PROGRAM

——27th, Room A——

The 177th Topical Symposium "Advanced Technology for Future Information Storage"

10 : 00〜11 : 30 M. Igarashi (Hitachi)

27aA- 1 Issues and future extension of bit-patterned media
° N. Honda, K. Yamakawa*, J. Ariake*, Y. Kondo* (Tohoku Inst. Tech., *AIT)

27aA- 2 Bit patterned media made by a directed self-assembled mask with 2.5 Td/in^2 feature size
° A. Kikitsu, Y. Kamata, N. Kihara, S. Morita, K. Kimura, H. Izumi* (Toshiba, *Toshiba Storage Device)

27aA- 3 Fabrication and properties of $L1_0$ type FeNi thin films
° M. Mizuguchi, T. Kojima, S. Sekiya, K. Takanashi (Tohoku Univ.)

13 : 00〜15 : 00 Y. Nozaki (Keio Univ.)

27pA- 1 Development of Heusler alloys with high spin polarization and their application to CPPGMR
° T. Furubayashi*, T. Nakatani*, **, H. S. Goripati*, Y. Takahashi*, K. Hono*, **, N. Hase*, **
(*NIMS, **Univ. of Tsukuba)

27pA- 2 Future readers for HDD with high resolution and high SNR
° M. Takagishi, H. Iwasaki (Toshiba)

27pA- 3 TAR media development: Material and process
° H. Nemoto, K. Nakamura, I. Takekuma, J. Sayama, A. Tsunehiro, K. Tanahashi (Hitachi)

27pA- 4 Microwave assisted magnetization switching and its switching mechanism
° S. Okamoto, N. Kikuchi, O. Kitakami (Tohoku Univ.)

15 : 15〜16 : 15 R. Nakatani (Osaka Univ.)

27pA- 5 Present and future storage system for broadcasting
° E. Miyashita, M. Kishida, N. Hayashi (NHK)

27pA- 6 New data allocation method for energy-efficient high-speed tiered-storage systems
° K. Fujimoto, H. Akaike*, K. Miura, H. Muraoka (Tohoku Univ., *Hitachi)

——27th, Room B——

Spin Polarized Materials **10 : 15〜11 : 45** Y. Sakuraba (Tohoku Univ.)

27aB- 1 CPP-GMR using highly spin polarized $Co_2Fe(Ga_{0.5}Ge_{0.5})$ Heusler alloy
° Y. Takahashi*, A. Srinivasan*, B. Varaprasad*, A. Rajanikanth*, N. Hase**, T. Nakatani*, S. Kasai*, T. Furubayashi*, S. Mitani*, K. Hono*, ** (*NIMS, **Univ. of Tsukuba)

27aB- 2 Point contact Andreev reflection measurements of $Co_2Fe(Ge_{1-x}Z_x)$ (Z=Ga, Si) Heusler alloys
° B. Varaprasad, A. Rajanikanth, Y. Takahashi, K. Hono (NIMS)

27aB- 3 Perpendicular magnetization of Co_2FeAl full-Heusler alloy thin films induced by MgO interface
Z. Wen, ° H. Sukegawa, S. Mitani, K. Inomata (NIMS)

27aB- 4 Epitaxial growth of Heusler alloy Co_2MnSi thin films on Ge(001) substrates via a MgO interlayer
° G. Li, T. Taira, K. Matsuda, M. Arita, T. Uemura, M. Yamamoto (Hokkaido Univ.)

27aB- 5 Growth of LaPtBi thin films by 3-source magnetron sputtering
° N. Sugimoto, N. Fukatani, T. Yosihara, T. Miyawaki, K. Ueda, N. Tanaka, H. Asano (Nagoya Univ.)

27aB- 6 Growth of zinc-blende MnAs thin films on InP substrate
° H. Oomae, J. Asubar, S. Nakamura*, Y. Jinbo, N. Uchitomi (Nagaoka Univ. Tech., *Aoyama Gakuin Univ.)

Heusler Alloys (MR) **13 : 00〜14 : 00** S. Mizukami (Tohoku Univ.)

27pB- 1 Interlayer exchange coupling between $Co_2Fe(Al_{0.5}Si_{0.5})$ Heusler alloy films through Ag spacer layer and its CPP-GMR properties
° T. Nakatani, M. Hayashi, T. Furubayashi, K. Hono (NIMS)

27pB- 2 CPP-GMR device using $Co_2Mn(Ga_xGe_{1-x})$ Heusler alloy
° N. Hase*, **, B. Varaprasad**, Y. Takahashi**, K. Hono*, ** (*Univ. of Tsukuba, **NIMS)

27pB- 3 Tunneling magnetoresistance effect and structure of $Co_2FeAl_{0.5}Si_{0.5}$-MgF_2 granular films
° Y. Urakawa, S. Ozaki, Y. Fujiwara, N. Obara, K. Maeda, T. Kato*, M. Jimbo**, T. Kobayashi (Mie Univ., *Nagoya Univ., **Daido Univ.)

27pB- 4 Local magnetism and tunnel magnetoresistance of non-equilibrium Co-based Heusler alloy films prepared by atomically controlled alternate deposition
° M. Tanaka, S. Hori, A. Murata, K. Mibu, R. Hiramatsu*, K. Kondou**, S. Kasai**, T. Ono* (Nagoya Inst. Tech., *Kyoto Univ., **NIMS)

Domain Wall Motion **14 : 15〜15 : 45** K. Suemitsu (Renesas Electronics)

27pB- 5 Current-induced domain wall motion in perpendicularly magnetized CoFeB/MgO wire
° S. Fukami*, **, T. Suzuki***, Y. Nakatani****, N. Ishiwata*, **, M. Yamanouchi*, S. Ikeda*, N. Kasai*, **, H. Ohno* (*Tohoku Univ., **NEC, ***Renesas Electronics, ****UEC)

27pB- 6 Current-induced domain wall motion in TbFeCo/Ni bilayer wire
° H. Nakamura, X. Liu, A. Morisako (Shinshu Univ.)

