FEMMS2009

Program of Posters

Posters are expected to be kept up-loaded on board whole days during the conference.
Presentation times allocated are;

17:00 - 18:30PM, 28 September (Mon) for the posters with an odd number
17:00 - 18:30PM, 29 September (Tue) for the posters with an even number

Poster-number	Title / Author(s) / Affiliation(s)
P-001	**Performance of low-voltage TEM/STEM with a new aberration corrector** T. Sasaki(1,2), H. Sawada(1,2), T. Nakamichi(2), F. Hosokawa(2), K. Omoto(1,2), T. Tomita(1,2), T. Kaneyama(1,2), Y. Kondo(2), K. Kimoto(1,3), K. Suenaga(1,4) (1) Japan Science and Technology Agency (JST), CREST (2) JEOL Ltd. (3) National Institute for Materials Science (4) Nanotube Research Center, National Institute of Advanced Industrial Science and Technology (AIST)
P-002	**High brightness electron source for pulse electron gun using semiconductor photocathodes with NEA surface** T. Nishitani(1), M. Tabuchi(2), K. Motoki(3), K. Takashima(3), Y. Takeda(3) (1) The Institute of Physical and Chemical Research (RIKEN) (2) Venture Business Laboratory, Nagoya University (3) Department of Crystalline Materials Science, Nagoya University
P-003	**Flexible formation of coherent probes for diffraction on an aberration-corrected STEM with three condenser lenses** P. M. Voyles(1), Feng Yi(1), P. Tiemeijer(2) (1) Materials Science and Engineering, University of Wisconsin (2) FEI Company, The Netherlands
P-004	**The performance of the first aberration corrected Hitachi STEM** H. Inada(1,2), L. Wu(1), D. Su(1), J. Wall(1), Y. Zhu(1) (1) Brookhaven National Laboratory (2)Hitachi High Technologies Corp.
P-005	**Advanced TEM sample holders for advanced TEMs** E.A. Stach, D.B. Vetter, R.Keyes, J.T. Sink and N.J. Salmon Hummingbird Scientific, LLC, USA
P-006	**New functions and applications for material science by the spherical aberration corrected STEM** H. Kikuchi(1), H. Inada(1), K. Kaji(1), K. Nakamura(1), Y. Suzuki(1), H. Okushima(1), M. Konno(1), E Nakazawa(1), R. Tsuneta(2) (1) Hitachi High-Technologies Corporation (2) Hitachi Central Research Lab.
P-007	**OIST 300-kV holography electron microscope for nano-magnetism** H. Kasai(1), A. Sugawara(1,2), K. Fukunaga(1,3), A. Tonomura(1) (1) Okinawa Institute of Science and Technology (2) Presently, with Advanced Research Laboratory, Hitachi Ltd. (3) Presently, with JEOL Ltd.
P-008	**An experimental ultra fast shutter for a spectrometer** C. G. Trevor(1), A.Maigne(1), R. Twesten(1), M. Barfels(1), S. Gubbens(1), B. Kraus(2) (1) Gatan R&D, USA (2) Gatan GMBH, Germany

P-009	**Multi-dimensional data acquisition and analysis at the nanoscale and beyond** A.Maigne, R.D. Twesten Gatan Inc., USA
P-010	**Automated mapping of multiple elements for dose-efficient elemental quantification using EFTEM** A.Aitouchen, A.Maigne, R.D. Twesten and P.J Thomas Gatan Inc., USA
P-011	**Direct imaging of dopant atoms in a buried ceramic interface** S.D. Findlay(1), N. Shibata(1,2), S. Azuma(1), Y. Ikuhara(1,3,4) (1) Institute of Engineering Innovation, The University of Tokyo (2) PRESTO, Japan Science and Technology Agency (3) Nanostructures Research Laboratory, Japan Fine Ceramic Center (4) WPI Advanced Institute for Materials Research, Tohoku University
P-012	**Elemental discrimination of lattice defects in a hexagonal boron nitride single layer** Chuanhong Jin, Fang Lin, Kazu Suenaga, Sumio Iijima Nanotube Research Center, AIST, Department of Materials Science and Engineering, Meijo Univeristy, College of Science, South China Agricultural University
P-013	**HAADF STEM observation of rare earth dopants in a-Al_2O_3 bicrystals** S. Azuma(1), N. Shibata(1,2), T. Mizoguchi(1), S. D. Findlay(1), T. Yamamoto(1,3), Y. Ikuhara(1,3,4) (1) Institute of Engineering Innovation, The University of Tokyo (2) PRESTO, Japan Science and Technology Agency (3) Nanostructures Research Laboratory, Japan Fine Ceramic Center (4) WPI Advanced Institute for Materials Research, Tohoku University
P-014	**HRTEM observation of BN mono-sheet** M. Mitome, C. Zhi, D. Golberg, Y. Bando Materials Nanoarchitectonics, National Institute for Materials Science
P-015	**W occupancies of Ti-columns in (Ti,W)C-Ni cermets** Y.-J. Kang(1,2), K. Mitsuishi(1,2), Y.-U. Heo(2), Y. Nakayama(2), K. Furuya(2) (1) Quantum Dot Research Center, National Institute for Materials Science, Japan (2) High Voltage Electron Microscopy Station, National Institute for Materials Science, Japan
P-016	**Ultra thin quantum wells of CdSe in ZnSe characterized by high resolution methods** H. A. Calderon(1), I. H. Calderon(2), E. Yucelen(3), C.A. Achete(4) (1) ESFM-IPN, UPALM Ed. (2) Depto. Fisica CINVESTAV, Mexico DF (3) FEI Company, The Netherlands (4) INMETRO, DIMAT
P-017	**Quantitative high-angle annular dark field imaging using a JEOL 2200FS transmission electron microscope** K. Volz(1,2), R. Fritz(1), A. Beyer(1), I. Häusler(2), A. Mogliatenko(2), H. Kirmse(2), W. Neumann(2), A. Rosenauer(3) (1) Department of Physics and Materials Science Center, Philipps University (2) Institue of Physics, Humboldt University (3) Faculty of Physics and Electrical Engineering, University of Bremen

