION WITH MAGNETIC MESOPOROUS ACTIVATED CARBONS**
K. Kondo, O. Miura, T. Jin, D. Ito (Tokyo Metropolitan University)

SAP-73 **A STUDY ON ACCUMULATION OF MAGNETIC DRUG IN THE CAPILLARY VESSEL OF TARGET ORGAN USING SUPERCONDUCTING MDDS**
F. Mishima[1], Y. Akiyama[1], K. Shirasuna[2], A. Miyamoto[2], S. Nishijima[1]
([1]Osaka University, [2]Obihiro University of Agriculture & Veterinary Medicine)

SAP-74 **DEVELOPMENT OF HIGH GRADIENT MAGNETIC SEPARATION SYSTEM UNDER DRY CONDITION**
Y. Nakai, F. Mishima, Y. Akiyama, S. Nishijima (Osaka University)

SAP-75 **REMOVAL, COLLECTION AND RECYCLING OF POSPHORUS IN SEWAGE WATER BY SUPERCONDUCTING HIGH GRADIENT MAGNETIC SEPARATION**
T. Ishiwata, O. Miura, D. Ito (Tokyo Metropolitan University)

SAP-76 **DEVELOPMENT OF HIGH GRADIENT MAGNETIC SEPARATION SYSTEM FOR REMOVING THE METALLIC WEAR DEBRIS TO BE PRESENT IN HIGHLY VISCOUS FLUID**
S. Hayashi, F. Mishima, Y. Akiyama, S. Nishijima (Osaka University)

SAP-77 **THE EFFECTS OF MAGNETIZATION METHOD AND THE SHAPE OF ELECTROMAGNETS FOR PERFORMANCE OF 3-D SUPERCONDUCTING ACTUATOR USING HTS BULKS**
D. Inoue, S.B. Kim, K. Okugawa, Y. Uwani, S. Murase (Okayama University)

SAP-78 **FUNDAMENTAL STUDY ON MAGNETIC SEPARATION OF ORGANIC DYES**
M. Fang, F. Mishima, Y. Akiyama, S. Nishijima (Osaka University)

SAP-79 **INTERACTION BETWEEN RING PERMANENT MAGNETS AND BULK Dy-Ba-Cu-O SUPERCONDUCTORS**
H. Kurabayashi[1], S. Horikoshi[1], A. Suzuki[1], M. Ikeda[1], A. Wongsatanawarid[1], H. Seki[1], S. Akiyama[2], M. Hiragushi[3], M. Murakami[1]
([1]Shibaura Institute of Technology, [2]Magneo-Giken, [3]SEIKOW Chemical Engineering)

SAP-80 **NUMERICAL EVALUATION OF HYSTERESIS LOSS OF A QMG COIL MAGNET**
M. Tsuchimoto (Hokkaido Institute of Technology)

SAP-81 **LARGE AND SPATIAL MAGNETIC FIELD MODULATION USING SUPERCONDUCTING BULK MAGNET AND SILICON STEEL**
H. Fujishiro, D. Furuta, K. Yaegashi, T. Naito, N. Yoshimoto (Iwate University)

SAP-82 **MAGNETIC FIELD AND GRADIENT ANALYSIS AROUND MATRIX FOR HGMS**
S. Baik[1], D.W. Ha[1], T.H. Kim[1], G.S. Park[2]
([1]Korea Electrotechnology Research Institute, [2]Pusan National University)

SAP-83 **DETECTION OF AE SIGNALS FROM A HTS TAPES DURING QUENCHING IN A SOLID CRYOGEN-COOLING SYSTEM**
H. Lee, K.J. Kim, J.B. Song, J.H. Kim, J.H. Lee (Korea University)

Poster Session II

Nov. 4 (Wed.) 13:40 - 15:40 Room 101+102 & Multi-Purpose Hall (1F)

Physics and Chemistry

Chairperson:
S. Okuma (Tokyo Institute of Technology)

PCP-1 **THE *ab*-PLANE MAGNETIC SUSCEPTIBILITY STUDY IN AN INFILTRATED YBaCuO BULK SUPERCONDUCTOR**
K. Kwak[1], J. Yoo[1], S. Lee[1], H.Y. Lee[1], D. Youm[1], B.J. Park[2], Y.H. Han[2], C.-J. Kim[3], S.B. Park[3]
([1]Korea Advanced Institute of Science and Technology, [2]Korea Electric Power Research Institute, [3]Korea Atomic Energy Research Institute)

PCP-2 **ANISOTROPIC PROPERTIES OF Sm-123 SUPERCONDUCTORS ANALYZED BY GRAINED BEAN MODEL**
A. Ishimatsu, T. Akune, N. Sakamoto (Kyushu Sangyo University)

PCP-3 **PROPERTIES OF MICROWAVE SURFACE RESISTANCE OF HTS FILMS UNDER THE DC MAGNETIC FIELD**
S. Nakayama, K. Nakagawa, A. Saito, S. Ohshima (Yamagata University)

PCP-4 **EFFECT OF Mg^{2+} SUBSTITUTION AT Ca SITE ON CRITICAL TEMPERATURE AND SUPERCONDUCTING FLUCTUATION BEHAVIOR OF (Tl,Pb)1212 CERAMICS**
A.K. Yahya[1], E.S. Marsom[2], N.H. Ahmad[1] ([1]Universiti Teknologi Mara, [2]University Tenaga Nasional)

PCP-5 **ELECTRONIC INHOMOGENEITY AND OPTICAL RESPONSE OF Bi2212**
M. Ishikado[1], K.M. Kojima[2], S. Uchida[2] ([1]Japan Atomic Energy Agency, [2]The University of Tokyo)

PCP-6 **ELECTRON-PHONON INTERACTION IN $Gd_{1-x}Ca_xBaSrCu_3O_{7-\delta}$ SUPERCONDUCTORS**
T.V. Chong[1], S. Kambe[1], H. Kawaji[2], T. Atake[2], O. Ishii[1]
([1]Yamagata University, [2]Tokyo Institute of Technology)

PCP-7 **PREPARATION AND PROPERTIES OF Ca-DOPED $Bi_{2+x}Sr_{2-x}CuO_{6+\delta}$**
R. Yoshizaki, H. Ikeda, K. Kadowaki (University of Tsukuba)

PCP-8 **PREPARATION OF $(Bi,Pb)_2Sr_{1.8}CuO_y$ AND ITS PHYSICAL PROPERTIES**
M. Sakai[1], T. Sato[1], S. Kambe[1], O. Ishii[1], T. Atake[2], H. Kawaji[2]
([1]Yamagata University, [2]Tokyo Institute of Technology)

