PROGRAM

Oct. 2/Noh Theatre Public Hall in the Nara Prefectural New Public Hall

10 : 00 〜10 : 15

AUMS President's address　Ching-Ray Chang（AUMS President, National Taiwan Univ.）
MSJ President（ICAUMS General chair）address　Hidetoshi Matsuki（Tohoku Univ.）
MSJ Conference Chair（ICAUMS local secretary）address　Nobuyoshi Hosoito（NAIST）

10 : 15 〜10 : 40

AUMS Award ceremony

10 : 45 〜11 : 30

Plenary Talk

2aPL-1　Spintronics, Spin Caloritronics, and Skyrmion
Prof. Chia-Ling Chien（Department of Physics and Astronomy, The Johns Hopkins Univ.）

Oct. 2/RoomA

Hybrid Recording I　**15 : 00 〜16 : 15**　Chair: O. Kitakami（Tohoku Univ.）

2pA-1　Electromagnetic and micromagnetic modeling of head and media for shingled recording processes（Invited）
°Z.-J. Liu*,**, Y. Y. Guo*, X. G. Li**（*Data Storage Institute, **National Univ. of Singapore）

2pA-2　Thermally Assisted Magnetic Recording Applying Optical Near Field with Ultra Short-Time Heating
A. Tajiri, °K. Tamura, S. Toriumi, Y. Ashizawa*, K. Nakagawa*, Ar. Tsukamoto*, A. Itoh*, Yuz. Sasaki**, S. Saito**, Mi. Takahashi**, S. Ohnuki*（Graduate School of Science and Technology, Nihon Univ., *College of Science and Technology, Nihon Univ., **Graduate School of Engineering, Tohoku Univ.）

2pA-3　High Efficient Waveguide by Using Surface Plasmon Polaritons for Thermally Assisted Magnetic Recording
°Y. Ashizawa, Ta. Ota*, K. Tamura*, K. Nakagawa（College of Science and Technology, Nihon Univ., *Graduate School of Science and Technology, Nihon Univ.）

2pA-4　Circularly Polarized Light Generated by Plasmon Antenna for All-Optical Magnetic Recording
Ta. Ota, °K. Tamura, Y. Ashizawa*, Ar. Tsukamoto*, A. Itoh*, S. Ohnuki*, K. Nakagawa*（Graduate School of Science and Technology, Nihon Univ., *College of Science and Technology, Nihon Univ.）

Hybrid Recording II　**16 : 30 〜17 : 30**　Chair: Z.J. Liu（DSI）

2pA-5　Laser-induced ultrafast demagnetization in layered GdFeCo films
°Te. Sato, R. Shimizu, S. Toriumi, S. Kogure, Ar. Tsukamoto*, A. Itoh*（Graduate School of Science and Technology, Nihon Univ., *College of Science and Technology, Nihon Univ.）

2pA-6　Fabrication of single crystalline $L1_0$-FeCuPt grains by Rapid Thermal Annealing and additional annealing
°T. Ubana, Ar. Tsukamoto*, A. Itoh*（Graduate School of Science and Technology, Nihon Univ., *College of Science and Technology, Nihon Univ.）

2pA-7　Microwave assisted switching experiment on Co/Pt multilayer dot array
°M. Furuta*, N. Kikuchi*, S. Okamoto*, O. Kitakami*, T. Shimatsu**,***（*Institute of Multidisciplinary Research for Advanced Materials, Tohoku Univ., **Research Institute of Electrical Communication, Tohoku Univ., ***Center for Interdisciplinary Research, Tohoku Univ.）

2pA-8　Switching behavior of single Co/Pt nanodot under microwave assistance
°S. Okamoto*, N. Kikuchi*, M. Furuta*, O. Kitakami*, T. Shimatsu**,***（*IMRAM, Tohoku Univ., **CIR, Tohoku Univ., ***RIEC, Tohoku Univ.）

Oct. 2/RoomB

Soft Magnetic Materials I（Amorphous Alloys）　15 : 00 〜16 : 00　Chair: M. Ohta（Hitachi Metals）

2pB-1　Amorphous and nanocrystalline materials for energy management（Invited）　°R. Hasegawa（Metglas Inc.）

2pB-2　Influence of powder oxygen content on the magnetic properties of FeSiB amorphous powder core
°C. Lu, Z. Lu, D. Li, S. Zhou（China Central Iron and Steel Research Institute Group, Advanced Technology and Materials Co., Ltd.）

2pB-3　Effect of annealing for magnetic softness of Fe-B submicron particles
°Y. Shimada, Y. Endo, M. Yamaguchi, S. Okamoto*, O. Kitakami*
（Dept. of Electrical Engineering, Tohoku Univ., *IMRAM, Tohoku Univ.）

Soft Magnetic Materials II（Metals Nanocrystals）　16 : 15 〜17 : 45　Chair: R. Hasegawa（Metglas Inc.）

2pB-4　Core loss for Fe-Si powder core（Invited）　°Ta. Saito, S. Takemoto（Daido Steel Co., Ltd.）

2pB-5　{100} texture evolution in soft magnetic Fe-base alloys by gamma to alpha phase transformation
°J. K. Sung, Y. M. Koo（GIFT, Pohang Univ. of Science and Technology）

2pB-6　Local Structure and Magnetic Properties of Fe-Mn Nanocrystalline Alloys Fabricated by Mechanical Alloying Technique
°K. Tarigan, D. S. Yang*, M. Ginting**, S. C. Yu***（Indonesia Institute of Technology, ITI, *Chungbuk National Univ., **Research and Development Center for Applied Physics, LIPI, ***Chungbuk National Univ., CBNU）

2pB-7　Properties of Fe-based Nanocrystalline with Constant Permeability under Intense Field
°Zhu. Li, D. Li, Gua. Li, X. Wu, Z. Lu
（China Iron & Steel Research Institute Group, Advanced Technology and Materials Co., Ltd.）

2pB-8　The influence of clusters in melt on the subsequent glass-formation and crystallization of Fe-based metallic glasses
°B. Dong, D. Li, S. Zhou, J. Qin*, S. Pan*, Zhengb. Li**
（China Central Iron & Steel Research Institute Group, Advanced Technology & Materials Co., Ltd., *Key Laboratory for Liquid-Solid Structural Evolution and Processing of Materials（Ministry of Education）, **China Central Iron and Steel Research Institute Group）

Oct. 2/RoomC

Bio and Environmental Magnetics I　15 : 00 〜16:15　Chair: C.-M. Fu（National Taiwan Univ.）

2pC-1　New functionality of magnetic nanoparticles in biomedical applications — from gene delivery to combination therapy with antibody（Invited）　Y. Takemura（Yokohama National Univ.）

2pC-2　Medical application of functional magnetite nanoparticles（Invited）　°A. Ito（Kyushu Univ.）

2pC-3　Magnetic beads composed of Fe-Pt/Au hybrid nanoshell and silica core
°R. Zhang, T. Hamada, S. Inagi, Y. Kitamoto（Tokyo Institute of Technology）

Bio and Environmental Magnetics II　16 : 30 〜17 : 45　Chair: C. G. Kim（Chungnam National Univ.）

2pC-4　Magneto hyperthermia with magnetic nano-particles and nano-rods（Invited）
°C.-M. Fu, C.-W. Lee, C.-H. Lee, F.-H. Chang*
（Department of Physics, National Taiwan Univ., *Institute of Biochemistry and Molecular Biology, National Taiwan Univ.）

2pC-5　Preparation of（La, Sr）（Mn, Cu）O_3 perovskite spheres and evaluation of their heating ability as magnetic hyperthermia mediators　°T. Nakagawa, M. Horiki, Kot. Maeda, S. Seino, T. A. Yamamoto（Osaka Univ.）

2pC-6　Temperature distribution measurement in prostate phantom using Ti needles as heating mediators for magnetic hyperthermia　°N. Fukaya, T. Nakagawa, S. Seino, T. A. Yamamoto（Osaka Univ.）

2pC-7　Adsorption of Cu^{2+} ions by chitosan modified magnetic ferrite nanoparticles
Y. Meng, Y. Sun, D. Y. Chen, D. Jiao, H. Y. Yu, D. C. Zeng, °Z. W. Liu
（School of Material Science and Engineering, South China Univ. of Technology）

Oct. 2/RoomD

Heusler Alloys　15 : 00 〜17 : 00　Chair: Y. Sakuraba（Tohoku Univ.）

2pD-1　*Ab initio* studies on half-metallic Heusler alloys: An outlook toward room-temperature applications（Invited）
°M. Shirai, Y. Miura, Ka. Abe（Tohoku Univ.）

2pD-2 Search for highly spin polarized ferromagnetic materials and their device applications（Invited）
°Y. K. Takahashi, T. Furubayashi, K. Hono（NIMS）

2pD-3 Tunnel magnetoresistance in perpendicularly magnetized Co_2FeAl/MgO/CoFeB magnetic tunnel junctions
°Z. Wen, H. Sukegawa, S. Kasai, M. Hayashi, S. Mitani, K. Inomata（National Institute for Materials Science（NIMS））

2pD-4 Enhanced coherent tunneling contribution in epitaxial magnetic tunnel junctions with a Co_2MnSi electrode and a MgO barrier due to improved interfacial structural properties
°H. Liu, Y. Honda, K. Matsuda, T. Uemura, Masaf. Yamamoto（Hokkaido Univ.）

2pD-5 Magnetic, magnetocaloric and magnetotransport properties of quaternary Ni-Mn-In-Z Heusler alloys（Invited）
°A. Granovsky, A. Kazakov, V. Prudnikov, E. Gan'shina, I. Dubenko*, N. Ali*, S. Stadler**
（Faculty of Physics, Lomonosov Moscow State Univ., *Department of Physics, Southern Illinois Univ., **Department of Physics & Astronomy, Louisiana State Univ.）

Oct. 2/RoomE

Surface, Interface I **15 : 00 〜16:15** Chair: T. Yamada（Chiba Univ.）

2pE-1 Spin Damping Monopole（Invited） °G. Tatara*, A. Takeuchi*, H. Ueda, K. Taguchi
（Graduate School of Science, Tokyo Metropolitan Univ., *Department of Applied Physics, The Univ. of Tokyo）

2pE-2 Direct probing of spin polarization in graphene on magnetic metal surface by metastable helium beam
°S. Entani, M. Ohtomo, M. Kurahashi*, Y. Matsumoto, P. V. Avramov, H. Naramoto, S. Sakai, Y. Yamauchi*（JAEA, *NIMS）

2pE-3 Direct observation of perpendicular crystalline anisotropy on interfacial unpinned moments of antiferromagnet and induced perpendicular anisotropy °B.-Y. Wang*,**,***, C.-Y. Hong*, Y. K.-H. Ou*, W.-F. Pong**, H.-J. Lin****, M.-T. Lin*,***** (*Department of Physics, National Taiwan Univ., **Department of Physics, Tamkang Univ., ***Advanced Light Source, Lawrence Berkeley National Laboratory, ****National Synchrotron Radiation Research Center, *****Institute of Atomic and Molecular Sciences, Academia Sinica）

2pE-4 Detection of uncompensated interfacial antiferromagnetic spins in the perpendicularly exchange-biased system
°Y. Shiratsuchi, T. Nakamura*, M. Suzuki*, H. Noutomi, H. Oikawa, T. Fujita, K. Arakawa**, Y. Takechi, H. Mori**, T. Kinoshita*, Masah. Yamamoto, R. Nakatani（Graduate School of Engineering, Osaka Univ., *Japan Synchrotron Radiation Research Institute（JASRI/SPring-8）, **Research Center for Ultra-High Voltage Electron Microscopy）

Surface, Interface II **16 : 30 〜17 : 30** Chair: B. Y. Wang（National Taiwan Univ.）

2pE-5 Investigation of perpendicular magnetic anisotropy of CoFeB by x-ray magnetic circular dichroism
°W.-Ch. Tsai, S.-C. Liao, H.-C. Hou, C.-T. Yen*, Y.-H. Wang*, H.-M. Tsai**, F.-H. Chang**, H.-J. Lin**, C.-H. Lai
（National Tsing Hua Univ., *Industrial Technology Research Institute, **National Synchrotron Radiation Research Center）

2pE-6 Compositions and magnetic phases for Co/Ir（111）ultrathin films
W.-Y. Chan, C.-H. Chang, W.-H. Chen, °J.-S. Tsay（National Taiwan Normal Univ.）

2pE-7 Competition between exchange bias coupling and interlayer coupling in NiFe/CoO/Co trilayers
T.-C. Lan*, C.-H. Liu*, C. Shueh*, °D. Cortie**,***, F. Klose***, J. van Lierop****, K.-W. Lin*
（*National Chung Hsing Univ., **Univ. of Wollongong, ***Australian Nuclear Science and Technology Organisation, ****Univ. of Manitoba）

2pE-8 Magnetic Force Microscope Tips Prepared by Coating Sharp Si-Base Tips with Thin Co Film
°K. Soneta, M. Ohtake, M. Futamoto（Chuo Univ.）

Oct. 2/PS

Poster Session I **13 : 00 〜15 : 00** Chair: H. Mamiya（NIMS）

2pPS-1 Monochromatic spatiotemporal stable magnetostatic surface spin wave in a ferromagnetic thin film
°N. Sato*, K. Sekiguchi*,**, Y. Nozaki*,*** (*Department of Physics, Keio Univ., **PRESTO, JST, ***CREST, JST)

2pPS-2 Manipulation of Fast domain wall propagation in magnetically bistable microwires through the magnetoelastic anisotropy
°V. Zhukova*, J. M. Blanco*, M. Ipatov*, A. Zhukov*,** (*UPV/EHU, **IKERBASQUE)

2pPS-3 Threshold tip position for magnetization manipulation with magnetic force microscopy
°K. Maehara, K. Toyoki, H. Nomura, R. Nakatani（Osaka Univ.）

2pPS-4 Surface roughness effects on magnetization reversal of micron-scale magnetic ring elements
°C.-W. Chiang, C.-Y. Huang*, T.-R. Ger, Z.-H. Wei（Department of Power Mechanical Engineering, National Tsing Hua Univ., *Institute of NanoEngineering and MicroSystems, National Tsing Hua Univ.）

2pPS-5 Nonlinear dynamics of the domain walls in magnetic with modulation of the parameter of the magnetic anisotropy
°A. Gumerov, E. G. Ekomasov, R. Murtazin, R. Kudryavtsev（Institute of Physics and Technology, Bashkir State Univ.）

2pPS-6 Nonlinear dynamics of the domain walls in magnetic with modulation of the parameters system
°R. Murtazin, E. G. Ekomasov, T. Shapaeva*, A. Gumerov, A. Ekomasov
（Institute of Physics and Technology, Bashkir State Univ., *Lomonosov Moscow State Univ.）

2pPS-7 Influence of asymmetric degree on vortex nucleation and annihilation in NiFe ring
C. -H. Huang, L. Horng, N. J. Cheng*, °C. J. Hsu*, F. S. Wu, J. C. Wu
（Department of Physics and Taiwan SPIN Research Center, *Institute of Photonics, National Changhua Univ. of Education）

2pPS-8 Quantitative analysis of spin torque effect in the magnetic vortex structure
°M. Goto*, K. Sekiguchi*, **, Y. Nozaki*, *** (*Department of Physics, Keio Univ., **PRESTO, JST, ***CREST, JST)

2pPS-9 Dislocation density and coercivity in AlFe nanocrystalline alloys
°A. Yoshida*, **, K. Kodama*, Y. Taniguchi*, T. Ichise*, M. Shimaoka*, R. Yamagishi**, S. Hanasaka**, N. Hosoito**
(*Nara National College of Technology, **Nara Institute of Science and Technology)

2pPS-10 Magnetocrystalline anisotropy and magnetoelastic property of $L1_0$-ordered transition metal alloys
°H. Itoh, N. Suzuki, S. Honda*, J. Inoue*（Kansai Univ., *Univ. of Tsukuba）

2pPS-11 Magnetostrictive properties of Fe-based amorphous powder core
°M. Morikawa, S. Agatsuma, S. H. Kim, S. Hashi, K. Ishiyama, I. Otsuka*
（Research Institute of Electrical Communication, Tohoku Univ., *EPSON ATMIX Corporation）

2pPS-12 Canted magnetization in Co and Fe/HOPG thin films induced by template defects
°C.-J. Tsai, T.-Y. Ho, C.-S. Chi, Y.-Y. Huang, C.-H. Wang, F.-Y. Lo, W.-C. Lin
（Department of Physics, National Taiwan Normal Univ.）

2pPS-13 Uniaxial magnetic anisotropy in nanostructured Pd/Fe/Al_2O_3(0001) by oblique deposition
°C.-J. Tsai, C.-S. Chi, T.-Y. Ho, W.-C. Lin（Department of Physics, National Taiwan Normal Univ.）

2pPS-14 Magnetic Anisotropy and Magnetostriction of Ni(100) Single-Crystal Thin Films with Different Thicknesses
°T. Ohtani, T. Kawai, M. Ohtake, M. Futamoto（Chuo Univ.）

2pPS-15 Study of perpendicular magnetic anisotropy of Co/Au multilayer by magnetic Compton profile
°Ko. Suzuki, M. Hayata, K. Minegishi, Tad. Kato, M. Itou*, Yo. Sakurai*, H. Sakurai（Gunma Univ., *JASRI/SPring-8）

2pPS-16 Parallel measurements of magnetic hysteresis loop and magneto-optical effect by spectrometric detection
G. X. Du, °Tat. Sasaki, S. Saito, Mi. Takahashi*（Department of Electronic Engineering, Graduate School of Engineering, Tohoku Univ., *New Industry Creation Hatchery Center, Tohoku Univ.）

2pPS-17 Synthesis and Characterization of Highly Coercive $L1_0$ FeNi Powders
°Y. Hayashi, S. Gotou, M. Mizuguchi*, M. Kotsugi**, Y. Kitou, E. Okuno, K. Takanashi*
（DENSO CORPORATION, *Tohoku Univ., **JASRI）

