

4th International Symposium on  
 Designing, Processing and Properties of Advanced Engineering Materials  
**ISAEM-2008**  
 November 18-21, 2008

18 Nov.

17:00-18:30	Welcome Party	<b>Noyori Conference Hall</b>
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19 Nov.

8:15-8:30	Opening	<b>Room A</b>			
8:30-9:50	Keynote Lectures	<b>Room A</b>			
8:30	[ Material Processing ] Chairman : Z. Horita (Kyushu Univ., Japan)				
	K-1	T. G. Langdon (Univ. of Southern California, USA, Univ. of Southampton, U.K.) "Using Severe Plastic Deformation for the Processing of Advanced Engineering Materials"			
9:10	[ 3-D Imaging ] Chairman : M. Sugiyama (Nippon Steel Corp., Japan)				
	K-2	D. J. Jensen (Risø National Lab. for Sustainable Energy, Technical Univ. of Denmark, Denmark) "Metal Microstructures in 4D"			
9:50-10:05	Coffee Break				
10:05-12:45	Invited Lectures				
		<b>Room A</b>	<b>Room B</b>		
		[ Material Processing ]	[ 3-D Imaging ]		
		Chairmen : T. Furuhashi (Tohoku Univ., Japan), A. Chiba (Tohoku Univ., Japan)	Chairmen : H. Toda (Toyohashi Univ. of Tech., Japan), Y. Adachi (NIMS, Japan)		
10:05	I-1	K. Tsuzaki, Y. Kimura, T. Inoune, F. Yin (NIMS, Japan) "Toughening of Ultra-High Strength Steels through Thermomechanical Processing"	10:05	I-7	M. Kobayashi, H. Toda, K. Uesugi* (Toyohashi Univ. of Tech., Japan) (*JASRI, Japan) "3D/4D Deformation and Fracture Analysis by Tracking Microstructural Features in High-Resolution Computed Tomography"
10:30	I-2	A. Chiba, K. Yamanaka, S. Kurosu, S.H. Lee, H. Matsumoto (Tohoku Univ., Japan) "Grain Refinement of Co-Cr-Mo Alloys for Biomedical Applications Using Hot-Deformation Processing"	10:30	I-8	K. Kajiwara, S. Kawado*, T. Mukaide** (JASRI, Japan) (*Kyushu Synchrotron Light Research Center, Japan) (**Canon Inc, Japan) "Three-Dimensional observation by X-ray topography at SPring-8"
10:55	I-3	Y. S. Sato, H. Kokawa (Tohoku Univ., Japan) "Microstructural Characteristics in Friction Stir Welds"	10:55	I-9	A. Takeuchi, Y. Suzuki, K. Uesugi (JASRI, Japan) "X-ray Micro/Nano-Tomography Instrument at SPring-8"
11:20	I-4	Y. Kawamura (Kumamoto Univ., Japan) "Formation and Mechanical Properties of LPSO Mg-TM-RE Alloys"	11:20	I-10	K. Higashida*, M. Tanaka*, M. Mitsuhara*, K. Kaneko**, S. Hata* (*Kyushu Univ., Japan) (**JST-CREST, Japan) "3-D Observation of Crack Tip Dislocations by Combining Scanning Transmission Electron Microscopy and Computed Tomography."

11:45	I-5 <u>Y. Todaka</u> , J. Sasaki, T. Moto, M. Umemoto (Toyohashi Univ. of Tech., Japan) "Microstructures and Mechanical Properties of Bulk Submicrocrystalline $\omega$ -Ti Produced by High-Pressure Torsion Straining "	11:45	I-11 <u>M. Rabara</u> , P. Mainwaring*, J. Hunt* (Nippon Gatan, Japan) (*Gatan Research & Development, USA) "X-ray Ultramicroscopy of Materials in the SEM"
12:10	I-6 <u>L. Wang</u> , Y. Liu, S. Wang, X. Zhao (Northeastern Univ., China) "Effects of ET Treatment on Intergranular Corrosion Behavior of a Ni-Cr-W-Mo Superalloy"	12:10	I-12 <u>K. Asayama</u> , S. Kudo, N. Hashikawa, Y. Hirose, A. Takaoka, H. Mori (Renesas Tech. Corp., Japan) (*Osaka Univ., Japan) "Fail Analysis of Semiconductor Devices by 3D Images Re-constructed from TEM Data"
12:45-14:05	Lunch Break		
14:05-14:45	Keynote Lecture <b>Room A</b>		
14:05	[ Material Processing ] Chairman : M. Niinomi (Tohoku Univ., Japan) K-3 <u>Z. Q. Hu</u> , W. R. Sun, S. L. Yang, S. R. Guo, H. C. Yang* (Inst. of Metal Research, China) (*Northeastern Univ., China) "Influence of Phosphorus Microalloying on the Microstructure and Mechanical Properties of DA761 Superalloy"		
15:00-17:00	Short Presentation		
	<b>Room A</b>		