27pB- 7 High domain wall magnetoresistance in TbFeCo wires
° S. Li, T. Amagai, X. Liu, A. Morisako (Shinshu Univ.)

27pB- 8 Observation of domain wall motion due to pulsed current in magnetic nanowire memory
° K. Ikeda, Duc-The Ngo, H. Awano (Toyota Tech. Inst.)

27pB- 9 Analysis of current driven domain walls in nano pattern shape
° T. Kanehira, Y. Takahasi, K. Ikeda, Duc-The Ngo, H. Awano (Toyota Tech. Inst.)

27pB-10 Study of magnetic wires on Polycarbonate substrate
° R. Eguchi, K. Kumeta, T. Hirano, J. Miyamoto, H. Awano (Toyota Tech. Inst.)

Nano-Magnetics **16 : 00〜17 : 30** H. Yanagihara (Tsukuba Univ.)

27pB-11 Size dependence of FMR spectrum for nano circular dot with single magnetic domain
S. Noh, ° K. Miyake, T. Kaneko*, H. Imamura*, M. Sahashi (Tohoku Univ., *AIST)

27pB-12 Micromagnetic simulation of spin-wave modes in a circular dot with single domain
° T. Kaneko, S. Noh*, K. Miyake*, M. Sahashi*, H. Imamura (AIST, *Tohoku Univ.)

27pB-13 Dynamic property of a magnetic vortex stabilized in a polygonal nanomagnet
° M. Miyata*, K. Kiseki*, S. Yakata*, **, H. Wada*, T. Kimura*, ** (*Kyushu Univ., **JST-CREST)

27pB-14 Application of domain wall pinning for scanning magnetoresistance microscope
° N. Yamaguchi, T. Yagihara, H. Hosoi, K. Sueoka (Hokkaido Univ.)

27pB-15 Local logic operation method for arrayed magnetic logic gate with magnetic force microscopy
° Y. Imanaga, Y. Hiratsuka, S. Miura, H. Nomura, R. Nakatani (Osaka Univ.)

27pB-16 Development of magnetic logic gate shift register
° H. Nomura, S. Miura, Y. Imanaga, R. Nakatani (Osaka Univ.)

——27th, Room C——

Magnet Films I **9 : 45〜10 : 45** M. Takezawa (Kyushu Inst. Tech.)

27aC- 1 The coecivity of the Nd-Fe-B/Nd thin films with Nd-Fe-B small grains
° K. Koike*, T. Kusano*, J. Umezawa*, T. Miyazaki**, Y. Mizuno*, D. Ogawa*, H. Kato*, ** (*Yamagata Univ., **Tohoku Univ.)

27aC- 2 The interface state and magnetic property of Nd-Fe-B/Dy thin films
° J. Umezawa*, K. Koike*, D. Ogawa*, Y. Mizuno*, N. Inaba*, H. Kato*, ** (*Yamagata Univ., **Tohoku Univ.)

27aC- 3 Coercivity and microstructure of oxidized Nd-Fe-B films
° M. Matsuura, R. Goto, N. Tezuka, S. Sugimoto (Tohoku Univ.)
27aC- 4 Magnetic properties and microstructure of Nd-Fe-B single layer with high coercivity
° W. B. Cui, Y. Takahashi, K. Hono (NIMS)

Magnet Films II **11 : 00〜12 : 00** T. Akiya (Tohoku Univ.)
27aC- 5 Magnetic properties of α-Fe/$Pr_2(Fe, Co)_{14}B$ film fabricated by continuous length ribbon
F. Yamashita, ° S. Ohya, S. Nishimura, M. Nakano*, H. Fukunaga* (Minebea, *Nagasaki Univ.)
27aC- 6 Relationship between magnetic properties and droplets in Fe-Pt thick film magnets
° D. Urakawa, W. Oniki, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)
27aC- 7 Development of sintered Nd-Fe-B sputtering targets and prototyping of the linear motor using the permanent magnet thin film
° M. Uehara, T. Shinshi*, M. Ishibashi* (Hitachi Metals, *Tokyo Inst. Tech.)
27aC- 8 Influence of introducing oxygen to crystallites orientation of FeCo layers on amorphous TbFeCo films
° Y. Kubota, N. Miyamoto, S. Nakagawa (Tokyo Inst. Tech.)

Symposium "Rare Earth Saving Technology in Recent Permanent Magnets"
13 : 00〜15 : 00 M. Ito (Osaka Univ.)
27pC- 1 Development of technology for reducing dysprosium usage in Nd-Fe-B magnets
° S. Sugimoto (Tohoku Univ.)
27pC- 2 Less heavy -rare earth elements magnet using fluoride solutions
° M. Komuro, Y. Satsu, H. Suzuki (Hitachi)
27pC- 3 Fabrication of Nd-Fe-B thin films with high coercivity
° T. Shima, H. Iwama, Y. Hatayama, S. Suzuki (Tohoku Gakuin Univ.)
27pC- 4 Development of Dy free NdFeB anisotropic bonded magnets and their applications
° C. Mishima, K. Noguchi, M. Yamazaki, H. Matsuoka, H. Mitarai, Y. Honkura (Aichi Steel)

15 : 15〜16 : 45 M. Ito (Osaka Univ.)
27pC- 5 Study of the coercivity enhance mechanism of Nd-Fe-B type permanent magnets using multiscale structural analysis
° T. Ohkubo, H. Sepehri-Amin, K. Hono (NIMS)
27pC- 6 Development of rare earth free motor
° M. Morimoto (Tokai Univ.)
27pC- 7 Iron-Nitride compound as a new candidate for futured permanent magnetic material
° T. Ogawa, M. Takahashi (Tohoku Univ.)

