

ICCCI-2009, Technical Program (Tentative)

Session		Chairperson	Date	Start	End	Type	Title	Autohre(s)	Affiliation
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Nakata	Sept. 7	8:00	8:30	Invited	DEVITRIFICATION BEHAVIOR AND CRYSTAL-GLASSY MIXED-PHASE STRUCTURES OBSERVED IN PARTIALLY CRYSTALLIZED CU-BASED GLASSY ALLOYS	D. V. Louzguine-Luzgin**, G. Xie**, Q. Zhang* and A. Inoue**,**	*WPI Advanced Institute for Materials Research, Tohoku University, Japan **Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Nakata	Sept. 7	8:30	9:00	Invited	STRUCTURE AND PROPERTIES OF INTERFACES IN BULK METALLIC GLASS BASED COMPOSITES	Mingwei Chen	Advanced Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Nakata	Sept. 7	9:00	9:15	Oral	OXIDATION AND CRYSTALLIZATION OF ZR-BASED METALLIC GLASS IN AIR	Toshio Kuroda*, Kenji Ikeuchi*, Masahiro Shimada*, Akira Kobayashi*, Hisamichi Kimura** and Akihisa Inoue**	*Joining and Welding Research Institute, Osaka University, Japan **Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Nakata	Sept. 7	9:15	9:30	Oral	DEVELOPMENT OF HIGH-PERFORMANCE VACUUM SENSOR USING JOINING METHOD FOR THIN FILM METALLIC GLASS	Seiichi Hata*, Junpei Sakurai*, Hiroshi Kozako*, Yukiko Matsumoto*, Akira Shimokohbe**, Nobuyuki Mukai***, Yoshinori Ohnuma***, Tsutomu Takahashi***, Yasunori Saotome****, Hisamichi Kimura****, Parmanand Sharma**** and Akihisa Inoue****	*Precision and Intelligence Laboratory, Tokyo Institute of Technology, Japan *Emeritus Professor, Tokyo Institute of Technology, Japan **Nabtesco Corporation, Japan ***Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Nakata	Sept. 7	9:30	10:00	Invited	GROWTH OF HIGH-QUALITY SI MULTICRYSTALS USING DENDRITIC CASTING METHOD AND MECHANISM TO OBTAIN HIGH-QUALITY CRYSTALS	Kazuo Nakajima, Koza Fujiwara, Kentaro Kutsukake, and Noritaka Usami	Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	10:00	10:15	Break	---	---	---
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Fukuhara	Sept. 7	10:15	10:30	Oral	DEALLOYING OF CU-ZR-TI BULK METALLIC GLASS	Hiroya Abe*, Kazuyoshi Sato*, Hiroshi Nishikawa*, Tadashi Takemoto*, Mikio Fukuhara** and Akihisa Inoue**	*Joining and Welding Research Institute, Osaka University, Japan **Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Fukuhara	Sept. 7	10:30	10:45	Oral	DYNAMIC RELAXATION AND ITS CORRELATION TO QUASI-STATIC MECHANICAL PROPERTIES IN BULK METALLIC GLASS	Hidemi Kato and Akihisa Inoue	Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Fukuhara	Sept. 7	10:45	11:15	Invited	DIRECT BOND COPPER TO ALUMINA AND ITS CHARACTERIZATION	Wei-Hsing Tuan and Shao-Kuan Lee	Department of Materials Science and Engineering, National Taiwan University, Taiwan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Fukuhara	Sept. 7	11:15	11:30	Oral	ANISOTROPIC SHRINKAGE IN SINTERING OF PARTICLES ARRANGED IN ORTHOTROPIC SYMMETRY	Fumihiro Wakai, Takashi Akatsu and Yutaka Shinoda	Secure Materials Center, Materials and Structures Laboratory, Tokyo Institute of Technology, Japan

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A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Fukuhara	Sept. 7	11:30	11:45	Oral	STRAIN DRIVEN SPIN REORIENTATION TRANSITION IN GLASSY FERROMAGNET/FERROELECTRIC HETEROSTRUCTURES	Tomoyasu Taniyama**, Mitsuru Itoh*, Parmanand Sharma***, Hisamichi Kimura*** and Akihisa Inoue***	* Materials and Structures Laboratory, Tokyo Institute of Technology, Japan ** PRESTO, Japan Science and Technology Agency, Japan *** Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Fukuhara	Sept. 7	11:45	12:00	Oral	THERMAL MICROSCOPE STUDY ON METALLIC GLASS THIN FILMS	Yuji Matsumoto*, Miki Hiraoka* and Seiichi Hata**	*Materials and Structures Laboratory, Tokyo Tech, Japan **Secure Device Research Center, Precision and Intelligence Laboratory, Tokyo Tech, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	12:00	13:30	Lunch	---	---	---
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Wakai	Sept. 7	13:30	14:00	Invited	INTEGRATION OF ADVANCED CARBON-CARBON COMPOSITES TO METALLIC SYSTEMS FOR THERMAL MANAGEMENT APPLICATIONS	Mrityunjay Singh	Ohio Aerospace Institute, Glenn Research Center, USA
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Wakai	Sept. 7	14:00	14:30	Invited	SYNTHESIS AND CHARACTERIZATION OF MATERIALS HARMONIZED WITH ENVIRONMENT	Toshinobu Yogo	EcoTopia Science Institute, Nagoya University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Wakai	Sept. 7	14:30	15:00	Invited	NEW PROGRESS IN ELECTRIC MATERIALS BY HYBRID TECHNOLOGY AND THREE DIMENSIONAL INTEGRATION	Hiroshi Kawarada, Kenji Ohomori, Takayuki Homma, Shuichi Shoji, Keisaku Yamada, Yoshiji Horikoshi	Institute for Nanoscience & Nanotechnology (INN), Waseda University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Wakai	Sept. 7	15:00	15:15	Oral	ELECTRONIC TRANSPORT BEHAVIORS OF Ni-Nb-Zr-H GLASSY ALLOYS	Mikio Fukuhara*, Hajime Yoshida*, Keiichi. Koyama*, Akihisa Inoue** and Yoshio Miura***	*Institute for Materials Research, Tohoku University, Japan **World Premier International Research Center, Tohoku University, Japan ***Research Institute of Electrical Communication, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	15:15	15:30	Break	---	---	---
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Kuroda	Sept. 7	15:30	15:45	Oral	ELECTRONIC STRUCTURES AND CARRIER INJECTION PROPERTIES OF OXIDE-ORGANIC HETEROINTERFACES	Toshio Kamiya**, Hiroshi Yanagi*, Ikue Koizumi*, Ki-Beom Kim*, Maiko Kikuchi*, Masahiro Hirano**, Hideo Hosono*,***	*Materials and Structures Laboratory, Tokyo Institute of Technology, Japan **ERATO-SORST, Japan Science and Technology Agency in Frontier Research Center, Tokyo Institute of Technology, Japan ***Frontier Research Center, Tokyo Institute of Technology, Jap
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Kuroda	Sept. 7	15:45	16:00	Oral	FORMATION OF BONE-LIKE HYDROXYAPATITE ON SURFACE-MODIFIED BULK METALLIC GLASS BY HYDROTHERMAL-ELECTROCHEMICAL METHOD	Matsushita Nobuhiro*, Naota Sugiyama*, Eriko Ito*, Xinmin Wang**, Takeshi Wada**, Mikio Fukuhara**, Masahiro Tsukamoto***, Akihisa Inoue**, Masahiro Yoshimura*	*Materials and Structures Laboratory, Tokyo Institute of Technology, Japan **Institute for Materials Research, Tohoku University, Japan ***Joining and Welding Research Institute, Osaka University, Japan