15:00	[ 3-D Imaging ] Chairman : Z. Horita (Kyushu Univ., Japan)		
15:39	[ Ceramics ] Chairman : T. Kasuga (Nagoya Inst. of Tech., Japan)		
	<b>Room B</b>		
15:00	[ Polymeric Materials ] Chairman : A. Usuki (Toyota Central R&D Labs., Inc., Japan)		
15:24	[ Biomedical Materials ] Chairman : T. Hanawa (Tokyo Medical and Dental Univ., Japan)		
	<b>Room C</b>		
15:00	[ Material Processing ] Chairman : A. Chiba (Tohoku Univ., Japan )		
16:15	[ Materials Simulation ] Chairman : Y. Nakasone (Tokyo Univ. of Science, Japan)		
17:00-19:00	Poster Presentation <b>Room C</b>		
	[ 3-D Imaging ] Chairman : Z. Horita (Kyushu Univ., Japan) [ Ceramics ] Chairman : T. Kasuga (Nagoya Inst. of Tech., Japan) [ Polymeric Materials ] Chairman : A. Usuki (Toyota Central R&D Labs., Inc., Japan) [ Biomedical Materials ] Chairman : T. Hanawa (Tokyo Medical and Dental Univ., Japan) [ Material Processing ] Chairman : A. Chiba (Tohoku Univ., Japan ) [ Materials Simulation ] Chairman : Y. Nakasone (Tokyo Univ. of Science, Japan)		

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8:30-9:50		Keynote Lectures		Room A	
8:30	[ Materials Simulation ] Chairman : Y. Nakasone (Tokyo Univ. of Science, Japan)				
	K-4 <u>Y. Liu</u> , W. A. Goddard III (California Inst. of Tech., USA) "Multi-scale Multi-paradigm Computational Materials Design"				
9:10	[ Ceramics ] Chairman : Y. Iwamoto (Nagoya Inst. of Tech., Japan)				
	K-5 P. Colombo (Univ. of Padova, Italy, The Pennsylvania State Univ., USA) "Porous Ceramics from Pre ceramic Polymers"				
9:50-10:05		Coffee Break			
10:05-12:10		Invited Lectures			
Room A			Room B		
[ Materials Simulation ]			[ Ceramics ]		
Chairman : T. Ishikawa (Nagoya Univ., Japan)			Chairmen : T. Kasuga (Nagoya Inst. of Tech., Japan), K. Kakimoto (Nagoya Inst. of Tech., Japan)		
10:05	I-13 <u>Y. Shibutani</u> , M. Kosuge (Osaka Univ., Japan) "Heterogeneous Grain Boundary Effect Using Displacement Bursts of Nanoindentation"	10:05	I-18 <u>K. Kakimoto</u> , J. Furuhashi, Y. Ishida, H. Ogawa*, M. Aki* (Nagoya Inst. of Tech., Japan)(* Otsuka Chemical Co., Ltd., Japan) "Synthesis of Shape-controlled Ceramic Particles by Molten Salt Route and its Filler Application to Resin-based Dielectric Composite"		
10:30	I-14 <u>Y. Suwa</u> , H. Onodera* (Nippon Steel Corp., Japan) (*NIMS, Japan) "Three-dimensional Phase-Field Simulation of Grain Growth"	10:30	I-19 <u>K. Kikuta</u> , K. Noda, S. Okumura, T. Yamaguchi, S. Hirano (Nagoya Univ., Japan) "Orientation Control of Perovskite Thin Film Using a Nano Sheet Layer Prepared on Glass Substrate"		
10:55	I-15 <u>A. Yamanaka</u> , T. Takaki*, Y. Tomita (Kobe Univ., Japan) (*Kyoto Inst. of Tech., Japan) "Numerical Prediction of Microstructure and Mechanical Properties of Dual-Phase Steel Using Phase-Field Method and Homogenization Method"	10:55	I-20 <u>K. Watari</u> , K. Sato (AIST, Japan) "Development of Novel Binders - Photoreactive Thin Film of Particles Bonding-"		
11:20	I-16 <u>E. Nakamachi</u> (Doshisha Univ., Japan) "Multi-scale Finite Element Analyses and Syntheses for Process Metallurgy Design of Sheet Metal"	11:20	I-21 <u>H. Muto</u> , A. Matsuda, M. Sakai (Toyohashi Univ. of Tech., Japan) "Experimental Study and Simulation on the Formation of Two- or Three-Dimensional Particle Arrangements under the External Force"		
11:45	I-17 <u>J. Yanagimoto</u> (Univ. of Tokyo, Japan) "FE-based Analysis for the Prediction of Microstructure Evolution in Hot Rolling"	11:45	I-22 <u>T. Yamamoto</u> ***, N. Shibata*, T. Mizoguchi*, Y. Ikuhara*,** (*Univ. of Tokyo, Japan) (**Nano Structure Research Center, Japan) "Grain Boundary Atomic Structures and their Electron Transport Behaviors in SrTiO <sub>3</sub> Bicrystals"		