——27th, Room D——

Magnetic Sensors **9 : 30〜11 : 30** H. Kikuchi (Iwate Univ.)
27aD- 1 Thin film electric power sensor using a magneto resistance effect
° H. Tsujimoto, Y. Tsuzaki (Osaka City Univ.)
27aD- 2 Control of inplane-uniaxial anisotropy of FeSiB magnetostrictive thin film
° J. Shin, Y. Suwa, S. Kim, S. Hashi, K. Ishiyama (Tohoku Univ.)
27aD- 3 Complex susceptibility of magnetic markers examined by half bridge GMR needle probe
° R. Haraszczuk, S. Yamada, M. Kakikawa, T. Ueno (Kanazawa Univ.)
27aD- 4 Reduction of the DC drifts in modulation type GMR field sensor
G. A. Wang, K. Tashiro, ° T. Kato, S. Iwata (Nagoay Univ.)
27aD- 5 Highly sensitive thin film sensor using coplanar line
° S. Yabukami, F. Akama, K. Sato, A. Yachidate*, H. Yamada*, T. Ozawa, N. Kobayashi**, T. Nakai***, K. I. Arai**
(Tohoku-Gakuin Univ., *Sendai Nat. Coll. Tech., **RIEMM, ***Industrial Technology Institute Miyagi)

27aD- 6 Development of a thin resolver with two phase outputs in an axial design
I. Sasada, ° K. Tanaka (Kyushu Univ.)

27aD- 7 Examination of rotating angular accuracy by magnetic sensor GIGS with a bipolar magnet
° J. Totsuka, M. Asano, T. Yagi, Y. Kaneta*, S. Nagata (Daido Steel, *RIEMM)

27aD- 8 Development of micro order rotary magnetic scales by UV-LIGA
° Y. Matsuoka, K. Yamaguchi (Fukushima Univ.)

Techniques of Microscopy I **12 : 45〜14 : 30** M. Shirato (Osaka Univ.)

27pD- 1 Magnetic imaging of perpendicular recoding head by secondary cantilever resonance magnetic force microscopy (SR-MFM)
° Y. Majima, S. Tanaka, K. Yanagiuchi* (Tokyo Inst. Tech., *TDK)

27pD- 2 Near-field magnetic force microscopy: High resolution imaging of static magnetic field
° R. Ito, Z. Li, G. Egawa, S. Yoshimura, H. Saito (Akita Univ.)

27pD- 3 Near-field magnetic force microscopy: Vector analysis of static magnetic field
° H. Saito, Z. Li, R. Ito, G. Egawa, S. Yoshimura (Akita Univ.)

27pD- 4 Coercivity measurement of MFM tips by using pulse magnetic field
° K. Hatakeyama, G. Egawa, S. Yoshimura, H. Saito (Akita Univ.)

27pD- 5 Thermal demagnetized state observation of the hot-deformed magnet with high coercivity MFM probe
° T. Yamaoka, Y. Kojima*, H. Tsujikawa, R. Hirose, A. Ito**, H. Kawamura**
(SII NanoTechnology, *Daido Steel, **Nitto Optical)

27pD- 6 In-situ thermally demagnetization process observation of Nd-Fe-B magnets up to 200℃ with high coercivity MFM probe
° T. Yamaoka, H. Tsujikawa, R. Hirose, A. Ito*, H. Kawamura* (SII Nano Technology, *Nitto Optical)

27pD- 7 Preparation of high-resolution FeB-coated magnetic force microscope tips
° K. Soneta, M. Ohtake, M. Futamoto (Chuo Univ.)

Techniques of Microscopy II **14 : 45〜16 : 30** S. Yoshimura (Akita Univ.)

27pD- 8 Measurement of high frequency electromagnetic near field on a CPW using a MFM tip and an amplitude modulation wave
Y. Endo, ° M. Fukushima, K. Arai, M. Watanabe, N. Sakashita, Y. Shimada, M. Yamaguchi (Tohoku Univ.)

27pD- 9 Motion capture system using magnetic ribbon type marker
° O. Mori, H. Nakano, S. Yabukami, O. Ishii*, T. Ozawa, S. Hashi**, H. Kanetaka**
(Tohoku Gakuin Univ., *Yamagata Univ., **Tohoku Univ.)

27pD-10 Magnetic field waveform measurement of microstrip line using pulsed laser
° J. Takahashi, H. Nasuno, S. Hashi, K. Ishiyama (Tohoku Univ.)

27pD-11 Position sensing system of wireless marker using by high speed AD converter
° H. Nakano, H. Kikuta*, S. Yabukami, T. Ozawa, T. Kanekawa**, T. Takano**, H. Kanetaka***, S. Hashi***
(Tohoku Gakuin Univ., *Ryowa Electronics, **CPI Technologies, ***Tohoku Univ.)