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A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Kuroda	Sept. 7	16:00	16:30	Invited	POLARIZED HYDROXYAPATITE-BASED VECTOR MATERIALS	Kimihiro Yamashita	Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	Prof. Kuroda	Sept. 7	16:30	17:00	Invited	PHOTODECOMPOSITION MECHANISMS OF METHYLENE BLUE BY IRON OXIDE BASED COMPOUNDS UNDER LIGHT ILLUMINATION	Fahmida Gulshan**, Sayaka Yanagida*, Ken-ichi Katsumata*, Toshihiro Isobe**, Yoshikazu Kameshima**, Akira Nakajima** and Kiyoshi Okada**,**	* Materials and Structures Laboratory, Tokyo Institute of Technology, Japan ** Department of Metallurgy and Ceramics Science, Tokyo Institute of Technology, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	INTERMEDIATE LAYER PRODUCED AT MAGNETIC PULSE WELDED ALUMINUM/METALLIC GLASS INTERFACE	Mitsuhiro Watanabe*, Shinji Kumai**, Qingsheng Zhang***, Koji Nakayama*** and Hisamichi Kimura***	*Materials and Structures Laboratory, Tokyo Institute of Technology, Japan **Department of Materials Science and Engineering, Tokyo Institute of Technology, Japan ***Institute of Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	LOW TEMPERATURE BONDING OF BULK METALLIC GLASS USING ULTRASONIC PROCESS	Hiroshi Nishikawa*, Krit WongPiromsarn*, Hiroya Abe*, Tadashi Takemoto*, Masao Kubo**, Yoshiharu Sanagawa**, Takamasa Sakai**, Mikio Fukuhara***, Akihisa Inoue****	*Joining and Welding Research Institute, Osaka University, Japan **Micro Fabrication Process Center, Panasonic Electric Works, Ltd., Japan ***Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	FABRICATION OF FE BASED METALLIC GLASS PARTICLES REINFORCED AL BASED COMPOSITE MATERIALS BY FRICTION STIR WELDING	Young Su Ji*, Hidetoshi Fujii*, Koji Inada*, Kazuhiro Nakata*, Hisamichi Kimura**, Akihisa Inoue**, Kiyoshi Nogi*	*Joining and Welding Research Institute, Japan **Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	PROPERTY OF NI-BASED METALLIC GLASS COATING PRODUCED BY GAS TUNNEL TYPE PLASMA SPRAYING CHARACTERIZATION IN INTERFACES	Akira Kobayashi*, Toshio Kuroda*, Hisamichi Kimura** and Akihisa Inoue**	*Joining and Welding Research Institute, Osaka University, Japan ** Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	HIGH-SPEED TENSILE BEHAVIOR OF Zr-BASED BULK METALLIC GLASS	Yoshihiro Sakino Toshio Kuroda and You-Chul Kim	Joining and Welding Research Institute, Osaka University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	AC IMPEDANCE ANALYSIS OF Ni-Nb-Zr-H GLASSY ALLOYS	Mihoko Seto*, Mikio Fukuhara* and Akihisa Inoue**	*Institute for Materials Research, Tohoku University, Japan **World Premier International Research Center, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	DEVELOPMENT OF METALLIC GLASS FOR BIOMATERIAL	XinMin Wang*, KunSu Son*, Takeshi Wada*, FengXiang Qin*, Nobuhiro Matsushita**, Masahiro Tsukamoto*** and Akihisa Inoue****	*Institute for Material Research, Tohoku University, Japan **Materials and Structure Laboratory, Tokyo Institute of Technology, Japan ***Joining and Welding Research Institute, Osaka University, Japan ****WPI, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	MICROSTRUCTURES FORMATION ON TITANIUM-BASED BULK METALLIC GLASS PLATE BY FEMTOSECOND LASER IRRADIATION	M. Tsukamoto*, T. Shinonaga**, N. Abe*, N. Matsushita***, T. Wada**** X. Wang**** and M. Yoshimura***, ****	*Joining and Welding Research Institute, Osaka University, Japan **Graduate School of Engineering, Osaka University, Japan ***Materials and Structures Laboratory, Tokyo Institute of Technology, Japan ****Institute for Materials Research, TohokuUniversity, Japan

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A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	MECHANICAL BEHAVIOR OF MICRO-SIZED METALLIC GLASS	Yanhui Liu and Mingwei Chen	WPI Advanced Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	EFFECT OF HYDROGEN ABSORPTION IN THE HEAT CAPACITY OF Ni _{0.36} Nb _{0.24} Zr _{0.40} GLASSY ALOLY	Atsuko Uchida*, Hitoshi Kawaji*, Tooru Atake*, Mikio Fukuhara** and Akihisa Inoue**	*Materials and Structures Laboratory, Tokyo Institute of Technology, Japan **Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	LASER BATT WELDING OF THE MG-BASED METALLIC GLASS	Takeshi Terajima*, Kazuhiro Nakata*, Hisamichi Kimura**, Akihisa Inoue***	*Joining and Welding Research Institute, Osaka University, Japan **Institute for Materials Research, Tohoku University, Japan ***Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	SINGLE CRYSTAL GROWTH OF 12CaO•7Al ₂ O ₃ ELECTRIDE BY MELT CONTROL	Sung Wng Kim, Masahiro Hirano and Hideo Hosono	Secure Materials Center, Materials and Structures Laboratory, Tokyo Institute of Technology, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	Cu ₂ -xSe: HIGH-EFFICIENT HOLE INJECTION ELECTRODE FOR ORGANIC SEMICONDUCTORS	Hiroshi Yanagi*, Ikue Koizumi*, Ki-Beom Kim*, Hidenori Hiramatsu**, Toshio Kamiya*,**, Masahiro Hirano**,*** and Hideo Hosono*, **,***	*Materials and Structures Laboratory, Tokyo Institute of Technology, Japan **ERATO-SORST, Japan Science and Technology Agency in Frontier Research Center, Tokyo Institute of Technology, Japan ***Frontier Research Center, Tokyo Institute of Technology, Jap
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	TERAHERTZ WAVE PROPERTIES OF METALLIC GLASS MICRO PATTERNS WITH MAGNETIC POLYGON TABLETS FABRICATED BY USING MICRO STEREOLITHOGRAPHY OF STRUCTURAL JOINING	Soshu Kiriwara*, Maasa Nakano*, Toshiki Niki*, Masaru Kaneko*, Hisamichi Kimura**, Akihisa Inoue**	*Joining and Welding Research Institute, Osaka University, Japan **Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	THERMAL STABILITY OF Zr ₅₅ Cu ₃₀ Ni ₅ Al ₁₀ METALLIC GLASS IN CONTACT WITH ALUMINUM	Masakatsu Maeda*, Yasuo Takahashi*, Akihisa Inoue**	*Center for Advanced Science and Innovation, Osaka University, Japan **Tohoku University, Sendai, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	DISSIMILAR LAP WELDING OF Ni ₆₀ Nb ₁₅ Ti ₁₅ Zr ₁₀ METALLIC GLASS AND STAINLESS STEEL FOIL BY FIBER LASER BEAM	Kazuhiro Nakata*, Takuya Tsumura*, Yousuke Kawahito*, Hisamichi Kimura**, Akihisa Inoue**	*Joining and Welding Research Institute, Osaka University, Japan **Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	LASER WELDING OF Zr ₅₅ Cu ₃₀ Al ₁₀ Ni ₅ BULK METALLIC GLASS	Mohamed Ashour*, Yousuke Kawahito*, Takeshi Terajima*, Seiji Katayama*, Toshio Kuroda*, Hisamichi Kimura**	*Joining and Welding Research Institute, Osaka University, Japan **Institute for Materials Research, Tohoku University, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	ANODIC BONDING OF ZIRCONIUM-BASED METALLIC GLASS	Makoto Takahashi*, Kenji Ikeuchi*, Hisamichi Kimura**, Akihisa Inoue**	*Joining and Welding Research Institute, Osaka University, Japan **Institute for Materials Research, Tohoku University, Japan