12:10-13:30	Lunch Break
13:30-14:50	Keynote Lectures <b>Room A</b>
	[ Ceramics ] Chairman : K. Watari (AIST, Japan)
13:30	K-6 Y. Ikuhara (Univ. of Tokyo, JFCC, Tohoku Univ., Japan) "Towards Innovation in Interface Characterization of Ceramic"
14:10	K-7 I. Tanaka (Kyoto Univ., Japan, JFCC, Japan) "First Principles Thermodynamics for Process Design of Advanced Materials"
14:50-15:00	Coffee Break
15:00-17:00	Open Discussion <b>Room B</b>
	Today & Future Aspect of 3D Imaging and 3D Simulation Chairmen : T. Furuhashi (Tohoku Univ., Japan), T. Ishikawa (Nagoya Univ., Japan), M. Sugiyama (Nippon Steel Corp., Japan)  Presentors : H. Toda (Toyohashi Univ. of Tech., Japan) Y. Adachi (NIMS, Japan) M. Tanaka (Kyusyu Univ., Japan ) T. Kamino(Hitachi High-Technologies Corp., Japan) N. Yukawa (Nagoya Univ., Japan) T. Koyama (NIMS., Japan)
17:00-17:30	
17:30-19:30	Banquet <b>Room C</b>
	Chairman : M. Niinomi (Tohoku Univ., Japan)

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8:30-9:50	Keynote Lectures		Room A		
8:30	[ Biomedical Materials ] Chairman : T. Hanawa (Tokyo Medical and Dental Univ., Japan)				
	K-8	C. J. Boehlert, T. Akahori*, M. Niinomi* (Michigan State Univ., USA) (*Tohoku Univ., Japan) "The Mechanical Behavior and Biocompatibility of Vanadium-Free Titanium-Aluminum-Niobium Alloys"			
9:10	[ Polymeric materials ] Chairman : M. Okamoto (Toyota Technological Inst., Japan)				
	K-9	J. M. Yeh (Chung-Yuan Christian Univ., Taiwan) "Advanced Anticorrosive Coatings Prepared from Polyaniline-Clay Nanocomposite Materials"			
9:50-10:05	Coffee Break				
10:05-12:10	Invited Lectures				
Room A		Room B			
[ Biomedical Materials ]		[ Polymeric materials ]			
Chairmen : T. Narushima (Tohoku Univ., Japan), T. Nakano (Osaka Univ., Japan)		Chairmen : H. Saito (Tokyo Univ. of Agriculture and Tech., Japan), T. Takeichi (Toyohashi Univ. of Tech., Japan)			
10:05	I-23	T. Nakano (Osaka Univ., Japan) "Preferential Orientation of Biological Apatite Crystallite in Various Bones"	10:05	I-28	A. Okada, A. Usuki (Toyota Central R&D Labs, Inc., Japan) "Research and Development of Nylon- Clay Hybrid"
10:30	I-24	T. Narushima (Tohoku Univ., Japan) "In Vivo and in Vitro Evaluation of Amorphous Calcium Phosphate Films Coated on Titanium Implants by RF Magnetron Sputtering"	10:30	I-29	M. Okamoto, M. Bitou (Toyota Technological Inst., Japan) "Fabrication of Porous 3-D Structure from Poly(L-lactide)-based Nano- Composite Foams via Enzymatic Degradation"
10:55	I-25	H. Takadama, T. Kizuki, S. Yamaguchi, T. Matsushita, T. Kokubo, T. Nakamura* (Chubu Univ., Japan) (*Kyoto Univ., Japan) "New Kind of Surface Chemical Treatment for Providing Bioactivity to Titanium Metal and Its Alloy"	10:55	I-30	T. Takeichi, Y. Shirai, S. M. M. Alam, T. Kawauchi (Toyohashi Univ. of Tech., Japan) "Preparation of Polyimide- polysiloxane Hybrid and its Property"
11:20	I-26	T. Hanawa, Y. Tanaka (Tokyo Medical and Dental Univ., Japan) "Immobilization of Poly(Ethylene Glycol) to Metal Surfaces with Electrodeposition"	11:20	I-31	K. Tsunekawa, H. Saito (Tokyo Univ. of Agriculture and Tech., Japan) "Photoelastic Behavior of Glassy Polymers"
11:45	I-27	M. Niinomi, T. Akahori, H. Otomo*, M. Nakai, H. Tsutsumi (Tohoku Univ., Japan) (*Toyohashi Univ. of Tech., Japan) "Thermomechanical Treatments for Creating Superelastic Functionality in Ti-29Nb-13Ta-4.6Zr for Biomedical Applications"	11:45	I-32	M. Ohshima, T. Nemoto, M. Itoh, A. Kabamoto, J-A. Kim, J-W. Kim, K. Taki (Kyoto Univ., Japan) "Preparation of Porous Polymeric Materials by Polymer Processing"
12:10-12:25	Closing		Room A		