2pPS-18 Corrosion behaviors and mechanism of sintered rare-earth magnets
°A. Li, W. Li, J. Li, H. Feng, Z.-H. Guo, M. Zhu（Central Iron & Steel Research Institute）

2pPS-19 Densification behavior of granular compound including melt-spun flake with bingham flow phenomenon
F. Yamashita, °T. Suzuki, H. Komura（Minebea Co., Ltd.）

2pPS-20 COERCIVITY OF NEAR SINGLE DOMAIN SIZE $Nd_2Fe_{14}B$-TYPE PARTICLES PREPARED BY BALL MILLING OF HDDR-TREATED Nd-Fe-B-TYPE ALLOY
°H.-W. Kwon, J.-H. Yu*（Pukyong National Univ., *Korea Institute of Materials Science）

2pPS-21 Permanent magnet wires produced by spinning technique in rotating liquid
°S. Matsumura, T. Todaka, M. Enokizono（Oita Univ.）

2pPS-22 Magnetic Properties of Melt-Spun Nd-Ce-Fe-B Ribbons °K. Oka, T. Todaka, M. Enokizono（Oita Univ.）

2pPS-23 Development of surface treatment for Dy free NdFeB anisotropic magnet powders
°K. Noguchi, C. Mishima, M. Yamazaki, H. Matsuoka, Y. Hashimoto, H. Mitarai, Y. Honkura（Aichi Steel Corp.）

2pPS-24 Preparation of Pr-Fe-Co-B-M（M = Nb, Zr）nanocomposite permanent magnets with enhanced coercivity by rapid solidification

X. Cui, Z. W. Liu, D. C. Zeng, °H. Y. Yu（School of Materials Science and Engineering, South China Univ. of Technology）

2pPS-25 Analysis of Magnetization Process of Nd-Fe-B Sintered Magnets by Magnetic Domain Observation Using Kerr Microscope

°Y. Kimura, M. Takezawa, Y. Morimoto, J. Yamasaki（Kyushu Institute of Technology）

2pPS-26 Effect of post annealing on the coercivity in Nd-Fe-B/Nd films

°K. Koike, J. Umezawa, H. Shiraiwa, D. Ogawa, Hir. Kato（Yamagata Univ.）

2pPS-27 Combinatorial approach to the optimization of magnetic properties in Nd-Fe-B thin films

°D. Ogawa, K. Koike, Hir. Kato（Yamagata Univ.）

2pPS-28 Temperature dependence of magnetic properties of $SmCo_5/\alpha$-Fe nanocomposite magnets with layered structure

°R. Horikawa, A. Tou, M. Nakano, T. Yanai, H. Fukunaga（Nagasaki Univ.）

2pPS-29 Fabrication of epitaxial Nd-Fe-B thin films and its magnetic properties

°R. Goto, S. Okamoto, N. Kikuchi, O. Kitakami

（Institute of Multidisciplinary Research for Advanced Materials, Tohoku Univ.）

2pPS-30 High magnetic performance Pr-Fe-B thin films sputtered on Ta/glass

°C.-F. Huang, A.-C. Sun, P. C. Kuo*, H. W. Chang**, W. C. Chang***, L.-X. Ye****, T.-H. Wu****

（Department of Chemical Engineering and Materials Science, Yuan-Ze Univ.,

*Department of Materials Science and Engineering, National Taiwan Univ.,

**Department of Physics, Tunghai Univ., ***Department of Physics, National Chung Cheng Univ.,

****Graduate School of Materials Science, National Yunlin Univ. of Science and Technology）

2pPS-31 Spin-current generation in non-magnetic strip by spin motive force

°R. Sugano*, **, M. Ichimura*, **, Sa. Takahashi**, ***, S. Maekawa**, ****

（*CRL, Hitachi, Ltd., **JST, CREST, ***IMR, Tohoku Univ., ****ASRC, JAEA）

2pPS-32 Direct Characterization of Spin-transfer Switching of Nano-scale Magnetic Tunnel Junctions Using Conductive Atomic Force Microscope

J.-M. Lee*, C.-M. Lee*, **, L.-X. Ye*, D.-C. Yang***, J.-C. Wu****, °T.-H. Wu*, **

（*Taiwan SPIN Research Center, National Yunlin Univ. of Science and Technology,

**Graduate School of Materials Science, National Yunlin Univ. of Science and Technology,

***Graduate School of Optoelectronics, National Yunlin Univ. of Science and Technology,

****Department of Physics, National Changhua Univ. of Education）

2pPS-33 Effect of the Gilbert Damping Constant on the Switching Current in SpinRAM

°K. Oomaru, Yoshin. Nakatani（Univ. of Electro-Communications）

2pPS-34 Simulation of Spin Current Switching Assisted by Electric Field

°M. Shiomi, M. Honda, Yoshin. Nakatani（Univ. of Electro-Communicaitons）

2pPS-35 Wear characterization of conductive Pt-coated AFM probes

L.-X. Ye*, C.-M. Lee*, **, B.-Y. Chen*, **, J.-M. Lee*, °T.-H. Wu*, **

（*Taiwan SPIN Research Center, National Yunlin Univ. of Science and Technology,

**Graduate School of Materials Science, National Yunlin Univ. of Science and Technology）

2pPS-36 Transport characteristics of ferromagnet/superconductor/ferromagnet single-electron transistors

°C.-S. Wu, Z.-L. Jiang, Y.-C. Chang*, S. Liou*, W. Kuo**（Department of physics, National Changhua Univ. of Education, *Institute of Physics, Academia Sinica, **Department of Physics, National Chung Hsing Univ.）

Chair: M. Amano（Toshiba）

2pPS-37 Micromagnetics Simulation for Magnetization Switching of Permalloy Thin Films with Modulated Pure Spin Current Injection

°S. Honda*, H. Itoh**, *** (*Faculty of Pure and Applied Sciences, Univ. of Tsukuba,

**Department of Pure and Applied Physics, Kansai Univ.,

***Japan Science and Technology Agency, CREST）

2pPS-38 Contribution of Rashba field to domain wall creep in TbFeCo nanowires

°B. Do, H. Awano（Toyota Technological Institute）

2pPS-39 Detection of spatial distribution of magnetostatic surface waves using spin pumping

°R. Iguchi*, Ka. Ando**, Z. Qiu***, T. An**, E. Saitoh**, ***, ****, *****, Te. Sato*

（*Keio Univ., **IMR, Tohoku Univ., ***WPI-AIMR, Tohoku Univ., ****ASRC, JAEA, *****CREST, JST）

2pPS-40 Spin Injection into Trilayer Graphene Lateral Spin Valves
°Yanp. Liu*,**, H. Idzuchi**,***, Y. Fukuma**,***, O. Rousseau**, Y. Otani**,***, W. S. Lew*, T. Zhou****
(*Nanyang Technological Univ., **RIKEN, ***Univ. of Tokyo,
****Data Storage Institute (A*STAR) Agency for Science, Technology and Research)

2pPS-41 Excitation of Synthetic Antiferromagnetic Pinned Layer in Magnetic Tunnel Junction with Perpendicular Magnetic Anisotropy °W.-Y. Kim, K.-J. Lee (Department of Materials Science and Engineering, Korea Univ.)

2pPS-42 CoFeB/MgO-based magnetic tunnel junctions with perpendicular magnetic anisotropy by using $[Co/Pd]_n$ films
°Y.-J. Chang*,**, A. Canizo-Cabrera**, Y.-H. Chang*, T.-H. Wu*,**
(*National Yunlin Univ. of Science and Technology, **Taiwan SPIN Research Center)

2pPS-43 Structure and transport properties of Fe_3O_4 thin film on $LaAlO_3$ (001) substrate grown by MBE
°A. T. Duong, Y. Shin, S. Jeon, S. Cho (Univ. of Ulsan)

2pPS-44 Substrate and Growth temperature dependent magnetic properties in epitaxial Co thin films
°S. Jeon, A. T. Duong, Y. Shin, S. Cho (Univ. of Ulsan)

2pPS-45 Magnetoresistance properties in CPP-GMR devices using $Co_2Fe_xMn_{1-x}Si$ electrodes
°M. Ueda, Y. Sakuraba, K. Takanashi (Institute for Materials Research, Tohoku Univ.)

2pPS-46 Tunneling magnetoresistance effect and structure of granular films using CoFeAlSi alloy
M. Kondo, T. Chino, M. Hattori, Y. Urakawa*, Y. Fujiwara*, Tak. Kato**, °M. Jimbo
(Daido Univ., *Mie Univ., **Nagoya Univ.)

2pPS-47 Growth and Magnetic Properties of Pseudo-Single-Crystal Mn_4N Films M. Tsunoda, °K. Kabara (Tohoku Univ.)

2pPS-48 Manipulation of domain wall in connected magnetic tunnel junction ellipses
Y.-C. Lee, °C.-Y. Kuo, C.-T. Chao, L. Horng, M. Tsunoda*, Mi. Takahashi*, J.-C. Wu
(Department of Physics, National Changhua Univ. of Education, *Department of Electronic Engineering, Tohoku Univ.)

2pPS-49 Magnetic sensor capable of sensing protein damage by radiation
°D.-G. Park, H. Song (Korea Atomic Energy Research Institute)

2pPS-50 Epitaxial growth of half-matallic ferromagnets Co_2MnSi on diamond semiconductors
°T. Soumiya, K. Ueda, K. Kawamoto, N. Fukatani, H. Asano (Nagoya Univ.)

2pPS-51 Spin accumulation in p-type Germanium using a Fe/GeO_2 tunnel contact at room temperature
°S. Watanabe*,**, A. Spiesser**, Hid. Saito**, S. Yuasa**, Ko. Ando** (*Univ. of Tsukuba, **AIST)

2pPS-52 Quantum interference and sharp spin polarization on Rashba double quantum dots
°Kuo-W. Chen*, C.-R. Chang*,** (*Department of Physics, National Taiwan Univ.,
**Center for Quantum Science and Engineering, National Taiwan Univ.)

2pPS-53 Depth profile of induced magnetic polarization in Au layers of Fe/Au(001) superlattice by resonant X-ray magnetic scattering at the high angle region °S. Uegaki, T. Ohkochi*, K. Kodama**, N. Hosoito (NAIST, *JASRI, **NNCT)

2pPS-54 Ferromagnetic resonance study on magnetic anisotropy and sub-lattice exchange coupling in strained $BiFeO_3$ thin-film
°Y. S. Chen*,**, H. Y. Guo**, J. C. Yang***, Y. H. Chu***, W. F. Wu*, J. G. Lin**
(*Department of Mechanical Engineering, National Taiwan Univ.,
**Center for Condensed Matter Sciences, National Taiwan Univ.,
***Department of Materials Science and Engineering, National Tsing Hua Univ.)

2pPS-55 Magnetic Structures of Mn 4p Magnetization Induced in the MnIr-base Exchange Bias System by Resonant X-ray Magnetic Scattering at the Mn K Absorption Edge with Helicity Modulation Technique
°T. Hasegawa, R. Yamagishi, K. Kodama*, N. Hosoito, Hiroka. Takahashi**, M. Tsunoda**
(Graduate School of Materials Science, Nara Institute of Science and Technology,
*Department of Mechanical Engineering, Nara National College of Technology,
**Department of Electronic Engineering, Tohoku Univ.)

2pPS-56 Exchange and Orange Peel couplings in ultrathin CoFeB/MgO/CoFeB junctions with perpendicular magnetic anisotropy
Y.-C. Weng, °C.-W. Cheng, G. Chern (Department of Physics, National Chung Cheng Univ.)

2pPS-57 Orientational Dependence of Perpendicular Exchange Anisotropy in Mn-Ir/Co-Fe/Pd/$[Co/Pd]_4$ Multilayers
°Hiroka. Takahashi, M. Tsunoda (Tohoku Univ.)

2pPS-58 Effects of impurity states on exchange coupling in ferromagnetic Fe/Fe_3O_4 junctions
°J. Inoue, S. Honda, H. Itoh*, K. Mibu**, H. Yanagihara, E. Kita
(Univ. of Tsukuba, *Kansai Univ., **Nagoya Institute of Technology)

2pPS-59 Structural and magnetic analyses of $FePt_3$/FePt composite films °H. Sakuma, Yo. Sato, K. Ishii (Utsunomiya Univ.)

2pPS-60 Magnetic properties of film-form assembly of α-Fe nanoparticles with strong interparticle dipolar interaction
°K. Hiroi*, H. Kura**, T. Ogawa***, Mi. Takahashi**,****, Te. Sato*
(*Graduate School of Science and Technology, Keio Univ., **New Industry Creation Hatchery Center, Tohoku Univ., ***Graduate School of Engineering, Tohoku Univ., ****Center for Nanobioengineering and Spintronics, Chungnam National Univ.)

2pPS-61 Synthesis and Magnetic Properties of Nickel Nanoparticles
H. J. Cuya, K. Shinoda*, H. Mamiya**, H. Miyamura, Ki. Sato***, °B. Jeyadevan
(The Univ. of Shiga Prefecture, *Tohoku Univ., **NIMS, ***DOWA Holdings Co., Ltd)

2pPS-62 Quantification of coloration with milling for ferrite fine-particle aggregate
K. Nishimura, °H. Sugino, N. Matsushita*, Mi. Inoue** (Suzuka National College of Technology, *Tokyo Institute of Technology, **Toyohashi Univ. of Technology)

2pPS-63 Synthesis of carbon nanocapsules containing Fe produced by discharge in ethanol
°H. Kuratani, Y. Fujiwara, Koh. Maeda, T. Kobayashi, M. Jimbo*
(Graduate School of Engineering, Mie Univ., *Faculty School of Engineering, Daido Univ.)

2pPS-64 Thermal decomposition process of $Fe(CO)_5$ and $Co_2(CO)_8$ mixed precursor for Fe-Co alloy nanoparticles with homogeneous chemical composition °T. Ogawa*, H. Kura**, H. Takano*, R. Tate*, Kou. Hata***, Mi. Takahashi**,**** (*Grad. Sc. Eng., Tohoku Univ., **NICHe, Tohoku Univ., ***Osaka Branch, Samsung Yokohama Res. Inst., ****nBEST, Chungnam Nat. Univ.)

2pPS-65 Effects of MgO barrier on magnetic properties of Fe/MgO/Si(001) thin films
°J. H. Jo*,**, K.-H. Kim*,**, H.-J. Kim**, Jo. Chang**, S. H. Lim*
(*Department of Materials Science and Engineering, Korea Univ., **Spin Convergence Research Center, Korea Institute of Science and Technology)

2pPS-66 Magnetic domain observation of FeCo thin films using photoelectron emission microscope
°T. Ohtsuki, M. Kotsugi, T. Ohkochi, T. Kojima*, M. Mizuguchi*, K. Takanashi*
(Japan Synchrotron Radiation Research Institute, *Institute for Material Research, Tohoku Univ.)

2pPS-67 Ferromagnetic Resonance Study of $Fe_{100-x}Co_x$/GaAs(001) ($x < 11$) Deposited by RF Magnetron Sputtering
Y. Wada, °Yut. Takahashi, N. Inaba, F. Kirino*, M. Ohtake**, M. Futamoto**
(Graduate School of Science and Engineering, Yamagata Univ., *Graduate School of Fine Arts, Tokyo National Univ. of Fine Arts and Music, **Faculty of Science and Engineering, Chuo Univ.)

2pPS-68 Effect of Pt Addition on Structure and Magnetic Properties of α'-$Fe_{16}N_2$ Thin Film
T. Ogawa*, °K. Hayashi*, C. Mitsumata*, A. Sakuma*, Mi. Takahashi**,***
(*Graduate School of Engineering, Tohoku Univ., **New Industry Creation Hatchery Center (NICHe), Tohoku Univ., ***Center for Nano-bio Engineering and Spintronics, Chungnane National Univ.)

2pPS-69 Perpendicular magnetic anisotropy of [Co/Pt] multilayers with an inverted structure
°T. Y. Lee*, D. S. Son**, S. H. Lim*,**, S.-R. Lee** (*Department of Nano Semiconductor Engineering, Korea Univ., **Department of Materials Science and Engineering, Korea Univ.)

2pPS-70 Investigation for electrical transport properties of multi-bit type magneto-electric capacitor
°R. Imura, T. Yokota, K. Ichikawa, M. Gomi
(Department of Materials science and Engineering, Nagoya Institute of Technology)

2pPS-71 Magnetoelectric properties of self-assembled $La_{1-x}Sr_xMnO_3$ superlattice thin films prepared by pulse laser deposition
°Daik. Suzuki, N. Sakamoto, K. Shinozaki*, His. Suzuki**, N. Wakiya (Department of Materials Science and Chemical Engineering, Shizuoka Univ., *Department of Metallurgy and Ceramics Science, Tokyo Institute of Technology, **Graduate School of Science and Technology, Shizuoka Univ.)

2pPS-72 Fabrication of $CoFe_2O_4$ ultrathin epitaxial films by MBE method
°S. Hiratani, T. Nagahama, To. Shimada (Hokkaido Univ.)

Chair: M. Mizuguchi (Tohoku Univ.)

2pPS-73 Magnetic domain observation of FeNi single crystalline film deposited on Cu(001) using photoelectron emission microscopy (PEEM) °M. Kotsugi*,**, T. Ohtsuki*,**, T. Ohkochi*,**, T. Kojima**,***, M. Ogiwara**,***, M. Mizuguchi**,***, K. Takanashi**,*** (*SPring-8/JASRI, **JST, ***Tohoku Univ. IMR)

2pPS-74 Magnetic properties of patterned CoFeBPd thin films °Y. J. Nam*, T. Y. Lee*, S. H. Lim*,** (*Department of Nano Semiconductor Engineering, Korea Univ., **Department of Materials Science and Engineering, Korea Univ.)

2pPS-75 Growth and properties of epitaxial Fe_2CrSi / AFM Ru_2MnGe Heusler multilayers
°K. Inagaki, N. Fukatani, T. Miyawaki, K. Ueda, H. Asano (Nagoya Univ.)