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A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	FEM STUDY OF JOINING PROCESS IN MAGNETIC PRESSURE SEAM WELDING	Isao Shibahara*, Hisashi Serizawa**, Sherif Rashed**, Hidekazu Murakawa** and Shinji Kumaj***	*Graduate School of Engineering, Osaka University, Japan **Joining and Welding Research Institute, Osaka University, Japan ***Department of Materials Science and Engineering, Tokyo Institute of Technology, Japan
A	Joining Technology for New Metallic Glasses and Inorganic Materials	---	Sept. 7	17:30	19:00	Poster	SYNTHESIS AND PROPERTIES OF NEW AU-BASED BULK GLASSY ALLOYS WITH ULTRALOW GLASS TRANSITION TEMPERATURE	Wei Zhang*, Hai Guo**, Mingwei Chen***, Yasunori Saotome*, Chunling Qin*** and Akihisa Inoue***	*Institute for Materials Research, Tohoku University, Japan **Graduate School, Tohoku University, Japan ***WPI, Advanced Institute for Materials Research, Tohoku University, Japan

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Session		Chairperson	Date	Start	End	Type	Title	Autohre(s)	Affiliation
B	Nanoparticles and Powders	Prof. Naito	Sept. 7	8:00	8:30	Invited	DIRECT OBSERVATION OF PARTICLE MOVEMENT UNDER SHEAR STRESS IN EXTRESION PROCESS	Masako Uematsu, Satoshi Tanaka and Keizo Uematsu	Nagaoka University of Technology, Japan
B	Nanoparticles and Powders	Prof. Naito	Sept. 7	8:30	9:00	Invited	INFLUENCE OF PEPTIZATION, WASHING AND DRYING METHODS ON PARTICLE PACKING, PHASE TRANSFORMATION AND PORE-STRUCTURE STABILITY OF ALCOXIDE DERIVED NANOSTRUCTURED TITANIA	Krishnankutty-Nair P Kumar*, Hiroyuki Izutsu** and Tatsuya Okubo***	*Department of Materials Science and Engineering, University of Texas at Dallas, USA **Taki Chemical Co., Ltd. Japan ***Department of Chemical Systems Engineering, The University of Tokyo, Japan
B	Nanoparticles and Powders	Prof. Naito	Sept. 7	9:00	9:15	Oral	A SIMPLE APPROACH FOR THE FORMATION OF HYDROTHERMALLY STABLE TEMPLATED HOLLOW SILICA NANOPARTICLES	Raymond V. Rivera-Virtudazo, Hideo Watanabe, Takashi Shirai, Masayoshi Fuji and Minoru Takahashi	Ceramics Research Laboratory, Nagoya Institute of Technology, Japan
B	Nanoparticles and Powders	Prof. Naito	Sept. 7	9:15	9:30	Oral	CHARACTERISTICS OF TITANIA/SILICA COMPOSITE NANOPARTICLES AND GELS	Masanori Hirano, Keisuke Ota and Shunsuke Oya	Department of Applied Chemistry, Aichi Institute of Technology, Japan
B	Nanoparticles and Powders	Prof. Naito	Sept. 7	9:30	10:00	Invited	AEROSOL SYNTHESIS OF RARE-EARTH BASED NANOPHASED FUNCTIONAL MATERIALS	Katarina Marinkovic*, Lidija Mancic*, Luz Gomez**, Maria Eugenia Rabanal**, Miroslav Dramicanin*** and Olivera Milosevic*	*Institute of Technical Sciences of Serbian Academy of Sciences and Arts, Serbia **University Carlos III, Spain ***Institute "Vinca", Serbia
B	Nanoparticles and Powders	---	Sept. 7	10:00	10:15	Break	---	---	---
B	Nanoparticles and Powders	Prof. Sakka	Sept. 7	10:15	10:45	Invited	A VERTICALLY GROWN SILICON NANOTUBES ARRAY: TUBULAR, REVERSIBLE ELECTRODE CONFIGURATION FOR HIGHLY REVERSIBLE LITHIUM STORAGE	Ungyu Paik	Division of Materials Science Engineering, Hanyang University, Korea
B	Nanoparticles and Powders	Prof. Sakka	Sept. 7	10:45	11:00	Oral	NANOPARTICLE PROCESSING FOR ADVANCED LI-ION BATTERIES	Ching-Chung Huang	Hosokawa Micron Powder Systems, USA
B	Nanoparticles and Powders	Prof. Sakka	Sept. 7	11:00	11:15	Oral	CORE-SHELL MAGNETITE NANOPARTICLE: A VEHICLE FOR ENTRAPMENT OF POORLY WATER SOLUBLE DRUGS	Metha Rutnakompituk, Siraprapa Meerod, Boonjira Boontha and Uthai Wichai	Faculty of Science, Naresuan University, Thailand
B	Nanoparticles and Powders	Prof. Sakka	Sept. 7	11:15	11:30	Oral	EFFECT OF MICROWAVE IRRADIATION SURFACE TREATMENT ON ALUMINA PARTICLES	Yosuke Tanaka, Masaki Yasuoka, Yuji Hotta and Koji Watari	National Institute of Advanced Industrial Science and Technology, Japan

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B	Nanoparticles and Powders	Prof. Sakka	Sept. 7	11:30	12:00	Invited	SYNTHESIS AND CHARACTERIZATION OF NANOSTRUCTURED TITANATES	Fernando Rizzo	Department of Materials Science and Metallurgy, Pontificia Universidade Católica do Rio de Janeiro, Brazil
B	Nanoparticles and Powders	---	Sept. 7	12:00	13:30	Lunch	---	---	---
B	Nanoparticles and Powders	Prof. Uematsu	Sept. 7	13:30	14:00	Invited	SINTERING OF TRANSPARENT YAG CERAMICS, COMPOSITES AND CRYSTALS	Gary L. Messing*, Adam Stevenson*, Libby Kupp*, Sang-Ho Lee*, Venkatraman Gopalan*, Sujarinee Kochawattana**, John Dumm***, Vida K. Castillo**** and Gregory J. Quarles*****	* Department of Materials Science and Engineering and the Materials Research Institute, The Pennsylvania State University, USA ** Chulalongkorn University, Thailand *** Advanced Materials Development Center, USA **** VLOC, subsidiary of II-VI Incorporated, USA
B	Nanoparticles and Powders	Prof. Uematsu	Sept. 7	14:00	14:15	Oral	PRESSURE FILTRATION OF PHENYLALANINE-ADSORBED SUBMICROMETER SILICON CARBIDE PARTICLES	Shinichi Baba*, Yoshihiro Hirata**, Naoki Matsunaga* and Soichiro Sameshima**	* Department of Applied Chemistry and Chemical Engineering, Kagoshima University, Japan ** Department of Advanced Nanostructured Materials Science and Technology, Kagoshima University, Japan
B	Nanoparticles and Powders	Prof. Uematsu	Sept. 7	14:15	14:30	Oral	DENSE, BUBBLE-FREE CERAMIC DEPOSITS FROM AQUEOUS SUSPENSION BY PULSED DC ELECTROPHORETIC DEPOSITION	Tetsuo Uchikoshi*, Laxmidhar Besra**, Tohru S. Suzuki*, Yoshio Sakka*	*Nano Ceramics Center, National Institute for Materials Science, Japan **Colloids & Materials Chemistry Department, Institute of Minerals & Materials Technology, India
B	Nanoparticles and Powders	Prof. Uematsu	Sept. 7	14:30	14:45	Oral	CHARACTERISATION OF TRIBOLOGICAL INTERFACE IN LOW WEAR MAGNELI TYPE CERAMICS	Rolf Waesche, Mathias Woydt and Birgit Rehmer	BAM Federal Institute for Materials Research and Testing, Berlin, Germany
B	Nanoparticles and Powders	Prof. Uematsu	Sept. 7	14:45	15:15	Invited	BOUNDARY LUBRICATED METAL-METAL INTERFACES	Alfons Fischer	Materials Science and Engineering, Universitaet Duisburg-Essen, Germany
B	Nanoparticles and Powders	---	Sept. 7	15:15	15:30	Break	---	---	---
B	Nanoparticles and Powders	Prof. Komeya	Sept. 7	15:30	15:45	Oral	CHARACTERIZATION OF NANO TiO ₂ / Si ₃ N ₄ COMPOSITE PARTICLES PREPARED BY MECHANICAL TREATMENT	Junichi Tatami*, Makoto Noguchi*, Hiromi Nakano**, Toru Wakihara*, Katsutoshi Komeya* and Takeshi Meguro*	*Graduate School of Environment and Information Sciences, Yokohama National University, Japan **Electron Microscope Laboratory, Ryukoku University, Japan
B	Nanoparticles and Powders	Prof. Komeya	Sept. 7	15:45	16:15	Invited	GRAIN BOUNDARY COMPLEXIONS	Martin P. Harmer* and Jian Luo**	* Center for Advanced Materials and Nanotechnology, Lehigh University, USA ** School of Materials Science and Engineering, Clemson University, USA