PCP-9 **SUPERCONDUCTING PROPERTY OF Zr-Co AND Zr-Co-Al ALLOYS FABRICATED BY RAPID SOLIDIFICATION**
D. Okai[1], T. Yamasaki[1], G. Motoyama[1], H. Kimura[2], A. Inoue[2]
([1]University of Hyogo, [2]Tohoku University)

PCP-10 **INTERGRAIN ORDERING PROCESSES OF $YBa_2Cu_4O_8$ AND RELATED COMPLEX CERAMIC SYSTEMS**
M. Hagiwara[1], T. Shima[1], R. Kitada[1], H. Deguchi[2], K. Koyama[3]
([1]Kyoto Institute of Technology, [2]Kyushu Institute of Technology, [3]The University of Tokushima)

PCP-11 **GROWTH AND SUPERCONDUCTING PROPERTIES OF $RBa_2Cu_3O_x$ (R:RARE-EARTH ELEMENTS) SINGLE-CRYSTALLINE WHISKERS**
M. Nagao[1], S. Watauchi[1], I. Tanaka[1], T. Okutsu[2], Y. Takano[2], T. Hatano[2], H. Maeda[2]
([1]University of Yamanashi, [2]National Institute for Materials Science)

PCP-12 **NEW METHOD OF MEASURING OXYGEN CONTENT IN CUPRATE SUPERCONDUCTORS WITH THE DISSOLEVED OXYGEN SENSOR**
A. Tashiro, S. Kambe, O. Ishii (Yamagata University)

PCP-13 **EFFECT OF STRUCTURAL PROPERTIES ON HOLE DOPING IN THE TWO-LEGGED Cu_2O_3 LADDER IN INCOMMENSURATE COMPOSITE CRYSTAL STRUCTURE OF $Sr_{14}Cu_{24}O_{41}$**
Y. Gotoh[1], J. Akimitsu[2]
([1]National Institute of Advanced Industrial Science and Technology, [2]Aoyama Gakuin University)

PCP-14 **PREPARATION AND PHYSICAL PROPERTIES OF INDIUM-BASED CUPRATE COMPOUNDS**
Y. Watanabe, H. Oishi, S. Kambe, O. Ishii (Yamagata University)

PCP-15 **MAGNETIC UNI- AND TRI-AXIAL GRAIN-ORIENTATION IN SUPERCONDUCTORS WITH LAYERED STRUCTURES**
S. Horii[1], M. Yamaki[1], H. Ogino[2], T. Maeda[1], K. Kishio[2], J. Shimoyama[2]
([1]Kochi University of Technology, [2]The University of Tokyo)

PCP-16 **SYNTHESIS OF POLYCRYSTALLINE LaFeAs(O,F) OXYPNICTIDE SUPERCONDUCTOR**
M. Ishikado[1], S. Shamoto[1], H. Kito[2], A. Iyo[2], H. Eisaki[2]
([1]Japan Atomic Energy Agency, [2]National Institute of Advanced Industrial Science and Technology)

PCP-17 **3-BAND THEORY OF Fe PNICTIDE SUPERCONDUCTORS**
K. Yamaji, T. Yanagisawa, I. Hase (National Institute of Advanced Industrial Science and Technology)

PCP-18 **GIGANTIC UNIAXIAL PRESSURE EFFECT IN SINGLE CRYSTALS OF IRON-BASED SUPERCONDUCTORS**
Y. Nakashima, H. Yui, T. Sasagawa (Tokyo Institute of Technology)

PCP-19 **FIRST-PRINCIPLES CALCULATION FOR THE ANISOTROPY OF IRON-BASED SUPERCONDUCTORS**
H. Nakamura, M. Machida (Japan Atomic Energy Agency)

PCP-20 **SCANNING TUNNELING SPECTORSCOPY ON IRON-OXYPNICTIDE SUPERCONDUCTOR $NdFeAs(O_{0.9}F_{0.1})$**
A. Sugimoto[1], T. Ekino[1], R. Ukita[1], K. Shohara[1], H. Okabe[2], J. Akimitsu[2], A.M. Gabovich[3]
([1]Hiroshima University, [2]Aoyama Gakuin University, [3]National Academy of Sciences)

PCP-21 **COMPARE OF THE ELECTRONIC STRUCTURES OF F- AND Ir- DOPED SmFeAsO**
Y. Zhang[1], W.G. You[1], C.H. Cheng[2], Y.L. Chen[1], Y.J. Cui[1], H. Zhang[3], Y. Zhao[1,2]
([1]Southwest Jiaotong University, [2]University of New South Wales, [3]Peking University)

PCP-22 **SUPERCONDUCTIVITY AND MAGNETISM IN Ir-DOPED GdFeAsO**
Y. Cui[1], Y. Chen[1], C. Cheng[2], Y. Yang[1], J. Jiang[1], Y. Wang[1], Y. Zhang[1], Y. Zhao[1,2]
([1]Southwest Jiaotong University, [2]University of New South Wales)

PCP-23 **SUPERCONDUCTING PROPERTIES OF S-SUBSTITUTED FeTe**
K. Deguchi[1,2], Y. Mizuguchi[2,3], S. Ogawara[3], T. Watanabe[3], S. Tsuda[1,2], T. Yamaguchi[1,2],
Y. Takano[1,2,3] ([1]National Institute for Materials Science, [2]JST-TRIP, [3]University of Tsukuba)

PCP-24 **MAGNETIC AND SUPERCONDUCTING PROPERTIES OF BINARY SELENIDES**
N. Umeyama[1,2], M. Tomura[2], Y. Hara[3], K. Takase[4], N. Miyakawa[2], S. Ikeda[1]
([1]National Institute of Advanced Industrial Science and Technology, [2]Tokyo University of Science,
[3]Ibaraki National College of Technology, [4]Nihon University)

PCP-25 **Cancelled**

PCP-26 **FABRICATION OF EPITAXIAL Fe-Te-S THIN FILMS BY LASER ABLATION OF $FeTe_{0.8}S_{0.4}$ TARGET**
Y. Haruyama[1], K. Matsumoto[1], P. Mele[1], M. Mukaida[2], Y. Yoshida[3], Y. Ichino[3], T. Kiss[2]
([1]Kyushu Institute of Technology, [2]Kyushu University, [3]Nagoya University)

PCP-27 **GROWTH OF $FeM_{1-x}S_x$ (M=Se,Te) THIN FILMS BY A Nd:YAG-PLD**
Y. Fujii[1,2], K. Yokota[1,2], R. Teranishi[1,2], N. Mori[1], M. Mukaida[1,2], M. Inoue[1,2], T. Kiss[1,2], K. Matsumoto[2,3],
Y. Ichino[2,4], Y. Yoshida[2,4], A. Ichinose[2,5]
([1]Kyushu University, [2]JST-TRIP, [3]Kyushu Institute of Technology, [4]Nagoya University, [5]Central Research Institute of Electric Power Industry)