P-018	**Analysis of InGaN/GaN multi quantum wells (MQWs) using by aberration-corrected scanning transmission electron microscopes and 3-D atom probe tomography** G.-H. Gu(1), S.-M. Park(1), B.-H. Kim(1), D.-H. Jang(1), C.-G. Park(1,2) (1) Dept. of Materials Science and Engineering, Pohang University of Science and Technology (POSTECH) (2) National Center for Nanomaterials and Technology, Korea
P-019	**STEM image simulation by Bloch wave method in layer-by-layer representation** T. Morimura(1), M. Hasaka(2) (1) Graduate School of Science and Technology, Nagasaki University (2) Department of Materials Science and Engineering, Nagasaki University
P-020	**Atomic resolution energy-filtered transmission electron microscopy based on inner-shell ionisation** N.R. Lugg(1), B. Freitag(2), S.D. Findlay(3), L.J. Allen(1) (1) School of Physics, University of Melbourne, (2) FEI Company, The Netherlands (3) Institute of Engineering Innovation, School of Engineering, University of Tokyo
P-021	**Withdrawn**
P-022	**The importance of nonlinear imaging contributions on the information limit in high-resolution transmission electron microscopy** S. van Aert. J.H Chen, D. van Dyck University of Antwerp Belgium Wuhan University
P-023	**Electron diffractive imaging with atomic resolution: Fact or fiction?** D. van Dyck University of Antwerp
P-024	**Strong evidence for phonon scattering as the main cause for the Stobbs factor** D. van Dyck University of Antwerp
P-025	**Theoretical interpretation and applications of annular bright field STEM imaging** S.D. Findlay(1), N. Shibata(1,2), H. Sawada(3), E. Okunishi(3), Y. Kondo(3), T. Yamamoto(1,4), Y. Ikuhara(1,4,5) (1) Institute of Engineering Innovation, The University of Tokyo (2) PRESTO, Japan Science and Technology Agency (4) Nanostructures Research Laboratory, Japan Fine Ceramic Center (5) WPI Advanced Institute for Materials Research, Tohoku University
P-026	**New design of image detectors for transmission electron microscopy based on fiber optic coupled CMOS devices** H.R. Tietz TVIPS GmbH, Germany

P-027	**Single atom detection by XEDS in the aberration corrected AEM? Is it feasible?** N. J. Zaluzec Argonne National Laboratory , Electron Microscopy Center
P-028	**A low voltage analysis system with a microcalorimeter and scanning electron microscope** Keiichi Tanaka, Akikazu Odawara, Atsushi Nagata, Satoshi Nakayama, Anto Yasaka SII NanoTechnology Inc. 36-1 Takenoshita, Oyama-cho, Sunto-gun, Shizuoka 410-1393, Japan keiichi.tanaka@siint.co.jp, akikazu.odawara@siint.co.jp, atsushi.nagata@siint.co.jp, satoshi.nakayama@siint.co.jp, anto.yasaka@siint.co.jp
P-029	**Characterization of a large area silicon drift detector for use in transmission electron microscopy** N.Rowlands(1), M.Q. Chu(2), I.P. Jones(2), S. Bhadare(1) (1) Oxford Instruments, UK (2) Department of Metallurgy and Materials, University of Birmingham
P-030	**Visualization of Li in $LiMn_2O_4$ cathode material by Cs-corrected STEM** R. Huang(1), Y. H. Ikuhara(1), T. Mizoguchi(2), S. D. Findlay(2), A. Kuwabara(1), H. Moriwake(1), C. A. J. Fisher(1), H. Oki(3), Y. Ikuhara1(2) (1) Nanostructures Research Laboratory, Japan Fine Ceramics Center (2) Institute of Engineering Innovation, the University of Tokyo (3) Toyota Motor Corporation
P-031	**EDS in S/TEM using liquid nitrogen free silicon drift detectors** M. Falke(1,3), A. Mogilatenko(2), H. Kirmse(2), W. Neumann(2), C. Brombacher(3), M. Albrecht(3), A. Bleloch(4), L. Allard(5), R. Terborg(1), R. Krömer(1) and M. Rohde(1), B. Freitag(6), S. von Harrach(6) (1) Bruker AXS Microanalysis (2) HU Berlin, AG Kristallographie (3) Institute of Physics, University of Technology Chemnitz (4) superSTEM Laboratory (5) Oak Ridge National Laboratory (6) FEI Electron Optics B.V.
P-032	**Hole-doping level dependence of the domain size in manganites examined by low-temperature transmission electron microscopy** M. Nagao, K. Kimoto and Y. Matsui National Institute for Materials Science
P-033	**Structural studies on A-cation-deficient perovskite $La_{2/3-x}Li_{3x}TiO_3$** T. Tsurui(1), T. Katsumata(2), Y. Inaguma(3) (1) Institute for Materials Research, Tohoku University (2) Faculty of Science, Tokai University (3) Faculty of Science, Gakushuin University
P-034	**Preparation and HV TEM of piezoelectric and non-piezoelectric $PbNb_2O_6$** U. De(1), K. R. Chakraborty(1), K. R. Sahu(1,2) (1) Variable Energy Cyclotron Centre, India, (2) Physics Dept., ESSB College, India
P-035	**Analytical microscopy of Japanese roof tiles** E. Tanabe(1), Y. Kitano(2), A. Miyano(3), Y. Sakai(4) (1) Western Hiroshima Industrial Research Institute (2) Hiroshima Institute of Technology (3) Emeritus Professor of Nagoya Institute of Technology (4) Shimane Industrial Promotion Foundation & Shimane Industrial Promotion Foundation, Japan