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B	Nanoparticles and Powders	Prof. Komeya	Sept. 7	16:15	16:45	Invited	QUANTITATIVE X-RAY MICROTOMOGRAPHY TO ESTABLISH STRUCTURE-PROPERTY LINKAGES IN HYBRID MATERIALS	Ulrike Wegst	Department of Materials Science and Engineering, Drexel University, USA
B	Nanoparticles and Powders	Prof. Komeya	Sept. 7	16:45	17:15	Invited	NANOSCALE LUMINESCENT MATERIALS	Lauren Rohwer, May Nyman, and Kevin G. Ewsuk	Sandia National Laboratories, USA
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	LABORATORY APPARATUS TO SYNTHESIZE OXIDE NANOPARTICLES	Akira Watanabe*, Motoharu Fujii*, Shuui Sasabe* and Kiyoshi Nogi**	*Hosokawa Powder Technology Research Institute, Japan *Joining and Welding Research Institute, Osaka University, Japan
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	SYNTHESIS OF NANOPARTICLES BY THE FLASH CREATION METHOD	Akira Watanabe*, Motoharu Fujii*, Shuui Sasabe* and Kiyoshi Nogi**	*Hosokawa Powder Technology Research Institute, Japan *Joining and Welding Research Institute, Osaka University, Japan
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	METALLIC NANOPARTICLES SYNTHESIZED BY THERMALLY PINCHED ARC PLASMA	Junichi Noma**, Hiroya Abe**, Makio Naito**, Kentaro Yamamoto**, Shinichi Tashiro** and Manabu Tanaka**	*Kurimoto, LTD., Japan **Joining and Welding Research Institute, Osaka University, Japan
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	DISPERSION BEHAVIOR AND SURFACE INTERACTION CONTROL OF SIC NANOPARTICLES IN AQUEOUS MEDIA BY USING POLYMERIC DISPERSANTS	Yosuke Nomura, Motoyuki Iijima and Hidehiro Kamiya	Graduate School of Bio-Applications and systems Engineering, Tokyo University of Agriculture and Technology, Japan
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	IN-SITU MEASUREMENT OF SINTERING SHRINKAGE BEHAVIOR OF SILICON CARBIDE	Shunichi Kawakami*, Junichi Tatami*, Toru Wakihara*, Katsutoshi Komeya*, Takeshi Meguro*, Ping Xin** and Masahiro Ando**	*Graduate School of Environment and Information Sciences, Yokohama National University, Japan **Covalent Materials Corporation, Japan
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	FIBROUS COMPOSITE POWDER COMPACTS FOR THERMAL INSULATION AT HIGH TEMPERATURE	Takahiro Ohmura*, Yasuo Ito*, Isami Abe*, Hiroya Abe** and Makio Naito**	*NICHIAS Corporation, Japan **Joining and Welding Research Institute, Osaka University, Japan
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	FABRICATION OF NON-FIRING CERAMICS ASSISTED BY PARTICLE SURFACE ACTIVATION USING A PLANETARY BALL MILL	Apiluck Eiad-ua , Takashi Shirai , Hideo Watanabe, Masayoshi Fujii, Koji Orito and Minoru Takahashi	Ceramics Research Laboratory, Nagoya Institute of Technology, Japan
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	DISPERSION BEHAVIOR OF CARBON BLACK NANOPARTICLE WITH SILANE COUPLING AGENT SURFACE TREATMENT IN ORGANIC SOLVENT	Kenji Takebayashi*, Yoshinori Tsuji*, Shuji Sasabe*, Motoyuki Iijima** and Hidehiro Kamiya**	*Hosokawa Powder Technology Research Institute, Japan **Tokyo University of Agriculture and Technology, Japan

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Session		Chairperson	Date	Start	End	Type	Title	Autohre(s)	Affiliation
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	MICROSTRUCTURE OF CRYSTAL-ORIENTED STRONTIUM BISMUTH TITANATE FERROELECTRICS CERAMICS PREPARED BY REACTION SINTERING	Satoshi Tanaka and Keizo Uematsu	Materials Science and Technology, Nagaoka University of Technology, Japan
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	DISPERSION OF SINGLE-WALLED CARBON NANOTUBES INDUCED BY STRUCTURAL EFFECT OF PERYLENE DERIVATIVES AND THEIR OPTOELECTRONIC PROPERTIES	Jin-Hyon Lee, Hyun-Ho Kim, Sung Bok Wee, and Ungyu Paik	Division of Materials Science Engineering, Hanyang University, Korea
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	ELECTROSTATICALLY MODIFIED CERIA PARTICLES FOR RESTRAINING OF REMAINING PARTICLE AND SCRATCH IN STI CMP PROCESS	Ye-Hwan Kim*, Jea-Gun Park** and Ungyu Paik*	*Division of Materials Science Engineering, Hanyang University, Korea **Nano-SOI Process Laboratory, Hanyang University, Korea
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	THE MORPHOLOGICAL CHANGE INTO DRYING PROCESS ON THE SYNTHESIS OF ZNO MICROTUBES BY A SIMPLE AQUEOUS SOLUTION METHOD	Seiji Yamashita, Lin. Liwei, Hideo Watanabe, Takashi Shirai, Masayoshi Fuji and Minoru Takahashi	Ceramic Research Laboratory, Nagoya Institute of Technology, Japan
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	FABRICATION AND ELECTRICAL PROPERTY OF ZNO CERAMICS USING ZNO/NANO AL2O3 COMPOSITE PARTICLES BY MECHANICAL TREATMENT	Satoko Tasaki*, Junichi Tatami*, Toru Wakihara*, Katsutoshi Komeya*, Takeshi Meguro* and Hiromi Nakano**	*Graduate School of Environment and Information Sciences, Yokohama National University, Japan **Ryukoku University, Japan
B	Nanoparticles and Powders	---	Sept. 7	17:30	19:00	Poster	FUBRICATION OF BIODEGRADABLE MICRODEVICES FOR PROLONGED-RELEASE OF PROTEINS BY SPRAY-COATING OF POROUS HYDROXYAPATITE WITH NON-COVALENTLY CROSS-LINKED NANOPARTICULATE CHITOSAN	Mariko Morinaga*, Hideki Ichikawa*,***, Hiroya Abe**,***, Kazuyoshi Sato**, Makio Naito***, Hiroyuki Hirano*,*** and Yoshinobu Fukumori*,***	*Faculty of Pharmaceutical Sciences, Kobe Gakuin University, Japan **Joining and Welding Research Institute, Osaka University, Japan ***Cooperative Research Center of Life Sciences, Kobe Gakuin University, Japan