2pPS-76 Impurity gas analysis in the sputtering process under high Ar gas pressure
°S. Sasaki, S. Ishibasi*, S. Saito*, Mi. Takahashi* (Ichinoseki National College of Technology, *Tohoku Univ.)

2pPS-77 Structures and magnetic properties of FePt/Fe(200) thin films on glass
°A. Kinoshita, T. Haeiwa (Spin Device Technology Center, Shinshu Univ.)

2pPS-78 Pt-substitution effects to enhance uniaxial magnetic anisotropy in $L1_0$-ordered Fe-Ni alloys
°K. Hyodo, Y. Kota, C. Mitsumata, A. Sakuma (Department of Applied Physics, Tohoku Univ.)

2pPS-79 Influence of Pt content on magnetic domain structure of CoPt films
°R. Tojo, Y. Kawada, T. Komine, R. Sugita (Department of Media and Telecommunication Engineering, Ibaraki Univ.)

2pPS-80 Micromagnetic Simulations of Spin Waves in Nanowires with Perpendicular Anisotropy
C. H. Hsieh*,**, J. C. Lee**, J. J. Liang***, °S. F. Lee*,** (*Graduate Institute of Applied Physics, National Chengchi Univ., **Institute of Physics, Academia Sinica, ***Department of Physics, Fu Jen Catholic Univ.)

2pPS-81 Encapsulated CoPt Nanoparticles Prepared with Reversed Micelle
°S. Yoshida, T. Haeiwa (Spin Device Thechnology Center, Shinshu Univ.)

2pPS-82 Alternating Field Assisted Magnetization Reversal in Ferromagnetic Thin Ellipse
°T. W. Kuo, Y. T. Lu, H. T. Huang*, M. F. Lai (Institute of Nanoengineering and Microsystems, NTHU, *Department of Power Mechanical Engineering, NTHU)

2pPS-83 Enhancement of extraordinary Hall effect in sub-micron $(Co/Pt)_n$ crosses
°Y.-C. Lee, Y.-J. Chang*, T.-H. Wu*, J.-C. Wu (Taiwan SPIN research center, National Changhua Univ. of Education, *Taiwan SPIN research center, National Yunlin Univ. of Science and Technology)

2pPS-84 Magnetic properties of Au nanowires capped with Oleylamine
°Y. Ochi, Te. Sato (Graduate School of Science and Technology, Keio Univ.)

2pPS-85 Influence of magnetic dipole interaction on ferromagnetic resonance in nanoparticle assembly
°D. Hasegawa, S. Saito*, Mi. Takahashi* (Waseda Univ., *Tohoku Univ.)

2pPS-86 Programmable pinning site for Racetrack Memory °S. Hirai, H. Nomura, R. Nakatani (Osaka Univ.)

2pPS-87 Domain wall motion by current in a Co/Ni nanowire with perpendicular magnetization under in-plane magnetic fields
°Y. Yoshimura*, T. Koyama*, D. Chiba*,**, Yoshin. Nakatani***, S. Fukami****, M. Yamanouchi****,*****, H. Ohno****,*****, T. Ono* (*ICR, Kyoto Univ., **PRESTO, ***Univ. of Electro-Communications, ****CSIS, Tohoku Univ., *****RIEC, Tohoku Univ.)

2pPS-88 Current induced bit-by-bit domain wall propagation with periodical anisotropy modulation in perpendicular magnetic nanowire °T. Takashima, Te. Tanaka, K. Ito, H. Otsuki, K. Matsuyama (Kyushu Univ.)

2pPS-89 Preparation of Metal-Polymer Composite Films by the Metal-Polymer Co-electroless deposition Method
°N. Fujita, T. Yoshimoto, H. Fukui, M. Hirai, Mi. Inoue*
(Nara National College of Technology, *Toyohashi Univ. of Technology)

2pPS-90 Development of the Magnetic Gyro °Y. Honkura, K. Sasayama*, K. Urakawa**, R. Masaki**, C. M. Cai, K. Tsuchida**
(Aichi Steel Corp., *OTSL Corp., **Aichi Micro Intelligent Corp.)

2pPS-91 New Method of Hysteresis Curve Measurement by Using Lock-in Amplifier
°T. Shirane, Ma. Sasaki, Ma. Takahashi (Sendai National College of Technology)

2pPS-92 Experimental and numerical study of geometrically defined standing spin wave resonance modes in Permalloy microstrip
°Y. Urazuka, Yu. Cao, H. Otsuki, Te. Tanaka, K. Matsuyama (Kyushu Univ.)

2pPS-93 Micromagnetic study on a nano-structured spin wave active ring resonator
°Yu. Cao, Y. Urazuka, K. Nagai, Te. Tanaka, K. Matsuyama (Kyushu Univ.)

2pPS-94 Measurement System of High Frequency Permeability using All Shielded Shorted Microstrip Line
°S. Takeda, T. Hotchi*, S. Motomura*, Hir. Suzuki* (Magnontech Ltd., *KEYCOM Corp.)

2pPS-95 Application of Magnetic Ribbon Coated with Poly(3,4-ethylenedioxythiophene)/Poly(4-styrenesulfonate) to a Wireless Ammonia Sensor °O. Ishii, O. Mori, Ka. Takahashi, N. Kutsuzawa, H. Okuzaki*
(Yamagata Univ., *Univ. of Yamanashi)

2pPS-96 Magnetic strain sensor using GMR devices °H. Ito, Ho. Kim, Tak. Kato, S. Iwata (Nagoya Univ.)

2pPS-97 Highly sensitive coplanar line type integrated magnetic field sensor
°Takuf. Kimura, H. Nakano, S. Yabukami, K. Ikeda*, T. Ozawa, N. Kobayashi**, Ke. Arai**
(Tohoku-Gakuin Univ., *Taiyo Yuden Co., Ltd., **Research Institute for Electric and Magnetic Materials)

2pPS-98 MFL method using ac field for evaluation of wall thinning on pipe
°Ka. Sato, I. Shimizu, Hiroa. Kikuchi (Iwate Univ.)

2pPS-99 Magnetic NDE based on magnetostriction using laser displacement meter °Yuk. Sato, Hiroa. Kikuchi (Iwate Univ.)

2pPS-100 Eddy-Current Testing of Small Crack in Narrow Space by Using Needle Type Magnetic Probe
°S. Kanamori, S. Yamada, Toshiy. Ueno (Kanazawa Univ.)

2pPS-101 Non-destructive evaluation of induction-hardened case depth by a magnetic hysteresis technique
°S. Kobayashi, Hiroko Takahashi, Y. Ishibashi, Y. Kamada (Iwate Univ.)

2pPS-102 Non-Destructive Inspection Method Using GIGS Magnetic Field Sensor
°T. Ozawa, S. Yabukami, J. Totsuka*, Se. Nagata*, M. Naoe**, N. Kobayashi**, Y. Kaneta**, Ke. Arai**
(Tohoku Gakuin Univ., *Daido Steel, **Research Institute for Electromagnetic Materials)

2pPS-103 Development of a spot-weld test by magnetic flux penetration method
°D. Harada, K. Sakai, T. Kiwa, K. Tsukada (Okayama Univ.)

2pPS-104 Nondestructive evaluation of a radiator cooling fin removal
°Sh. Nagata, I. Enokida, M. Enokizono* (Univ. of Miyazaki, *Oita Univ.)

2pPS-105 Photographic Detection of Spatial Magnetic Field Distribution by Magneto-Optical Imaging Technique with Magnetic Transfer Film °S. Meguro, Y. Konishi, E. Yanagisawa, T. Ishibashi*, S. Saito**, Mi. Takahashi**
(Neoark Corp., *Nagaoka Univ. of Tech., **Tohoku Univ.)

2pPS-106 Linearity evaluation for optical probe current sensor using the magnetic Kerr effect
°Shin Suzuki, H. Morisaki, M. Sonehara, K. Ogawa, Tos. Sato (Spin Device Technology Center, Shinshu Univ.)

2pPS-107 Analysis of Coercivity Distribution in GMR devices with GdFe Free Layers by High-resolution Magneto-optical Microscope °T. Ishibashi, Y. Oshino, K. Aoshima*, K. Machida*, K. Kuga*, Hiros. Kikuchi*, N. Shimidzu*
(Nagaoka Univ. of Tech., *NHK)

2pPS-108 Measurement of magnetic-field distribution using pulsed laser with magneto-optical effect
°J. Takahashi, S. Hashi, K. Ishiyama (Research Institute of Electrical Communication, Tohoku Univ.)

Chair: Shi. Ikeda (Toyama National College of Technology)

2pPS-109 Improvement of spatial resolution by Fe-Co tip with high saturation magnetization for Near-field magnetic force microscopy (NF-MFM) °S. Okayasu, R. Ito, G. Egawa, Y. Kinoshita, S. Yoshimura, Hit. Saito (Akita Univ.)

2pPS-110 Alternating magnetic field spectroscopy: Fourier imaging of AC magnetic field for magnetic writing head
°Y. Kinoshita, Kou. Hatakeyama*, G. Egawa*, S. Yoshimura*, Hit. Saito* (Venture Business Laboratory, Akita Univ., *Center for Geo-Environment Science, Graduate School of Engineering & Resource Science, Akita Univ.)

2pPS-111 Stroboscopic imaging of AC magnetic field for a perpendicular magnetic writing head by using frequency-modulated magnetic force microscopy (FM-MFM)
Zhengh. Li, Kod. Hatakeyama, °G. Egawa, S. Yoshimura, Hit. Saito (Akita Univ.)

2pPS-112 Fine local magnetic structures measured by STM-SQUID microscopy
°N. Watanabe, Y. Miyato, S. Matsusawa, H. Itozaki (Osaka Univ.)

2pPS-113 Optically induced magnetic field of polycrystalline solar cell
°Y. Miyato, T. Hino, Yoshih. Nakatani, H. Itozaki (Osaka Univ.)

2pPS-114 Development of tunneling magnetoresistance microscope with electromagnetic field reconstruction
°Y. Mima, N. Oyabu*, T. Inao**, N. Kimura***, K. Kimura (Department of Chemistry, Kobe Univ., *Department of Electric Science and Engineering, Kyoto Univ., **Murata Manufacturing Company, Ltd, ***Center of Atomic and Molecular Technologies, Osaka Univ.)

2pPS-115 Magnetic Force Microscope Tip with High Resolution and High Switching Field Prepared by Coating Si Tip with $L1_1$ Ordered CoPt-Alloy Film
°Shi. Ishihara, M. Ohtake, M. Futamoto (Chuo Univ.)

2pPS-116 Fabrication of Co-Pt nanoparticles having superparamagnetism into *pyrococcus furious* virus-like Particle
°M. Taira, Z. J. Jin, A. Higashiura*, Y. Shiratsuchi, A. Nakagawa*, R. Nakatani
(Graduate School of Engineering, Osaka Univ., *Institute of Protein, Osaka Univ.)

2pPS-117 Magnetic permeability in a ferromagnet under current-indeed torques
°M. Nishijima, K. Taguchi, G. Tatara, H. T. Ueda, A. Takeuchi* (Tokyo Metropolitan Univ., *Univ. of Tokyo)

2pPS-118 Non-equilibrium steady states of magnetic nanoparticles in alternating magnetic fields and the biomedical applications
°H. Mamiya, B. Jeyadevan* (National Institute for Materials Science, *The Univ. of Shiga Prefecture)

2pPS-119 Effects of viscosity of ferromagnetic dispersant on specific loss power
°D. Isaka, Y. Kikuchi, A. Seki, Ka. Suzuki, M. Kishimoto, H. Yanagihara, E. Kita
(Institute of Applied Physics, Univ. of Tsukuba)

2pPS-120 Heating characteristics of ferromagnetic iron oxide particles for magnetic thermoablation
°A. Seki, Y. Kikuchi, A. Horiuchi, D. Isaka, Ka. Suzuki, M. Kishimoto, H. Yanagihara, E. Kita
(Instituteof Applied Physics, Univ. of Tsukuba)

2pPS-121 Activity control of thermoresponsive enzyme functionalized onto magnetic nanoparticle by applications of alternating current magnetic field
°Mi. Abe, Kazun. Yoshida, S. Seino, T. Nakagawa, T. Shikakura, Y. Koga, T. A. Yamamoto (Osaka Univ.)

2pPS-122 Synthesis Perspective on Magnetite Seeds for Magnetic Hyperthermia
°A. Mizuno, R. Kasuya*, H. Mamiya**, K. Shinoda***, J. Cuya, H. Miyamura, B. Jeyadevan
(The Univ. of Shiga Prefecture, *AIST, **NIMS, ***Tohoku Univ.)

2pPS-123 A study of calculation of exciting condition under magnetic saturation for soft-heating hyperthermia
°K. Aoki, T. Esaki, T. Takura*, F. Sato*, Ta. Sato, H. Matsuki (Graduate School of Biomedical Engineering, Tohoku Univ., *Graduate School of Engineering, Tohoku Univ.)

2pPS-124 Study on the On/Off control methods for magnetic fields using the high temperature superconducting bulks
°S. Tahara, S. B. Kim, H. Onodera* (Okayama Univ., *Core Research for Evolutional Science and Technology)

2pPS-125 Basic study of magnetic particle imaging utilizing sonic-wave emission by magnetically-stimulated particles (SEMP)
°M. Tano, T. Nakagawa, S. Seino, T. A. Yamamoto, T. Ueda*, Ma. Abe**
(Osaka Univ., *PhosMega Co. Ltd., **Tokyo Institute of Technology)

2pPS-126 Characterization of magnetic markers for bio-sensing application
°Y. Higuchi, S. Uchida, A. K. Bhuiya, T. Yoshida, K. Enpuku (Department of Electrical Engineering, Kyushu Univ.)

2pPS-127 Study of wireless position sensing system for diagnosis of a stent graft's shift
°T. Kuboki, S. Hashi, K. Ishiyama, S. Yabukami*, H. Kanetaka** (Research Institute of Electrical Communication, Tohoku Univ., *Faculty of Engineering, Tohoku Gakuin Univ., **Department of Biomedical Engineering, Tohoku Univ.)

2pPS-128 The effects of pulsed magnetic field stimulus on acupoint HT2 after isometric contractions of biceps brachii muscle: EMG analysis
J. Seo, Jaeh. Kim, D.-G. Hwang, Y.-Y. Cha*, °H. S. Lee (Department of Oriental Biomedical Engineering, Sangji Univ., *Department of Oriental Rehabilitation Medicine, Sangji Univ.)

2pPS-129 Magnetically-levitated mechanism using magnet arrays for a magnetic wireless blood pump
°S. H. Kim, J. W. Shin, S. Hashi, K. Ishiyama (Research Institute of Electrical Communication, Tohoku Univ.)

2pPS-130 Measurement of Magnetic Interference Induced by Measurement and Gradient Field Coils for Low-Field MRI Systems
°D. Oyama, J. Hatta, M. Miyamoto, Y. Adachi, M. Higuchi, J. Kawai, G. Uehara (Kanazawa Institute of Technology)

2pPS-131 Rejection of magnetic noise from wire using wavelet transformation and independent component analysis for magnetocardiogram
°Ko. Kobayashi, M. Yoshizawa, Y. Uchikawa* (Faculty of Engineering, Iwate Univ., *School of Science and Engineering, Tokyo Denki Univ.)

2pPS-132 A MEG measurement using pico-tesla resolution amorphous wire magneto-impedance sensor with Simultaneously recorded EEG
°S. Tajima, K. Oh, T. Uchiyama, K. Mohri*, Mu. Yamada** (Graduate School of Engineering, Nagoya Univ., *Nagoya Industrial Science Research Institute, **Faculty of Science and Technology, Meijo Univ.)