27pD-12 Disturbance-free observation of the Barkhausen effect in Co/Pt multilayer by X-ray Fourier transform holography
° M. Suzuki, T. Nakamura, K. Nomura*, S. Isogami**, N. Awaji*, M. Oura***, E. Matsubara****, T. Ishikawa***,
M. Tsunoda** (JASRI, *Fujitsu, **Tohoku Univ., ***RIKEN, ****Kyoto Univ.)

27pD-13 Magnetic domain observation system with determination of the three-dimensional local magnetization direction
° S. Meguro, S. Saito*, K. Akahane, M. Takahashi* (Neoark, *Tohoku Univ.)

27pD-14 New technique for magnetization curve measurements using X-ray transmission method
° M. Itou, Y. Sakurai (JASRI)

Electromagnetic Nondestructive Testing **16 : 45〜18 : 00** T. Sato (Shinshu Univ.)

27pD-15 Estimation of reinforcing steel using the trigonometric function by electromagnetic induction method—No.1 The experimental examination—
° K. Kobayashi, M. Hatakeyama, K. Ara, K. Yamazaki*, A. Haga**, K. Muramatsu***, Y. Uchikawa****
(Iwate Univ., *Takenaka Corp., **Tohoku Gakuin Univ., ***Saga Univ., ****Tokyo Denki Univ.)

27pD-16 Estimation of reinforcing steel using the trigonometric function by electromagnetic induction method—No.2 The analysis examination—
° M. Hatakeyama, K. Kobayashi, K. Ara, K. Yamazaki*, A. Haga**, K. Muramatsu***, Y. Uchikawa****
(Iwate Univ., *Takenaka Corp., **Tohoku Gakuin Univ., ***Saga Univ., ****Tokyo Denki Univ.)

27pD-17 Development of Magnetic Crack Detection System Using Thin Film Magnetic Field Sensor
° T. Ozawa, A. Yachidate*, H. Yamada*, K. Sato, K. Kojima, S. Yabukami, N. Kobayashi**, T. Nakai***, K. Arai** (Tohoku-Gakuin Univ., *Sendai Nat. Coll. Tech., **RIEMM, ***Industrial Technology Institute Miyagi)

27pD-18 Scaling law of magnetic hysteresis loops in a remanent state
° Y. Ishibashi, S. Kobayashi, S. Takahashi (Iwate Univ.)

27pD-19 Magnetic properties on Fe and Fe-Cu alloy irradiated by neutron
° H. Kikuchi, Y. Kamada, S. Kobayashi, J. Echigoya, H. Watanabe* (Iwate Univ., *Kyushu Univ.)

——27th, Room E——

Surface, Interface, and Graphene **9 : 15〜10 : 30** E. Shikoh (Osaka Univ.)

27aE- 1 Precise control of graphene layer number
° S. Entani, Y. Matsumoto, M. Ohtomo, P. Avramov, H. Naramoto, S. Sakai (JAEA)

27aE- 2 Magnetic counting rule of radical carbon edge nano graphene
° N. Ota, N. Gorjizade*, Y. Kawazoe* (Univ. of Tsukuba, *Tohoku Univ.)

27aE- 3 Spin-polarized states of single- and bilayer-graphen/magnetic metal
° Y. Matsumoto, S. Entani, M. Ohtomo, P. Avramov, H. Naramoto, K. Amemiya*, S. Sakai (JAEA, *KEK)

27aE- 4 Giant magneto-resistance through a single molecule
° T. Yamada, S. Schumaus*, A. Bagret*, Y. Yamagishi, F. Evers*, W. Wulfhekel* (Chiba Univ., *KIT)

27aE- 5 Magnetoelectric coupling at metal surfaces: electric control of Fe nano magnets
° T. Yamada*, L. Gerhard**, Y. Yamagishi*, A. Ernst***, I. Mertig***, ****, W. Wulfhekel**
(*Chiba Univ., **Karlsruhe Inst. Tech., ***MPI- Halle, ****Martin-Luther-Univ.)

Exchange Bias **10 : 45〜12 : 00** C. Mitsumata (Tohoku Univ.)

27aE- 6 Exchange-bias-field dependence on oxidation-intensity in CoFe/Cr-NOL interface
° N. Shimomura*, K. Sawada*, **, T. Nozaki*, M. Doi***, M. Sahashi*
(*Tohoku Univ., **Toshiba, ***Tohoku Gakuin Univ.)

27aE- 7 Perpendicular exchange bias of Pt/(Co, Ni)/α-Cr_2O_3(0001) thin films
° H. Oikawa, H. Noutomi, Y. Shiratsuchi, R. Nakatani (Osaka Univ.)

27aE- 8 Change in perpendicular exchange bias with a Pt spacer layer in Pt/Co/a-Cr_2O_3 thin film
° H. Noutomi, T. Fujita, H. Oikawa, Y. Shiratsuchi, R. Nakatani (Osaka Univ.)

27aE- 9 Soft X-ray MCD measurement for Pt/Co/α-Cr_2O_3 thin film with perpendicular exchange bias
° Y. Shiratsuchi, H. Noutomi, H. Oikawa, T. Fujita, T. Nakamura*, R. Nakatani (Osaka Univ., *JASRP)

27aE-10 Perpendicular exchange anisotropy in Mn-Ir/Fe-Co/[Pt/Co] multilayers
° H. Takahashi, M. Tsunoda, M. Takahashi (Tohoku Univ.)

Granular Films **13 : 00〜14 : 30** O. Kitakami (Tohoku Univ.)