PCP-28 **GROWTH OF 122 FAMILY THIN FILMS OF SUPERCONDUCTORS BY A PLD METHOD**
A. Umeno[1,2], R. Teranishi[1,2], N. Mori[1,2], M. Mukaida[1,2], M. Inoue[1,2], T. Kiss[1,2], K. Matsumoto[2,3], Y. Ichino[2,4],
Y. Yoshida[2,4], A. Ichinose[2,5]
([1]Kyushu University, [2]JST-TRIP, [3]Kyushu Institute of Technology, [4]Nagoya University, [5]Central Research Institute of Electric Power Industry)

PCP-29 **RESEARCH FOR SINGLE CRYSTAL GROWTH AND SUPERCONDUCTIVITY OF FeSe**
K. Yuki[1], M. Mukaida[1], R. Teranishi[1], N. Mori[1], T. Kiss[1], K. Matsumoto[2], Y. Yoshida[3], A. Ichinose[4]
([1]Kyushu University, [2]Kyushu Institute of Technology, [3]Nagoya University, [4]Central Research Institute of Electric Power Industry)

PCP-30 **$SmFeAsO_{1-x}F_x$ THIN FILM GROWTH BY PULSED LASER DEPOSITION**
K. Yokota[1], M. Mukaida[1], N. Mori[1], R. Teranishi[1], T. Kiss[1], M. Inoue[1], K. Matsumoto[2], A. Ichinose[3],
Y. Yoshida[4]
([1]Kyushu University, [2]Kyushu Institute of Technology, [3]Central Research Institute of Electric Power Industry, [4]Nagoya University)

PCP-31 **SUPERCONDUCTIVITY AND ANTIFERROMAGNETISM IN THE PHASE DIAGRAM OF THE FRUSTRATED HUBBARD MODEL WITHIN A VARIATIONAL STUDY**
K. Kobayashi[1], H. Yokoyama[2] ([1]Chiba Institute of Technology, [2]Tohoku University)

PCP-32 **ANOMALOUS HALL EFFECT IN *n*-TYPE CUPRATES DUE TO CURRENT VERTEX CORRECTIONS INDUCED BY ANTIFERROMAGNETIC FLUCTUATIONS**
H. Kontani[1], G.S. Jenkins[2], D.C. Schmadel[2], P.L. Bach[2], R.L. Greene[2], X. Bechamp-Laganiere[3],
G. Roberge[3], P. Fournier[3], H.D. Drew[2]
([1]Nagoya University, [2]University of Maryland, [3]Universite de Sherbrooke)

PCP-33 **MAGNETIC FIELD EFFECT ON THE PAIRING STATE COMPETITION IN QUASI-ONE-DIMENSIONAL ORGANIC SUPERCONDUCTORS $(TMTSF)_2X$**
H. Aizawa[1], K. Kuroki[1], Y. Tanaka[2] ([1]The University of Electro-Communications, [2]Nagoya University)

PCP-34 **^{11}B & ^{195}Pt NMR STUDY OF THE SUPERCONDUCTOR $Li_2(PD_{1-x}PT_x)_3B$ WITHOUT INVERSION SYMMETRY**

S. Harada, J. Hukui, Y. Inada, G.-Q. Zheng (Okayama University)

PCP-35 **IRON DOPING EFFECT ON SUPERCONDUCTING PROPERTIES OF MgB_2**
C.H. Cheng[1], Y. Yang[2], C. Ke[2], H.T. Lin[3]
([1]University of New South Wales, [2]Southwest Jiaotong University, [3]Cheng Shiu University)

PCP-36 **CONCURRENT DOPING EFFECT OF Ti AND NANO-DIAMOND ON FLUX PINNING OF MgB_2**
Y. Zhao[1,2], C. Ke[1], C.H. Cheng[2], Y. Yang[1], P. Munroe[2]
([1]Southwest Jiaotong University, [2]University of New South Wales)

PCP-37 **EFFECT OF SORBIC ACID DOPING ON FLUX PINNING IN BULK MgB_2**
Y. Yang[1], C.H. Cheng[2], L. Wang[1], H.H. Sun[1], Y. Zhao[1,2]
([1]Southwest Jiaotong University, [2]University of New South Wales)

PCP-38 **EFFECT OF Zr DOPING ON THE PROPERTIES OF CERAMICS BULK SUPERCONDUCTORS**
S.H. Lee, Y. Choi (Sun Moon University)

PCP-39 **CHARACTERISTICS OF CERAMICS BULK SUPERCONDUCTORS**
S.H. Lee, Y. Choi (Sun Moon University)

Vortex Physics

Chairperson:
N. Chikumoto (Superconductivity Research Laboratory, ISTEC)

VPP-1 **CRITICAL CURRENT DENSITIES AND VORTEX DYNAMICS IN $FeTe_xSe_{1-x}$ SINGLE CRYSTALS**
T. Taen, Y. Tsuchiya, Y. Nakajima, T. Tamegai (The University of Tokyo)

VPP-2 **FLUX JUMP IN ION IRRADIATED AND Hf DOPED MgB_2 SUPERCONDUCTOR**
A. Talapatra[1], S.K. Bandyopadhyay[1], P. Sen[1], A. Banerjee[2], R. Rawat[2], V. Ganesan[2]
([1]Variable Energy Cyclotron Centre India, [2]UGC-DAE Consortium for Scientific Research India)

VPP-3 **TEMPORAL CHAOTIC BEHAVIOUR OF VORTEX MOTION IN A TYPE-II SUPERCONDUCTORS WITH PERIODICALLY-DISTRIBUTED PINNING CENTRES**
H.T. Lin[2], C.H. Cheng[1] ([1]University of New South Wales, [2]Cheng Shiu University)

VPP-4 **INFLUENCE OF FLAT MILLING ON VORTEX MATCHING EFFECT IN $Bi_2Sr_2CaCu_2O_{8+y}$ WITH ANTIDOT ARRAY**
S. Ooi, T. Mochiku, K. Hirata (National Institute for Materials Science)

VPP-5 **DEVELOPMENT OF SURFACE MAGNETO-OPTICAL IMAGING METHOD**
Y. Tsuchiya, Y. Nakajima, T. Tamegai (The University of Tokyo)

VPP-6 **OBSERVATION OF MAGNETIC FLUX PENETRATION INTO YBCO STRIP LINE BY A SCANNING LASER MAGNETO-OPTICAL MICROSCOPE**
K. Takahashi, H. Murakami, I. Kawayama, M. Tonouchi (Osaka University)

VPP-7 **THE ANOMALOUS HALL RESISTIVITY IN Zn DOPED YBCO SINGLE CRYSTALS**
M. Hussain[1], K. Takita[2] ([1]University Technology Petronas, [2]University of Tsukuba)