2pPS-133 Application of ac magnetic field for detecting DNA gamma-irradiation effect
°H. Song, D.-G. Park（Korea Atomic Energy Research Institute）

2pPS-134 Peculiarities of magnetic properties of complex from nanodiamonds and antitumor drug doxorubicin
V. E. Orel, A. D. Shevchenko*, G. P. Bogatyreva**, O. V. Leshchenko**, °A. Y. Rykhalskiy（National Cancer Institute, MH Ukraine, *G.V. Kurdyumov Institute for Metal Physic, NAS Ukraine, **V.Bakul Institute for Superhard Materials, NAS Ukraine）

2pPS-135 Influence of applied magnetic field angle on magnetic cluster state of stacked perpendicular recording media
°S. Sato, Y. Yamaguchi, T. Komine, R. Sugita（Ibaraki Univ.）

2pPS-136 Magnetization reversal process in ECC media with high coercivity
°A. Oyama, T. Komine, R. Sugita（Ibaraki Univ.）

2pPS-137 Efficient Approach to Measure Crystallization Temperature by Infrared Reflectivity
°W. Wang, S. Saito, H. Yakabe*, Mi. Takahashi**（Department of Electronics Engineering, Graduate School of Engineering, Tohoku Univ., *Hitachi Metals, Ltd, **New Industry Creation Hatchery Center, Tohoku Univ.）

2pPS-138 The（B, Ag）effect on residual stress and microstructure of $L1_0$ FePt thin films
°J. L. Tsai, J. C. Huang, Y. C. Lin, W. C. Tsai, S. C. Wu
（Department of Materials Science and Engineering, National Chung Hsing Univ.）

2pPS-139 Local structural changes in disorder-order transformation of FePt nanoparticles synthesized by polyol process
°S. Fujieda, K. Shinoda, Shig. Suzuki, B. Jeyadevan*（Institute of Multidisciplinary Research for Advanced Materials, Tohoku Univ., *Faculty of Engineering, The Univ. of Shiga Prefecture）

2pPS-140 Quantification of inter granular exchange coupling for stacked media by analyzing energy state of magnetic domain structure °K. K. Tham, D. Hasegawa*, N. Itagaki, S. Hinata, S. Ishibashi, S. Saito, Mi. Takahashi**
（Department of Electronic Enigeering, Graduate School of Engineering, Tohoku Univ., *Waseda Institute for Advanced Study, Waseda Univ., **New Industry Creation Hatchery Center, Tohoku Univ.）

2pPS-141 High-Resolution Magnetic Force Microscope Tip Coated with Co Film by Ultra-High Vacuum Evaporation
°T. Hagami, M. Ohtake, M. Futamoto（Chuo Univ.）

2pPS-142 Magnetic field direction dependence of magnetization state in stacked media
°Y. Yamaguchi, T. Komine, R. Sugita（Ibaraki Univ.）

2pPS-143 Media design analysis for 4 Tbpsi TAMR °D. Nunome, T. Horie, T. Kobayashi, Y. Fujiwara（Mie Univ.）

2pPS-144 Microwave assisted magnetic recording simulation on three layered exchange coupled composite medium
°Y. Furomoto, Y. Otsuka, H. Otsuki, Te. Tanaka, Y. Kanai*, K. Matsuyama
（Kyushu Univ., *Niigata Institute of Technology）

2pPS-145 Fitting Major and Minor Hysteresis Loops Using Micromagnetic Simulations
°R. Terashima, S. J. Greaves, H. Aoi, H. Muraoka（RIEC, Tohoku Univ.）

2pPS-146 Condensation characteristics of the magnetic particles for magnetic separation by magnetic chromatography system
°Y. Kozai, S. B. Kim, J. Oshitani, S. Noguchi*（Graduate School of Natural Science and Technology, Okayama Univ., *Graduate School of Information Science and Technology, Hokkaido Univ.）

2pPS-147 Rashba spin orbital coupling with geometric effect in two-dimensional spin system
°Kuo-Chin Chen, C.-R. Chang（National Taiwan Univ.）

Oct. 3/RoomA

Magnetic Recording Media I **9 : 00 〜10 : 30** Chair: S. Nakagawa（Tokyo Inst. Tech. Univ.）

3aA-1 Micromagnetic Studies of Density Limit in Polycrystalline Recording Media（Invited）
K. Zhang, °Dan Wei（Tsinghua Univ.）

3aA-2 Stacking sequence coherency in hcp/fcc transition metal alloys — Magnetocrystalline anisotropy for hcp Co based alloys and fcc non-ferromagnetic materials for designed pseudo-hcp structure（Invited）
°S. Saito, Mi. Takahashi（Tohoku Univ.）

3aA-3 Perpendicular magnetic anisotropic FePt graded films（Invited）
F. T. Yuan, Y. H. Lin*, °J.-H. Hsu, P. C. Kuo*（Department of Physics & Graduate Institute of Applied Physics, National Taiwan Univ., *Graduate Institute of Materials Science and Engineering, National Taiwan Univ.）

Magnetic Recording Media II **10 : 45 〜 11 : 30** Chair: J. -H. Hsu（National Taiwan Univ.）

3aA-4 $L1_0$ ordered FePt based double-layered perpendicular recording media for heat assisted magnetic recording
°B. S. D. Ch. S. Varaprasad*, M. Chen*,**, W. B. Cui*, Y. K. Takahashi*, K. Hono*,**
（*NIMS, **Graduate School of Pure and Applied Sciences, Univ. of Tsukuba）

3aA-5 Addition of Ag and Au to reduce ordering temperature of very thin FePt films on MgO underlayer
°Te. Kawahara, Mak. Tanaka, K. Murata, Shig. Nakagawa（Tokyo Institute of Technology）

3aA-6 Investigation of Thermal Stability of Perpendicular Ba-Ferrite Particulate Media
°Y. Kurihashi, O. Shimizu, Y. Murata, M. Asai, H. Noguchi
（Recording Media Research Laboratories, FUJIFILM Corporation）

Magnetic Recording Media III **13 : 30 〜 14 : 30** Chair: M. Futamoto（Chuo Univ.）

3pA-1 Effect of Pt underlayer on $L1_1$ CoPt film sputtered on glass
°C.-F. Huang, S.-H. Huang, A.-C. Sun, J.-H. Hsu*, F. T. Yuan*, H. C. Lu**, S. F. Wang**, S. N. Hsiao***, H. Y. Lee***, J. K. Mei****（Department of Chemical Engineering and Materials Science, Yuan-Ze Univ., *Department of Physics, National Taiwan Univ., **Department of Materials and Mineral Resources Engineering, National Taipei Univ. of Technology, ***National Synchrotron Radiation Research Center（NSRRC）, ****Department and Institute of Electrical Engineering, Minghsin Univ. of Science and Technology）

3pA-2 Magnetization reversal experiments on Co/Pt multilayer dot with a pulse field perpendicular to the magnetization
°N. Kikuchi*, Y. Suyama*, S. Aizawa*, S. Okamoto*, O. Kitakami*, T. Shimatsu**,***
（*IMRAM Tohoku Univ., **CIR Tohoku Univ., ***RIEC Tohoku Univ.）

3pA-3 Analysis of magnetic switching of 2 to 4 layered exchange coupled composite structures
°N. Honda（Tohoku Institute of Technology）

3pA-4 Microwave-power dependence of switching field required for MAMR in CoCrPt-SiO_2 perpendicular medium
°N. Ishida*, Y. Soeno**, K. Sekiguchi*,***, Y. Nozaki*,**** （*Department of Physics, Keio Univ., **SQ Research Center, TDK Corporation, ***PRESTO, JST, ****CREAT, JST）

Oct. 3/RoomB

Multiferroic, Conduction Phenomena **9 : 00 〜 10 : 15** Chair: H. Kawanaka（AIST）

3aB-1 Temperature evolution of spin waves in multiferroic hexagonal $YMnO_3$ and $LuMnO_3$（Invited）
°J.-G. Park*,**,***,**** （*FPRD Department of Physics & Astronomy, Seoul National Univ., **IBS Research Center for Functional Interfaces, Seoul National Univ., ***Center for Strongly Correlated Materials Research, Seoul National Univ., ****Center for Korean J-PARC Users, Seoul National Univ.）

3aB-2 Polar Charge Ordering and Multiferroic Property in RFe_2O_4（Invited）
°N. Ikeda, T. Nagata, Y. Fukada, T. Kambe, J. Kano, M. Fukunaga（Okayama Univ.）

3aB-3 The implications of finite size effect on magnetic behavior of rare earth manganite and bismuth ferrite compounds
°V. Shelke, H. Reshi, S. Pillai, D. Tripathi, Ras. Yadav, Ram. Yadav（Department of Physics, Barkatullah Univ.）

Magnetic Phase Transition, Magnetic Ordering **10 : 30 〜 11 : 45** Chair: J.-G. Park（Seoul National Univ.）

3aB-4 Resonant soft x-ray scattering studies of multiferroic $YMnO_3$ thin films（Invited）
°H. Wadati*, J. Okamoto**, M. Garganourakis***, V. Scagnoli***, U. Staub***, Y. Yamasaki**, H. Nakao**, Y. Murakami**, M. Mochizuki*, M. Nakamura****, M. Kawasaki*,**** Y. Tokura*,****
（*Department of Applied Physics and Quantum-Phase Electronics Center（QPEC）, Univ. of Tokyo, **Condensed Matter Research Center and Photon Factory, Institute of Materials Structure Science, High Energy Accelerator Research Organization, ***Swiss Light Source, Paul Scherrer Institut, ****Cross-Correlated Materials Research Group, RIKEN Advanced Science Institute）

3aB-5 Spin Dependent Transport Phenomena in Fe Doped Manganites °W. Shah（King Faisal Univ.）

3aB-6 Asymmetric kinetics in forward and reverse evolutions of thermally induced phase transition in $La(Fe_{0.88}Si_{0.12})_{13}$ magnetocaloric compound °A. Fujita, M. Kano（Dept. Mater. Sci., Tohoku Univ.）

3aB-7 ^{119}Sn Mossbauer spectroscopy of 3d-, 4f- and U-intermetallic compounds
°V. Krylov（Institute of Nuclear Physics, Moscow State Univ.）

Computation Physics **13 : 30 〜 14 : 30** Chair: G. Tatara (Tokyo Metro. Univ.)

3pB-1 Collective magnetism in the Hubbard model within the dynamical mean-field approximation (Invited)
°U. Yu (GIST-college, Gwangju Institute of Science and Technology)

3pB-2 Free-energy measurement in ferromagnetic films with the spin reorientation transition
°Y. Norizuki, Mu. Sasaki (Department of Applied Physics, Tohoku Univ.)

Oct. 3/RoomC

Bio and Environmental Magnetics III **9 : 00 〜 10 : 45** Chair: Y. Takemura (Yokohama National Univ.)

3aC-1 Biomolecule circuitry devices for magnetic Lab-on-a-chip platform (Invited)
B. Lim*,**, X. Hu*,**, V. Reddy*,**, Y. J. Yu**, °C. -G. Kim*,**
(*Dept. of Materials Science and Engineering, Chungnam Nat'l Univ., **nBEST, Chungnam Nat'l Univ.)

3aC-2 Synthesis of magnetite nanoparticles with organic amines and evaluation of their properties for biomedical application (Invited)
°T. Nakanishi, H. Zhang, T. Osaka (Waseda Univ.)

3aC-3 Preparation of Antibody modified PEG-Au/iron-oxide composite nanoparticles as MR imaging agent
°S. Seino, M. Yoshikawa*, H. Kojima*, Y. Tomono*, Y. Mukai*, Shin. Nakagawa*,
T. Nakagawa, T. A. Yamamoto (Graduate School of Engineering, Osaka Univ.,
*Graduate School of Pharmaceutical Science, Osaka Univ.)

3aC-4 MNP Imaging Using Harmonic Signal for Sentinel Lymph Node Detection
°N. B. Othman, T. Tsubaki, T. Yoshida, K. Enpuku, A. Kandori* (Department of Electrical and Electronic Engineering, Kyushu Univ., *Central Research Laboratory, Hitachi Ltd.)

3aC-5 Development of highly precise gradiometer using amorphous wire magneto-impedance element for cell tissue evaluation
°T. Uchiyama, S. Nakayama*, S. Atsuta** (Graduate school of Engineering, Nagoya Univ.,
*Graduate School of Medicine, Nagoya Univ., **Fuji denolo corporation)

High Magnetic Fields Application I **11 : 00 〜 12 : 00** Chair: Q. Wang (Northwestern Univ.)

3aC-6 Materials processing and analyses using magnetic fields (Invited) °Ts. Kimura (Kyoto Univ.)

3aC-7 Orientation of bismuth nanospheres under high magnetic field
°N. Kitamura, K. Fukumi, Ko. Takahashi*, I. Mogi*, S. Awaji*, Kaz. Watanabe*
(National Institute of Advanced Industrial Science and Technology,
*Institute for Materials Research, Tohoku Univ.)

3aC-8 Development of the system for high throughput high quality protein crystal growth using high magnetic forces
°N. Hirota, H. Wada, M. Kiyohara*, M. Tanokura**, A. Kita***, E. Suzuki****, H. Okada, T. Ode*, A. Nakamura**,
J. Ohtsuka**, N. Numoto***, T. Kashiwagi**** (NIMS, *Kiyohara Optics Inc., **The Univ. of Tokyo,
***Kyoto Univ., ****Ajinomoto Co., Inc.)

High Magnetic Fields Application II **13 : 30 〜 14 : 30** Chair: N. Hirota (NIMS)

3pC-1 Effects of in situ high magnetic field application on the growth of molecular beam vapor deposited Ni-Fe nanocrystalline films (Invited) °Q. Wang, Guo. Li, Yo. Cao, J. Du, K. Wang, J. He (Northeastern Univ.)

3pC-2 Fractionation of Mixed Particles by Magneto-Archimedes Method (Invited) °S. Nishijima (Osaka Univ.)

Oct. 3/RoomD

Magnetoresistance Effects I **9 : 00 〜 10 : 15** Chair: H. Sukegawa (NIMS)

3aD-1 3*d*-Metal Nitrides for Spintronics (Invited) °M. Tsunoda (Tohoku Univ.)

3aD-2 Fe_4N based magnetic tunnel junctions with Cu_3N barrier
M. Tsunoda, °R. Chiba (Department of Electronic Engineering, Tohoku Univ.)

3aD-3 Spin-dependent transport properties in magnetic tunnel junctions with Fe_4N electrodes: A first-principles study
E. Nagata*, °M. Y. Zhou*, Y. Miura*,**, Ka. Abe*,**, M. Shirai*,** (*RIEC, Tohoku Univ., **CSIS, Tohoku Univ.)

3aD-4 Magnetoresistance Effect of $L1_0$-$Mn_{62}Ga_{38}$/Fe/MgO/CoFe Perpendicularly Magnetized layer Based Tunnel Junctions
°T. Kubota, Q. L. Ma, S. Mizukami, X. Zhang, H. Naganuma*, M. Oogane*, Y. Ando*, T. Miyazaki
(WPI-AIMR, Tohoku Univ., *Graduate School of Engineering, Tohoku Univ.)

Magnetoresistance Effects II **10 : 30 〜 11 : 45** Chair: S. Mitani（NIMS）

3aD-5 Development of Perpendicular-MTJs for Gigabit-Scale Spin-RAM Application（Invited）
°K. Yakushiji, H. Kubota, M. Konoto, A. Fukushima, S. Yuasa, Ko. Ando（AIST）

3aD-6 $Co_{50}Fe_{50}$ seed effect for $Mg_{1-x}Zn_xO$-based magnetic tunnel junctions
°Y. Kurosaki, A. Nishide, H. Yamamoto, D. Sato, Ma. Yamada, J. Hayakawa（Central Research Laboratory, Hitachi Ltd.）

3aD-7 $Co_{0.9}Fe_{0.1}$/Pt nano-contacts magnetoresistance in alumina-based Nano-Oxide Layer
°M. Al-mahdawi, Y. Shiokawa, M. Sahashi（Tohoku Univ.）

3aD-8 Oxygen impurity influence on resistivity, ΔRA, and bulk spin scattering asymmetry in FeCo CPP-GMR
°Y. Shiokawa, J. Jung, K. Kishi, Ho. Watanabe, Z. Zheng, M. Sahashi（Tohoku Univ.）

Magnetoresistance Effects III **13 : 30 〜 14 : 30** Chair: M. Tsunoda（Tohoku Univ.）

3pD-1 Large Giant Magnetoresistance Effect Using Half Metallic Heusler Alloys（Invited）
°M. Oogane, J. Sato, I. Kthiar, H. Naganuma, Y. Ando（Tohoku Univ.）

3pD-2 Microstructure and magneto-transport properties of CPP-GMR pseudo spin-valves with polycrystalline Heusler alloy $Co_2Mn(Ge_{0.25}Ga_{0.75})$
°Y. Du*, **, T. M. Nakatani**, N. Hase*, **, Y. K. Takahashi**, T. Furubayashi**, K. Hono*, **
（*Univ. of Tsukuba, **NIMS）

3pD-3 Current-perpendicular-to-plane giant magnetoresistance using $Co_2FeGa_{1-x}Ge_x$ Heusler alloys
°H. S. Goripati*, **, T. Furubayashi**, Y. K. Takahashi**, K. Hono*, **（*Univ. of Tsukuba, **NIMS）

Oct. 3/RoomE

Thin Films I **9 : 00 〜 10 : 15** Chair: S. Yoshimura（Akita Univ.）

3aE-1 Fabrication of $L1_0$-ordered FeNi thin films and their magnetic anisotropy（Invited）
°M. Mizuguchi, T. Kojima, M. Ogiwara, K. Takanashi（Tohoku Univ.）

3aE-2 Magnetic anisotropy and structural properties for $L1_0$-FeNi films and Fe/Ni multilayers
°T. Kojima, M. Ogiwara, M. Mizuguchi, M. Kotsugi*, T. Koganezawa*, T. Ohtsuki*, K. Takanashi
（Institute for Materials Research, Tohoku Univ., *JASRI/SPring-8）

3aE-3 Spin wave-assisted magnetization switching °T. Seki, K. Utsumiya, Y. Nozaki*, H. Imamura**, K. Takanashi
（IMR, Tohoku Univ., *Department of Physics, Keio Univ., **AIST）

3aE-4 Graphene-ribbon model for nano-meter size magnetic recording bit °N. Ota（Univ. of Tsukuba）

Thin Films II **10 : 30 〜 12 : 00** Chair: Y. K. Takahashi（NIMS）

3aE-5 Fabrication of epitaxial thin films of magnetic spinel materials by molecular beam epitaxy method（Invited）
°T. Nagahama, Y. Matsuda, Ka. Tate, S. Hiratani, Y. Watanabe, To. Shimada（Hokkaido Univ.）

3aE-6 （100）orientation of Fe/FeO layer for the underlayer of spinnel ferrite films
°T. Kashima, K. Mamiya, Ko. Matsushita, Shig. Nakagawa（Tokyo Institute of Technology）

3aE-7 The magnetic properties of mixed-spinel $Zn_{1-x}Ni_xFe_2O_4$ ($x = 0 - 1$) and their exchange interaction with $BiFeO_3$
Y.-Y. Li, W.-J. Lin, C.-C. Chan, °X. Qi（National Cheng Kung Univ.）

3aE-8 Investigation of ZnO thin film grown on Co buffer toward ZnO tunnel barrier based magnetic tunnel junctions
°M. Belmoubarik, To. Nozaki, M. Sahashi（Tohoku Univ.）

3aE-9 Giant negative magnetoresistance in magnetic superconducting heterostructure
°J. G. Lin, A. Mani*, T. Geetha Kumary*（Center for Condensed Matter Sciences, National Taiwan Univ.,
*Condensed Materials Physics Division, Materials Science Group, Indira Gandhi Centre for Atomic Research）

Thin Films III **13 : 30 〜 14 : 30** Chair: M. Mizuguchi（Tohoku Univ.）

3pE-1 Giant negative uniaxial magnetocrystalline anisotropy of $Co_{80}Ir_{20}$ sputtered film with perfect hcp and modulated atomic layers °N. Nozawa, Takuy. Kimura, K. Shibuya*, K. Hoshino*, S. Hinata, S. Saito, Mi. Takahashi
（Tohoku Univ., *Foundation of Promotion of Material Science and Technology of Japan）