27pE- 1 Brillouin light scattering from magnetic excitations in superparamagnetic Co-Al-O granular films
° A. Yoshihara, S. Nakamura*, T. Nojima*, S. Ohnuma**, H. Fujimori**
(Ishinomaki Seushu Univ., *Tohoku Univ., **RIEMM)

27pE- 2 Magnetic properties of Pd added CoPt granular thin films with carbon base matrix
° Y. Oda, K. Kakizaki, K. Kamishima, N. Hiratsuka (Saitama Univ.)

27pE- 3 Relationship between magneto-resistive response in TMR magnetic sensor and chemical composition of nano-granular TMR thin films
° M. Naoe, N. Kobayashi, Y. Kaneta, K. Shirakawa, K. Arai, T. Masumoto, S. Koyama*, S. Nagata*
(RIEMM, *Daido Steel)

27pE- 4 Magnetic Properties and TMR of FeCoSi-AlF nano granular thin films deposited on heating substrates.
° N. Kobayashi, K. Ishida, T. Iwasa, T. Tsurui*, T. Masumoto (RIEMM, *Tohoku Univ.)

27pE- 5 Fabrication of polyimide-Co granular thin film by vapor deposition polymerization
° K. Suzuki, H. Yanagihara, E. Kita (Univ. of Tsukuba)

27pE- 6 Preparation of Co-Ce-O composite films by chemical method
° H. Fukui, M. Hirai, J. Sasano*, M. Izaki*, M. Inoue*, M. Chigane**, N. Fujita
(Nara Nat. Coll. Tech., *Toyohashi Univ. Tech., **Osaka Municipal Technical Res. Inst.)

Fine Particles I **14 : 45〜16 : 15** K. Nishimura (Suzuka Nat. Coll. Tech.)

27pE- 7 Local magnetotransport properties of Fe nanoparticles measured with nanoprobes
° H. Sakuma, K. Ishii (Utsunomiya Univ.)

27pE- 8 Improvement of saturation magnetization using Fe nanoparticles by additive surfactant with weak adsorption
° M. Kamata, H. Kura*, M. Takahashi*, T. Ogawa*, T. Tanaka (Ehime Univ., *Tohoku Univ.)

27pE- 9 Synthesis of Fe nanoparticles with large diameter by supply control of precursor and its growth mechanism
° H. Kura, T. Ogawa, K. Hata*, M. Takahashi (Tohoku Univ., *Samsung)

27pE-10 The effect of magnetic dipole interaction on high-frequency magnetic properties of Fe nanoparticles assembly
° R. Tate, H. Kura, K. Hata*, M. Takahashi, T. Ogawa (Tohoku Univ., *Samsung)

27pE-11 Effect of nanostructure on saturation magnetization of Fe-Co nanoparticles synthesized via chemical route
T. Ogawa, ° H. Takano, H. Kura, M. Takahashi (Tohoku Univ.)

27pE-12 Structure and magnetic property of FePt particles encapsulated in carbon nanotubes
° T. Kaneko, Y. Fujiwara, H. Sato, T. Kato*, K. Maeda, K. Ishihara**, M. Jimbo**,
K. Hata, T. Kobayashi, S. Iwata* (Mie Univ., *Nagoya Univ., **Daido Univ.)

Fine Particles II **16 : 30〜17 : 30** N. Fujita (Nara Nat. Coll. Tech.)

27pE-13 Synthesis and soft magnetic properties of Co-B submicron particles
° Y. Shimada, Y. Endo, T. Miyazaki, M. Yamaguchi, S. Okamoto, O. Kitakami (Tohoku Univ.)

27pE-14 Microwave absorption properties of polymer composites with amorphous Fe-B and Ni-Zn ferrite nanoparticles
° K. Shimba, N. Tezuka, S. Sugimoto (Tohoku Univ.)

27pE-15 Room temperature synthesis of ferrite nano-particles and their characteristics of the aggregate
° K. Nishimura, R. Mori, N. Matsushita*, M. Inoue**
(Suzuka Nat. Coll. Tech., *Tokyo Inst. Tech., **Toyohashi Univ. Tech.)

27pE-16 Heat dissipation mechanism of rotatable magnetic nanoparticle and optimal design for hyperthermia
° H. Mamiya, B. Jeyadevan* (NIMS, *Univ. Shiga Pref.)

——27th, Room F——

Medical Treatments **10 : 30〜12 : 00** B. Jeyadevan (Univ. Shiga Pref.)

27aF- 1 Preparation of highly water-dispersed magnetic nanoparticles generated by a two-step ligand exchange reaction and their biomedical applications
° M. Hatakeyama*, H. Kishi*, Y. Kita*, K. Imai*, K. Nishio*, S. Karasawa*, Y. Masaike*, S. Sakamoto*,
A. Sandhu**, A. Tanimoto***, T. Gomi****, E. Kohda****, M. Abe*, H. Handa*
(*Tokyo Inst. Tech., **Toyohashi Univ. Tech., ***Keio Univ., ****Toho Univ.)

27aF- 2 Fabrication of polymer coated FePt nanoparticles and their uptake assessment for various cells
° T. Hachisu*, Y. Egawa*, H. Zhang*, **, A. Sugiyama*, T. Osaka*
(*Waseda Univ., **Tokyo Univ. Agriculture and Technology)

27aF- 3 FePt-nanoparticles/polymer hybrid capsules designed for magnetically guided drug delivery system
° T. Fuchigami, R. Kawamura, Y. Kitamoto, M. Nakagawa*, Y. Namiki**
(Tokyo Inst. Tech., *Tohoku Univ., **Jikei Univ. School of Medicine)

27aF- 4 Ferrite beads detection by Hall differential magnetic field sensors for identifying sentinel lymph nodes
° M. Abe, T. Ueda, T. Masaki, Y. Kitamoto, N. Matsushita, H. Handa (Tokyo Inst. Tech.)