P-036	**Withdrawn**
P-037	**The electrostatic potential and electron density analysis of the orbital-ordered state of $TbMnO_3$ using CBED** D. Morikawa(1), K. Tsuda(1), F. Ishii(2), N. Abe(1), T. Arima(1) (1) Institute of Multidisciplinary Research for Advanced Materials, Tohoku University (2) Graduate School of Natural Science and Technology, Kanazawa University
P-038	**Relationship between magnetic domain configuration and crystallographic orientation in a colossal magnetoresistive material** X. Z. Yu(1), R-W. Li(2), T. Asaka(3), K. Kimoto(1), Y. Matsui(1) (1) Advanced Electron Microscopy Group and High Voltage Electron Microscopy Station, National Institute for Materials Science (2) Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences (CAS), (3) Japan Fine Ceramics Center
P-039	**Microstructures and Electrical Properties of TiO_2-dopped Al_2O_3 Ceramics** H. Unno(1,5), Y. Sato(2), T. Okita(3), S. Toh(4), S. Matsumura(4,5) (1) Electronics Materials Division, Nippon Steel Materials Co., Ltd. Fukuoka (2) Advanced Technology Research Laboratories, Technical Development Bureau, Nippon Steel Corporation (3) Electronics Materials Division, Nippon Steel Materials Co., Ltd. Tokyo (4) HVEM Laboratory, Kyushu University (5) Department of Applied Quantum Physics and Nuclear Engineering, Kyushu University
P-040	**Hydrogen storage properties and local structures of $(La, RE)_5Ni_{19}$ complex compounds** R. Ishikawa and E. Abe Department of Materials Engineering, The University of Tokyo
P-041	**Atomic and electronic structural studies of the interfaces between metal nitrides (VN, CrN) and MgO by CS-corrected TEM** Z. Zhang(1), B. Raskova(1), G. Dehm(1,2), P. Lazar(3), J. Redinger(3), R. Podloucky(4) (1) Erich Schmid Institute of Materials Science, Austrian Academy of Sciences (2) Department Materials Physics, University of Leoben (3) Institute of General Physics, Vienna University of Technology (4) Department of Physical Chemistry, University of Vienna
P-042	**The Roll of hydrogen implantation dose in lattice distortion obtained by TEM and RBS/C on the mechanism of surface blistering** H. Iwata(1,2), M. Takagi(1,2), Y. Tokuda(1), R. Ishigami(3), K. Yasuda(3) (1) Faculty of Engineering, Aichi Institute of Technology (2) Research Institute for Industrial Technology, Aichi Institute of Technology (3) Department of Energy Materials, Wakasa-wan Energy Research Center
P-043	**Atomic and electronic structures of Pd/ZnO interface: HRTEM, EELS and *ab-initio* calculation** N. Sakaguchi(1), S. Watanabe(1), H. Ichinose(2) (1) CAREM, Hokkaido University (2) Frontier Research System, Riken

P-044	**Atomistic structures of CeO_2 grain boundary** H. Hojo(1), T. Mizoguchi(1), H. Ohta(2,3), N. Shibata(1,3), T. Yamamoto(1,4), Y. Ikuhara(1,4,5) (1) Institute of Engineering Innovation, The University of Tokyo (2) Graduate School of Engineering, Nagoya University (3) PRESTO, Japan Science and Technology Agency (4) Nanostructures Research Laboratory, Japan Fine Ceramics Center (5) WPI Advanced Institute for Materials Research, Tohoku University
P-045	**Estimation of the activation energy for the migration of self-interstitial atoms in high-purity tungsten by using HVEM** T. Amino, K. Arakawa, H. Mori Research Center for Ultra-High Voltage Electron Microscopy, Osaka University
P-046	**Small grain formation by swift heavy ions in CeO_2** K. Yasunaga(1), T. Sonoda(2), K. Yasuda(3), S. Matsumura(3) (1) The Research Laboratory for High Voltage Electron Microscopy, Kyushu University (2) Nuclear Technology Research Laboratory, Central Research Institute of Electric Power Industry (CRIEPI) (3) Department of Applied Quantum Physics and Nuclear Engineering, Kyushu University
P-047	**Fabrication of Mo-containing nanowires using electron beam-induced deposition** M. Shimojo(1,2), K. Makise(1), K. Mitsuishi(1), M. Takeguchi(1), K. Furuya(1) (1) National Institute for Materials Science (2) Saitama Institute of Technology
P-048	**Advanced TEM Sample preparation using low kv in Nano-devices** S.-H. Lee(1),H.-H. Kim(2), D. Wall(3), W.-J. Yun(2), H.-Y. Lee(2) (1) FEI Company, Korea (2) AP TECH Corporation (3) FEI Company, The Netherlands,
P-049	**Defects of cage-type silica mesoporous crystals** Y. Sakamoto(1), O. Terasaki(2,3) (1) Nanoresearch and Nanotechnology Center, Osaka Prefecture University (2) Graduate School of EEWS, Korea KAIST (3) Structural Chemistry, Arrhenius Laboratory, Stockholm University
P-050	**Formation of a damaged layer caused by focused ion beam milling in metallic and electronic materials** Y. Huh, J.-D. Kim, K.-H. Kim, S.-H. Park, K.-S. Shin, K-.J. Hong and J.-J. Lee Department of Analysis and Assessment, Research Institute of Industrial Science and Technology (RIST)
P-051	**A comparative study of precipitation in Al-Mg-Si(-Cu) and Al-Mg-Ge alloy systems** Calin D. Marioara, Sigmund J. Andersen and Randi Holmestad SINTEF Materials and Chemistry Department of Physics, Norwegian University of Science and Technology