VPP-8 **ORIGIN OF THE FAST MAGNETIZATION RELAXATION AT LOW TEMPERATURES IN HTS WITH STRONG PINNING**
L. Miu[1], I. Ivan[1], P. Badica[2], G. Jakob[2], D. Miu[3], P. Mele[4], K. Matsumoto[4], M. Mukaida[5], Y. Yoshida[6], T. Horide[7], A. Ichinose[8], S. Horii[9]
([1]National Institute of Materials Physics Romania, [2]University of Mainz, [3]National Institute of Laser, Plasma, and Radiation Physics Romania, [4]Kyushu Institute of Technology, [5]Kyushu University, [6]Nagoya University, [7]Kyoto University, [8]Central Research Institute of Electric Power Industry, [9]The University of Tokyo)

VPP-9 **RESEARCH ON FLUX-FLOW OSCILLATORS INDUCED DIFFERENT TYPES OF PINNING**

POTENTIALS
Y. Yamada[1], K(e). Nakajima[2], K(o). Nakajima[3]
([1]Oyama National College of Technology, [2]Yamagata University, [3]Tohoku University)

VPP-10 **DYNAMICS AND MODE LOCKING OF CIRCULATING VORTICES IN A CORBINO DISK**
S. Okuma[1], Y. Yamazaki[1], Y. Matsumura[1], N. Kokubo[2]
([1]Tokyo Institute of Technology, [2]Kyushu University)

VPP-11 **REVERSIBLE-IRREVERSIBLE TRANSITION IN PERIODICALLY DRIVEN VORTICES**
S. Okuma, Y. Tsugawa (Tokyo Institute of Technology)

VPP-12 **DISAPPEARANCE OF SHEAR RIGIDITY OF DRIVEN VORTICES DETECTED BY MODE LOCKING**
S. Okuma[1], H. Imaizumi[1], N. Kokubo[2] ([1]Tokyo Institute of Technology, [2]Kyushu University)

VPP-13 **PERIODIC MOTION OF DRIVEN VORTEX LATTICE IN AMORPHOUS FILMS DETECTED BY MODE LOCKING EXPERIMENTS**
N. Kokubo, T. Yoshimura, K. Yamada, B. Shinozaki (Kyushu University)

VPP-14 **COMPLEX DYNAMICS OF A JOSEPHSON JUNCTION NETWORK DRIVEN BY MODULATED CURRENTS**
T. Kawaguchi (University of Yamanashi)

VPP-15 **REVERSIBLE SWITCHING BETWEEN VORTEX STATES BY SUPERCUREENT INJECTION INTO MESOSCOPIC SUPERCONDUCTORS**
S. Hatsumi, Y. Kuroda, Y. Ootuka, A. Kanda (University of Tsukuba)

VPP-16 **INFLUENCE OF DEFECTS ON VORTEX PENETRATION AND EXPULSION IN MESOSCOPIC SUPERCONDUCTORS**
Y. Kuroda, S. Hatsumi, Y. Ootuka, A. Kanda (University of Tsukuba)

VPP-17 **QUASI-PARTICLE STRUCTURE OF THE VORTEX STATES IN NANO-SIZED SUPERCONDUCTORS**
M. Kato[1,2], T. Yotsuya[1,2], H. Suematsu[1,2], S. Kawamata[1,2], T. Ishida[1,2]
([1]Osaka Prefecture University, [2]JST-CREST)

VPP-18 **ANOMALOUS RESISTIVITY BEHAVIOR IN MESOSCOPIC SINGLE CRYSTALS $Bi_2Sr_2CaCu_2O_{8+d}$ IN HIGH MAGNETIC FIELDS**
J. Mirkovic[1], T. Saito[2], S. Deguchi[2], T. Yamamoto[2], K. Kadowaki[2]
([1]University of Montenegro, [2]University of Tsukuba)

VPP-19 **SIMULATION STUDY ON THE VORTEX PENETRATION IN THE PRESENCE OF THE SQUARE ANTIDOT ARRAY**
N. Nakai, M. Machida (Japan Atomic Energy Agency)

VPP-20 **NOVEL PHASE TRANSITION BETWEEN GIANT VORTEX AND VORTEX MOLECULE STATE**
H. Suematsu, M. Kato, T. Ishida (Osaka Prefecture University)

VPP-21 **MULTI-CONNECTED SUPERCONDUCTORS IN A MAGNETIC FIELD**
O. Sato[1], M. Kato[2] ([1]Osaka Prefectural College of Technology, [2]Osaka Prefecture University)

VPP-22 **QUASI-PARITICLE EXCITATION AROUND A PAIR OF HALFQUANTUM VORTICES (HQVs) IN *p*- AND *f*-WAVE SUPERCONDUCTORS**
Y. Niwa[1], M. Kato[1], K. Maki[2] ([1]Osaka Prefecture University, [2]University of Southern Carifornia)

VPP-23 **SELF-CONSISTENT SOLUTION OF A QUASI-PARTICLE STRUCTURE AROUND A SINGLE VORTEX IN HIGH-T_c SUPERCONDUCTORS**
S. Tomita[1], M. Kato[1], K. Maki[2] ([1]Osaka Prefecture University, [2]University of Southern California)

VPP-24 **ANOMALOUS JOSEPHSON VORTEX SOLUTIONS IN JOSEPHSON JUNCTIONS WITH MULTIPLE TUNNELING CHANNELS**
Y. Ota[1], M. Machida[1], T. Koyama[2], H. Matsumoto[2] ([1]Japan Atomic Energy Agency, [2]Tohoku University)

Bulks and Characterization

Chairperson:
X. Yao (Shanghai Jiao Tong University)

BLP-1 **Cancelled**

BLP-2 **OXYGEN DIFFUSION IN TOP SEED MELT GROWTH PROCESSED $YBa_2Cu_3O_{7-y}$ SUPERCONDUCTORS WITH VARIOUS GROWTH RATES**
S.-A. Jung[1], B.-H. Jun[1], B.J. Park[2], Y.H. Han[2], S.-I. Hong[3], B.-S. Seong[1], S.-D. Park[1], C.-J. Kim[1]
([1]Korea Atomic Energy Research Institute, [2]Korea Electric Power Research Institute, [3]Chungnam National University)

BLP-3 **GROWTH OF HIGH PERFORMANCE SmBCO BULK SUPERCONDUCTOR WITH THE ADDITION OF $Sm_2Ba_4Cu_2O_9$ PHASE**
S. Lijie[1], L. Wei[1], L. Shufeng[1], M. Tomaz[2], Y. Xin[1] ([1]Shanghai Jiao Tong University, [2]Jozef Stefan Institute)