19 Nov.

14:45-17:00		Short Presentation					
Room A		Room B		Room C			
[ 3-D Imaging ]		[ Polymeric Materials ]		[ Material Processing ]			
Chairman : Z. Horita (Kyushu Univ., Japan)		Chairman : A. Usuki (Toyota Central R&D Labs, Inc., Japan)		Chairman : A. Chiba (Tohoku Univ., Japan)			
15:00	P3-01 <u>T. Sato</u> , M. Konno, E. Nakazawa, Y. Nagakubo, A. Watabe, T. Kamino, M. Ogasawara (Hitachi High-Technologies Corp., Japan) "Multi Directional High Resolution TEM Observation of Pt Nanocatalysts"	15:00	P5-01 <u>T. Sakai</u> , Y. Nakasone (Tokyo Univ. of Science, Japan) "Degradation of Crystals and Its Effects on Tensile Properties of a Crystalline Polymer"	15:00	P1-01 <u>S. Yamamoto*</u> , K. Tsuchiya*,*, Y. Yokoyama***, Y. Todaka*, M. Umemoto* (*Toyohashi Univ. of Tech., Japan) (**NIMS, Japan) (***)Tohoku Univ., Japan) "Effect of High Pressure Torsion Deformation on Microstructures and Thermal Behavior in Zr <sub>50</sub> Cu <sub>40</sub> Al <sub>10</sub> "		
15:03	P3-02 <u>T. Kujime</u> , M. Tane*, H. Nakajima* (College of Industrial Tech., Japan) (*Osaka Univ., Japan) "Three-Dimensional Image-based Modeling of Lotus-type Porous Carbon Steel and Analysis of its Mechanical Behavior by Finite Element Method"	15:03	P5-02 <u>Q. H. Shah</u> (Int. Islamic Univ. Malaysia, Malaysia) "Failure Behavior of Rectangular Polycarbonate Armor Plate Subjected to Single and Multiple Projectile Impacts"	15:03	P1-02 <u>T. Inamura*</u> , Y. Kinoshita*,*, K. Wakashima*, S. Miyazaki*** and H. Hosoda* (*Tokyo Inst. of Tech., Japan) (**Present affiliation: Nihon Kohden Corp., Japan) (***)Univ. of Tsukuba, Japan) "Texture Development and Mechanical Property of Severely Cold-rolled Ti-24mol%Nb-3mol%Al Shape Memory Alloy"		
15:06	P3-03 <u>A. Maigne</u> , P. J. Thomas, R. D. Twisten (Gatan Inc, USA) "Multi-Dimensional Data Acquisition and Analysis in the Scanning TEM"	15:06	P5-03 <u>K. Y. Huang</u> , Y. S. Jhuo, J. M. Yeh* (Chung-Yaun Christian Univ., Taiwan) "Electrochemical Studies for the Electroactivity of Amine-capped Aniline Trimer on the Anticorrosion Effect of As-prepared Polyimide Coatings"	15:06	P1-03 <u>H. Nagai</u> , Y. Todaka, M. Umemoto (Toyohashi Univ. of Tech., Japan) "Fatigue Life Improvement Through Surface Nanostructuring of High-Strength Steel by Drilling"		
15:09	P3-04 <u>Y. Hangai</u> , S. Takahashi, T. Utsunomiya*, S. Kitahara**, O. Kuwazuru***, K. Sato****, N. Yoshikawa*** (Gunma Univ., Japan) (*Shibaura Inst. of Tech., Japan) (**Gundai Co., Ltd., Japan) (***)Univ. of Tokyo, Japan) (****Tokyo Metropolitan Industrial Technology Research Institute,) "Nondestructive Observation of Porosity Reducing and Improvement of Mechanical Properties by PRPC Method of Aluminum Alloy Die Castings"	15:09	P5-04 <u>W. I. Hung</u> , Y. H. Lin, P. J. Chung, <u>J. M. Yeh*</u> (Chung-Yuan Christian Univ., Taiwan) "Gold Nanoparticles Functioned as Heterogeneous Nucleation Agents on the As-prepared Polyacrylate-Gold Composite Foams Prepared from Photopolymerization"	15:09	P1-04 <u>M. Kumagai</u> , Y. Todaka, M. Yoshii, M. Umemoto (Toyohashi Univ. of Tech., Japan) "Tensile Property of Submicrocrystalline Pure Fe Produced by HPT-Straining"		