27aF- 5 Basic study of imaging by magnetically stimulated particles under alternating magnetic field
° M. Tano, T. Nakagawa, S. Seino, T. Yamamoto, T. Ueda*, M. Abe* (Osaka Univ., *Tokyo Inst. Tech.)

27aF- 6 Generation of cavitation by driving giant magnetostrictive actuator and sterilization effect
° S. Nakamura, T. Suzuki, T. Ueno, M. Kakikawa, S. Yamada (Kanazawa Univ.)

Biomagnetic Measurements **13 : 00〜14 : 15** T. Nakagawa (Osaka Univ.)

27pF- 1 Effect of white noise on phase synchronization in auditory steady state responses
° K. Tanaka, I. Nemoto, M. Kawakatsu, Y. Uchikawa (Tokyo Denki Univ.)

27pF- 2 AEF in MEG evoked by amplitude-modulated chord
° H. Nakata, I. Nemoto, K. Tanaka, Y. Uchikawa (Tokyo Denki Univ.)

27pF- 3 Development of high accuracy gradiometer using amorphous wire magneto-impedance element and its application for cell tissue functional evaluation
° T. Uchiyama, S. Nakayama, S. Atsuta* (Nagoya Univ., *Fuji denolo)

27pF- 4 Real-time marker coil localization system for biomagnetic measurements
° D. Oyama, Y. Adachi, M. Higuchi, J. Kawai, K. Kobayashi*, G. Uehara (Kanazawa Inst. Tech., *Iwate Univ.)

27pF- 5 The electronic circuit model for the SEF responses
° K. Kobayashi, K. Tanaka, Y. Uchikawa (Tokyo Denki Univ.)

Magnetic Generation and Magnetic Shielding
14 : 30〜15 : 30 I. Sasada (Kyushu Univ.)

27pF- 6 Coupling suppressing method between mounted feeding coils for direct feeding FES
° K. Kato, K. Iwasaki, N. Tamura, K. Furiya, T. Sato, T. Takura, F. Sato, H. Matsuki (Tohoku Univ.)

27pF- 7 Investigation on a method of magnetic noise compensation from moving magnetic sources (part. 3)
° K. Yamazaki, K. Miura, A. Hayashi*, Y. Hirata**, F. Takeuchi***, K. Kobayashi****
(Takenaka Corp., *Forestec, **Hokkai-Gakuen Univ., ***Hokkaido Univ., ****Iwate Univ.)

27pF- 8 Examination for improvement of open-feeling in open-type magnetically-shielded room composed of magnetic square cylinders by controlling flux path.
° S. Hirosato, K. Yamazaki, T. Tsuruta, Y. Haraguchi*, M. Kosaka*, Y. Gao*, K. Muramatsu*, K. Kobayashi**
(Takenaka Corp., *Saga Univ., **Iwate Univ.)

27pF- 9 Multi-directional excitation system with current boosters for soft-heating hyperthermia
° K. Furiya, K. Aoki, T. Sato, T. Takura, F. Sato, H. Matsuki, T. Yanada*
(Tohoku Univ., *Tohoku Bunka Gakuen Univ.)

Hyperthermia **15 : 45〜17 : 15** F. Sato (Tohoku Univ.)

27pF-10 Influence of size and conformation magnetite nanoparticles on magnetic heat dissipation characteristics
° B. Jeyadevan, T. Kikuchi*, H. Mamiya**, R. Kasuya***, J. Huaman, H. Miyamura,
(Univ. of Shiga Prefecture, *Tohoku Univ., **NIMS, ***AIST)

27pF-11 Application of dimple-contained iron oxide nano-plate to cancer treatment using thermoablation
H. Yanagihara, T. Oda, Y. Ohara, R. Miyamoto, Y. Akashi, N. Okochi, ° M. Kishimoto, E. Kita (Univ. Tsukuba)

27pF-12 Relaxation mechanism evaluation under high frequency magnetic field of magnetic nanoparticles for hyperthermia
° K. Ueda, H. Kobayashi, A. Tomitaka, T. Yamada, Y. Takemura (Yokohama National Univ.)

27pF-13 Estimation of heat dissipation mechanism of $La_{0.77}Sr_{0.23}MnO_3$ magnetic hyperthermia nanoparticles
° A. Inukai, N. Sakamoto, H. Aono*, K. Shinozaki**, H. Suzuki, N. Wakiya
(Shizuoka Univ., *Ehime Univ., **Tokyo Inst. Tech.)

27pF-14 In-vivo experiments of magnetic hyperthermia utilizing Ti needles
° T. Nakagawa, T. Yoshioka, M. Horiki, K. Kakito, S. Seino, T. Yamamoto, M. Abe*, T. Gondo**, T. Hashimoto**,
M. Ohori** (Osaka Univ., *Tokyo Inst. Tech., **Tokyo Medical Univ.)

27pF-15 Effect of ferrite core of the resonant circuit implant through the 18G needle
° K. Kumagai, K. Watabe, R. Matsumura, T. Yamada, T. Sato*, Y. Takemura
(Yokohama National Univ., *Tohoku Univ.)

——28th, Room A——

Magnetic Recording Heads **9 : 00〜10 : 15** Y. Nozaki (Keio Univ.)

28aA- 1 Micromagnetic recording field analysis of shielded planar head
° H. Hosokai, Y. Kanai, K. Yamakawa*, K. Yoshida**, S. Greaves***, H. Muraoka***
(Niigata Inst. Tech., *Akita Industrial Tech. Center, **Kogakuin Univ., ***Tohoku Univ.)