P-052	**Effect of TMs addition on the hardening behavior of Al-Mg-Si alloy** S. Wang(1), K. Matsuda(2), S. Ikeno(2) (1) Graduate School of Science and Engeering for Education, University of Toyama (2) Graduate School of Science and Engeering for Research, University of Toyama
P-053	**The effect of Ag addition on transition of crystal structure for b'-phase in Al-Mg-Si alloy during aging** J. Nakamura(1), K. Matsuda(2), Y. Nnakamura(3), T. Sato(3), S. Ikeno(2) (1) Graduate School of Science and Engineering for Education, University of Toyama (2) Graduate School of Science and Engineering for Research, University of Toyama (3) Graduate School of Science and Engineering, Tokyo Institute of Technology
P-054	**Effect of Cu and Ag addition on the age-behavior and mechanical properties of Al-Mg-Si alloys** H. Nishita(1), K. Matsuda(2), T. Kawabata(2), Y. Uetani(3), S. Ikeno(2) (1) Faculty of Engineering, University of Toyama (2) Graduate School of Science and Engeering for Research, University of Toyama (3) Toyama Prefectural University
P-055	**TEM observation of the aging hardening precipitates in Al-Mg-Ge-Si alloy** K. Yamamoto(1), K. Matsuda(2), J. Nakamura(1), T. Kawabata(2) and S. Ikeno(2) (1) Graduate School of Science and Engineering for Education, University of Toyama (2) Graduate School of Science and Engineering for Research, University of Toyama
P-056	**Effects of crystallographic orientation on tensile deformation in the excess-Mg type Al-Mg-Si alloys** K. Iida(1), K. Matsuda(2), Y. Uetani(2), S. Ikeno(2) (1) Graduate School of Science and Engineering for Education, University of Toyama (2) Graduate School of Science and Engineering for Research, University of Toyama
P-057	**HRTEM observation of precipitates in excess Si / excess Mg type Al-Mg_2Si alloys with Cu** K. Matsuda(1), J. Nakamura(2), T. Kawabata(1), S. Ikeno(1) (1) Graduate School of Science and Engineering for Research, University of Toyama (2) Graduate school of Science and Engineering for Education, University of Toyama
P-058	**Discontinuous coarsening behavior of Ni_2MnAl intermetallics during isothermal aging treatment of Fe-Mn-Ni-Al alloys** Y.-U. Heo(1), M. Takeguchi(1), K. Furuya(2), and H.-C. Lee(3) (1) Advanced Nano-characterization Center and High Voltage Electron Microscopy Station, National Institute for Materials Science (2) NIMS Center for Nanotechnology Network, National Institute for Materials Science (3) School of Materials Science and Engineering, Seoul National University
P-059	**Withdrawn**

P-060	**HRTEM observation of the precipitates in aged Mg-Zn alloys with different concentrations of Zn** T. Kawabata, K. Matsuda, S. Ikeno Graduate school of science and engineering for research, University of Toyama
P-061	**Direct determination of a unique long-period ordered structure in a $Mg_{97}Zn1Er_2$ alloy by aberration-corrected STEM** D. Egusa and E. Abe Department of Materials Engineering, The University of Tokyo
P-062	**Reversion-induced unique deformation of long-period ordered structure during a warm-extrusion of $Mg_{97}Zn_1Y_2$ alloy** W. Narita(1), E. Abe(1), M. Yamasaki(2) and Y. Kawamura(2) (1) Department of Materials Engineering, The University of Tokyo (2) Department of Materials Science and Engineering, Kumamoto University
P-063	**Crystallographic orientation relationship between discontinuous precipitates and the matrix in commercial AZ91 alloys** T.Gonoji(1), K. Matsuda(2), K.Fujii(3), T. Kawabata(2), Y.Uetani(4), S. Ikeno(2) (1) Graduate school of Science and Engineering for Education, University of Toyama (2) Graduate school of Science and Engineering for Research, University of Toyama (3) Industrial Research Institute of Ishikawa (4) Toyama Prefectural University
P-064	**Transmission electron microscopy of antiphase boundary-like structure in martensite of Ti-Ni-Cu shape memory alloy** K. Hirayama(1), M. Matsuda(1), Y. Morizono(1), S. Tsurekawa(1), T. Hara(2), M. Nishida(3) (1) Department of Materials Science and Engineering, Kumamoto University (2) National Institute for Materials Science (3) Department of Applied Science for Electronics and Materials, Kyushu University
P-065	**Electron tomography observations of w-phase in b-Ti alloys** M. Nishida, M. Mitsuhara, S. Hata, M. Itakura, H. Nakashima Department of Engineering Sciences for Electronics and Materials, Kyushu University
P-066	**Annihilation of athermal w-phase crystals in a b-type Ti alloy cooled at 131K due to inelastic scatterimg of irradiated electron beam** E Sukedai Okayama University of Science
P-067	**Electron microscopy study of the aging behavior of metastable b-Ti alloys** S.-H. Kim, H.-C. Lee Department of Materials Science and Engineering, Seoul National University

P-068	**Characterization of particulates reinforced Ni-based metallic glassy matrix composites fabricated by spark plasma sintering** G.-Q. Xie(1), D. V. Louzguine-Luzgin(1,2), A. Inoue(1,2) (1) Institute for Materials Research, Tohoku University (2) WPI Advanced Institute for Materials Research, Tohoku University
P-069	**Electron irradiation induced nanocrystallization of Cu-based metallic glass** G.-Q. Xie(1), D. V. Louzguine-Luzgin(1,2), Q.-S. Zhang(2), and A. Inoue(1,2) (1) Institute for Materials Research, Tohoku University (2) WPI Advanced Institute for Materials Research, Tohoku University
P-070	**Structural investigations of nanocomposites based on cellulose with argentum** Kh.Yunusov, S.Fazilova , S.Yugay, A.Sarymsakov Institute of Polymer Chemistry and Physics, Uzbekistan Academy of Sciences
P-071	**TEM characterization of tricobalt tetraoxide nanocatalyst with different morphology and oxidation activity** Z.-Q. Liu(1), P.-J. Shang(1), X. Xie(2), Y. Li(2), W. Shen(2) (1) Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences (2) State Key Laboratory of Catalysis, Dalian Institute of Chemical Physics, Chinese Academy of Sciences
P-072	**Modification of structure and composition of FePt nanoparticles embedded in amorphous AŁO_3 matrix by swift heavy ion irradiation** M. Shirai, K. Tsumori, K. Yasuda, S. Matsumura Department of Applied Quantum Physics and Nuclear Engineering, Kyushu University
P-073	**TEM characterization of direct lateral growth of carbon nanotubes between electrodes toward high performance field-effect transistors** B.-Y. Jang(1), T. Iijima(1), T. Tokunaga(2), Y. Horita(2), Y. Hayashi(1), R. A. Afre(1), M. Tanemura(1), K. Kuroda(2), G. A. J. Amaratunga(3) (1) Department of Frontier Materials, Nagoya Institute of Technology (2) Department of Quantum Engineering, Nagoya University (3) Centre for Advanced Photonics and Electronics, University of Cambridge
P-074	**Withdrawn**
P-075	**Morphology and optical properties of single and multi- layer InAs quantum dots** C.-C. Hsu(1), R.-Q. Hsu(1), Y.-H. Wu(2), J.-F. Chen(3) (1) Department of Mechanical Engineering, National Chiao-Tung University (2) Department of Materials Science and Engineering, National Chiao-Tung University (3) Department of Electrophysics Engineering, National Chiao Tung University
P-076	**Characterization of microstructures of oxide scales thermally formed on single crystal silicon carbide** B. Chayasombat(1), T. Kato(2), T. Hirayama(2), T. Tokunaga(3), K. Sasaki(3), K. Kuroda(3) (1) Graduate School of Engineering, Nagoya University (2) Nanostructures Research Laboratory, Japan Fine Ceramics Center (3) Department of Quantum Engineering, Nagoya University