BLP-4 **EFFECTS OF CALCIUM DOPING ON THE CRITICAL CURRENT DENSITY OF TOP-SEEDED MELT GROWTH PROCESSED YBCO SUPERCONDUCTORS**
C.-J. Kim[1], B.H. Jun[1], S.D. Park[1], J.S. Chio[1], T.H. Sung[2], B.S. Seong[1]
([1]Korea Atomic Energy Research Institute, [2]Korea Electric Power Research Institute)

BLP-5 **STUDY ON OXYGEN HEAT TREATMENT FOR SINGLE GRAIN YBCO BULK OF HIGH TEMPERATURE SUPERCONDUCTOR BEARING**
B.J. Park[1], Y.H. Han[1], S.Y. Jung[1], C.H. Kim[1], S.D. Park[2], C.J. Kim[2], T.H. Sung[1]
([1]Korea Electric Power Research Institute, [2]Korea Atomic Energy Research Institute)

BLP-6 **THERMAL STRESS ANALYSIS IN YBCO SUPERCONDUCTORS WITH ARTIFICIAL HOLES**
G. Jang[1], H.J. Lee[2], C.H. Kim[2], Y.H. Han[3], T.H. Sung[3] ([1]Chungbuk National University, [2]Korea Atomic Energy Research Institute, [3]Korea Electric Power Research Institute)

BLP-7 **Cancelled**

BLP-8 **THERMAL CONDUCTIVITY OF Dy-123 SUPERCONDUCTOR COMPOSED WITH Pt-Rh WIRES**
H. Shimada[1], H. Fujimoto[2], T. Yamaguchi[1], S. Yamazaki[3], S. Yoshizawa[1]
([1]Meisei University, [2]Railway Technical Research Institute, [3]Kogakuin University)

BLP-9 **MAGNETIC FIELD OF LARGE-BORE RESIN-IMPREGNATED BULK SUPERCONDUCTOR ANNULI**
M. Tomita, Y. Fukumoto (Railway Technical Research Institute)

BLP-10 **MECHANICAL PROPERTIES OF Ag ADDED Dy123 LOW POROSITY BULKS**
A. Murakami[1], K. Otaka[1], A. Iwamoto[2] ([1]Hirosaki University, [2]National Institute for Fusion Science)

BLP-11 **EFFECTS OF BINDER ADDITION ON THE MECHANICAL PROPERTIES OF BULK Y-Ba-Cu-O SUPERCONDUCTORS**
H. Seki, A. Wongsatanawarid, S. Kobayashi, Y. Ikeda, M. Murakami (Shibaura Institute of Technology)

BLP-12 **CRACK REDUCTION IN A LARGE BULK Y-Ba-Cu-O SUPERCONDUCTOR THROUGH LIQUID BINDER ADDITION**
A. Wongsatanawarid, H. Seki, S. Kobayashi, M. Murakami (Shibaura Institute of Technology)

BLP-13 **REINFROCEMENT OF BULK Y-Ba-Cu-O SUPERCONDUCTOR WITH Fe-Mn-Si SHAPE MEMORY ALLOY RING**
Y. Shimpo[1], H. Seki[1], A. Wongsatanawarid[1], S. Taniguchi[1], T. Maruyama[2], T. Kurita[2], M. Murakami[1]
([1]Shibaura Institute of Technology, [2]Awaji Materia Co., Ltd.)

BLP-14 **CHARACTERIZATION OF NON-CONTACT PERMANENT MAGNETIC CLUTCH FOR SUPERCONDUCTING FLYWHEEL**
M. Ikeda[1], K. Takeda[1], A. Suzuki[1], H. Kurabayashi[1], A. Wongsatanawarid[1], H. Seki[1], H. Hasegawa[2], H. Seino[2], K. Nagashima[2], M. Murakami[1]
([1]Shibaura Institute of Technology, [2]Railway Technical Research Institute)

BLP-15 **MECHANICAL PROPERTY OF Dy-123 SUPERCONDUCTOR COMPOSED WITH Pt-Rh WIRES**
H. Shimada[1], H. Fujimoto[2], S. Yamazaki[3], S. Yoshizawa[1]
([1]Meisei University, [2]Railway Technical Research Institute, [3]Kogakuin University)

BLP-16 **NUMERICAL SIMULATION OF INDUCTIVE METHOD FOR DETERMINING SPATIAL DISTRIBUTION OF CRITICAL CURRENT DENSITY**
A. Kamitani[1], T. Takayama[1], A. Tanaka[1], S. Ikuno[2]
([1]Yamagata University, [2]Tokyo University of Technology)

BLP-17 **NUMERICAL CALCULATION OF TRAPPED MAGNETIC FIELD SQUARE MULTIPLE BULK SUPERCONDUCTORS**
A. Aydiner, E. Yanmaz (Karadeniz Technical University)

BLP-18 **THREE-DIMENSIONAL SIMULATION OF SHIELDING CURRENT DENSITY IN HTS USING EELEMENT-FREE GALERKIN METHOD**
S. Ikuno[1], T. Takayama[2], A. Kamitani[2] ([1]Tokyo University of Technology, [2]Yamagata University)

BLP-19 **EFFECTS OF In_2O_3 ADDITION ON THE CRYSTAL GROWTH AND SUPERCONDUCTING PROPERTIES OF $REBa_2Cu_3O_y$**
R. Kita[1], K. Sakimoto[1], S. Nakamura[1], T. Nakamura[1], O. Miura[2], K. Yamada[3], K. Kaneko[3]
([1]Shizuoka University, [2]Tokyo Metropolitan University, [3]Kyushu University)

BLP-20 **EFFECT OF Mo ADDITION ON THE SUPERCONDUCTING PROPERTIES OF $YBa_2Cu_3O_{7-y}$ SINGLE CRYSTAL**
J. Youn[1], C.-J. Kim[2], K. No[1], B.-H. Jun[2], Y. Kim[2], Y.H. Han[3], B.J. Park[3]
([1]Korea Advanced Institute of Science and Technology, [2]Korea Atomic Energy Research Institute, [3]Korea Electric Power Research Institute)

BLP-21 **EVALUATION OF MAGNETIC FORCE DISTRIBUTION ON A PAIR OF SUPERCONDUCTING BULK MAGNETS**
K. Yokoyama[1], T. Oka[2], K. Noto[3]
([1]Ashikaga Institute of Technology, [2]Niigata University, [3]Iwate University)

BLP-22 **CONTROL OF ACTIVE MAGNETIC LEVITATION SYSTEM USING SPHERE-SHAPED HTS BULK FOR INERTIAL NUCLEAR FUSION**
X. Lu, T. Ou, K. Abe, H. Ueda, A. Ishiyama, K. Agatsuma (Waseda University)

BLP-23 **CORRELATION BETWEEN CRITICAL CURRENT DENSITY AND *n*-VALUE IN THE MgB_2 SUPERCONDUCTOR WIRES**
J.H. Kim[1], H. Kumakura[1], A. Matsumoto[1], S. Choi[1], T. Kiyoshi[1], S.X. Dou[2]
([1]National Institute for Materials Science, [2]University of Wollongong)