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Session		Chairperson	Date	Start	End	Type	Title	Autahre(s)	Affiliation
C	Interface Characterization and Control	Prof. Kang	Sept. 8	8:00	8:15	Introduction	INTRODUCTION OF SESSION C: INTERFACE CHARACTERIZATION AND CONTROL	Kiyoshi Nogi	Osaka University
C	Interface Characterization and Control	Prof. Kang	Sept. 8	8:15	8:45	Invited	FROM REACTIVE WETTING TO REACTIVE INFILTRATION	Nicolas Eustathopoulos	SIMaP-LTPCM, ENSEEG, Domaine Universitaire, France
C	Interface Characterization and Control	Prof. Kang	Sept. 8	8:45	9:15	Invited	THERMODYNAMIC AND KINETIC ASPECTS OF INTERFACIAL REACTIONS BETWEEN LEAD-FREE SOLDER ALLOYS AND METALLIC SUBSTRATES	Fiqiri Hodaj	Grenoble Institute of Technology, Domaine Universitaire, France
C	Interface Characterization and Control	Prof. Kang	Sept. 8	9:15	9:45	Invited	INTERACTION BETWEEN LIQUID AL-CONTAINING MELTS AND YTTRIA-CONTAINING CERAMICS	Natalia Sobczak*, **, Rafal Nowak* and Edmund Sienicki**	*Foundry Research Institute, Poland **Motor Transport Institute, Poland
C	Interface Characterization and Control	---	Sept. 8	9:45	10:00	Break	---	---	---
C	Interface Characterization and Control	Dr. Sobczak	Sept. 8	10:00	10:30	Invited	NATURE-INSPIRED DESIGN OF HIGHLY TOUGHENED MATERIALS	A. P. Tomsia, M. E. Launey, E. Munch, E. Saiz and R. O. Ritchie	Materials Sciences Division, Lawrence Berkeley National Laboratory, USA
C	Interface Characterization and Control	Dr. Sobczak	Sept. 8	10:30	11:00	Invited	FUNDAMENTAL ASPECTS OF INTERNAL INTERFACES IN MATERIALS SYSTEM	Manfred Rühle	Max-Planck-Institut für Metallforschung Stuttgart, Germany
C	Interface Characterization and Control	Dr. Sobczak	Sept. 8	11:00	11:30	Invited	THERMAL PROPERTIES OF MATERIALS AT VARIOUS INTERFACES FOR ELECTRONIC INDUSTRY	Hyungsun Kim, Seongjin Hwang, Dongsun Kim, Jungki Lee, Yonghyeon Yu, Chungyong Lee and Ilbok Lee	School of Materials Engineering, Inha University, Korea
C	Interface Characterization and Control	Dr. Sobczak	Sept. 8	11:30	12:00	Invited	DENSIFICATION DURING SINTERING WITH CONTROL OF THE GRAIN BOUNDARY STRUCTURE	Suk-Joong L. Kang and Min-Gon Lee	Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology, Korea
C	Interface Characterization and Control	Dr. Sobczak	Sept. 8	12:00	12:15	Oral	GENERAL ANALYTICAL CONCEPT AND METHODOLOGY OF DESIGN AND PRODUCING OF CLAY – BASED POLYMER NANOCOMPOSITE	Refat A. El-Sheikhy and Mosleh A. Al-Shamrany	Faculty of Engineering, King Saud University, Saudi Arabia

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Session		Chairperson	Date	Start	End	Type	Title	Autohre(s)	Affiliation
C	Interface Characterization and Control	---	Sept. 7	17:30	19:00	Poster	WETTING BEHAVIOR OF SN3.0AG0.5CU SOLDER ON STAINLESS STEELS	Hongqin Wang, Hiroshi Nishikawa, Tadashi Takemoto	Joining and Welding Research Institute, Osaka University, Japan
C	Interface Characterization and Control	---	Sept. 7	17:30	19:00	Poster	TIME DEPENDENCE OF CONTACT ANGLE BETWEEN SILVER-COPPER-TITANIUM ALLOY AND BORON NITRIDE	Yoshihisa Sechi*, **, Taihei Matsumoto**, **** and Kazuhiro Nakata****	*Kagoshima Prefectural Institute of Industrial Technology, Japan **Graduate School of Engineering, Osaka University, Japan ***Toyo Tanso Co., Ltd., Japan ****Joining and Welding Research Institute, Osaka University, Japan
C	Interface Characterization and Control	---	Sept. 7	17:30	19:00	Poster	NON-EQUILIBRIUM PLASMA PROPERTY OF ARGON GAS TUNGSTEN ARCS	Shinichi Tashiro and Manbu Tanaka	Joining and Welding Research Institute, Osaka University, Japan
C	Interface Characterization and Control	---	Sept. 7	17:30	19:00	Poster	HARD X-RAY PHOTOELECTRON SPECTROSCOPY ANALYSIS FOR ORGANIC-INORGANIC HYBRID MATERIALS FORMATION	Yuichi Setsuhara*, ****, Ken Cho*, ****, Kosuke Takenaka*, ****, Masaharu Shiratani**, ****, Makoto Sekine**, ****, Masaru Hori**, ****, Eiji Ikenaga****, Hiroki Kondo**, Osamu Nakatsuka*** and Shigeaki Zaima***	*Joining and Welding Research Institute, Osaka University, Japan **Department of Electronics, Kyushu University, Japan ***Graduate School of Engineering, Nagoya University, Japan ****Japan Synchrotron Radiation Research Institute, Japan *****Japan Science
C	Interface Characterization and Control	---	Sept. 7	17:30	19:00	Poster	NUMERICAL ANALYSIS OF PLASMA KEYHOLE WELDING OF ALUMINUM THIN PLATE	Minoru Miyata, Shinnichi Tashiro and Manabu Tanaka	Joining and Welding Research Institute, Osaka University, Japan
C	Interface Characterization and Control	---	Sept. 7	17:30	19:00	Poster	A SIMULATION MODEL OF SHORT ARC LAMP	Yoshihiro Tsujimura, Kentaro Yamamoto and Manabu Tanaka	Joining and Welding Research Institute, Osaka University, Japan