28aA- 2 Perpendicular magnetic recording head for transition curvature reduction
° M. Sugiyama, T. Horide, I. Nunokawa, M. Ishibashi, H. Katada, K. Watanabe, K. Nakamoto (Hitachi)

28aA- 3 High-resolution MFM imaging of AC magnetic field of magnetic recording head by cone shaped FePt tip
° G. Egawa, K. Hatakeyama, S. Yoshimura, H. Saito (Akita Univ.)

28aA- 4 Implementation of spin-torque oscillator for MAMR into magnetic record simulator
° T. Takahashi, S. Asaka, K. Yoshida, Y. Kanai* (Kogakuin Univ., *NIIT)

28aA- 5 Size effects of FGL on oscillating characteristics
° S. Asaka, T. Takahashi, K. Yoshida, Y. Kanai* (Kogakuin Univ., *NIIT)

Energy Assisted Magnetic Recording I **10 : 30〜12 : 00** H. Saito (Akita Univ.)

28aA- 6 High-sensitive detection of FMR spectrum using micro-fabricated coplanar waveguide
° T. Kobayashi*, A. Yamaguchi**, Y. Nozaki*, *** (*Keio Univ., **AIST, ***CREST JST)

28aA- 7 Measurement of ferromagnetic resonant spectrum in granular CoCrPt thin films
° N. Ishida*, T. Kobayashi*, H. Ueda*, Y. Nozaki*, ** (*Keio Univ., **CREST JST)

28aA- 8 Switching times in energy assisted magnetic recording
° S. Greaves, H. Muraoka (Tohoku Univ.)

28aA- 9 Microwave assisted magnetization switching in nanodot array of Co/Pt multilayer
° S. Okamoto, J. Li, N. Kikuchi, O. Kitakami, T. Shimatsu, H. Aoi (Tohoku Univ.)

28aA-10 Proposal of write-once HDD using anti-ferro magnetized media for thermally assisted recording
° H. Awano, H. Ohno, S. Terasaki, N. Watanabe (Toyota Tech. Inst.)

28aA-11 Observation of FeCuPt transient process in rapid thermal annealing
° T. Ubana*, S. Okame*, **, A. Tsukamoto, A. Itoh (*Nihon Univ., **TDK)

Energy Assisted Magnetic Recording II **13 : 00〜14 : 30** S. Okamoto (Tohoku Univ.)

28pA- 1 Heat conduction analysis of thermally assisted recording with a stacked optical near-field antenna
A. Nozaki, ° K. Tamura, T. Ota, Y. Ashizawa, K. Nakagawa, A. Itoh (Nihon Univ.)

28pA- 2 Thermally assisted magnetic recording by a stacked optical near-field antenna on a granular medium
Y. Osa, ° A. Tajiri, Y. Ashizawa, S. Ohnuki, K. Nakagawa, Y. Sasaki*, S. Saito*, M. Takahashi*, A. Itoh
(Nihon Univ., *Tohoku Univ.)

28pA- 3 Film structure dependence of ultrashort light-induced demagnetization of GdFeCo
° T. Sato, R. Shimizu, S. Toriumi, A. Tsukamoto, A. Itoh (Nihon Univ.)

28pA- 4 Dependence of circularly polarized light excited by a plasmon aperture on relative position to magnetic particles for all-optical magnetic recording
° T. Ota, Y. Ashizawa, K. Nakagawa, S. Ohnuki, H. Iwamatsu, A. Tsukamoto, A. Itoh (Nihon Univ)

28pA- 5 Investigation of media specifications for thermally assisted magnetic recording (II)
° T. Horie, T. Kitayama, H. Sugita, T. Kobayashi, Y. Fujiwara (Mie Univ.)

28pA- 6 Dependence of microwave assisted magnetic recording characteristics on thickness ratio of ECC media
° A. Kato, Y. Furomoto, T. Tanaka, A. Faridah*, Y. Kanai**, K. Matsuyama
(Kyushu Univ., *Malaya Univ., **Niigata Inst. Tech.)

——28th, Room B——

Magnetoresistive Effects I **9 : 45〜11 : 45** T. Nagahama (Hokkaido Univ.)

28aB- 1 An enhancement of magnetoresistance by ultra-thin oxide spin-filtering layer
° Y. Fuji, M. Hara, H. Yuasa, S. Murakami, H. Fukuzawa (Toshiba)

28aB- 2 Effect of nonmagnetic metal layer insertion on crystalline barrier magnetic tunnel junction
° T. Niizeki, S. Mitani, H. Sukegawa, S. Kasai, K. Inomata (NIMS)

28aB- 3 Conduction properties and magnetoresistance in the CPP geometry of TiN/Fe_3O_4/Fe device
° K. Shimada, H. Yanagihara, E. Kita, A. Fukushima*, S. Yuasa*, J. Inoue**
(Univ. of Tsukuba, *AIST, **Nagoya Univ.)

28aB- 4 Fabrication of $MgAl_2O_4$ layered structures by reactive sputtering
° K. Inagaki, K. Mari, H. Fujita, N. Fukatani, T. Miyawaki, K. Ueda, H. Asano (Nagoya Univ.)

28aB- 5 Preparation of the (100) oriented $CoFe_2O_4$ films for spin filter layers
° K. Mamiya, Y. Kubota, S. Nakagawa (Tokyo Inst. Tech.)