15:12	P3-05 <u>M. Mitsuhashi</u> , M. Tanaka, S. Hata, K. Ikeda, H. Nakashima, K. Higashida (Kyushu Univ., Japan) "Three-Dimensional Imaging of Dislocations in Metallic Materials Using Electron Tomography"	15:12	P5-05 <u>M. Kawachi</u> , T. Kawachi, T. Takeichi, A. Kitaura*, E. Yashima* (Toyohashi Univ. of Tech., Japan) (*Nagoya Univ., Japan) "Encapsulation of Fullerene in an st-PMMA Helical Cavity"	15:12	P1-05 <u>Y. Niwa</u> , Y. Todaka, T. Masuda, M. Umemoto (Toyohashi Univ. of Tech., Japan) "Thermoelectric Properties of Ca-Mg-Si Alloys"		

Room A		Room B		Room C	
15:15	P3-06 <u>R. Hatano</u> , T. Nagira, H. Yasuda, M. Yoshiya, K. Uesugi*, (Osaka Univ., Japan) (*JASRI, Japan) "Al <sub>2</sub> O <sub>3</sub> -YAG Eutectic Growth Evolution in the Solidification Accompanied by the Melting of the Al <sub>2</sub> O <sub>3</sub> -YAP Metastable Eutectic"	15:15	P5-06 <u>D. N. Suwitaningsih</u> , T. Kawauchi, T. Takeichi (Toyohashi Univ. of Tech., Japan) "Synthesis and Properties of Polybenzoxazine/Liquid Rubber Hybrid"	15:15	P1-06 <u>Y. Hada</u> , K. Tsuchiya*, T. Koike**, Y. Todaka, M. Umemoto (Toyohashi Univ. of Tech., Japan) (*NIMS, Japan) (** Asahi Intecc Co., Ltd, Japan) "Mechanical Properties of Amorphous/Nanocrystalline TiNi Wires"
15:18	P3-07 <u>Y. Ohkawa</u> , M. Kobayashi, H. Toda, K. Uesugi* (Toyohashi Univ. of Tech., Japan.) (*JASRI, Japan) "Three-Dimensional Analysis of Grain Deformation Behavior in Al-Cu Alloy by High-Resolution X-ray Computed Tomography"	15:18	P5-07 <u>H. Ardhyananta</u> , T. Kawauchi, T. Takeichi (Toyohashi Univ. of Tech., Japan) "High Performance Polybenzoxazine-Polydimethylsiloxane Hybrids"	15:18	P1-07 <u>T. Yasuji</u> , M. Tsubaki, M. Fukumoto (Toyohashi Univ. of Tech., Japan) "Material Flow Behavior of Friction Stir Welding between Aluminum and Steel"
15:21	P3-08 <u>K. Shimizu</u> , H. Toda, M. Kobayashi, K. Uesugi*, Y. Suzuki* (Toyohashi Univ., Toyohashi, Japan) (*JASRI, Japan) "3-D Chemical Concentration Mapping via K-edge Subtraction Imaging"	15:21	P5-08 <u>Y. Murai</u> , T. Kawauchi, N. Furukawa*, T. Takeichi (Toyohashi Univ. of Tech., Japan) (*Sasebo National College of Tech., Japan) "Synthesis and Preparation of Polybenzoxazines Using High Molecular Weight Precursors"	15:21	P1-08 <u>I. Kartika</u> , Y. Li, H. Matsumoto, A.Chiba (Tohoku Univ., Japan) "Optimization of Hot Workability and Hot Deformation Mechanism in Co-30Ni-21Cr-10Mo Alloy"
15:24	P3-09 <u>K. Murata</u> , J. J. L. Mulders* (FEI Japan, Japan) (*FEI Electron Optics, The Netherlands) "Three-Dimensional EBSD Analysis"	[ Biomedical Materials ] Chairman : T. Hanawa (Tokyo Medical and Dental Univ., Japan)		15:24	P1-09 <u>H. Matsumoto</u> , K. Kodaira, A. Chiba (Tohoku University, Japan) "New Type Structural $\alpha'$ Martensite Ti Alloys with Refined Microstructure"
15:27	P3-10 <u>P. Qu</u> , H. Toda, H. Zhang, L. Qian*, M. Sakaguchi, M.Kobayashi, K. Uesugi** (Toyohashi Univ. of Technology, Japan) (*Kyushu Univ., Japan) (**JASRI, Japan) "3D Observation and Image-Based Simulation of Fatigue Crack Propagation in an Al-Mg-Si Alloy"	15:24	P6-01 <u>T. Otomo</u> , H. Matsumoto, N. Nomura*, A. Chiba (Tohoku Univ., Japan) (*Tokyo Medical and Dental Univ., Japan) "Influence of Cold Working and Subsequent Heat Treatment on Young's Modulus in Co-Ni-Cr-Mo Alloy"	15:27	P1-10 <u>M. Abdel-Hady*</u> , **, M. Morinaga* (*Nagoya Univ., Japan) (**Central Metallurgical R&D Inst., Egypt) "Negative Thermal Expansion Induced by Cold Rolling in $\beta$ -type Ti Alloys"