P-077	**Nano-cluster arrays of In and In/Ag compound on Si(111)-7x7 studied by UHV-TEM / STM** M. Tanaka(1), A. Kuraoka(2) and M. Shimojo(1,2) (1) National Institute for Materials Science (2) Saitama Institute of Technology
P-078	**Strain analysis in freestanding Si/SiN membranes by TEM/CBED** H. Gao(1), K. Ikeda(1), S. Hata(1), H. Nakashima(1), D. Wang(2), H. Nakashima(2) (1) Faculty of Engineering Sciences, Kyushu University (2) Art, Science and Technology Center for Cooperative Research, Kyushu University
P-079	**Effects of Al on microstructure and phase transformation behavior in C-Mn-Si-Al TRIP steels** N.-S. Lim(1), S. Das(1), S.-I. Kim(3), C.-G. Park(1,2) (1) Dept. of Materials Science and Engineering, Pohang Univ. of Sci. & Tech. (POSTECH) (2) National Center for Nanomaterials Technology, Pohang Univ. of Sci. & Tech. (POSTECH) (3) POSCO Technical Research Lab.
P-080	**Superconductive property of Al- or Mg-based MgB_2 dispersed composite material** M. Mizutani(1), K. Matsuda(2), K. Nishimura(2), Y. Hishinuma(3), T. Kawabata(2), S. Ikeno(2) (1) Graduate School of Science and Engineering for Education, University of Toyama (2) Graduate School of Science and Engineering for Research, University of Toyama (3) National Institute for Fusion Science
P-081	**Transmission electron microscopy study of $Y_{1-x}Sm_xBa_2Cu_3O_y$ coated conductors with $BaZrO_3$ Particles** T. Kato(1), M. Miura(2), M. Yoshizumi(2), Y. Yamada(2), T. Izumi(2), T. Hirayama(1), Y. Shiohara(2) (1) Nanostructures Research Laboratory, Japan Fine Ceramics Center (2) Superconductivity Research Laboratory, ISTEC
P-082	**TEM characterization of ZnO nanowires grown by plasma-assisted molecular beam epitaxy** T. Iijima(1), B. Jang(1), T. Tokunaga(2), Y. Hayashi(1), R. A. Afre(1), M. Tanemura(1), K. Kuroda(2) (1) Department of Frontier Materials, Nagoya Institute of Technology (2) Department of Quantum Engineering, Nagoya University
P-083	**Dislocation structures of [111] low-angle tilt grain boundaries in zirconia bicrystals** Y. Nohara(1), E. Tochigi(2), N. Shibata(2,3), T. Mizoguchi(2), T. Yamamoto(2,4), Y. Ikuhara(2,4,5) (1) Analysis Research Department, Chemical Research Laboratories, Nissan Chemical Industries, Ltd. (2) Institute of Engineering Innovation, School of Engineering, The University of Tokyo (3) PRESTO, Japan Science and Technology Agency (4) Nanostructures Research Laboratory, Japan Fine Ceramic Center (5) WPI Advanced Institute for Materials Research, Tohoku University
P-084	**Atomic resolution environmental transmission electron microscopes and applications on nanomaterials** X.-F. Zhang(1), T. Yaguchi(2), A. Watabe(2) (1) Hitachi High Technologies America, Inc., (2) Hitachi High Technologies Corporation
P-085	**Growth of the tungsten oxide nanorods: an in-situ TEM observation study** T. Tokunaga(1), T. Kawamoto(1), K. Tanaka(1), Y. Hayashi(2), K. Sasaki(1), K. Kuroda(1) (1) Department of Quantum Engineering, Nagoya University (2) Department of Frontier Materials, Nagoya Institute of Technology