BLP-24 **INFLUENCE OF A Mg DIFFUSIVE METHOD USING BALL MILLED B POWDERS ON SUPERCONDUCTING PROPERTIES OF MgB_2 BULKS**
H. Matsuoka[1], Y. Watanabe[1], M. Maeda[2], Y. Kubota[1] ([1]Nihon University, [2]University of Wollongong)

BLP-25 **PORE FORMATION AND CRITICAL CURRENT DENSITY OF *IN-SITU* AND *EX-SITU* PROCESSED MgB_2 SUPERCONDUCTORS**
J. Yi[1], C.-J. Kim[1], K.-N. Choo[1], J. Joo[2], B.-H. Jun[1]
([1]Korea Atomic Energy Research Institute, [2]Sungkyunkwan University)

BLP-26 **INFLUENCE OF Ag ADDITION ON SUPERCONDUCTING PROPERTIES FOR THE HIGH ENERGY BALL MILLED MgB_2 SUPERCONDUCTOR**
H.J. Kim[1], C.J. Kim[2], H.W. Park[1]
([1]Korea University of Technology and Education, [2]Korea Atomic Energy Research Institute)

BLP-27 **THE EFFECTS OF C SUBSTITUTION ON THE FIELD DEPENDENCE OF CRITICAL CURRENT DENSITY IN NANO SiC ADDED MgB_2**
S.K. Chen[1], X. Xun[2], J.H. Kim[2], S.X. Dou[2], J.L. Driscoll[3]
([1]Universiti Putra Malaysia, [2]University of Wollongong, [3]University of Cambridge)

BLP-28 **THE MAGNETIC FLUX BEHAVIORS OF MgB_2 BY NANOPARTICLE ADDITIONS**

K. Song[1], S. Kang[1], C. Park[2] ([1]Chonbuk National University, [2]Seoul National University)

BLP-29 **LOW TEMPERTURE SYNTHESIS AND MAGNETIC PROPERTIES OF T'-RE_2CuO_4 (RE = La, Nd, Sm) POLYCRYSTALLINE**
S. Ueda, S. Asai, M. Naito (Tokyo University of Agriculture and Technology)

BLP-30 **EFFECT OF SILVER ADDITION ON THE SUPERCONDUCTING PROPERTIES OF $Sr_{0.6}K_{0.4}Fe_2As_2$**
L. Wang, Y. Qi, X. Zhang, Z. Gao, D. Wang, Y. Ma (Chinese Academy of Sciences)

BLP-31 **CRITICAL CURRENT DENSITY PROPERTIES IN POLYCRISTALLINE $Sr_{0.6}K_{0.4}Fe_2As_2$ SUPERCONDUCTOR**
N. Yoshida[1], M. Kiuchi[1], S.E. Otabe[1], T. Matsushita[1], J. Ge[2], B. Ni[2], L. Wang[3], Y. Qi[3], X. Zhang[3], Z. Gao[3], Y. Ma[3]
([1]Kyushu Institute of Technology, [2]Fukuoka Institute of Technology, [3]Chinese Academy of Sciences)

BLP-32 **IRON-BASED 11-TYPE SUPERCONDUCTORS FABRICATED BY HIGH PRESSURE TORSION PROCESSING METHOD**
M. Matsuyama[1], H. Iwaoka[1], R. Teranishi[1], N. Mori[1], M. Mukaida[1], Z. Horita[1], M. Inoue[1], T. Kiss[1], K. Matsumoto[2], Y. Yoshida[3], A. Ichinose[4]
([1]Kyushu University, [2]Kyushu Institute of Technology, [3]Nagoya University, [4]Central Research Institute of Electric Power Industry)

BLP-33 **A NEW SEEDING APPROACH TO THE MELT TEXTURE GROWTH OF A LARGE YBCO SINGLE DOMAIN WITH DIAMETER ABOVE 53 mm**
X. Wu, K.-X. Xu, H. Fang (Shanghai University)

Films, Junctions and Electronic Devices

Chairperson:
T. Uchida (National Defense Academy)

FDP-1 **SUPERCONDUCTING/FERROMAGNETIC BILAYERS INCLUDING HIGHLY COERCIVE MATERIALS**
S. Haindl[1], J. Engelmann[1], T. Shapoval[1], I. Moench[1], L. Schultz[1], B. Holzapfel[1], D. Stamopoulos[2], E. Manios[2], I. Aristomenopoulou[2] ([1]IFW Dresden, [2]National Center for Scientific Research Greece)

FDP-2 **LnFeAsO THIN FILMS BY PULSED LASER DEPOSITION**
R. Teranishi[1], M. Mukaida[1], Y. Yoshida[2], M. Yamaguchi[2], Y. Ichino[2], T. Yoshimoto[1], M. Inoue[1], T. Kiss[1], K. Matsumoto[3], A. Ichinose[4], N. Mori[1]
([1]Kyushu University, [2]Nagoya University, [3]Kyushu Institute of Technology, [4]Central Research Institute of Electric Power Industry)

FDP-3 **GROWTH AND CHARACTERIZATION OF LaFeAs(O,F) AND GdFeAs(O,F) THIN FILMS**
M. Kidszun, S. Haindl, A. Kauffmann, K. Nenkov, T.D. Thersleff, N. Kozlova, J. Freudenberger, J. Werner, E. Reich, L. Schultz, B. Holzapfel (IFW Dresden)

FDP-4 **LOCAL TRANSPORT PROPERTIES OF $PrFeAsO_{0.7}$ USING FIB MICRO-FABRICATION TECHNIQUE**
K. Shirai[1], H. Kashiwaya[2], S. Miura[1], M. Ishikado[3], H. Eisaki[2,4], H. Kitoh[2,4], A. Iyo[2,4], S. Shamoto[3], I. Kurosawa[1], S. Kashiwaya[2]
([1]Japan Women's University, [2]National Institute of Advanced Industrial Science and Technology, [3]Japan Atomic Energy Agency, [4]JST-TRIP)

FDP-5 **FABRICATION OF $Fe(Se_{0.5}Te_{0.5})$ THIN FILMS BY Nd:YAG-PLD AND ArF-PLD**
T. Yoshimoto[1], Y. Ichino[2], Y. Yoshida[2], T. Kiss[1], M. Inoue[1], K. Matsumoto[3], A. Ichinose[4], H. Kai[1], R. Teranishi[1], N. Mori[1], M. Mukaida[1]
([1]Kyushu University, [2]Nagoya University, [3]Kyushu Institute of Technology, [4]Central Research Institute of Energy Power Industry)