15:30	P3-11 <u>M. Tanaka</u> , K. Higashida (Kyushu Univ., Japan) "Crack Tip Dislocations Observed by TEM in Single Crystal Silicon"	15:27	P6-02 <u>T. Odahara</u> , H. Matsumoto, A. Chiba (Tohoku Univ., Japan) "Deformation Behavior of Biomedical Co-33Cr-5Mo-0.3N Alloy at Elevated Temperatures"	15:30	P1-11 <u>O. Kuwazuru</u> , T. Utsunomiya*, Y. Murata**, Y. Hangai**, N. Yoshikawa, S. Kitahara*** (Univ. of Tokyo, Japan) (*Shibaura Inst. of Tech., Japan) (**Gunma Univ., Japan) (***)Gundai Co., Ltd., Japan) "X-ray CT Observation for Casting Defects in Die Cast Aluminium Alloy to Evaluate the Fatigue Strength"
15:33	P3-12 <u>T. Kamino</u> , T.Yaguchi, K.Kaji, H.Kikuchi, M.Miyakawa, H.Okushima, M.Konno (Hitachi High-Technologies Corp., Japan) "Observation of 3D Elemental Distribution Using a Dedicated STEM Equipped with a Real-Time EELS Imaging System"	15:30	P6-03 <u>S. Kurosu</u> , H. Matsumoto, A. Chiba (Tohoku Univ., Japan) "Grain Refinement of Biomedical Co-Cr-Mo-N alloy by Reverse Transformation"	15:33	P1-12 <u>Y. Li</u> , H. Matsumoto, A. Chiba (Tohoku Univ., Japan) "Correcting the Stress-Strain Curve in Hot Forging Process"

Room A		Room B		Room C	
15:36	P3-13 <u>Y. Adachi</u> *, S. Morooka**, (*NIMS, Japan) (** Ibaraki Univ., Japan) "Computer-aided 3D Visualization of Twisted Cementite Lamellae in Eutectoid Steel"	15:33	P6-04 <u>K. Narita</u> **, M. Niinomi* M. Nakai*, T. Akahori*, H. Tsutsumi*, K. Oribe**, S. Kozuka**, S. Sato** (*Tohoku Univ., Japan) (**Showaika Co., LTD., Japan) "Mechanical Performance of Ti-29Nb-13Ta-4.6Zr Applied to Spinal Implant Rod"	15:36	P1-13 <u>M. Shahien</u> , M. Yamada, T. Yasui, M. Fukumoto (Toyohashi Univ. of Tech., Japan.) "Reactive Plasma Spraying of Aluminum and Aluminum Nitride Mixed Powder"
[ Ceramics ]		15:36	P6-05 <u>T. Kanno</u> , M. Niinomi, T. Akahori, M. Nakai, T. Tsutsumi, H. Fukui* (Tohoku Univ., Japan) (*Aichi Gakuin Univ., Japan) "Relationship between Mechanical Properties and Microstructure of Dental Ag-20Pd-14.5Cu-12Au Alloy"	15:39	P1-14 <u>Z.-D Li</u> **, G. Miyamoto*, Z.-G Yang** and T. Furuhashi* (*Tohoku Univ., Japan) (**Tsinghua Univ., China) "Alloying Effects on Reverse Transformation Kinetics from Pearlite in High Carbon Steels"
Chairman : T. Kasuga (Nagoya Inst. of Tech., Japan)					
15:39	P4-01 <u>M. Yamada</u> , K. Sato, Y. Kandori, T. Yasui, M. Fukumoto (Toyohashi Univ. of Tech., Japan) "Titanium Dioxide Coatings Deposited by Cold Spray Process"	15:39	P6-06 <u>X. Feng</u> , M. Niinomi, M. Nakai, T. Akahori, H. Tsutsumi, M. Ogawa* (Tohoku Univ., Japan) (*Daido Steel Co., Ltd., Japan) "Anisotropic Thermal Expansion and Microstructure of Cold-rolled Ti-29Nb-13Ta-4.6Zr Alloy"	15:42	P1-15 T. Suzu, <u>A. Yamamoto</u> , S. Fukumoto (Univ. of Hyogo, Japan.) "Microstructures and Textures Induced by Wavy Roll-Forming on AZ31B Magnesium Alloy"