3pE-2 Effects of Boron content and the film thickness to the anisotropy field of Ru/FeCoB film
°R. Yohena, Shig. Nakagawa（Tokyo Institute of Technology）

3pE-3 Preparation of FePd/MgO/FePd Tri-layer Films on $SrTiO_3$ Single-Crystal Substrates with Different Orientations
°S. Ouchi, A. Itabashi, M. Ohtake, F. Kirino*, M. Futamoto（Chuo Univ., *Tokyo Univ. of the Arts）

3pE-4 Surface and interface roughness analysis of ultrathin Co/Pd multilayer for magnetic tunnel junctions
°K. Yang*, Zha. Li**, A. Lukaszew*,** （*Department of Applied Science, College of William and Mary, **Department of Physics, College of William and Mary）

Oct. 4/RoomA

Patterned Media **9 : 00 〜10 : 15** Chair: S. J. Greaves（Tohoku Univ.）

4aA-1 FePt Bit Patterned Media Fabricated by a Directed Self Assembled Mask（Invited）
°A. Kikitsu, T. Maeda, H. Hieda, R. Yamamoto, N. Kihara, Y. Kamata（Toshiba Corp., R&D Center）

4aA-2 Directed Self-Assembly Lithography for 5 Tbit/$inch^2$ Bit-patterned Media
°R. Yamamoto, T. Maeda, H. Hieda, N. Kihara, Y. Kamata, A. Kikitsu（Corporate R&D Center, Toshiba Corporation）

4aA-3 Control of magnetic properties of MnGa films by Kr^+ ion irradiation
°D. Oshima, Tak. Kato, S. Iwata, S. Tsunashima*（Nagoya Univ., *Nagoya Industrial Science Research Institute）

4aA-4 TbFeCo/Rh/TbFeCo planer patterned media with ferromagnetic transition from antiferromagnetic media by Kr ion irradiation
°H. Ono, H. Awano, Yu. Suzuki, S. Yasuda, T. Kato*, S. Iwata*（Toyota Technological Institute, *Nagoya Univ.）

Magnetic Recording Heads **10 : 30 〜11 : 15** Chair: H. Iwasaki（Toshiba）

4aA-5 Planar head field responses to high-frequency write current on shield structures
°H. Tamura, Y. Kanai, Kazue. Yoshida*, K. Yamakawa**, S. J. Greaves***, H. Muraoka***（Niigata Institute of Technology, *Kogakuin Univ., **Akita Industrial Technology Center, ***Tohoku Univ.）

4aA-6 Micromagnetic analysis of magnetic noise in DFL read head
°A. Tanabe, Y. Kanai, Kazue. Yoshida*, S. J. Greaves**, H. Muraoka**（Niigata Institute of Technology, *Kogakuin Univ., **Tohoku Univ.）

4aA-7 Microstructure and magnetoresistive properties in polycrystalline Co_2Fe-based Heusler alloy CPP pseudo spin valves
T. M. Nakatani*, Y. Du*,**, Y. K. Takahashi*, T. Furubayashi*, °K. Hono*,**（*NIMS, **Univ. of Tsukuba）

R/W Characteristics **15 : 00 〜16 : 30** Chair: K. Yoshida（Kogakuin Univ.）

4pA-1 Required barrier energy for thermal stability in bit patterned media（Invited） °H. Muraoka（Tohoku Univ.）

4pA-2 Nanobit Magnetic Recording Technology toward 5 Tb/in^2 and beyond（Invited）
°H. Miyamoto, J. Ushiyama, F. Akagi, Y. Shiroishi（Hitachi, Ltd.）

4pA-3 High frequency recording with shielded planar heads
°S. J. Greaves, H. Muraoka, Y. Kanai*（Research Institute of Electrical Communication, *Niigata Institute of Technology）

4pA-4 Study of simultaneous readback of two shingled tracks °Y. Maruko, K. Miura*, H. Muraoka
（Research Institute of Electrical Communication, Tohoku Univ., *Faculty of Engineering, Iwate Univ.）

Oct. 4/RoomB

Magneto-Optics and Microscopy **9 : 00 〜11 : 15** Chair: T. Ishibashi（Nagaoka Univ. Tech.）

4aB-1 X-ray lensless holographic imaging of magnetic nanostructures: developments in soft and hard X-ray regions（Invited）
°M. Suzuki*,*****, T. Nakamura*,*****, Y. Kondo**, S. Isogami***, K. Nomura****,*****, N. Awaji****,*****, M. Oura*****, Sh. Takahashi******, S. Ishio******, E. Matsubara*******,*****, T. Ishikawa*****, M. Tsunoda***,***** （*JASRI/SPring-8, **Akita Industrial Technology Center, ***Department of Electronic Engineering, Tohoku Univ., ****Device Integration Technologies Laboratory, Fujitsu Ltd., *****RIKEN SPring-8 Center, ******Faculy of Engineering and Resource Science, Akita Univ., *******Department of Materials Science and Engineering, Kyoto Univ.）

4aB-2 Magneto-optic three-dimensional display composed of amorphous films with perpendicular magnetization for real holographic electronic display（Invited） °Mi. Inoue, Y. Eto, K. Nakamura, K. Matsugami, H. Takagi
（Toyohashi Univ. of Technology）

4aB-3 Magneto-optical effects of gold/garnet composite films
°H. Uchida, Y. Nakai, Y. Mizutani*, Mi. Inoue* (Tohoku Institute of Technology, *Toyohashi Univ. of Technology)

4aB-4 Development of alternating magnetic force microscopy for detecting vector magnetic field near sample surface with high spatial resolution (Invited) °Hit. Saito (Akita Univ.)

4aB-5 Study of MFM for RF Field Detection with a CPW Producing a Beat Signal
°Y. Endo, M. Fukushima, Ka. Arai, K. Yanagi, Y. Shimada, M. Yamaguchi (Tohoku Univ.)

4aB-6 RF Near Field Microscopy of a Coplanar Waveguide with AM-MFM
°Y. Endo, M. Fukushima, Ka. Arai, Y. Shimada, M. Yamaguchi (Tohoku Univ.)

Sensor and Application **15 : 00 〜16 : 30** Chair: I. Sasada (Kyushu Univ.)

4pB-1 Development of magnetic phase detection sensor for steam generator tube (Invited)
°D. Son, K.-S. Ryu*, D.-G. Park** (Hannam Univ., *Korea Research Institute of Standards and Science, **Korea Atomic Energy Research Institute)

4pB-2 Highly sensitive magnetic field sensor for underwater applications (Invited)
°Kw.-H. Shin, Y. Kim, Y.-H. Kim*, S.-H. Lim**, C.-S. Yang***
(Kyungsung Univ., *Pukyong National Univ., **Korea Univ., ***R & D Institute, Agency of Defense Development)

4pB-3 Development of soft magnetic microwires with Giant magnetoimpedance effect for magnetic field detection applications
°A. Zhukov*, **, M. Ipatov*, V. Zhukova*
(*Dept. Phys. Mater., UPV/EHU, **IKERBASQUE, Basque Foundation for Science)

4pB-4 Position sensing system using wireless ribbon type marker
°S. Yabukami, O. Mori, R. Sasabayashi, T. Ozawa, O. Ishii*, H. Kanetaka**, S. Hashi**
(Tohoku-Gakuin Univ., *Yamagata Univ., **Tohoku Univ.)

Oct. 4/RoomC

Permanent Magnets I **9 : 30 〜10 : 30** Chair: H. Fukunaga (Nagasaki Univ.)

4aC-1 Solved and unsolved subjects of research in the Nd-Fe-B permanent magnets (Invited)
°M. Sagawa (INTERMETALLICS CO., LTD.)

4aC-2 High-performance Nd-Fe-B magnetic materials for new energy technologies application (Invited)
°A. Yan (Ningbo Institute of Material Technology & Engineering, Chinese Academy of Sciences)

Permanent Magnets II **10 : 45 〜12 : 00** Chair: H. Kato (Yamagata Univ.)

4aC-3 Higher coercivity and larger $(BH)_{max}$ achieved in Nd-Fe-B-based single-layer and nanocomposite thin films
°W. B. Cui, Y. K. Takahashi, K. Hono (NIMS)

4aC-4 Magnetic properties and exchange-coupling interaction of bonded lean-neo/Sr-ferrite hybrid magnets
°X. C. Zhong, Yu. Liu, Y. L. Huang, Z. W. Liu, D. C. Zeng (South China Univ. of Technology)

4aC-5 Structures and magnetic properties of Sm_5Fe_{17} melt-spun ribbon °Te. Saito (Chiba Institute of Technology)

4aC-6 Magnetic properties of Fe-doped cobalt ferrite epitaxial films grown by a reactive magnetron sputtering
°T. Niizeki, Y. Utsumi, M. Iura, H. Yanagihara, E. Kita (Univ. of Tsukuba)

4aC-7 Phase evolution in hexaferrite particles synthesized via a facile approach
D. Y. Chen, C. M. Li, °D. C. Zeng, Z. W. Liu, H.Y. Yu, X. C. Zhong (South China Univ. of Technology)

Permanent Magnets III **15 : 00 〜16 : 30** Chair: A. Yan (Chinese Acd. Sci.)

4pC-1 Effect of interface state on the coercivity in Nd-Fe-B magnets (Invited) °Hir. Kato, D. Ogawa, K. Koike (Yamagata Univ.)

4pC-2 The role of domain structure in the coercivity mechanism of permanent magnets (Invited)
°Ku. Kobayashi (Shizuoka Institute of Science and Technology)

4pC-3 The Effects of Microscopic Structure on the Thermal Stability of Sintered Nd-Fe-B Magnets
°Z.-B. Hao*, **, D.-X. Bao*, X.-L. Zhang*, M.-H. Wu*, ** (*Hengdian Group DMEGC Magnetics Co., Ltd, **Ganzhou DMEGC Rare Earth Magnetics Co., Ltd,)

4pC-4 Microstructural study for degraded Nd-Fe-B magnet annealed at 400°C
°T. Akiya, Y. Une*, M. Sagawa*, Tai. Sasaki**, T. Ohkubo, Hir. Kato**, K. Hono
(NIMS, *Intermetallics Co., Ltd., **Yamagata Univ.)

Permanent Magnets IV **16 : 45 〜 17 : 45** Chair: K. Kobayashi（Shizuoka Inst. SciTech. Univ.）

4pC-5 Grain alignment and magnetic properties of hot deformed nanocrystalline NdFeB magnets prepared under various strain rates
Y. L. Huang, °Z. W. Liu, D. C. Zeng, X. C. Zhong, H. Y. Yu（South China Univ. of Technology）

4pC-6 Enhancement of coercivity in rapidly quenched Nd-Fe-B powders by the Nd-Cu diffusion process
°H. Sepehri-Amin, D. Prabhu, M. Hayashi, T. Ohkubo, K. Hioki*, A. Hattori*, K. Hono（National Institute for Materials Science, *Daido Corporate Research & Development Center, Daido Steel Co., Ltd.）

4pC-7 Magnetic and Crystalline Microstructures of High-Textured Nd-Fe-B Magnets
°Y.-K. Fang, W. Li, X. Yin*, M. Zhu, Z.-H. Guo, S.-H. Liou*, B.-S. Han**
（Division of Functional Materials Research, Central Iron and Steel Research Institute Group, *Department of Physics and Astronomy and Nebraska Center for Materials and Nanoscience, UNL, **Institute of Physics and the Center for Condensed Matter Physics, CAS）

4pC-8 Microstructure and coercivity relationships of hot-deformed Nd-Fe-B magnets
°J. Liu*, **, H. Sepehri-Amin*, Ta. Ohkubo*, A. Hattori***, K. Hioki***, K. Hono*, **
（*National Institute for Materials Science, **Univ. of Tsukuba, ***Daido Steel Co., Ltd.）

Oct. 4/RoomD

Spin Devices I **9 : 00 〜 10 : 30** Chair: T. Nozaki（AIST）

4aD-1 Sub 200ps writing in precessional STT RAM（Invited）
M. Marins de Castro, B. Lacoste, R. C. Sousa, T. Devolder*, L. D. Buda-Prejbeanu, A.Medjoubi, G.Prenat, S. Auffret, U. Ebels, C. Ducruet**, I. L. Prejbeanu**, L. Vila***, B. Rodmacq, °B. Dieny（SPINTEC, UMR CEA/CNRS/UJF-Grenoble 1/Grenoble-INP, INAC, *Institut d'Electronique Fondamentale, CNRS UMR 8622, Bât. 220, Univ.' Paris-Sud, **Crocus Technology, ***SP2M/NM, CEA/Grenoble, INAC ）

4aD-2 Statistical variance mapping of spin-torque switching probability in in-plane magnetized MgO-MTJ
°A. Fukushima, K. Yakushiji, H. Kubota, S. Yuasa, Ko. Ando（AIST）

4aD-3 Theoretical study on spin torque switching with thermal fluctuation °T. Taniguchi, H. Imamura（AIST）

4aD-4 Magnetization state of spin torque oscillation condition in CPP-GMR device
°K. Miyake, D. Monma, M. Sahashi（Tohoku Univ.）

4aD-5 Theoretical study of spin-torque oscillator coupled with a nano-magnet by dipole-dipole interaction
°H. Arai, T. Taniguchi, H. Imamura（AIST）

Spin Devices II **10 : 45 〜 11 : 45** Chair: Y. Nozaki（Keio Univ.）

4aD-6 Theoretical study of spin transfer torque induced vortex-antivortex pair rotation in a magnetic thin film with multi-contacts °H. Imamura, H. Tsukahara, H. Arai, K. Miyake*, M. Sahashi*（AIST, *Tohoku Univ.）

4aD-7 Analysis on confinement conditions of a magnetic wall in a nano-contact
°Mu. Sasaki, Su. Tanaka, Y. Norizuki, Ka. Matsushita*, Ju. Sato**, H. Imamura***
（Tohoku Univ., *Osaka Univ., **Ochanomizu Univ., ***Nanosystem Research Institute（NRI）, AIST）

4aD-8 Spin-wave Reflection and Transmission in a frustrated ferromagnetic junction
°Yut. Sasaki, H. T. Ueda, G. Tatara（Tokyo Metropolitan Univ.）

4aD-9 Study of Low Current Driven Spin Logic in PMA TbFeCo Wire
°T. Kanehira, M. Kawamoto, T. Honda, H. Awano（Toyota Technological Institute）

Semiconductor Spinelectronics **15 : 30 〜 17 : 15** Chair: T. Sasaki（TDK）

4pD-1 Seebeck spin tunneling in silicon（Invited） °R. Jansen（AIST）

4pD-2 Recent Progress in III-V Based Ferromagnetic Semiconductors（Invited）
°Mas. Tanaka, L.D. Anh, D. Sasaki, P. N. Hai
（Department of Electrical Engineering and Information Systems, The Univ. of Tokyo）

4pD-3 Dynamical generation of spin currents（Invited） °Ka. Ando（Tohoku Unv.）

4pD-4 Interfacial Spectroscopic Characterization of Organic/Ferromagnet Hetero-junction of PTCDA-based Organic Spin Valves
°J.-Y. Hong*, Y. K.-H. Ou*, B.-Y. Wang*, K.-S. Li*, H.-W. Shiu**, Chia-Ha. Chen**, Y.-L. Chan**, D.-H. Wei**, F.-H. Chang**, H.-J. Lin**, W.-C. Chiang***, M.-T. Lin*,**** (*Department of Physics, National Taiwan Univ., **National Synchrotron Radiation Research Center, ***Department of Physics, Chinese Culture Univ., ****Institute of Atomic and Molecular Sciences, Academia Sinica)

Oct. 4/RoomE

Nanoparticles **9 : 00 〜10 : 30** Chair: S. Seino (Osaka Univ.)

4aE-1 Manipulation of Superparamagnetic Particles for Point of Care Medical Diagnostics (Invited)
°A. Sandhu (Toyohashi Univ. of Technology)

4aE-2 Synthesis and magnetic properties of elongated platelet γ-Fe_2O_3 particles for thermoablation using hysteresis-loss heating °A. Horiuchi, A. Seki, D. Isaka, M. Kishimoto, H. Yanagihara, E. Kita (Institute of Applied Physics, Univ. of Tsukuba)

4aE-3 Potential of Polyol/Alcohol-based Reduction Techniques for Magnetic Nanoparticle Synthesis (Invited)
°B. Jeyadevan (The Univ. of Shiga Prefecture)

4aE-4 Pressure and strain sensors based on transparent elastic films of gold nanoparticles
C.-W. Jiang*, I-Chi Ni***, S.-D. Tzeng***, °W. Kuo*,** (*Department of Physics, National Chung Hsing Univ., **Institute of Nanoscience, National Chung Hsing Univ., ***Department of Physics, National Dong Hwa Univ.)

Magnetization Dynamics **10 : 45 〜11 : 45** Chair: H. Munekata (Tokyo Inst. Tech.)

4aE-5 Ultrafast spin manipulation in ferrimagnetic GdFeCo by femtosecond pulsed laser (Invited)
°Ar. Tsukamoto, T. Sato, S. Toriumi, R. Shimizu, A. Itoh (Nihon Univ.)

4aE-6 Analysis of magnetic resonance in term of linearlized Landau-Lifshitz-Gilbert equation for nano-dots influeced by spin transfer torque (Invited) °C. Mitsumata, S. Tomita*, T. Seki, M. Mizuguchi (Tohoku Univ., *NAIST)

Semiconductor Photonics **15 : 00 〜16 : 00** Chair: A. Tsukamoto (Nihon Univ.)

4pE-1 Spin-photonics with semiconductor and metallic thin films (Invited) °H. Munekata (Tokyo Inst. Tech.)