FDP-6 **FLUX PINNING PROPERTIES OF MgB_2 THIN FILMS WITH Ti BUFFER PREPARED BY MOLECULAR BEAM EPITAXY**

K. Yonekura[1], A. Kugo[1], T. Fujiyoshi[1], T. Sueyoshi[1], Y. Harada[2], M. Yoshizawa[3], T. Ikeda[3], S. Awaji[4], K. Watanabe[4] ([1]Kumamoto University, [2]JST Satellite Iwate, [3]Iwate University, [4]Tohoku University)

FDP-7 **SUPERCONDUCTING PROPERTY OF SINGLE CRYSTAL LIKE MgB_2 THIN FILMS**
W.K. Seong[1], W.N. Knag[1], S. Oh[2], J.-K. Jung[3], C.J. Kim[4]
([1]Sungkyunkwan University, [2]National Fusion Research Institute, [3]Changwon National University, [4]Gyeongsang National University)

FDP-8 **SUPERCONDUCTING PROPERTIES OF C-DOPED MgB_2 THIN FILM FABRICATED BY 2-STEP METHOD USING PLD**
A. Matsumoto, H. Kitaguchi, H. Kumakura (National Institute for Materials Science)

FDP-9 **Cancelled**

FDP-10 **CONTROL OF N-VALUE FOR $Y_{1-x}RE_xBa_2Cu_3O_y$ FILMS PREPARED BY MOD**
K. Tsukada, M. Sohma, I. Yamaguchi, H. Matsui, T. Kumagai, T. Manabe
(National Institute of Advanced Industrial Science and Technology)

FDP-11 **ORIENTATIONAL CONTROL OF BUFFER LAYERS ON A-PLANE SAPPHIRE SUBSTRATES FOR $REBa_2Cu_3O_{7-\delta}$ THIN FILMS**
K. Sakuma, O. Michikami (Iwate University)

FDP-12 **EFFECTS OF HIGH TEMPERATURE HEAT TREATMENT IN HTS COATED CONDUCTOR**
M.H. Doh, G.-W. Hong, H.-G. Lee (Korea Polytechnic University)

FDP-13 **FLUX PINNING OF $GdBa_2Cu_3O_y$ FILMS FABRICATED BY A METAL-ORGANIC DEPOSITION TECHNIQUE USING METAL-NAPHTHENATES AND METAL-OCTHENATES**
O. Miura[1], R. Kita[2], T. Nakamura[2] ([1]Tokyo Metropolitan University, [2]Shizuoka University)

FDP-14 **INVESTIGATION OF CHARACTERISTICS WITH CHANGING FILM THICKNESS FOR Bi-2212/MgO FABRICATED BY THE MOD METHOD**
K. Hamanaka, T. Tachiki, T. Uchida (National Defense Academy)

FDP-15 **Nb AND Ta FILMS FABRICATED BY A ROTATING MULTI-FACING TARGET SPUTTERING SYSTEM**
S. Morohashi, Y. Kawano, M. Hatano, S. Nagata, N. Isobe (Yamaguchi University)

FDP-16 **UNCONVENTIONAL PROXIMITY-INDUCED SUPERCONDUCTING TRANSITION IN MULTILAYER GRAPHENE**
A. Kanda[1], H. Goto[1], H. Tomori[1], S. Tanaka[1], Y. Ootuka[1], K. Tsukagoshi[2,3], H. Yoshioka[4], M. Hayashi[5] ([1]University of Tsukuba, [2]MANA, [3]National Institute for Materials Science, [4]Nara Women's University, [5]Akita University)

FDP-17 **SWITCHING PROPERTIES IN Bi2201 INTRINSIC JOSEPHSON JUNCTIONS**
H. Kashiwaya[1], T. Matsumoto[1], H. Shibata[1], H. Eisaki[1], Y. Yoshida[1], S. Kawabata[1], Y. Tanaka[2], S. Kashiwaya[1]
([1]National Institute of Advanced Industrial Science and Technology, [2]Nagoya University)

FDP-18 ***I-V* CHARACTERISTICS IN MULTI-GAP INTRINSIC JOSEPHSON JUNCTION STACKS**
T. Koyama[1], Y. Ota[2], M. Machida[2] ([1]Tohoku University, [2]Japan Atomic Energy Agency)

FDP-19 **HIGH-T_c JOSEPHSON JUNCTIONS FABRICATED WITHOUT ETCHING PROCESS**
S. Nakagawa[1], T. Nakabayashi[1], H. Tanaka[2], K. Kinoshita[1], S. Kishida[1]
([1]Tottori University, [2]Yonago National College of Technology)

FDP-20 **FABRICATION OF NbN/TiN/NbN JOSEPHSON JUNCTIONS ON MgO(100) SUBSTRATES**
N. Koda[1], A. Shoji[2], H. Yamamori[2]
([1]National Institute of Advanced Industrial Science and Technology, [2]Advanced Industrial Science and Technology)

FDP-21 **ELECTROTRANSPORT OF HYDROGEN IN Nb FILM FOR JOSEPHSON JUNCTIONS**
K. Hinode, T. Satoh, S. Nagasawa, M. Hidaka (Superconductivity Research Laboratory, ISTEC)

FDP-22 **TOPOLOGICAL SPIN AND CHARGE TRANSPORT IN NORMAL**

METAL/NONCENTROSYMMETRIC SUPERCONDUCTOR JUNCTION UNDER MAGNETIC FIELDS
Y. Mizuno[1], T. Yokoyama[2], Y. Tanaka[1] ([1]Nagoya University, [2]The University of Tokyo)

FDP-23 **FABRICATION OF BALLISTIC GRAPHENE JOSEPHSON JUNCTIONS**
H. Tomori[1,2], H. Goto[1,2], S. Tanaka[1,2], Y. Ootuka[1], K. Tsukagoshi[2,3], A. Kanda[1,2]
([1]University of Tsukuba, [2]JST-CREST, [3]MANA-National Institute for Materials Science)

FDP-24 **ARTIFICIAL FABRICATION OF SNS JUNCTIONS USING *a*-AXIS ORIENTED MULTILAYER FILMS**
M. Takamura[1], S.-J. Kim[2], A. Ichinose[3], M. Mukaida[1], R. Kita[4], R. Teranishi[1], N. Mori[1], K. Matsumoto[5], Y. Yoshida[6]
([1]Kyushu University, [2]Cheju National University, [3]Central Research Institute of Electric Power Industry, [4]Shizuoka University, [5]Kyushu Institute of Technology, [6]Nagoya University)

FDP-25 **DEFECTS OF YBCO JUNCTIONS ON STO BICRYSTAL**
T. Maki, Y. Nakatani, X. Kong, T. Guan, H. Kubo, M. Abe, H. Itozaki (Osaka University)

FDP-26 **FABRICATION OF ALL DIAMOND STACKED JOSEPHSON JUNCTION**
Y. Takano[1], M. Watanabe[2], T. Yamaguchi[1], H. Kawarada[2]
([1]National Institute for Materials Science, [2]Waseda University)