P-086	***In situ* Observations of Twin formation in Sapphire (α-Al_2O_3)** E. Tochigi(1), N. Shibata(1,2), A. Nakamura(3), T. Yamamoto(1,4), Y. Ikuhara(1,4,5) (1) Institute of Engineering Innovation, The University of Tokyo (2) PRESTO, JST (3) Department of Intelligent Materials Engineering, Osaka City University (4) Nanostructures Research Laboratory, Japan Fine Ceramics Center (5) WPI-AIMR Research Center, Tohoku University
P-087	**TEM study on the mechanism of crack propagation in single crystal beta-tin during in-situ straining** P.-J. Shang(1), Z.-Q. Liu(1), D.-X. Li(1), J.-K. Shang(1,2) (1) Shenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences (2) Department of Materials Science and Engineering, University of Illinois
P-088	**Geometric constraint effects on dislocation plasticity studied by In-situ TEM straining of FIB-machined submicron single crystals** S.-H. Oh(1), M. Legros(2), D. Kiener(3), G. Dehm(4) (1) Division of Electron Microscopic Research, Korea Basic Science Institute (2) CEMES-CNRS (3) National Center of Electron Microscopy, Lawrence Berkeley National Laboratory, (4) Erich Schmid Institute of Materials Science
P-089	**Epitaxial film growth at the spreading reactive wetting front** C. Iwamoto, S. Satonaka Graduate School of Science and Technology, Kumamoto University
P-090	**Understanding nucleation and growth in nanostructure materials with real time transmission electron microscopy** E.A. Stach(1), B.-J. Kim(1) C.-Y. Weng(1,2), S. Kodambaka(3), J. Tersoff(2), M.C. Reuter(2), F.M. Ross(2), C. Pint(4), R.H. Hauge(4), P. Amama(5), B. Maruyama(6) (1) School of Materials Engineering and Birck Nanotechnology Center, Purdue University (2) Physical Sciences Division, IBM T.J. Watson Research Center (3) Department of Materials Science and Engineering, University of California, Los Angeles (4) Department of Physics, Department of Chemistry, and Richard E. Smalley Institute for Nanoscale Science and Technology, Rice University (5) University of Dayton Research Institute, University of Dayton (6) Air Force Research Laboratory, Wright Patterson Air Force Base
P-091	**Performance and applications of protochips Aduro<TM> heater technology for in-situ ultra-high resolution imaging at elevated temperatures** L. F. Allard(1), W. C. Bigelow(1), J. Liu(2), S. A. Bradley(3), J. E. Wittig(4) J. Bentley(1), D. P. Nackashi(5), J. Damiano(5) (1) Materials Sci. and Tech. Div., Oak Ridge National Laboratory (2) Center for Nanoscience, University of Missouri-St. (3) UOP LLC (4) Dept. of Chemistry, Vanderbilt University (5) Protochips Inc.
P-092	**In-situ analysis of the reduction of wustite ($Fe_{1-x}O$) by carbon** N. Ishikawa(1), T. Ogiwara(1), K. Harada(2), T.Inami(2) (1) Advanced Nano Characterization Center, National Institute for Materials Science (NIMS) (2) Faculty of Engineering, Ibaraki University

P-093	**In situ observation of the nucleation and growth of ferromagnetic domains in CMR manganite $La_{0.25}Pr_{0.375}Ca_{0.375}MnO_3$** Y. Murakami(1,2), H. Kasai(1,3), J. J. Kim(1,4), S. Mamishin(1,5), D. Shindo(1,2), S. Mori(6), A. Tonomura(1,3,7) (1) Okinawa Institute of Science and Technology, (2) IMRAM, Tohoku University (3) Advanced Research Laboratory, Hitachi Ltd., (4) Presently, with SAMSUNG ELECTRONICS Co., Ltd. (5) Hitachi High-Technologies Co., (6) Dept. Mater. Sci., CIAS, Osaka Prefecture University (7) Advanced Science Institute, RIKEN
P-094	**Crystallization behavior of an amorphous Cu-Zr-O thin film during in situ heating** Y.-U. Heo(1), K. Makise(2), M. Takeguchi(1), K. Mitsuishi(3), Y. Nakayama(2), B. Shinozaki(4), K. Yano(5), H. Nakamura(5) (1) Advanced Nano-characterization Center and High Voltage Electron Microscopy Station, National Institute for Materials Science (2) High Voltage Electron Microscopy Station, National Institute for Materials Science (3) Quantum Dot Research Center, National Institute for Materials Science (4) Department of Physics, Kyushu University (5) Advanced Technology Research Laboratories, Idemitsu Kosan Co.Ltd.
P-095	**In-situ TEM studies on sintering behavior of copper nanoparticles covered by biopolymer nanoskin** K. Ida(1,2), Y. Sugiyama(1), Y. Chujyo(1), K. Sasaki(1), M. Tomonari(2), T. Tokunaga(1), K. Kuroda(1) (1) Department of Quantum Engineering, Nagoya University (2) Functional Materials R&D Division, Ishihara Sangyo Kaisya, LTD.
P-096	**Efficient semi-analytic model for ultrafast electron microscope column performance optimization** J. Berger, W. A. Schroeder University of Illinois at Chicago
P-097	**High energy-resolution EELS studies of surface plasmon of nm-scale metal particles in near infrared region by using a monochromator TEM** Y. Sato(1), M. Terauchi(1), K. Adachi(2) (1) Institute of Multidisciplinary Research for Advanced Materials, Tohoku University (2) Ichikawa Research Laboratories, Sumitomo Metal Mining Co. Ltd.
P-098	**Measurement of electric field distribution using a conventional transmission electron microscope** K. Sasaki(1), H. Mori(1), N. Tanaka(1), H. Murata(2), C. Morita(3), H. Shimoyama(2), K. Kuroda(1) (1) Department of Quantum Engineering, Nagoya University, Nagoya (2) Department of Electrical and Electronic Engineering Meijo University (3) EcoTopia Science Institute, Nagoya University
P-099	**EELS and SXES studies of electronic structures of $Al_{53}Si_{27}Mn_{20}$ alloys** S. Koshiya, M. Terauchi, A. P. Tsai Institute of Multidisciplinary Research for Advanced Materials (MRAM), Tohoku University
P-100	**Magnetic linear dichroism probed by high momentum resolution EELS** Y. Ito(1,2), N. J. Zaluzec(2), A.N. Chiaramonti(2), R.E. Cook(2), M. van Veenendaal(1,3), D.J. Miller(2) (1) Department of Physics, Northern Illinois University (2) Materials Science Division, Argonne National Laboratory (3) Advanced Photon Source, Argonne National Laboratory