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Session		Chairperson	Date	Start	End	Type	Title	Autohre(s)	Affiliation
D	Energy and Environment	Dr. Makino	Sept. 8	8:00	8:30	Invited	---	Piero Salatino	Universita' degli Studi di Napoli Federico II, Dipartimento di Ingegneria Chimica
D	Energy and Environment	Dr. Makino	Sept. 8	8:30	9:00	Invited	SOME RECENT ADVANCES IN THE UNDERSTANDING OF GAS-SOLID INTERACTIONS DURING THE GASIFICATION OF BROWN COAL AND BIOMASS	Chun-Zhu Li	Curtin Centre for Advanced Energy Science and Engineering, Curtin University of Technology, Australia
D	Energy and Environment	Dr. Makino	Sept. 8	9:00	9:15	Oral	NOVEL RECYCLING PROCESS OF WASTE FRP FOR ADVANCED MATERIALS	Akira Kondo*, Yasuko Okuni**, Masashi Miura**, Norifumi Iku**, Hiroya Abe* and Makio Naito*	*Joining and Welding Research Institute, Osaka University, Japan **General Research Institute of Technology, INAX Corporation, Japan
D	Energy and Environment	Dr. Makino	Sept. 8	9:15	9:30	Oral	NUMERICAL SIMULATION OF FLOW AND NOX REDUCTION IN DE-NOX CATALYST HONEYCOMB	Kenji Tanno*, Ryoichi Kurose**, Hisao Makino* and Satoru Komori**	*Energy Engineering Laboratory, Central Research Institute of Electric Power Industry (CRIEPI), Japan **Department of Mechanical Engineering and Science, Kyoto University, Japan
D	Energy and Environment	Dr. Makino	Sept. 8	9:30	9:45	Oral	CREATION OF TRIPLE-PHASE-BOUNDARY IN SOLID OXIDE FUEL CELL BY USING THREE-DIMENSIONALLY ORDERED STRUCTURE	Kiyoshi Kanamura, Masashi Otani and Hirokazu Munakata	Department of Applied Chemistry, Graduate School of Urban Environmental Sciences, Tokyo Metropolitan University, Japan
D	Energy and Environment	---	Sept. 8	9:45	10:00	Break	---	---	---
D	Energy and Environment	Prof. Kamiya	Sept. 8	10:00	10:30	Invited	SYNTHESIS AND APPLICATIONS OF POROUS CARBON MATERIALS IN THAILAND: A REVIEW OF RECENT RESEARCH	T. Charinpanitkul, N. Tonanon and W. Tanthapanichakoon	Chulalongkorn University, Thailand
D	Energy and Environment	Prof. Kamiya	Sept. 8	10:30	11:00	Invited	MODERN CHARACTERIZATION OF AIRBORNE NANOPARTICLES	Wladyslaw W. Szymanski	Faculty of Physics, University of Vienna, Austria
D	Energy and Environment	Prof. Kamiya	Sept. 8	11:00	11:15	Oral	THE STUDY ON THE RELIABILITY OF LEAD-FREE SOLDER JOINT UNDER THE INSULATED SUBSTRATE OF IGBT MODULE	K. Fukuda, K. Onishi, Y. Nishimura and T. Goto	Fuji Electric Device Technology Co., Ltd, Japan
D	Energy and Environment	Prof. Kamiya	Sept. 8	11:15	11:30	Oral	CHEMICAL REDUCTIVE PREPARATION OF NI DECORATED CONDUCTIVE POROUS ALUMINA COMPOSITE AND ITS ELECTRO-PERFORMANCE IN ALKALINE SOLUTION	Chunxi Hai**, Hideo Watanabe*, Takashi Shirai*, Masayoshi Fuji*, Jingjun Liu*, Feng Wang* and Minoru Takahashi*	*Ceramics Research Laboratory, Nagaya Institute of Technology, Japan **College of Materials Science and Engineering, Beijing University of Chemical and Technology, P. R. China

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Session		Chairperson	Date	Start	End	Type	Title	Autohre(s)	Affiliation
D	Energy and Environment	Prof. Kamiya	Sept. 8	11:30	11:45	Oral	INTERFACIAL CONTROL IN PHOTO-ANODE OF DYE-SENSITIZED SOLAR CELL	Mamiko Kawakita*, Jin Kawakita**, Tetsuo Uchikoshi*** and Yoshio Sakka*,***	*Graduate School of Pure and Applied Sciences, Tsukuba University, Japan **Advanced Photovoltaics Center, National Institute for Materials Science, Japan ***Nano Ceramics Center, National Institute for Materials Science, Japan
D	Energy and Environment	Prof. Kamiya	Sept. 8	11:45	12:00	Oral	INFLUENCE OF FUNCTIONAL GROUPS OF OZONE OXIDIZED CARBON BLACK PARTICLES ON ζ -POTENTIAL	Hideyuki Hisashi*, Sumiyo Shimizu*, Masahide Kawayaya* and Hidehiro Kamiya**	* Research and Development Laboratory, Mikuni Color LTD., Japan ** Tokyo University of Agriculture and Technology, Japan

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Session		Chairperson	Date	Start	End	Type	Title	Autohre(s)	Affiliation
E	Smart Processing Technology	Prof. Songsivilai	Sept. 9	8:30	9:00	Invited	SURFACE MODIFICATION PLAYS AN IMPORTANT ROL IN BONE TISSUE ENGINEERING	Steven Mullens	VITO, Bergium
E	Smart Processing Technology	Prof. Songsivilai	Sept. 9	9:00	9:15	Invited	SPHERICAL HYDROXYAPATITE PARTICLES AS THE CARRIER FOR SUSTAINED RELEASE OF SMALL MOLECULAR DRUGS	Hui Xu, Xiaoyun Wang, Shaoning Wang, Jianbo Guo and Xing Tang	School of Pharmacy, Shenyang Pharmaceutical University, China
E	Smart Processing Technology	Prof. Songsivilai	Sept. 9	9:15	9:30	Invited	PREPARATION OF ESTRADIOL SUBMICRON EMULSIONS FOR IMPROVING BRAIN TARGETING BY THE NASAL ROUTE IN RATS	Xing Tang, Hai-bing He, Chao-qun Yu and Xiao-mei Wang	Department of Pharmaceutics, Shenyang Pharmaceutical University, China
E	Smart Processing Technology	Prof. Songsivilai	Sept. 9	9:30	9:45	Oral	CHARACTERIZATION OF THE FINSTRUCTURED SINTERED CERAMICS VIA NANOIMPRINT METHOD	Tadachika Nakayama*, Hong Dae Kim*, Yoshinori Tokoi*, Kazuyoshi Imaki*, Zhengyi Fu**, Hao Wang**, Soo-Wohn Lee***, Seung-Ho Kim***, Tsuneo Suzuki*, Hisayuki Suematsu* and Koichi Niihara*	*Department of Electric Engineering, Nagaoka University of Technology, Japan ** State Key Lab of Advanced for Materials Synthesis and Processing, Wuhan University of Technology, China *** Department of Environmental Engineering, Sunmoon University, Korea
E	Smart Processing Technology	Prof. Songsivilai	Sept. 9	9:45	10:00	Oral	DEVELOPMENT OF COMBINATORIAL PLASMA-PROCESS ANALYZER FOR ADVANCED R&D OF NEXT GENERATION NANODEVICE FABRICATIONS	Yuichi Setsuhara* ,****, Ken Cho* ,****, Kosuke Takenaka* ,****, Masaharu Shiratani** ,****, Makoto Sekine*** ,****, and Masaru Horj*** ,****	*Joining and Welding Research Institute, Osaka University, Japan **Department of Electronics, Kyushu University, Japan ***Graduate School of Engineering, Nagoya University, Japan ****Japan Science and Technology Agency, CREST
E	Smart Processing Technology	---	Sept. 9	10:00	10:15	Break	---	---	---
E	Smart Processing Technology	Prof. Takemoto	Sept. 9	10:15	10:45	Invited	ROLE OF MORPHOLOGIES, COMPOSITION, CATION DISTRIBUTION AND INTERFACES IN GAS SENSORS	Girish M. Kale	Institute for Materials Research, University of Leeds, United Kingdom
E	Smart Processing Technology	Prof. Takemoto	Sept. 9	10:45	11:15	Invited	STUDY ON MORPH-GENETIC MATERIALS DERIVED FROM NATURAL MATERIALS	Di zhang, Tongxiang Fan, Shemin Zhu, Huilan Su, Wang Zhang, Zhaoting Liu, Han Zhou, Qinlei Liu	State Kery Lab of Metal Matrix Composites, Shanghai JiaoTong University, China
E	Smart Processing Technology	Prof. Takemoto	Sept. 9	11:15	11:30	Oral	DEVELOPMENT OF ARTIFICIAL CRYSTALS FOR THERMODYNAMIC ENERGY CONTROL	Soshu Kiriara, Toshiki Niki, Mitsuyori Suwa	Joining and Welding Research Institute, Osaka University, Japan
E	Smart Processing Technology	Prof. Takemoto	Sept. 9	11:30	11:45	Oral	SPARK PLASMA SINTERING OF CARBON PARTICLES COATED WITH Al ₂ O ₃ CERAMIC	Weiwu Chen*, Yoshinari Miyamoto**, Taihei Matsumoto**, and Tsutsuro Tojo**,**	*Joining and Welding Research Institute, Osaka University, Japan **Advanced Carbon Technology Center, Toyo Tanso. Co., Ltd., Japan