15:42	P4-02 <u>K. Hataya</u> **, Y. H. Ikuhara*, T. Nagano*, S. Takahashi*, Y. Iwamoto** (*JFCC, Japan) (**Nagoya Inst. of Tech., Japan) "The Relationship Between the Gas Permeation Properties and the Chemical Structure of the Metal-doped High Temperature Hydrogen Membrane Materials"	15:42	P6-07 <u>S. Mineta</u> , K. Ueda, S. Namba*, T. Yoneda**, T. Narushima (Tohoku Univ., Japan) (*Kobe Steel, Ltd., Japan) (**Yoneda Advanced Casting Co., Ltd., Japan) "Microstructural Change in Solution Treatment of Biomedical Co-Cr-Mo Alloys with Various Carbon Content"	15:45	P1-16 <u>Y. Hata</u> , A. Yamamoto, S. Fukumoto (Univ. of Hyogo, Japan.) "Texture Induced in Wavy Roll-formed 6061 Aluminum Alloy"
15:45	P4-03 S. Honda, K. Kimata, S. Hashimoto, <u>Y. Iwamoto</u> , M. Yokoyama*, J. Shimano*, K. Ukai*, Y. Mizutani*(Nagoya Inst. of Tech., Japan) (*Toho Gas Co., Ltd., Japan) "Strength and Thermal Shock Properties of Sc-doped Zirconia for Thin Electrolyte Sheet of Solid Oxide Fuel Cell"	15:45	P6-08 <u>S. Hatanaka</u> , S. Doi, M. Ikeda, M. Ueda, M. Ogawa* (Kansai Univ., Japan) (*Daido Steel Co., Ltd, Japan) "Aging Behavior in Ti-10Cr-Al Alloys for Medical Application"	15:48	P1-17 <u>A. Fujii</u> , Y. Takigawa, T. Uesugi, K. Higashi (Osaka Prefecture Univ., Japan) "Fabrication of Homogeneous Bulk Nanocrystalline Ni-W Alloys and their Mechanical Properties"
15:48	P4-04 <u>T. Shibano</u> , W. Kinoshita, Y. Takigawa, K. Higashi (Osaka Prefecture Univ., Japan) "Effect of Insoluble Dopant on Phase Stability of Zirconia in Hot Water"	15:48	P6-09 <u>N. Nomura</u> , J. Tagiri*, T. Jin*, S-H Lee**, T. Hanawa, A. Chiba*** (Tokyo Medical and Dental Univ., Japan) (*Iwate Univ., Japan) (**Iwate Industrial Promotion Center, Japan) (***Tohoku Univ., Japan) "Effect of Boron and Nitrogen Addition on Microstructure and Mechanical Properties of Co-29Cr-6Mo Alloys for Biomedical Applications"	15:51	P1-18 <u>M. Honda</u> , T. Uesugi, Y. Takigawa, K. Higashi (Osaka Prefecture Univ., Japan) "Effect of Al Concentration on Dynamic Recrystallization in Mg-Al Magnesium Alloy"



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15:51	P4-05 <u>H. Hayashi</u> , K. Tanaka, K. Kakimoto, I. Kagomiya, T. Iijima* (Nagoya Inst. of Tech., Japan) (*AIST, Japan) "Material Design and Texture of Piezoelectric (Li, Na)NbO <sub>3</sub> Thin Films by Chemical Solution Deposition"	15:51	P6-10 <u>Y. Tanaka</u> , R. Kondo, Y. Tsutsumi, H. Doi, N. Nomura, T. Hanawa (Tokyo Medical and Dentals Univ., Japan) "Magnetic Susceptibility of Zr-Nb Alloys to Prevent Artifacts in MRI"	15:54	P1-19 <u>K. Yang</u> , M. Fukumoto (Toyohashi Univ. of Tech., Japan) "Investigation of Dominating Factors on Transition in Flattening Behavior of Thermal Sprayed Particle"
15:54	P4-06 <u>K. Okanoue</u> , Y. Kinemuchi, H. Kaga, H. Nakano*, S. Tanaka**, K. Uematsu**, K. Watari (AIST, Japan) (*Ryukoku Univ., Japan) (**Nagaoka Univ. of Tech., Japan) "Effect of Texturing via High Magnetic Filed on Properties of Grain Boundary in ZnO Varistors"	15:54	P6-11 <u>R. Kondo</u> , Y. Tsutsumi, H. Doi, N. Nomura, M. Ikeda*, T. Hanawa (Tokyo medical and dental Univ., Japan) (Kansai Univ., Japan) "Corrosion Resistance and Mechanical Properties of Dental Cast Zr-Nb-Pt and Zr-Nb-Pd Ternary Alloys"	15:57	P1-20 <u>J. Kobata</u> , Y. Takigawa, T. Uesugi, H. Kimura*, K. Higashi (Osaka Prefecture Univ., Japan) (*Tohoku Univ., Japan) "Deformation Behavior of Zr-based Bulk Metallic Glass with Introduced Shear Bands by Cold Rolling"