FDP-27 **THEORY OF ATOMIC SCALE 0-π PHASE TRANSTION IN JOSEPHSON JUNCTIONS THROUGH FERROMAGNETIC OXIDE FILMS**
S. Kawabata[1], Y. Asano[2], A.A. Golubov[3], Y. Tanaka[4], S. Kashiwaya[1]
([1]National Institute of Advanced Industrial Science and Technology, [2]Hokkaido University, [3]Twente University, [4]Nagoya University)

FDP-28 **COMPARISON OF TIMING JITTER BETWEEN NbN SUPERCONDUCTING SINGLE-PHOTON DETECTOR AND AVALANCHE PHOTODIODE**
T. Seki[1,2], H. Shibata[1,2], H. Takesue[1], Y. Tokura[1], N. Imoto[2] ([1]NTT Corporation, [2]Osaka University)

FDP-29 **VOLTAGE SIGNALS REPRODUCED BY SIMULATIONS DUE TO HOT SPOT IN CURRENT-BIASED SUPERCONDUCTING DETECTORS**
K. Arai[1], H. Suematsu[1], M. Kato[1], M. Machida[2], T. Ishida[1]
([1]Osaka Prefecture University, [2]Japan Atomic Energy Agency)

FDP-30 **DEVELOPMENT AND EVALUATION OF PULSED THz WAVE DETECTOR WITH A HTS JOSEPHSON JUNCTION**
R. Kaneko, I. Kawayama, H. Murakami, M. Tonouchi (Osaka University)

FDP-31 **TERAHERTZ WAVE EMISSION AND PHASE MOTION IN INTRINSIC JOSEPHSON JUNCTIONS**
H. Matsumoto[1], T. Koyama[1], M. Machida[2] ([1]Tohoku University, [2]Japan Atomic Energy Agency)

FDP-32 **CHARACTERIZATION OF THz PROPAGATION WITHIN HTS MICROSTRIP WAVE GUIDES**
B.H. Yoo[1], D.C. Chung[1], M.H. Kwak[2], S.B. Kang[2], K.Y. Kang[2]
([1]Woosuk University, [2]Electronics and Telecommunications Research Institute Korea)

FDP-33 **THz PROPAGATION WITHIN HTS PARALLEL PLATE WAVE GUIDES**
D.C. Chung[1], B.H. Yoo[1], M.H. Kwak[2], S.B. Kang[2], K.Y. Kang[2]
([1]Woosuk University, [2]Electronics and Telecommunications Research Institute Korea)

FDP-34 **DESIGN AND FABRICATION OF BANDWIDTH TUNABLE TRANSMIT HTS FILTERS USING π-SHAPED WAVEGUIDES**
H. Harada[1], N. Sekiya[1], Y. Nakagawa[1], S. Ohshima[2] ([1]University of Yamanashi, [2]Yamagata University)

FDP-35 **DESIGN OF TRANSMIT SUPERCONDUCTING STRIPLINE FILTERS**
K. Yamamoto[1], N. Sekiya[1], Y. Nakagawa[1], S. Ohshima[2]
([1]University of Yamanashi, [2]Yamagata University)

FDP-36 **DESIGN OF TRANSMIT SUPERCONDUCTING FILTER USING STEP IMPEDANCE RESONATORS**
N. Sekiya[1], Y. Nakagawa[1], S. Ohshima[2] ([1]University of Yamanashi, [2]Yamagata University)

FDP-37 **IMPROVED REPRODUCIBLE FABRICATION PROCESS OF HTS-SQUIDs WITH RAMP-EDGE JOSEPHSON JUNCTIONS AND MULTILAYER STRUCTURES**
S. Adachi, Y. Oshikubo, T. Hato, K. Tanabe (Superconductivity Research Laboratory, ISTEC)

FDP-38 **HIGH-T_c SQUID AXIAL GRADIOMETER WITH A FLUX-TRANSFORMER FABRICATED ON HTS TAPE**
Y. Ishimaru, S. Adachi, A. Tsukamoto, Y. Oshikubo, T. Hato, A. Ibi, Y. Yamada, K. Tanabe (Superconductivity Research Laboratory, ISTEC)

FDP-39 **NON-DESTRUCTIVE EVALUATION OF MULTILAYER CONDUCTOR USING AN HTS SQUID GRADIOMETER**
J. Kawano, T. Hato, S. Adachi, Y. Oshikubo, K. Tanabe
(Superconductivity Research Laboratory, ISTEC)

FDP-40 **EVALUATION OF JOINT INTERFACE OF FRICTION STIR WELDING BETWEEN DISSIMILAR METALS USING HTS-SQUID GRADIOMETER**
Y. Mashiko, Y. Hatsukade, T. Yasui, H. Takenaka, Y. Todaka, M. Fukumoto, S. Tanaka
(Toyohashi University of Technology)

FDP-41 **DETECTING DEGRADATION IN Ni-BASED SUPERALLOY UDIMET520 WITH SCANNING SQUID MICROSCOPY**
K. Isawa, Y. Igarashi, M. Hayashi, F. Sato, S. Hasegawa, K. Miyaguchi (Tohoku Electric Power Co., Inc.)

FDP-42 **MAGNETO-OPTICAL DETECTION OF LOCAL MAGNETIC FLUX QUANTUM IN HTS DEVICE**
H. Murakami[1], R. Kitamura[1], K. Takahashi[1], I. Kawayama[1,2], M. Tonouchi[1]
([1]Osaka University, [2]JST-PREST)

FDP-43 **SUPERCONDUCTIVE COMBINATIONAL LOGIC CIRCUIT USING MAGNETICALLY COUPLED SQUID ARRAY**
Y. Yamanashi, K. Umeda, K. Sai (Yokohama National University)

FDP-44 **DESIGN OF COMPONENT CIRCUITS OF AN SFQ HALF-PRECISION FLOATING-POINT ADDER USING 10 kA/cm^2 Nb PROCESS**
T. Kainuma[1], H.-J. Park[1], Y. Yamanashi[1], N. Yoshikawa[1], A. Fujimaki[2], N. Takagi[2], K. Takagi[2]
([1]Yokohama National University, [2]Nagoya University)

FDP-45 **ON-CHIP RSFQ MICROWAVE PULSE GENERATOR FOR CONTROLLING SUPERCONDUCTING QUBITS**
N. Takeuchi, D. Ozawa, Y. Yamanashi, N. Yoshikawa (Yokohama National University)

FDP-46 **DOUBLET SPLITTING DUE TO INTERCELL TUNNELING IN THREE-JOSEPHSON-JUNCTION FLUX QUBIT**
Y. Shimazu, K. Ochiai, E. Shinozaki (Yokohama National University)