4pE-2 Circularly Polarized Lasing in Spin-Controlled Vertical-Cavity Surface-Emitting Lasers (Invited)
°S. Koh, S. Iba, K. Ikeda, H. Kawaguchi (NAIST)

Exchange Bias **16 : 15 〜17 : 15** Chair: C. Mitsumata (NIMS)

4pE-3 New magnetic state in thin-film antiferromagnets and intrinsic exchange bias (Invited)
°I. V. Roshchin*,**, K. E. Badgley*, K. D. Belashchenko***, M. Zhernenkov****,*****, M. R. Fitzsimmons****, S. López-Moreno******, J. Méjia-López*******, A. Muñoz********, A. H. Romero*********,********** (*Department of Physics and Astronomy, Texas A&M Univ., **Materials Science and Engineering Program, Texas A&M Univ., ***Department of Physics, Univ. of Nebraska-Lincoln, ****Los Alamos Neutron Science Center, Los Alamos National Laboratory, *****Argonne National Laboratory, ******Facultad de Ciencias, Universidad Nacional Autónoma de México, *******Facultad de Física, Pontificia Universidad Católica, ********Departament de Física Fundamental II, Inst. de Materiales y Nanotecnología, Universidad de La Laguna, *********CINVESTAV-Queretaro, **********Max-Planck-Institute für Mikrostrukturphysik)

4pE-4 Effect of crystal orientation of Cr_2O_3 layer on magnetic properties of ferromagnetic/Cr_2O_3 interface
°To. Nozaki, T. Ashida, Yuj. Sato, M. Sahashi (Depertment of Electronic Engineering, Tohoku Univ.)

4pE-5 Magnetism and Structural characterization of Nano-Oxide Layer containing Cr_2O_3 and Fe_2O_3
°Na. Shimomura, K. Sawada, To. Nozaki, M. Doi*, M. Sahashi (Tohoku Univ., *Tohoku Gakuin Univ.)

Oct. 4/PS

Poster Session II **13 : 00 〜15 : 00** Chair: K. Nakamura（Tohoku Univ.）

4pPS-1 Field-driven Domain Wall Motion In Different width/thickness Permalloy Nanowires
°K.-C. Hu, C.-C. Chang, C.-H. Huang*, T.-C. Wu**, J.-C. Wu*, L. Horng*
（Department of Physics, National Changhua Univ. of Education, *Department of Physics and Taiwan SPIN Research Center, National Changhua Univ. of Education, **Department of Electronic Engineering, National Formosa Univ.）

4pPS-2 Role of electronic structure on solubility of magnetic Mn impurity in GaInAs semiconductor alloys
°Y. Kitaoka, M. Miyake, Ko. Nakamura, T. Akiyama, T. Ito（Mie Univ.）

4pPS-3 Half-metallicity of（001）surfaces of rocksalt and zinc-blende sodium nitride
B. Bialek, °J. I. Lee（Physics Department, Inha Univ.）

4pPS-4 Graphene nano-ribbon and the ripple effect °H.-H. Lee, Kuo-Chin Chen, C.-R. Chang（National Taiwan Univ.）

4pPS-5 Anomalous angular dependence of exchange bias in ferromagnetic/antiferromagnetic bilayers without field-cooling procedures °Y. Hu, G. Wu, Yan Liu, A. Du（Northeastern Univ.）

4pPS-6 Micromagnetic study of the effect of magnetic defects surroundings the antidots in permalloy antidot lattices with varying lattice constants °R. Mandal, D. Kumar, A. Barman（S. N. Bose National Centre for Basic Sciences）

4pPS-7 Magnetic and dielectric relaxations in lightly substituted $Y_{3-x}Ca_xFe_5O_{12}$（$0 \leqq x \leqq 0.1$）
N. Arai*, S. Enoshita*, S. Ishida*, °Yo. Kobayashi*, **, Ko. Abe*, J. Nakamura*, K. Asai*
（*The Univ. of Electro-Communications, **Tokyo Medical Univ.）

4pPS-8 Existence of ferromagnetic moment in superconducting state of iron pnictide $Ba_{0.7}La_{0.3}FFeAs$
°C.-H. Lee, Y.-L. Hsieh, C.-W. Wang, D. Hsu, C.-J. Wang, S. K. Karna, W.-H. Li, R. Shankar*, F. C. Chou*
（Department of Physics, National Central Univ., *Center for Condensed Matter Sciences, National Taiwan Univ.）

4pPS-9 Structural and magnetic properties of $Ba_{1-x}A_xTi_{0.9}Fe_{0.1}O_3$（A = La, Bi）
°Jaey. Kim, W. Yansen, Y. M. Kwon, W. Y. Yoon*, C. Liu, B. W. Lee
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4pPS-10 Effect of excess Bi on structure and ferroelectric properties of polycrystalline $BiFeO_3$ thin films
°J. Yan, M. Gomi, T. Hattori, T. Yokota（Department of Materials Science and Engineering, Nagoya Institute of Technology）

4pPS-11 Sputter-Epitaxy of Tetragonal-$BiFeO_3$ films on（001）$SrTiO_3$ substrates
°T. Hattori, J. Yan, T. Yokota, M. Gomi（Department of Materials Science and Engineering, Nagoya Institute of Technology）

4pPS-12 Itinerant-electron metamagnetism of magnetocaloric material and their borides
°M. Ohashi, Nobuy. Tanaka, I. Horiba, T. Ishii（Kanazawa Univ.）

4pPS-13 First principle study of hcp Co with stacking faults
°K. Iwai, T. Komine, S. Saito*, R. Sugita（Ibaraki Univ., *Tohoku Univ.）

4pPS-14 Effect of annealing on the structural and magnetic properties of nanocrystalline multiferroic $GdMnO_3$
°P. Negi, H. Kumar, H. M. Agrawal, R. C. Srivastava（Department of Physics, G. B. Pant Univ. of Ag. and Tech.）

4pPS-15 Magnetic and electronic transport properties of $Y_{1-x}Pr_xCoO_3$
°Y. Terakado*, Yo. Kobayashi*, **, K. Asai*（*Department of Engineering Science, The Univ. of Electro-Communications, **Department of Physics, Tokyo Medical Univ.）

4pPS-16 Structural, electronic and magnetic properties of bulk gadolinium from GGA + U calculations
°Chih-Ha. Chen*, **, G.-Y. Guo*, **（*Department of Physics and Center for Theoretical Science, National Taiwan Univ., **Graduate Institute of Applied Physics, National Chengchi Univ.）

4pPS-17 Magnetocaloric effects of $La_{0.67}Ba_{0.33}MnO_3$ system °H. Kawanaka, H. Bando, Y. Nishihara*（AIST, *Ibaraki Univ.）

4pPS-18 Strain Modulated Magnetic Coupling in C-type Antiferromagnetic $Nd_{0.35}Sr_{0.65}MnO_3$ films
°S. L. Cheng*, **, J. G. Lin*, T. H. Chuang**（*Center for Condensed Matter Sciences, National Taiwan Univ., **Department of Materials Science and Engineering, National Taiwan Univ.）

4pPS-19 Reduction in eddy current loss for a power coupler in an electrodeless discharged lamp
°T. Yanai, Y. Sakamoto, M. Nakano, H. Fukunaga（Graduate School of Engineering, Nagasaki Univ.）

4pPS-20 Electrodeposited Fe-Ga films prepared from citric acid based bath
°T. Yanai, T. Kawaguchi, M. Nakano, Ki. Suzuki*, H. Fukunaga（Graduate School of Engineering, Nagasaki Univ., *Department of Material Engineering, Monash Univ.）

4pPS-21 Effect of pH value on the structural and magnetic properties of NiZn ferrite nanoparticles by sol-gel process
°Y. M. Kwon, Jaey. Kim, B. W. Lee, C. Liu（Hankuk Univ. of Foreign Studies）

4pPS-22 Neutron irradiation effects on mechanical and magnetic properties of pre-deformed iron-based model alloys
°Y. Kamada, J. Mohapatra, Hiroa. Kikuchi, S. Kobayashi, Hi. Watanabe*（Iwate Univ., *Kyusyu Univ.）

4pPS-23 Properties of soft magnetic powder compressed cores made of Al_2O_3-coated Fe-Al powders
°P. Jang, S. Shin, G. Choi*（Cheongju Univ., *R&D center, Changsung Corp.）

4pPS-24 The Influence of Thermal Treatment on the Magnetic Properties of Fe-based Amorphous Powder Cores
X. Wang, Z. Lu, C. Lu, °D. Li（Advanced Technology & Materials Co., Ltd.）

4pPS-25 Magnetic exchange interaction of（Fe,Co）-Si-B-Nb glassy alloys with soft-magnetic properties
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4pPS-26 Magnetic and fluorescence properties of cerium-doped yttrium aluminum iron garnet nanocrystals
°D. Aoki, M. Shima（Gifu Univ.）

4pPS-27 Ferromagnetic/shape memory bilayer composite ribbons produced by liquid quenching method
°Y. Ninomiya, T. Todaka, M. Enokizono（Oita Univ.）

4pPS-28 Fe-B-Si-Nb bulk metallic glass with flat hysteresis curves prepared by B_2O_3 flux melting and copper mold casting
°T. Bitoh, S. Izumi（Akita Prefectural Univ.）

4pPS-29 Enhanced magnetization in copper chromite nanoparticles by combustion synthesis
°C.-R. Lin, Y.-W. Tu, M.-T. Hong, O. Shaikh, M.-L. Chen（Southern Taiwan Univ. of Science and Technology）

4pPS-30 Heat generation ability in an AC magnetic field of nano-sized La 2.5wt% added $MgFe_2O_4$ prepared by beads milling
°S. Yoshikawa, H. Hirazawa*, H. Aono**, T. Naohara**, T. Maehara**, Yuj. Watanabe***（Advanced course of Environmental Materials Engineering, Niihama National College of Technology, *Department of Environmental Materials Engineering, Niihama National College of Technology, **Graduate School of Science and Engineering, Ehime Univ., ***Department of Surgery, Graduate School of Medicine, Ehime Univ.）

4pPS-31 The heat generation material in the AC magnetic field for nano-sized $Mg_{1-x}Cu_xFe_2O_4$ prepared by beads milling
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Chair: N. Fujita（Nara National College of Tech.）

4pPS-32 Effects of La^{3+} addition on heat generation ability in AC magnetic field of $MgFe_2O_4$ powder prepared by solid reaction method
°Y. Wakae, H. Hirazawa*, H. Aono**, T. Naohara**, T. Maehara**, Yuj. Watanabe***（Advanced course of Environmental Materials Engineering, Niihama National College of Technology, *Department of Environmental Materials Engineering, Niihama National College of Technology, **Graduate School of Science and Engineering, Ehime Univ., ***Department of Surgery, Graduate School of Medicine, Ehime Univ.）

4pPS-33 Magnetic domain observation of ion-irradiated Fe and Fe/Cr/Fe epitaxial films
°Y. Kamada, Ta. Kawahara, T. Shimoyama, Hiroa. Kikuchi, S. Kobayashi, Hi. Watanabe*（Iwate Univ., *Kyusyu Univ.）

4pPS-34 First-principle calculations of half-metallic double perovskites $La_2BB'O_6$（B, $B' = 3d$ transition metal）
Y.-P. Liu, °Sh.-H. Chen*, H.-R. Fuh**, Y.-K. Wang***（Department of Physics, National Taiwan Normal Univ., *Institute of Physics, academia Sinica, **Graduate Institute of Applied Physics, National Taiwan Univ., ***Center for General Education and Department of Physics, National Taiwan Normal Univ.）

4pPS-35 Crystal Structures and Local Magnetism of Co_2FeGe Heusler Alloy Films Prepared by Atomically Controlled Alternate Deposition °Mas. Tanaka, A. Murata, D. Maezaki, K. Mibu (Nagoya Institute of Technology)

4pPS-36 Transport and magnetic properties of fully epitaxial superconducting NbN/half-metallic Heulser alloy Co_2MnSi bilayer films °I. Shigeta, Y. Sakuraba*, S. Kimura*, K. Koyama, Kaz. Watanabe*, K. Takanashi*, M. Hiroi (Kagoshima Univ., *Tohoku Univ.)

4pPS-37 Structure and valence band spectra of half-Heusler LaPtBi thin films
°Yo. Niimi, N. Sugimoto, T. Miyawaki, T. Yoshihara, N. Fukatani, K. Ueda, Nobuo Tanaka*, H. Asano
(Dept. of Crystalline Materials Science, Graduate School of Engineering, Nagoya Univ., *EcoTopia Institute, Nagoya Univ.)

4pPS-38 Electronical properties of double perovskite $SrLaVMoO_6$ thin films
°T. Shinno, K. Sanbou, T. Miyawaki, K. Ueda, H. Asano
(Dept. of Crystalline Material Science, Graduate School of Engineering, Nagoya Univ.)

4pPS-39 Current induced magnetization switching of amorphous GdFeCo with perpendicular magnetic anisotropy
°B. Dai, Tak. Kato, S. Iwata, S. Tsunashima* (Department of Quantum Engineering, Nagoya Univ., *Department of Research, NISRI)

4pPS-40 Thermal stability phase diagram of nanostructured synthetic ferrimagnets °J. M. Lee, S. H. Lim (Korea Univ.)

4pPS-41 Ac Driven Chaos Motion of Domain Wall Spin-Torque Oscillator
°Ka. Matsushita, Mu. Sasaki*, T. Chawanya** (Cybermedia Center, Osaka Univ., *Department of Applied Physics, Tohoku Univ., **Graduate School of Information Science and Technology, Osaka Univ.)

4pPS-42 Thermally Assisted Magnetic Switching on Magnetic Tunnel Junctions with TbFe alloy memory layer
°Y. Fujisawa, Tak. Kato, S. Iwata, S. Tsunashima* (Nagoya Univ., *Nagoya Industrial Science Research Institute)

4pPS-43 Anomalous Nernst effect for thermoelectric power applications
°K. Hasegawa*, M. Mizuguchi*,**, Y. Sakuraba*, K. Takanashi*
(*Institute for Materials Research, Tohoku Univ., **JST PRESTO)

4pPS-44 Minimal Precessional and Switching Currents for Relaxing-Precessional Magnetization Swithcing within a Spin Valve
°J.-H. Chang, C.-R. Chang (Department of Physics, National Taiwan Univ.)

4pPS-45 Magnetic anisotropy in CoFe(B)/MgO stack structures
°Sho. Ikeda*,**, R. Koizumi*, S. Ishikawa*, Hideo Sato**, M. Yamanouchi*,**, K. Mizunuma*, S. Kanai*, F. Matsukura*,**,***, H. Ohno*,**,*** (*Laboratory for Nanoelectronics and Spintronics, RIEC, Tohoku Univ., **Center for Spintronics Integrated Systems, Tohoku Univ., ***WPI Advanced Institute for Materials Research, Tohoku Univ.)

4pPS-46 Magnetic field dependence of the magnetic Compton profile in an Fe thin
°Tad. Kato, S. Emoto, Ko. Suzuki, M. Itou, Yo. Sakurai*, Y. Homma**, H. Sakurai
(Gunma Univ., *JASRI, **IMR Tohoku Univ.)

4pPS-47 Magnetostatic interaction between continuous and granular layers in multilayered nanowires for current-induced domain wall motion °A. Ooba, T. Komine, R. Sugita (Ibaraki Univ.)

4pPS-48 Dependence of hard-axis anisotropy field on domain wall width for current-induced domain wall motion in nanowires
°M. Ito, A. Ooba, T. Komine, R. Sugita (Ibaraki Univ.)

4pPS-49 Peltier cooling effect in Heusler compound Co_2MnSi/Au current perpendicular to plane nano-pillar junction
°S. Bosu, Y. Sakuraba, K. Takanashi (Institute for Materials Research, Tohoku Univ.)

4pPS-50 Annealing temperature dependence of magnetization in a CoFeB thin film with a Ti-N capping
°A. Sugihara, S. Osaki, R. Nakatani (Osaka Univ.)

4pPS-51 Epitaxial Growth of FeB/MgO/FeB and FeCoB/MgO/FeCoB Tri-Layer Films on $SrTiO_3$(100) Single-Crystal Substrates
°Y. Asai, M. Ohtake, M. Futamoto (Chuo Univ.)

4pPS-52 Investigation of Spin Seebeck effect in epitaxial $(Mn,Zn)Fe_2O_4$ thin film
°S. Yamamoto, N. Sakamoto, D. Fu, K. Shinozaki*, H. Suzuki**, N. Wakiya
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4pPS-53 Isothermal switching of perpendicular exchange bias at Co(111)/α-Cr_2O_3(0001) interface by high magnetic field °K. Wakatsu, Y. Shiratsuchi, T. Nakamura*, H. Oikawa, S. Maenou, Y. Narumi**, K. Tazoe**, C. Mitsumata***, T. Kinoshita*, H. Nojiri**, R. Nakatani (Graduate School of Engineering, Osaka Univ., *Japan Synchrotron Radiation Research Institute/SPring-8, **Institute for Material Research, Tohoku Univ., ***Graduate School of Engineering, Tohoku Univ.)

4pPS-54 Electronic and magnetic properties of single- and bi-layer graphene/Ni interfaces °Y. Matsumoto, S. Entani, M. Ohtomo, P. V. Avramov, H. Naramoto, K. Amemiya*, S. Sakai (ASRC JAEA, *IMSS KEK-PF)

4pPS-55 Magnetic scattering of a double periodic Fe/Au multilayer with magnetic anisotropy at the Fe *K* absorption edge °R. Yamagishi, S. Uegaki, T. Hasegawa, S. Amasaki, N. Hosoito (Nara Institute of Science and Technology)

4pPS-56 Synthetic Antiferromagnetic MgO/CoFeB/Ta(x)/CoFeB/MgO Structures with Perpendicular Magnetic Anisotropy °C.-W. Cheng, T. I. Cheng, C. H. Shiue, G. Chern (Department of Physics, National Chung Cheng Univ.)

4pPS-57 Effect of crystalline quality of α-Cr_2O_3 layer on perpendicular exchange bias in Pt/Co/α-Cr_2O_3(0001) thin film °Y. Takechi, K. Wakatsu, T. Nishimura, Y. Shiratsuchi, R. Nakatani (Graduate School of Engineering, Osaka Univ.)