P-101	**Direct observation of dipolar ferromagnetism in self-assembled monolayer arrays of magnetic nanoparticles** K. Yamamoto(1), T. Hirayama(1), S. A. Majetich(2) (1) Japan Fine Ceramics Center (2) Physics Department, Carnegie Mellon University
P-102	**TEM study of spin textures in the helimagnet FeGe** M. Uchida(1), Y. Kaneko(1), Y. Matsui(2), Y. Tokura(1,3,4), A. Tonomura(1) (1) Advanced Science Institute, RIKEN (2) Advanced Materials Laboratory, National Institute for Materials Science (NIMS) (3) Multiferroics Project, ERATO, Japan Science and Technology Agency (JST) (4) Department of Applied Physics, University of Tokyo
P-103	**Electron holography observation of magnetization distribution in the pseudo soft underlayer of perpendicular magnetic recording media** K. Hirata(1,2), Y. Ishida(2), K. Yanagisawa(1), H. Kasai(1,4), K. Yanagiuchi(2), D. Shindo(1,3), A. Tonomura(1,4) (1) Okinawa Institute of Science and Technology (2) Head Business Group, TDK Corporation (3) Institute of Multidisciplinary Research for Advanced Materials, Tohoku University (4) Advanced Research Laboratory, Hitachi Ltd.
P-104	**Dynamic observation of magnetization reversal in tiny single domains in CMR manganite** S. Mamishin(1,3), H. Kasai(1), Y. Murakami(1,2), D. Shindo(1,2), S. Mori(4), A. Tonomura(1) (1) Okinawa Institute of Science and Technology (2) IMRAM, Tohoku University (3) Hitachi High-Technologies Co. (4) Department of Materials Science, CIAS, Osaka Pref. University
P-105	**Observation of carrier distribution in compound semiconductors using phase-shifting electron holography** H. Sasaki(1), K. Yamamoto(2), T. Hirayama(2) (1) The Furukawa Electric Ltd. (2) Nanostructures Research Laboratory, Japan Fine Ceramics Center
P-106	**O K-edge and Fe $L_{2,3}$-edge ELNES of FeO_6 octahedra and FeO_4 tetrahedra in the brownmillerite $Sr_2Fe_2O_5$ by using site-resolved STEM-EELS** M. Haruta, H. Kurata, S. Inoue, S. Shimakawa, S. Isoda Institute for Chemical Research, Kyoto University
P-107	**The characterization of SiAlON-TiN composites using analytical transmission electron microscopy techniques** S. Turan, H. Yurdakul, F. Kara, H. Mandal and A. Kara Department of Materials Science and Engineering, Anadolu University
P-108	**Spectrometric full-color cathodoluminescence microscopy on InGaN/GaN wafers for laser diode** Y. Suzuki(1), H. Saijo(2), M. Shiojiri(3) (1) Graduate School of Biology-Oriented Science and Technology, Kinki University (2) Faculty of Biology-Oriented Science and Technology, Kinki University (3) Professor Emeritus of Kyoto Institute of Technology

P-109	**Scanning electron microscope observation of dislocations in semiconductor and metal materials** N. Kuwano(1,2), M. Itakura(2), Y. Nagatomo(3), S. Tachibana(4) (1) Art, Science and Technology Center for Cooperative Research, Kyushu University (2) Department of Applied Science for Electronics and Materials, Kyushu University (3) Central Research Institute, Mitsubishi Materials Corp. (4) SII NanoTechnologies Inc.
P-110	**Automated crystal orientation matching and phase mapping package for transmission electron microscopes** Y. Maniette(1), S. Nicolopoulos(2), E. Rauch(3) (1) ADScience, Japan (2) Nanomegas SPRL, Belgium (3) Laboratoire SIMAP, France
P-111	**Measuring interface electrostatic potential and surface charge in a scanning electron microscope** I. Sychugov, Y. Nakayama, K. Mitsuishi Quantum Dot Research Center, National Institute for Materials Science
P-112	**Orientation imaging of nanocrystalline platinum films in the TEM** K. Barmak(1), A. Darbal(1), T. Nuhfer(1), D. J. Dingley(2), G. Meaden(2), J. Michael(3), T. Sun(4), B. Yao(4), K. R. Coffey(4) (1) Department of Materials Science and Engineering, Carnegie Mellon University (2) EBSD Consultants (3) Sandia National Laboratories (4) Advanced Materials Processing and Analysis Center, University of Central Florida
P-113	**Energy-filtered Imaging in a Scanning Electron Microscope for Dopant Contrast in InP** D. Tsurumi, K. Hamada, Y. Kawasaki Analysis Technology Research Center, Sumitomo Electric Industries, Ltd.
P-114	***In-situ* observation of a/g phase transformation in Fe-Ni alloys via SEM / EBSD** T. Fukino(1), S. Tsurekawa(2) (1) Department of New Frontier Sciences, Kumamoto University (2) Department of Materials Science and Engineering, Kumamoto University
P-115	**Modeling and observations of electron beam charging of an insulator/metal bilayer and its impact on secondary electron images in defect inspection equipment** K. Ohya1(1), K. Inai(1), R. Kawasaki(1), D. Takami(1), M. Saito(2), T. Hayashi(2), J. Jau(3), K. Kanai(3) (1) Institute of Technology and Science, The University of Tokushima (2) Tokyo Electron Ltd. (3) Hermes Microvision Inc.
P-116	**Depth-sectioned imaging by annular dark field confocal scanning transmission electron microscopy** M. Takeguchi(1), A. Hashimoto(1), K. Mitsuishi(1), M. Shimojo(2) (1) National Institute for Materials Science, (2) Saitama Institute of Technology
P-117	**Development of in-situ fracture observation technique with load and displacement measurement in HVEM** T. Shibayama(1), G. Matsuo(2), K. Hamada(1), S. Watanabe(1) (1) Center for Advanced Research of Energy Conversion Materials, Hokkaido University (2) Graduate student, Hokkaido University