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Session		Chairperson	Date	Start	End	Type	Title	Autohre(s)	Affiliation
E	Smart Processing Technology	Prof. Takemoto	Sept. 9	11:45	12:15	Invited	PHASE TRANSITIONS IN THE PYROCHLORE-FLUORITE CERAMICS AND THERMAL CONDUCTIVITIES	Pan Wei, Wan ChunLei, Qu Zhixue	State Key Lab of New Ceramics and Fine Processing, Department of Materials Science and Engineering, Tsinghua University, China
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	PLASMA-ENHANCED NANOPARTICLES-BEAM DEPOSITION FOR HIGH-RATE FORMATION OF NANOCOMPOSITE FILMS VIA PLASMA-ENHANCED DEVELOPMENT OF NANOPARTICLES-BEAM DEPOSITION SYSTEM USING INDUCTIVELY-COUPLED PLASMAS	Kosuke Takenaka*, Yuki Nakajima*, Yuichi Setsuhara*, Hiroya Abe* and Kiyoshi Nogi**,**	*Joining and Welding Research Institute, Osaka University Japan **Hosokawa Powder Technology Research Institute, Japan
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	MICROSTRUCTURES FORMED ON STAINLESS STEEL BY FEMTOSECOND LASER IRRADIATION	Hiroshi Honda*, Masahiro Tsukamoto**, Nobuyuki Abe**, Togo Shinonaga*** and Masayuki Fujita****	*Structural Metals Center, National Institute for Materials Science, Japan **Joining and Welding Research Institute, Osaka University, Japan ***Graduate School of Engineering, Osaka University, Japan ****Institute for Laser Technology, Osaka University, J
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	SMART SiC COATING and IDENTIFICATION of CARBON MICROPARTICLES	Masaharu Nakamura, Yoshinari Miyamoto, Taihei Matsumoto and Tetsuro Tojo	Joining and Welding Research Institute, Osaka University, Japan
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	DISPERSION OF CARBON NANOTUBES BY BEADS MILLING PROCESS	Sara Yoshio, Junichi Tatami, Toru Wakihara, Takeshi Meguro and Kenji Aramaki	Graduate School of Environment and Information Sciences, Yokohama National University, Japan
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	EFFECT OF PARTICLE DISPERSION ON THE DRYING BEHAVIOR FOR THE GEL-CASTING METHOD	K. Yoshino, M. Fuji and M. Takahashi	Ceramics Research Laboratory, Nagoya Institute of Technology, Japan
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	EFFECT OF POLYMER STRUCTURE IN GELCAST GREEN BODY FOR GRAPHITIZATION	Tomoaki Kato, Takashi Shirai, Hideo Watanabe, Masayoshi Fuji, and Minoru Takahashi	Ceramics Research Laboratory, Nagoya Institute of Technology, Japan
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	DESIGN AND RELIABILITY OF ZRO2 CONTAINING POROUS NOZZLE FOR CONTINUOUS CASTING	Dong-Cheol Yoon*, Byeong-Kil Shin*, Yong-Ho Cho*, Hee-Soo Lee*, Mun-Kyu Cho**, Doo Hoa Jeong**	*School of Materials Science & Engineering, Pusan National University, Korea **Functional Materials Laboratory, Research Institute of Industrial Science & Technology, Korea
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	ONE-DIMENSIONAL ZnO NANOSTRUCTURES ON THE EPITAXIALLY GROWN GaN THIN FILM BY VAPOR TRANSPORT ROUTE	Taeseup Song, Jaehwan Ha, Min-kyu Kim, and Ungyu Paik	Division of Materials Science Engineering, Hanyang University, Korea
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	METAL NPS DECORATED-CNTS NANOCOMPOSITES	Zhenquan Tan, Hiroya Abe, Makio Naito and Satoshi Ohara	Joining and Welding Research Institute, Osaka University, Japan

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Session		Chairperson	Date	Start	End	Type	Title	Author(s)	Affiliation
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	FABRICATION OF CU/AL ₂ O ₃ /CU FUNCTIONALLY GRADED MATERIALS FROM THE SPONTANEOUSLY FORMED SEGREGATION STRUCTURES	A. N. Huang* and H. P. Kuo*, **	*Department of Chemical and Materials Engineering, Chang Gung University, Taiwan **Green technology research center, Chang Gung University, Taiwan
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	FABRICATION OF ALUMINA DIAMOND PHOTONIC CRYSTALS WITH TWINNED INTERFACES TO DEVELOP TERAHERTZ WAVE RESONATORS	Toshiki Niki, Soshu Kirihara	Joining and Welding Research Institute, Osaka University, Japan
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	FABRICATION OF ALUMINA DENTAL CROWNS BY USING STEREOLITHOGRAPHY OF STRUCTURAL JOINING PROCESS	Mitsuyori Suwa, Soshu Kirihara	Joining and Welding Research Institute, Osaka University, Japan
E	Smart Processing Technology	---	Sept. 7	17:30	19:00	Poster	STRUCTURE AND PHOTOCHEMICAL PROPERTY OF TiO ₂ -In ₂ O ₃ -SnO ₂ -Al ₂ O ₃ FILM PREPARED BY ELECTROLYSIS OF AQUEOUS SOLUTION	Naoki Matsunaga*, Keigo Oshiro*, Yoshihiro Hirata**, Yousuke Fukuda*, Soichiro Sameshima** and Takamasa Ishigaki***	*Department of Applied Chemistry and Chemical Engineering, Kagoshima University, Japan **Department of Advanced Nanostructured Materials Science and Technology, Kagoshima University, Japan ***National Institute for Materials Science, Nano Ceramics Center, Japan