4pPS-58 Unusual magnetization reversals about magnetoresistive spin valves using the epitaxial cobalt ferrite pinning layer °H. Matsuda (atect corporation)

4pPS-59 Effect of directionally oriented magnetic dipole field on static and dynamic magnetic properties of Fe nanoparticle needle-shaped assembly °H. Kura*, R. Tate**, K. Hiroi***, Mi. Takahashi*, ****, Kou. Hata*****, Te. Sato***, T. Ogawa** (*NICHe, Tohoku Univ., **Grad. Sch. Eng., Tohoku Univ., ***Grad. Sch. Sci. Tech., Keio Univ., ****nBEST, Chungnam National Univ., *****Osaka Branch, Samsung Yokohama Research Inst.)

4pPS-60 Evaluation of internal magnetic field for magnetic nanoparticle columnar assembly using ferromagnetic resonance measurement T. Ogawa*, °R. Tate*, H. Kura**, Kot. Hata***, Mi. Takahashi**, **** (*Department of Electronic Engineering, Graduate School of Engineering, Tohoku Univ., **New Industry Creation Hatchery Center, Tohoku Univ., ***Osaka Branch SAMSUNG Yokohama Research Institute, ****Center for Nanobioengineering and Spintronics, Chungnam National Univ.)

4pPS-61 Synthesis of composition-controlled FeNi alloy particles °W. Miyamura, S. Fujieda, K. Shinoda, Shig. Suzuki, B. Jeyadevan* (Institute of Multidisciplinary Research for Advanced Materials, Tohoku Univ., *School of Engineering, The Univ. of Shiga Prefecture)

4pPS-62 Phase transition and magnetic properties of iron sulfide nanoparticles °C.-R. Lin, S.-Z. Lu, M.-T. Hong, M.-L. Chen, O. Shaikh, Y.-W. Tu (Southern Taiwan Univ. of Science and Technology)

Chair: Y. Ashizawa (Nihon Univ.)

4pPS-63 Magnetic response of Fe nanoparticle assembly in hi-frequency GHz range ～ Assembly shape dependence ～ °D. Hasegawa, T. Oikawa* (Waseda Institute for Advanced Study, Waseda Univ., *Sumsung Yokohama Reseach Institute)

4pPS-64 Transportation of magnetic nanoparticle chains on a patterned magnetic surface °C.-P. Lee, T.-S. Lan, M.-F. Lai, Z.-H. Wei (Department of Power Mechanical Engineering, National Tsing Hua Univ.)

4pPS-65 Theoretical verification of magnetocrystalline anisotropy in tetragonal Fe-Co alloys °Y. Kota, A. Sakuma (Tohoku Univ.)

4pPS-66 Preparation and properties of $Ba_{0.7}Sr_{0.3}TiO_3/Mn_3GaN$ heterostructures °R. Suzuki, H. Tashiro, T. Miyawaki, K. Ueda, H. Asano (Nagoya Univ.)

4pPS-67 Structure and Magnetic Properties of FePt, CoPt, FePd, and CoPd Alloy Thin films Epitaxially Grown on $SrTiO_3$ Single-Crystal Substrates with Different Orientations °A. Itabashi, M. Ohtake, S. Ouchi, F. Kirino*, M. Futamoto (Chuo Univ., *Tokyo Univ. of the Arts)

4pPS-68 Metastable Ordered Phase Formation in $Co_{75}Pt_{25}$-Alloy Thin Film with the Close-Packed Plane Parallel to the Substrate Surface °Dais. Suzuki, M. Ohtake, F. Kirino*, M. Futamoto (Chuo Univ., *Tokyo Univ. of the Arts)

4pPS-69 Magnetization dynamics in CoFeB thin films with perpendicular magnetic anisotropy °S. Iihama, S. Mizukami*, Q. L. Ma*, T. Kubota*, Y. Ando, T. Miyazaki* (Department of Applied Physics, Graduate School of Engineering, Tohoku Univ., *WPI Advanced Institute for Material Research, Tohoku Univ.)

4pPS-70 Magnetic property and magnetoconductance of high-quality Fe_3O_4 epitaxial film
°Y. Matsuda, Ka. Tate, S. Hiratani, Yus. Watanabe, T. Nagahama, To. Shimada (Hokkaido Univ.)

4pPS-71 Magnetic properties of epitaxial spinel $CoCr_2O_4$ films grown by molecular beam epitaxy (MBE)
°Ka. Tate, T. Nagahama, To. Shimada (Hokkaido Univ.)

4pPS-72 MgO overlayer thickness dependence of perpendicular magnetic anisotropy in Ta/$Co_xFe_{80-x}B_{20}$/MgO/Ta ($x = 0, 10, 60$) multilayers °D. D. Lam*,**, F. Bonell*,**, S. Miwa*,**, Y. Shiota*, K. Yakushiji***, H. Kubota***, Ta. Nozaki***, A. Fukushima***, Sh. Yuasa***, Yo. Suzuki*,**,*** (*Graduate School of Engineering Science, Osaka Univ., **CREST, Japan Science Technology Agency, ***National Institute of Advanced Industrial Science and Technology (AIST))

4pPS-73 Determination of magnetic domain wall energy in Ni/Co superlattice
°K. Toyoki, Y. Shiratsuchi, R. Nakatani (Osaka Univ.)

4pPS-74 Spin current injection into Si(111) using γ-Al_2O_3 tunnel barrier
°Yus. Watanabe, Y. Matsuda, Ka. Tate, S. Hiratani, T. Nagahama, To. Shimada (Hokkaido Univ.)

4pPS-75 Electromagnetic Interaction in Ferromagnetic Oxide Sputtered Films with the Bi_2O_3-Fe_2O_3-$PbTiO_3$ System
°T. Higashi, A. Kajima, Mi. Inoue*, Tos. Fujii* (Kitakyushu National College of Technology, *Toyohashi Univ. of Technology)

4pPS-76 Correlation between magnetic anisotropy, lattice mismatch, and chemical order in $L1_0$-FePd thin films
°R. Shiina, I. Suzuki, E. Wada, Y. Shirahata, M. Itoh, T. Taniyama
(Materials and Structures Laboratory, Tokyo Institute of Technology)

4pPS-77 Structure and magnetic properties of mesoporous silica thin films formed by the electrodeposition method
°Sho. Suzuki, T. Haeiwa (Spin Device Technology Center, Shinshu Univ.)

4pPS-78 Magnetic domain structure in thin CoPt films with perpendicular anisotropy
°Y. Kawada, R. Tojo, T. Komine, R. Sugita (Ibaraki Univ.)

4pPS-79 Gilbert damping of Co/Pd multilayers with perpendicular anisotropy
°S. Kashima, Tak. Kato, Y. Matsumoto, S. Okamoto*, N. Kikuchi*, O. Kitakami*, S. Iwata, S. Tsunashima**
(Nagoya Univ., *Tohoku Univ., **NISRI)

4pPS-80 Temperature dependent magnetic properties and microstructure of electrodeposited Co nanowires embedded in alumina templates
°A. S. Samardak*,**, E. V. Sukovatitsina*, A. V. Ognev*,**, L. A. Chebotkevich*,**, S. V. Komogortsev***, A. M. Peighambari****, F. Nasirpouri**** (*Laboratory of thin film technologies, School of Natural Sciences, Far Eastern Federal Univ., **Institute of Automation and Control Processes, Far Eastern Branch of the Russian Academy of Sciences, ***Kirensky Institute of Physics, Siberian Branch of the Russian Academy of Sciences, ****Department of Materials Engineering, Sahand Univ. of Technology)

4pPS-81 Fabrication of Z-direction Notches in Magnetic Nanowires by Nanoimprint Lithography
°M. Okuda, Y. Miyamoto, E. Miyashita, N. Hayashi (NHK Science and Technology Research Laboratories)

4pPS-82 Strong angle dependent coercive field of the free layer by scaling down the magnetic tunnel junctions with fixed aspect ratio C.-T. Chao, °C.-Y. Kuo, Y.-C. Lee, L. Horng, Y.-J. Chang*, T.-H. Wu*, M. Tsunoda**, Mi. Takahashi**, J.-C. Wu (Department of Physics, National Changhua Univ. of Education, *Taiwan SPIN Research Center, National Yunlin Univ. of Science and Technology, **Department of Electronic Engineering, Tohoku Univ.)

4pPS-83 Magnetization Reversal Process in Antiferromagnetically Coupled $[Co/Pd]_m$/Ru/$[Co/Pd]_n$ Dot Patterns
°S. Ishio, Yu. Kobayashi, T. Hasegawa, A. Arakawa, H. Sasaki
(Department of Materials Science and Engineering, Akita Univ.)

4pPS-84 Structural analysis of FePt nanoparticles inside multi-walled carbon nanotubes °K. Hori, T. Kaneko, Y. Fujiwara, Koh. Maeda, Hidek. Sato, Tak. Kato*, T. Kobayashi, M. Jimbo**, S. Iwata*
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4pPS-85 Size and phase control of Fe nanoparticles with high saturation magnetization by tribenzylamine-trioctylamine mixed surfactant °M. Kamata*, H. Kura**, Mi. Takahashi***,****, T. Ogawa**, To. Tanaka*
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4pPS-86 Simulation study of magnetic quantum dots cellular automata fan-out system
°S. Miura, H. Nomura, R. Nakatani（Department of Materials Science and Engineering, Graduate School of Engineering, Osaka Univ.）

4pPS-87 Domain wall motion in peanut-shaped permalloy thin films
°Y.-C. Lee, Sh. Fe. Wang, Y.-C. Huang, W.-K. Lin, C.-R. Chang*, A. D. Belanovsky**, K. A. Zvezdin***, L. Horng, J.-C. Wu（Taiwan SPIN Research Center, National Changhua Univ. of Eduaction, *Departmetn of Physcis, National Taiwan Univ., **Prokhorov General Physics Institute, ***Moscow Institute of Physics and Technology）

4pPS-88 Transition from collective to non collective regime in the picosecond magnetization dynamics of 50 nm permalloy dot arrays
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4pPS-89 Influence of preparation conditions on superconducting properties of Bi-2223 thin films
N. T. Mua*, **, °J. C. Grivel**（*Hanoi Univ. of Frevention and Fight Fire, **Univ. of Technical of Denmark）

4pPS-90 Optimal Design of Double Squirrel Cage Induction Motor for Electric Vehicle using Response Surface Methodology
°K. W. Jeon, Y. -J. Kim*, S. Jang, S. -Y. Jung（School of Information and Communication Engineering, Sungkyunkwan Univ., *Dept. of Electrical Engineering Colleage of Engineering, Chosun Univ.）

4pPS-91 Novel Flux Barrier Type Outer Rotor IPM Motor with Rare-earth and Ferrite Magnets
°S. Ishii, Ke. Nakamura, O. Ichinokura（Tohoku Univ.）

4pPS-92 Centerpost Length Determination of IPMSM for EV Traction Motor considering Structural Strength
Y.-J. Kim, °S.-J. Kim（Chosun Univ.）

4pPS-93 A Prototype Design of Axial-gap Switched Reluctance Motor for In-Wheel Direct-Drive EV
°T. Shibamoto, H. Goto, Ke. Nakamura, O. Ichinokura（Tohoku Unversity）

Chair: H. Awano（Toyota Technological Institute）

4pPS-94 A Study of Rotor pole shape in Outer Rotor Type SR Motor
°T. Ogasawara, H. Goto, O. Ichinokura（Tohoku Univ.）

4pPS-95 Segment type DC Excited Reluctance Generator
°K. Saito, H. Goto, O. Ichinokura（Tohoku Univ.）

4pPS-96 Control simulation of electromagnetic actuator developed for AMT's shift unit
°Y. Yamamoto, K. Terashima, S. Hasegawa*, Y. Oshinoya*（ISUZU Advanced Engineering Center, Ltd., *Tokai Univ.）

4pPS-97 Study on the levitation characteristics of the magnetic substances using HTS bulk annuli trapped by superconducting magnet and fabricated spherical solenoid magnet
°T. Ikegami, S. B. Kim, J. Matsunaga, H. Onodera*（Graduate School of Natural Science and Technology, Okayama Univ., *JST,Core Reseach for Evolutional Science and Technology）

4pPS-98 Coupled Design of Interior Permanent Magnet Synchronous Generator Considering mechanical Stress
°D. Lee, Y.-J. Kim*, S. Jang, S.-Y. Jung（Sungkyunkwan Univ., *Chosun Univ.）

4pPS-99 Numerical Circuit Analysis of Magnetic Oscillation-type DC-AC Converter Using Bridge-connected Magnetic Circuit
°S. Okanuma（Department of Mechanical and Electrical Engineering, Fukushima Univ.）

4pPS-100 Consideration on Characteristics Improvement of Magnetic Oscillation-type DC-AC Power Converter
°S. Okanuma（Department of Mechanical and Electrical Engineering, Fukushima Univ.）

4pPS-101 A study of material selection of litz wire for contactless power transmission
°T. Misawa, T. Takura, F. Sato, Ta. Sato*, H. Matsuki*（Graduate School of Engineering, Tohoku Univ., *Graduate School of Biomedical Engineering, Tohoku Univ.）

4pPS-102 Basic Characteristics of Three-dimensional Three-Phase Variable Inductor
Ke. Nakamura, °M. Nagao, T. Ohinata*, K. Arimatsu*, T. Shirasaki*, O. Ichinokura（Tohoku Univ., *Tohoku Electric Power Co., Inc.）

4pPS-103 3D Analysis of Moving Contactless Transformer Considering Voltage source
°Kw. Kim, Y.-J. Kim*, S. Jang, S.-Y. Jung（Sungkyunkwan Univ., *Chosun Univ.）

4pPS-104 Resonance Frequency Fluctuation of Applicator with Wireless Power Transmission for Hyperthermia Therapy
°S. Yamada, Y. Ikehata, Toshio Ueno, M. Kakikawa（Kanazawa Univ.）

4pPS-105 Consideration of Anomalous Eddy Current Loss in Magnetic Circuit
°K. Fujita, Ke. Nakamura, O. Ichinokura (Tohoku Univ.)

4pPS-106 Magnetic Circuit Model Incorporating Micromagnetic Simulation
°H. Tanaka, Ke. Nakamura, O. Ichinokura (Tohoku Univ.)

4pPS-107 Evaluation of inductor using hybrid core composed of Mn-Zn ferrite and magnetic particle
°Shi. Ikeda, H. Nishikata, K. Shimizu, H. Uehori, H. Nishida, Yu. Sakurai (Toyama National College of Technology)

4pPS-108 Performance of Unimorph Vibrational Energy Harvester Using Galfenol °Toshiy. Ueno (Kanazawa Univ.)

4pPS-109 Active control of small vehicle seat with voice coil motor (Experimental consideration on weight change)
°Hid. Kato, Q. Lan, K. Sunaga, S. Hasegawa, Y. Oshinoya (Tokai Univ.)

4pPS-110 Bending levitation control for flexible steer plate (Experimental consideration on robustness)
°H. Marumori, T. Narita, S. Hasegawa, Y. Oshinoya (Tokai Univ.)

4pPS-111 Optimal placement of permanent magnets in hybrid magnetic levitation system for thin steel plate (Fundamental consideration on levitation performance) °T. Narita, T. Nameki, Y. Deng, S. Hasegawa, Y. Oshinoya (Tokai Univ.)

4pPS-112 Maximum transmission efficiency of LC-Booster using pick-up coil with capacitance
°T. Takura, T. Misawa, F. Sato, H. Matsuki* (Graduate School of Engineering, Tohoku Univ., *Graduate School of Biomedical Engineering, Tohoku Univ.)

4pPS-113 A study of Zn-ferrite film planar power inductor embedded in LSI interposer for integrated power supply
°H. Kobayashi, F. Sato, K. Hagita, R. Takeda*, M. Sonehara, Tos. Sato, N. Matsusita*, Ka. Kobayashi**, H. Shimizu**, Tom. Fujii**, K. Ishida***, T. Sakurai*** (Shinshu Univ., *Tokyo Institute of Technology, **Shinko Electric Industries Co., Ltd, ***The Univ. of Tokyo)

4pPS-114 Oscillation Characteristics of STO Inserted between Main-Pole and Trailing Shield of SPT Head
°S. Asaka, T. Hashimoto, Kazue. Yoshida, Y. Kanai* (Kogakuin Univ., *Niigata Institute of Technology)

4pPS-115 Resolution of Shielded MR Head for Bit Patterned Media
°N. Matsuura, K. Miura*, H. Muraoka (Research Institute of Electrical Communication, Tohoku Univ., *Electrical Engineering & Computer Science, Faculty of Engineering, Iwate Univ.)

4pPS-116 Estimation of Critical Current Density of Spin-Torque Noise in Tunneling Magnetoresistive Read Heads with Varying Stripe Heights Y. Endo*, °A. Hotta*, M. Yamaguchi*,** (*Department of Electrical Engineering, Graduate School of Engineering, Tohoku Univ., **New Industry Creation Hatchery, Tohoku Univ.)

4pPS-117 Write head design for thermally assisted magnetic recording °K. Yamakawa, K. Ise, F. Akagi*, Kat. Watanabe*, M. Igarashi*, H. Miyamoto* (Akita Industrial Technology Center, *Central Research Laboratory, Hitachi, Ltd.)

4pPS-118 High AC magnetic field imaging for a perpendicular magnetic writing head: Fabrication of high-coercivity FePt-MgO tip for frequency-modulated magnetic force microscopy (FM-MFM)
°S. Yasui, K. Kamachi, G. Egawa, S. Yoshimura, Hit. Saito (Akita Univ.)

4pPS-119 Patterning of perpendicular magnetized MnAl films by local ion irradiation
°M. Tanimoto, D. Oshima, Tak. Kato, S. Iwata (Nagoya Univ.)

4pPS-120 Ferromagnetic-antiferromagnetic patterning on $L1_0$ FePtRh film using Pt ion implantation
°T. Hasegawa, H. Yamada, T. Tomioka, Y. Kondo*, H. Yamane*, S. Nagamachi**, A. Arakawa, S. Ishio (Akita Univ., *Akita Industrial Technology Center (AIT), **Ion Technology Center Co. Ltd.)