P-118	**Depth sectioning property of bright-field and annular-dark-field scanning confocal electron microscopy** K. Mitsuishi(1), A. Hashimoto(2), M. Takeguchi(3), M. Shimojo(4), K. Ishizuka(5) (1) Quantum Dot Research Center, National Institute for Materials Science (2) International Center for Young Scientists, National Institute for Materials Science (3) Advanced Nano Characterization Center, National Institute for Materials Science (4) Advanced Science Research Laboratory, Saitama Institute of Technology (5) HREM Research Inc.
P-119	**Three-dimensional visualization and quantitative analysis of dislocation microstructure using electron tomography in an austenitic steel** M. Mitsuhara(1), S. Hata(1), K. Ikeda(1), H. Nakashima(1), M. Tanaka(2) and K. Higashida(2) (1) Department of Electrical and Materials Science, Kyushu University, 6-1, Kasuga-koen, Kasuga, (2) Department of Materials Science and Engineering, Kyushu University
P-120	**Three dimensional structure of crack tip dislocations revealed by high voltage electron microscopy in a silicon single crystal** M. Honda, M. Tanaka, K. Higashida Department of Materials Science and Engineering, Kyushu University
P-121	**STEM and TEM tomography for thick polymer sample** T. Kaneko(1), S. Motoki(1), Y. Aoyama(1), H. Nishioka(1), Y. Ohkura(1), Y. Kondo(1), H. Jinnai(2,3) (1) JEOL Ltd. (2) Department of Polymer Science and Engineering, Kyoto Institute of Technology (3) WPI Advanced Institute of Materials Research, Tohoku University
P-122	**Orientation control of the double helical morphology in the thin film of an ABC triblock terpolymer** S. Hong(1), H. Sugimori(1), R. Kimoto(1), K. Matsunaga(1), T. Kaneko(1), V. Abetz(2), H. Jinnai (1,3) (1) Department of Macromolecular Science and Engineering, Graduate School of Science and Engineering, Kyoto Institute of Technology (2) Institute of Polymer Research, GKSS Research Centre Geesthacht GmbH (3) WPI Advanced Institute for Materials Research, Tohoku University
P-123	**The interface dynamics of bicontinuous phase separating structure in a polymer blend system** H. Saito(1), M. Yoshinaga(1), T. Mihara(1), T. Nishi(2), H. Jinnai(1,2) (1) Department of Macromolecular Science and Engineering, Kyoto Institute of Technology (2) WPI, Advanced Institute for Material Research, Tohoku University
P-124	**Structural control of a double helical morphology in an ABC triblock terpolymer** H. Sugimori(1), K. Matsunaga(1), T. Kaneko(1), V. Abetz(2), H. Jinnai(1,3) (1) Department of Macromolecular Science and Engineering, Kyoto Institute of Technology (2) Institute of Polymer Research, GKSS Research Center Geesthacht (3) WPI Advanced Institute for Materials Research, Tohoku University

P-125	**3D reconstruction of a spherical precipitate by electron tomography** N. Yoshinaga(1), K. Kimura(1), K. Matsuyama(1), S. Hata(2), S. Matsumura(1) (1) Department of Applied Quantum Physics and Nuclear Engineering, Kyushu University (2) Department of Applied Science for Electronics and Materials, Kyushu University
P-126	**2-D & 3-D observations on the microstructures of super bainitie TRIP steels using combination of TEM, EBSD and APT** J.-B. Seol(1), Y.-M. Lim(2), C. G. Park(3) (1) Dept. of Materials Science and Engineering, Pohang Univ. of Sci. & Tech. (POSTECH) (2) POSCO R&D Center (3) National Center for Nanomaterials Technology (NCNT), POSTECH
P-127	**Withdrawn**
P-128	**Three-dimensional characterization by TEM-CT of pinning centers in a $GdBa_2Cu_3O_{7-y}$ superconductor film** K. Yamada(1), K. Furuya(2), R. Hadi(2), K. Kaneko(1), J. S. Barnard(3), P. A. Midgley(3), S. Sadayama(4), T. Kato(5), Y. Yamada(6), T. Izumi(6), Y. Shiohara(6) (1) Department of Materials Science and Engineering, Kyushu University (2) Department of Materials Physics and Chemistry, Kyushu University (3) Department of Materials Science and Metallurgy, University of Cambridge (4) Application Laboratory, FEI Company Japan (5) Nanostructures Research Laboratory, Japan Fine Ceramics Center (6) Superconductivity Research Laboratory, International Superconductivity Technology Center
P-129L	**Average and local structure of mesoporous carbon FDU materials: Electron tomography and electron crystallography** K. Miyasaka(1), M. Klingstedt(2), K. Kimura(3), D.-Y. Zhao(4), S. Matsumura(3), O. Terasaki(1,2) (1) Graduate School of EEWS, Korea Advanced Institute of Science and Technology (2) Structural Chemistry, Stockholm University (3) Department of Applied Quantum Physics and Nuclear Engineering, Kyushu University (4) Department of Chemistry, Fudan University
P-130L	**Characterizing Graphene Using Exit Wave Reconstruction** J.R. Jinschek(1), E. Yucelen(1), N. Alem(2), A. Zettl(2), C.F. Kisielowski(3), H.A. Calderon(4) (1) FEI NanoPort Europe, The Netherlands (2) University of California, Berkeley (3) NCEM-LBL, Berkeley (4) ESFM –IPN, UPALM
P-131L	**Automated image alignment for ±90 degrees TEM tilt series of needle-shaped specimens** Misa Hayashida, Shinya Terauchi, Toshiyuki Fujimoto National Institute of Advanced Industrial Science and Technology, Japan
P-132L	**Detection of Carbon in Low Carbon Steel Using Electron Microscopy and Atom Probe Field Ion Microscopy** K. Shin(1), D. H. Yoo(1), J. H. Seo(1) , D. Y. Park (1), J. B. Yoon(2), C. G. Park(2), B. H. Lee(3), C. G. Lee (5) (1) School of Nano and Advanced Materials, #9 Sarim-dong, Changwon National University (2) POSCO Technical Research Laboratory (3) Department of Materials and Science Engineering, Pohang Univ. of Science and Technology
P-133L	**Catalyst Nanoparticle Characterization Using an SDD on a JEOL 2200FS Aberration-Corrected STEM** K. L. More, L. F. Allard Materials Science and Technology Division, Oak Ridge National Laboratory,