15:57	P4-07 <u>H. Watanabe</u> , J. Tani, H. Kido, K. Mizuuchi (Osaka Municipal Technical Research Institute, Japan) "Processing of Magnesium Composites Containing Zr <sub>2</sub> (WO <sub>4</sub> )(PO <sub>4</sub> ) <sub>2</sub> Particles with Negative Thermal Expansion"	15:57	P6-12 <u>M. Ueda</u> , M. Ikeda, M. Ogawa* (Kansai Univ., Japan) (*Daido Steel Co., Ltd, Japan) "Chemical-Hydrothermal Combined Synthesis of Bioactive Oxide Films on Ti Surfaces"	16:00	P1-21 <u>A. Owash</u> , T. Uesugi, Y. Takigawa, K. Higashi (Osaka Prefecture Univ., Japan) "Deformation Characteristics at Elevated Temperatures and Investigation of Stacking Fault Energy in Mg-14Sc Alloy"
16:00	P4-08 <u>K. Sato</u> , Y. Hotta, K. Watari (AIST, Japan) "Rheological Properties of Suspensions of ZnO in Polyvinyl Alcohol Solution"	16:00	P6-13 <u>T. Wakita</u> ** , Y. Ota***, A. Obata*, T. Kasuga* (*Nagoya Inst. of Tech., Japan) (**Yamahachi Dental Mfg., Co., Japan) (***)Yabashi Industries Co., Ltd., Japan) "Preparation of Layered Membranes Based on Poly(Lactic Acid) Fibers"	16:03	P1-22 <u>S. Uchida</u> , M. Honda, T. Uesugi, Y. Takigawa, K. Higashi (Osaka Prefecture Univ., Japan) "Influence of Concentration of Solute Atoms on Stacking Fault Energy in Mg-Y and Mg-Al Alloys"
		16:03	P6-14 <u>A. Obata</u> , T. Hotta, T. Wakita, T. Kasuga (Nagoya Inst. of Tech., Japan) "Preparation of Poly(Lactic Acid)/Silicon-doped Calcium Carbonate Composite Fibrous Mats by Electrospinning"	16:06	P1-23 <u>Y. Tanaka</u> , M. Kajihara (Tokyo Inst. of Tech., Japan) "Heating Conditions for Production of Uniform Fe-Al Compound Layers During Aluminization"
				16:09	P1-24 <u>G. Xie</u> , D. V. Louzguine-Luzgin, S. Li, H. Kimura, A. Inoue (Tohoku Univ., Japan) "Ultra-High Strength Bulk Metallic Glassy Matrix Composites with Enhanced Ductility Fabricated by Spark Plasma Sintering Process"
				16:12	P1-25 <u>K.T. Han</u> (Pukyong National Univ., Korea) "Development of the Optimal Forming Process for Honeycomb Core"

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[ Materials Simulation ]					
Chairman : Y. Nakasone (Tokyo Univ. of Science, Japan)					
				16:15	P2-01 Y. Yoshida, <u>T. Ishiguro</u> , N. Yukawa, T. Ishikawa (Nagoya Univ., Japan) "Deformation Analysis of Shearing Process Using Results of Notched Round Bar Tension Test"
				16:18	P2-02 <u>Ar. Ejlali</u> , S. Aminossadati, Az. Ejlali* (Univ. of Queensland, Australia) (*Univ. of Isfahan, Iran) "Numerical Analysis of Air Flow Field Around Triangular Stockpiles with Constant Volumes"
				16:21	P2-03 <u>S. Fujita</u> , T. Uesugi, K. Higashi (Osaka Prefecture Univ., Japan) "Stacking Fault Energies for Cu-Si, Cu-Zn, Cu-Ge and Cu-Sn Using the First-Principles Results of Segregation Energy"
				16:24	P2-04 <u>C.S. Shi</u> , K.P. Wang, N.Q. Zhao (Tianjin Univ., China) "First-Principles Study of B-, N-Doping Effects on Chemical Binding Between Magnesium and Single-Walled Carbon Nanotubes"
				16:27	P2-05 <u>T. Koyama</u> , H.Onodera (NIMS, Japan) "Phase-Field Simulation of Ferroelectric Domain Structure Formation in BaTiO3 and Calculation of Dielectric Property"