4pPS-121 Deposition of inclined anisotropy film with oblique incidence collimated sputtering
°A. Honda, N. Honda (Tohoku Institute of Technology)

4pPS-122 Switching field distribution and magnetization reversal process of FePt dot patterns
°S. Ishio, Sh. Takahashi, T. Hasegawa, A. Arakawa, H. Sasaki, Z. Yan*, X. Liu*, Y. Kondo**, H. Yamane**, J. Ariake** (Department of Materials Science and Engineering, Akita Univ., *Venture Business Laboratory, Akita Univ., **Akita Prefectural R&D Center)

4pPS-123 TEM observation of exchange coupled bit patterned medium
°J. Ariake, Y. Kondo, N. Honda* (Akita Industrial Technology Center, *Tohoku Institute of Technology)

4pPS-124 Direct observation of switching field in individual magnetic dot for bit patterned media using X-ray nanoprobe
°Y. Kondo, M. Suzuki*, J. Ariake (Akita Industrial Technology Center (AIT), *JASRI/SPring-8)

Oct. 5/RoomA

Power Magnetics I **9 : 00 〜10 : 15** Chair: S. Nagata（Miyazaki Univ.）

5aA-1 Evaluation of Magnetic Properties for Practical Magnetic Filed Analysis（Invited） °K. Fujiwara（Doshisha Univ.）

5aA-2 Performance Improvement of the Permanent Magnet Magnetic Gear（Invited）
°Ke. Nakamura, M. Fukuoka, O. Ichinokura（Tohoku Univ.）

5aA-3 RNA-Based Optimum Design method for SPM type Magnetic Gears
°M. Fukuoka, Ke. Nakamura, O. Ichinokura（Tohoku Univ.）

Power Magnetics II **10 : 45 〜12 : 30** Chair: S. Yamada（Kanazawa Univ.）

5aA-5 Magnetic Induction Foaming Method for Preparing New Functional Materials（Invited）
°Y. Ido, K. Tomiyama*（Nagoya Institute of Technology, *Tokai Rubber Industries, Ltd.）

5aA-6 The performance of BLDC motor with high Bs amorphous stator core
°Gua. Li, D. Li, Zhu. Li, Z. Lu（China Iron & Steel Research Institute Group, Advanced Technology and Materials Co., Ltd.）

5aA-7 Investigation of Magnetic Pole Combination in a Surface Permanent Magnet Type Vernier Motor
°Y. Kataoka, M. Takayama, Y. Matsushima*, Y. Anazawa（Akita Prefectural Univ., *Shizuoka Univ.）

5aA-8 Eddy Current Loss Calculation in Permanent Magnet of SPM Motor Including Carrier Harmonics Based on Reluctance Network Analysis °Y. Yoshida, Ke. Nakamura, O. Ichinokura（Graduate School of Engineering, Tohoku Univ.）

5aA-9 Characteristics of the SR Motor with the Auxiliary Windings and Permanent Magnets in Generating Mode
°Y. Hasegawa, Ke. Nakamura, O. Ichinokura（Tohoku Univ.）

5aA-10 Development of transducer for two-dimensional local vector magnetic property measurement
°Sh. Nagata, K. Hirukawa, M. Enokizono*（Univ. of Miyazaki, *Oita Univ.）

Oct. 5/RoomB

High Frequency Application **9 : 00 〜11 : 15** Chair: K.-H. Shin（Kyungsung Univ.）

5aB-1 Soft magnetic hexagonal ferrites and related applications（Invited） °N. Hiratsuka（Saitama Univ.）

5aB-2 A challenge to suppress inductive noise coupling in LTE-class RFIC using soft magnetic thin film（Invited）
°M. Yamaguchi（Tohoku Univ.）

5aB-3 Development of Micro Magnetic Devices for High-Frequency Power Conversion and RF Applications（Invited）
°Tos. Sato, M. Sonehara, K. Ikeda*, H. Nakayama*, K. Takizawa*
（Spin Device Technology Center, Shinshu Univ., *Graduate School of Science and Technology, Shinshu Univ.）

5aB-4 A Permeability evaluation of large magnetic thin film using meander type probe up to 20 GHz
°S. Yabukami, A. Sato, T. Ozawa, Y. Miyazawa*, Y. Shimada**, M. Munakata***（Tohoku-Gakuin Univ., *Toei Scientific Industrial Co. Ltd., **Graduate School of Engineering, Tohoku Univ., ***Department of Informatics, Sojo Univ.）

5aB-5 Q-band FMR; Characterization of magnetic properties for CoPt-based alloy films
°S. Hinata, S. Saito, D. Hasegawa*, Mi. Takahashi**
（Department of Electronic Engineering, Graduate School of Engineering, Tohoku Univ., *Waseda Institute for Advanced Study, Waseda Univ., **New Industry Creation Hatchery Center, Tohoku Univ.）

5aB-6 Dipolar Coupling Array of Perpendicular to Plane Polarizer Spin-Torque Nano-Oscillators with Any Number
°H. Chen, Ju. Chang*, C. -M. Lee**, J. C. Wu, L. Horng, C. -R. Chang*
（National Changhua Univ. of Education, *Nation Taiwan Univ., **National Yunlin Univ. of Science and Technology）

Oct. 5/RoomC

Magneto-Optics **9 : 00 〜10 : 30** Chair: H. Sakurai（Gunma Univ.）

5aC-1 Effect of magnetic field on the optical properties in graphite nanoplatelet films（Invited）
°H.-L. Liu（Department of Physics, National Taiwan Normal Univ.）

5aC-2 Ultrafast magnetic vortex core switching driven by topological inverse Faraday effect
°K. Taguchi, J. Ohe*, G. Tatara (Tokyo Metropolitan Univ., *Toho Univ.)

5aC-3 Photo-induced precession of magnetization in $[Co/Pd]_5$ multilayers with various magnetic anisotropy
°K. Yamamoto, K. Nishibayashi, T. Matsuda, Y. Kitamoto*, H. Munekata (Imaging Science & Engineering Laboratory, Tokyo Institute of Technology, *School of Interdisciplinary Graduate Science & Engineering, Tokyo Institute of Technology)

5aC-4 Preparation and Magnetooptical Properties of $Bi_3Fe_5O_{12}$ Thick Film by Metal Organic Decomposition Technique
°N. Adachi, K. Yogo, To. Ota (Nagoya Institute of Technology)

5aC-5 Magneto-optics of plasmonic garnet/Au structures in multi-pass regime
°A. Baryshev, H. Uchida*, Mi. Inoue** (Electronics-Inspired Interdisciplinary Research Institute, Toyohashi Univ. of Technology, *Tohoku Institute of Technology, **Toyohashi Univ. of Technology)

Magnetic Anisotropy, Magnetostriction **10 : 45 〜 12 : 00** Chair: Y. Kobayashi (Tokyo Medical Univ.)

5aC-6 Application of magnetic Compton profile to perpendicular magnetic anisotropy films (Invited)
°H. Sakurai, Ko. Suzuki, M. Itou*, Yo. Sakurai*, A. Koizumi** (Gunma Univ., *JASRI, **Univ. of Hyogo)

5aC-7 Magneto-crystalline anisotropy at interfaces of Fe and non-ferromagnetic metals: A first-principles study
°Y. Miura*, **, M. Tsujikawa**, M. Shirai*, ** (*RIEC, Tohoku Univ., **CSIS, Tohoku Univ.)

5aC-8 Magnetostriction and Magnetic Properties of Fe-B Alloy Thin Films Prepared by Sputtering
°T. Kawai, Y. Asai, S. Ouchi, M. Ohtake, S. Takeda*, M. Futamoto (Chuo Univ., *Magnontech Ltd.)

5aC-9 Voltage Control of Magnetic Anisotropy of CoFeB Thin Films Stacked with Various Oxides
°J. Koba, T. Kuribara, N. Miyakawa, K. Kita (Department of Materials Engineering, The Univ. of Tokyo)

Magnetization Process, Magnetic Domain **13 : 30 〜 15 : 00** Chair: H. Mamiya (NIMS)

5pC-1 TEM observations of singular points in magnetic phase diagrams (Invited)
°Ya. Murakami, D. Shindo (IMRAM,Tohoku Univ.)

5pC-2 Microstructure dependence of the Barkhausen voltage pulse width in ferrite-dispersed Cu and Fe_3C micro-precipitates
°T. Inaguma, H. Sakamoto, M. Hasegawa* (Nippon Steel Corporation, *Nagoya Univ.)

5pC-3 Hysteresis scaling in an Ising magnet °S. Kobayashi (Iwate Univ.)

5pC-4 Magnetization Reversal Process in FeCo/Ru/FeCo Exchange Coupled Synthetic Antiferromagnetic Multilayers
°X. Liu, S. Ishio (Akita Univ.)

5pC-5 The current induced nonlinear mode splitting of the magnetic vortex
°S. Sugimoto*, **, Y. Fukuma***, H. Fujimori*, Ya. Niimi*, Y. Otani*, **
(*Institute for Solid State Physics, Univ. of Tokyo, **Advanced Science Institute, RIKEN, ***Frontier Research Academy for Young Researchers, Kyushu Institute of Technology)

Oct. 5/RoomD

Spin Dynamics **9 : 00 〜 10 : 30** Chair: T. Seki (Tohoku Univ.)

5aD-1 Unconventional current-induced magnetization dynamics (Invited)
°K.-J. Lee, S.-M. Seo, K.-W. Kim*, J. Ryu*, H.-W. Lee*
(Korea Univ, *Dept. of Physics, Pohang Univ. of Science and Technology)

5aD-2 Spin dynamics in FeCo ultrathin films exerted by voltage pulses (Invited)
°Ta. Nozaki*, **, ***, Y. Shiota*, F. Bonell***, S. Murakami*, ***, S. Miwa*, ***, T. Shinjo*, Yo. Suzuki*, ***
(*Osaka Univ., **AIST, ***CREST, JST)

5aD-3 Spin current induced ferromagnetic resonance in ferromagnetic/non-magnetic bi-layer thin films
°S. Kasai, K. Kondou, H. Sukegawa, S. Mitani, K. Tsukagoshi* (Magnetic Materials Unit, National Institute for Materials Science (NIMS), *International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science (NIMS))

5aD-4 Generation of spin current from γ'-Fe_4N film
°S. Isogami, M. Oogane*, A. Sakuma*, M. Tsunoda** (Fukushima National Institute of Technology, *Department of Applied Physics, Tohoku Univ., **Department of Electronic Engineering, Tohoku Univ.)

Spin Currents **10 : 45 〜 12 : 00** Chair: H. Imamura（AIST）

5aD-5 Vortex type NCMR-Oscillator with Residual Magnetization（Invited）
°M. Sahashi, K. Miyake, Y. Okutomi, Y. Kozono, T. Nakamura, H. Tsukahara*, H. Imamura*（Tohoku Univ., *AIST）

5aD-7 Diffusive transport of pure spin current in lateral spin valves
°Y. Fukuma*,**, H. Idzuchi**,***, Y. Otani**,***（*Kyushu Institute of Technology, **RIKEN, ***Univ. of Tokyo）

5aD-8 Enhanced spin accumulation in CoFe/MgO/Ag lateral spin valves
°H. Idzuchi*,**, S. Karube*,**, Y. Fukuma**,***, Y. Otani*,**（*Institute for Solid State Physics, Univ. of Tokyo, **Advanced Science Institute, RIKEN, ***Frontier Research Academy for Young Researchers, Kyushu Institute of Technology）

5aD-9 Giant spin Hall effect induced by skew scattering on Bi impurities in Cu
°Ya. Niimi*, Y. Kawanishi*, Dah. Wei*, C. Deranlot**, H. Yang***, M. Chshiev***, T. Valet****, A. Fert**, Y. Otani*,*****（*ISSP, Univ. of Tokyo, **CNRS/Thales, ***SPINTEC, ****In Silicio SAS, *****RIKEN-ASI）

TMR Devices **13 : 30 〜 15 : 00** Chair: K. Yakushiji（AIST）

5pD-1 Progresses on High Density MRAMs with perpendicular MTJs and Challenges to Realize Normally-Off systems（Invited）
°H. Yoda（Toshiba Electronics Korea Corporation）

5pD-2 Magnetic Tunnel Junction with Manganese Alloy Electrode with a Large Perpendicular Magnetic Anisotropy（Invited）
°S. Mizukami, T. Kubota, Q. L. Ma, T. Miyazaki（Tohoku Univ.）

5pD-3 Enhanced tunnel magnetoresistance in magnetic tunnel junctions with a cubic Mg-Al-O barrier
°H. Sukegawa, S. Mitani, T. Ohkubo, K. Inomata, K. Hono（National Institute for Materials Science）

5pD-4 Perpendicular Magnetic Anisotropy in Fe/MgO and Fe/$MgAl_2O_x$ structures
°J. Koo*,**, S. Mitani*,**, H. Sukegawa**, Z. Wen**, T. Niizeki***, S. Kasai**, K. Inomata**（*Graduate School of Pure and Applied Sciences, Univ. of Tsukuba, **National Institute for Materials Science, ***Institute of Applied Physics, Univ. of Tsukuba）

Award Memorial Speeches **15 : 15 〜 16 : 15** Chair: H. Muraoka（Tohoku Univ.）

5pMS-1 Progress of half-metallic Heusler compounds-based spin-dependent transport devices and future
°Y. Sakuraba, K. Takanashi（Tohoku Univ.）

5pMS-2 Dimensional transition of magnetic-field- and electric-current-induced magnetic domain wall motion in metallic Pt/Co/Pt nanowire °K.-J. Kim*,**, J.-C. Lee*,***, K.-H. Shin***, H.-W. Lee****, S.-B. Choe*（*Seoul National Univ., **Kyoto Univ., ***Korea Institute of Science and Technology, ****Pohang Univ. of Science and Technology）

Oct. 5/RoomE

Nanostructures I **9 : 00 〜 10 : 15** Chair: M. Otake（Chuo Univ.）

5aE-1 STM opens up new nano spintronics: atomic-scale magnetism of nano-magnets（Invited） °T. Yamada（Chiba Univ.）

5aE-2 Low Temperature Scanning Tunneling Microscope Studies of Single Molecule Magnets
K. Reaves*,**, Kyon. Kim*, K. Iwaya*, T. Hitosugi*, H. Katzgraber***,****, H. Zhao*****, K. Dunbar*****, °W. Teizer*,**,****（*WPI-AIMR, Tohoku Univ., **Materials Science and Engineering, Texas A&M Univ., ***Department of Physics and Astronomy, Texas A&M Univ., ****Theoretische Physik, ETH Zurich, *****Department of Chemistry, Texas A&M Univ.）

5aE-3 Exploring the Magnetic Interactions Between Co nano-islands by Spin-Polarized Scanning Tunneling Microscopy
°C.-I. Lu*, P.-J. Hsu*, S.-W. Chen*, Y.-H. Chu*, C. Butler*, C.-H. Hsu*, W.-J. Hsueh*, M.-T. Lin*,**（*Department of Physics, National Taiwan Univ., **Institute of Atomic and Molecular Sciences, Academia Sinica）

5aE-4 Manifestation of Spatial Spin Distribution Resulting from Quantum Interference in Co Nanoislands on Cu(111)
°Y.-H. Chu*, P.-J. Hsu*, S.-W. Chen*, C.-I. Lu*, W.-J. Hsueh*, C.-H. Hsu*, C. Butler*, M.-T. Lin*,**（*Department of Physics, National Taiwan Univ., **Institute of Atomic and Molecular Sciences, Academia Sinica）

Nanostructures II **10 : 30 〜 11 : 45** Chair: S. Tomita（NAIST）

5aE-5 Magnetization reversal and crystalline structure in Co nanopillars（Invited）
°M. Vazquez, L. G. Vivas, Y. Ivanov, D. G. Trabada, M. P. Proença, O. Chubykalo-Fesenko（Institute of Materials Science of Madrid）

5aE-6 Influence of Lattice Symmetry on the Magnonic Spectra in Magnetic Nanodot Lattice
S. Saha*, °R. Mandal*, S. Barman*, D. Kumar*, B. Rana*, S. Sugimoto**, Y. Fukuma***,****, Y. Otani**,***, A. Barman* (*S. N. Bose National Centre for Basic Sciences, **Institute for Solid State Physics, Univ. of Tokyo, ***Advanced Science Institute, RIKEN, ****Frontier Research Academy for Young Researchers, Kyushu Institute of Technology)

5aE-7 Metamaterials in the terahertz region (Invited) °M. Hangyo, K. Takano, F. Miyamaru* (Osaka Univ., *Shinshu Univ.)

Nanostructures III **14 : 00 〜 15 : 00** Chair: S. Nakamura (Toshiba)

5pE-1 Magnetic quantum dots cellular automata bi-directional shift register (Invited)
°H. Nomura, S. Miura, R. Nakatani (Osaka Univ.)

5pE-2 Vortex core switching in a Pac-man shaped disk by a pulse magnetic field
°Tom. Sato, Yoshin. Nakatani (Univ. of Electro-Communications)

5pE-3 Magnetic vortex core manipulation under impact of magnetostatic field
°A. V. Ognev*,**, M. Stebliy*, A. S. Samardak*,**, K. Diga*, L. A. Chebotkevich*,** (*Laboratory of thin film technologies, School of Natural Sciences, Far Eastern Federal Univ., **Institute of Automation and Control Processes, FEBRAS)

Award Memorial Speeches **15 : 15 〜 16 : 15** Chair: Mi. Inoue (Toyohashi Univ. Tech.)

5pMS-3 Anomalous anisotropic magnetoresistance effects in perovskite manganites R.-W. Li (NIMTE, CAS)

5pMS-4 Non-Abelian spin-orbit gauge as spin propagator in two-dimensional gas with Rashba and Dresselhaus spin-orbit couplings °So.-H. Chen, M.-H. Liu*, J.-S. Yang**, X.-G. He, C.-R. Chang (National Taiwan Univ., *Universität Regensburg, **National Taiwan Ocean Univ.)