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Session		Chairperson	Date	Start	End	Type	Title	Autohre(s)	Affiliation
F	Materials Design	Prof. Fujii	Sept. 9	8:30	9:00	Invited	DESIGNING WITH BRITTLE MATERIALS	Steve Freiman	Freiman Consulting
F	Materials Design	Prof. Fujii	Sept. 9	9:00	9:30	Invited	EFFECTIVE METHODS FOR DETERMINING HARDNESS AND TOUGHNESS OF CERAMICS	Roger Morrell	National Physical Laboratory, UK
F	Materials Design	Prof. Fujii	Sept. 9	9:30	9:45	Oral	METALLIC BONDING WITH THE USE OF COPPER COMPOUND POWDERS	Kazuaki Ihara*, Y. Kobayashi*, N. Shibamiya*, M. Minato*, Y. Yasuda**, T. Morita** and S. Yamada**	*Department of Biomolecular Functional Engineering, College of Engineering, Ibaraki University, Japan **Materials Research Laboratory, Hitachi Ltd., Japan
F	Materials Design	Prof. Fujii	Sept. 9	9:45	10:00	Oral	MICROSTRUCTURE AND MECHANICAL PROPERTIES OF FRICTION STIR WELDED PURE COPPER	Y. F. Sun, H. Fujii, K. Nakata and K. Nogi	Joining and Welding Research Institute, Osaka University, Japan
F	Materials Design	---	Sept. 9	10:00	10:15	Break	---	---	---
F	Materials Design	Prof. Setsuhara	Sept. 9	10:15	10:45	Invited	DESIGN AND RELIABILITY OF LAYERED CERAMICS	H.S. Lee*, D.C. Yoon*, B.K. Shin*, M.C. Shin*, Y.N. Kim**, and M.S. Jeon**	*School of Materials Science & Engineering, Pusan National University, Korea **Machinery & Material Testing Center, Korea Testing Laboratory, Korea
F	Materials Design	Prof. Setsuhara	Sept. 9	10:45	11:15	Invited	JOINING OF ADVANCED CERAMIC MATERIALS BY PLASTIC DEFORMATION TO PRODUCE ENGINEERING DEVICES	Dileep Singh*, Jules. L. Routbort* and K. Niihara**	*Argonne National Laboratory, USA **Osaka University, Japan
F	Materials Design	Prof. Setsuhara	Sept. 9	11:15	11:30	Oral	EFFECT OF PLASMA THERMAL SPRAY COATING PARAMETERS ON THE MICROSTRUCTURE AND PERFORMANCE OF ALUMINA/COPPER COMPOSITE	Kuan Hong Lin*, Zi Hao Xu** and Shun Tian Lin**	* Department of Mechanical Engineering, Tunghan University, Taiwan ** Department of Mechanical Engineering, National Taiwan University of Science and Technology, Taiwan
F	Materials Design	Prof. Setsuhara	Sept. 9	11:30	11:45	Oral	PREPARATION OF A DRUG-LOADED GEL ELECTRODE FOR IONTOPHORESIS	T. Yoshioka*, M. Soya*, S. Hayashi**, R. Wakita**, M. Umino** and J. Tanaka*	* Department of Metallurgy and Ceramics Science, Graduate School, Tokyo Institute of Technology, Japan **Department of Oral Restitution, Division of Oral Health Sciences, Graduate School, Tokyo Medical and Dental University, Japan
F	Materials Design	Prof. Setsuhara	Sept. 9	11:45	12:00	Oral	SOLID SOLUTIONS OF GADOLINIUM OXIDES AND YTTRIUM OXIDES DOPED WITH EU OBTAINED BY AEROSOL METHODS	L. Gómez*, K. Marinkovic**, O. Milosevic**, ME. Rabanal*	*University Carlos III, Spain **Institute of Technical Sciences of Serbian Academy of Sciences and Arts, Serbia

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Session		Chairperson	Date	Start	End	Type	Title	Autohre(s)	Affiliation
F	Materials Design	Prof. Setsuhara	Sept. 9	12:00	12:15	Oral	NOVEL TECHNIQUE OF TEXTURE CONTROL BY LASER SPOT HEATING IN PURE ALUMINUM SHEET	Toshiya Shibayanagi, Masahiro Tsukamoto, Nobuyuki Abe and Takuto Yamashita	Joining and Welding Research Institute, Osaka University, Japan
F	Materials Design	---	Sept. 7	17:30	19:00	Poster	MICROSTRUCTURE AND PROPERTIES OF HfO ₂ -TiO ₂ ADDED CNT-Si ₃ N ₄ CERAMICS	Mitsuaki Matsuoka, Tomohiro Yamakawa, Junichi Tatami, Toru Wakihara, Katsutoshi Komeya and Takeshi Meguro	Graduate School of Environment and Information Sciences, Yokohama National University, Japan
F	Materials Design	---	Sept. 7	17:30	19:00	Poster	FABRICATION AND EVALUATION OF Y ₂ O ₃ -HfO ₂ -SiO ₂ -DOPED Si ₃ N ₄ CERAMICS	Sayaka Hagimura, Junichi Tatami, Toru Wakihara, Katsutoshi Komeya and Takeshi Meguro	Graduate School of Environment and Information Sciences, Yokohama National University, Japan
F	Materials Design	---	Sept. 7	17:30	19:00	Poster	FABRICATION OF NANO-TiO ₂ COATED MORPHOGENETIC CARBON AND ITS PHOTOCATALYTIC PERFORMANCE	Dacheng Huang*,*, Y. Miyamoto*, D. Matsumoto*, T. Tojo*, D. Zhang**	*Joining and Welding Research Institute, Osaka University, Japan **Shanghai Jiaotong University, China
F	Materials Design	---	Sept. 7	17:30	19:00	Poster	THE INFLUENCE OF GRAIN INTERFACE STRUCTURE ON THE MECHANICAL PROPERTIES OF ALUMINUM NITRIDE CERAMICS	Saiko Sumino*, Yukihiko Kanechika**, Yasuko Takeda*, Hiroshi Fukushima**	*Tokuyama Corporation, Japan **Graduate School of Engineering, Hiroshima University, Japan
F	Materials Design	---	Sept. 7	17:30	19:00	Poster	POLARIZED RAMAN SPECTROSCOPY STUDY OF BORON CARBIDE UNDER PRESSURES	Junjie Guo*, Ling Zhang*, Takeshi Fujita**, Deng Pan**, Mingwei Chen**	*Department of Materials Science, Graduate School of Engineering, Tohoku University, Japan **WPI-Advanced Institute for Materials Research, Tohoku University, Japan
F	Materials Design	---	Sept. 7	17:30	19:00	Poster	CONTROL OF JOINT PROPERTIES BY FRICTION POWDER PROCESSING	Koji Inada*, Hidetoshi Fujii*, Young Su Ji*, Yoshiaki Morisada** and Kiyoshi Nogi*	*Joining and Welding Research Institute, Osaka University, Japan **Osaka Municipal Technical Research Institute, Japan
F	Materials Design	---	Sept. 7	17:30	19:00	Poster	FRICTION STIR WELDING OF COMMERCIAL PURITY TITANIUM	Yoshiro Iwata, Hidetoshi Fujii, Kazuhiro Nakata and Kiyoshi Nogi	Joining and Welding Research Institute, Osaka University, Japan
F	Materials Design	---	Sept. 7	17:30	19:00	Poster	FRICTION STIR WELDING OF REDUCED ACTIVATION FERRITIC/MARTENSITIC F82H STEEL	Young Dong Chung, Hidetoshi Fujii, Hisashi Serizawa, Kazuhiro Nakata, Kiyoshi Nogi and Hiroyasu Tanigawa	Joining and Welding Research Institute, Osaka University, Japan
F	Materials Design	---	Sept. 7	17:30	19:00	Poster	PROPERTIES OF LASER-FSW HYBRID WELDED INCONEL 600	K. H. Song, T. Tsumura, H. Fujii and K. Nakata	Joining and Welding Research Institute, Osaka University, Japan

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Session		Chairperson	Date	Start	End	Type	Title	Author(s)	Affiliation
F	Materials Design	---	Sept. 7	17:30	19:00	Poster	SURFACE MODIFICATION OF FERRITIC SPHEROIDAL GRAPHITE CAST IRON BY FRICTION STIR PROCESSING	Koichi Imagawa, Hidetoshi Fujii, Kiyosi Nogi, Yasufumi Yamaguchi, Shoji Kiguchi	Joining and Welding Research Institute, Osaka University, Japan