28aB- 6 Improvement of tunnel magnetoresistance and reduction of tunnel resistance in epitaxial CoFe/$MgAl_2O_4$/CoFe (001) tunnel junctions
° H. Sukegawa, T. Niizeki, S. Mitani, T. Ohkubo, K. Inomata, K. Hono (NIMS)

28aB- 7 Tunnel magnetoresistance effect for magnetic tunnel junctions with $Mg_{1-x}Zn_xO$ barriers
° Y. Kurosaki, M. Yamada, D. Sato, A. Nishide, H. Yamamoto, J. Hayakawa (Hitachi)

28aB- 8 Reactive ion etching of magnetic materials for STT-MRAM
° T. Yamamoto*, K. Kinoshita**, ***, H. Yamamoto*, T. Morita*, S. Ikeda**, H. Ohno**
(*ULVAC, **Tohoku Univ., ***NEC)

Magnetoresistive Effects II **12 : 45〜14 : 30** K. Yakushiji (AIST)

28pB- 1 Fabrication of magnetic tunnel junctions using $L1_0$-ordered MnGa alloy and magnetoresistance effect
° T. Kubota, M. Araidai, Y. Miura, S. Mizukami, H. Naganuma, M. Oogane, Y. Ando, M. Shirai, M. Tsukada, T. Miyazaki (Tohoku Univ.)

28pB- 2 Fabrication of Cu_3N tunnel barrier films for γ'-Fe_4N based magnetic tunnel junctions
° M. Tsunoda, T. Inaba, M. Takahashi (Tohoku Univ.)

28pB- 3 Theoretical design of barrier materials for tunneling magnetoresistance devices with Fe_4N electrodes
° E. Nagata, Y. Miura, K. Abe, M. Shirai (Tohoku Univ.)

28pB- 4 Magnetic damping constant in γ'-Fe_4N thin film with negative spin polarization
° S. Isogami, M. Tsunoda*, A. Sakuma*, M. Takahashi* (Fukushima Nat. Coll. Tech., *Tohoku Univ.)

28pB- 5 Observation of interfacial magnetoresistance effect in $Y_3Fe_5O_{12}$/Pt junction
° H. Nakayama*, K. Harii*, K. Ando*, Y. Fujikawa*, E. Saitoh*, **, ***
(*Tohoku Univ., **JAEA, ***CREST-JST)

28pB- 6 First-principles calculation of conductivity tensor in transition metals alloys
° Y. Kota, A. Sakuma (Tohoku Univ.)

28pB- 7 The capping-layer dependence of the magnetic anisotropy in Fe/MgO(001) thin films
M. Tsujikawa, Y. Miura, ° M. Shirai (Tohoku Univ.)

——28th, Room C——

Rare-Earth Magnets I **9 : 30〜10 : 30** M. Nakano (Nagasaki Univ.)

28aC- 1 Magnetic domain observation of Nd-Cu-diffused Nd-Fe-B magnet with submicron grains by Kerr effect microscopy
° Y. Nagashima, Y. Kimura, M. Takezawa, Y. Morimoto, J. Yamasaki, N. Nozawa*, T. Nishiuchi*, S. Hirosawa* (Kyusyu Inst. Tech., *Hitachi Metals)

28aC- 2 Magnetic domains and domain-wall energies in (Nd,Dy)-Fe-B sintered magnets
° K. Ono, M. Kubota, M. Yano*, N. Miyamoto*, T. Shoji*, A. Kato*, A. Manabe*, T. Araki**, H. Nozaki**, M. Harada**, Y. Kaneko**, J. Raabe***, J. Kohlbrecher***
(KEK, *TOYOTA Motor, **TOYOTA Central R&D Labs., ***PSI)

28aC- 3 Grain boundary and interface chemistry of a Dy-free Nd-Fe-B sintered magnet
° H. Sepehri-Amin, T. Ohkubo, T. Shima*, K. Hono (NIMS, *Tohoku Gakuin Univ.)
28aC- 4 Microstructure of fine grained high coercivity Nd-Fe-B sintered magnet
° H. Sepehri-Amin, Y. Une*, T. Ohkubo, K. Hono, M. Sagawa* (NIMS, *Intermetallics)

Rare-Earth Magnets II **10 : 45〜12 : 00** S. Hirosawa (Hitachi Metals)
28aC- 5 Study on improvement of coercive force in sintered Nd-Fe-B magnets using heat treatment
° Y. Nakahata*, **, B. Borkowski*, **, H. Shimoji*, **, K. Yamada***, T. Todaka**, M. Enokizono**
(*Oita Prefectural Organization for Industry Creation, **Oita Univ., ***Saitama Univ.)
28aC- 6 Development of electromagnetic processing apparatus for sintered Nd-Fe-B magnets
° T. Akiya*, F. Sato*, H. Kato*, ** (*Tohoku Univ., **Yamagata Univ.)
28aC- 7 Surface state and magnetization reversal in $Nd_2Fe_{14}B$-type single crystals
° R. Saito, D. Ogawa, Y. Mizuno, K. Koike, H. Kato (Yamagata Univ.)
28aC- 8 Effect of post sinter annealing on magnetic properties of bulk $Sm_2Fe_{17}N_3$ sintered magnets
° D. Prabhu, H. Sepehri-Amin, C. L. Mendis, T. Ohkubo, K. Hono, S. Sugimoto* (NIMS, *Tohuku Univ.)
28aC- 9 Direct synthesis of $Fe_{16}N_2$ from iron carboxylates
° S. Yamamoto, M. Takano (Kyoto Univ.)

Rare-Earth Magnets III **13 : 00〜14 : 30** T. Ohkubo (NIMS)
28pC- 1 Magnetic properties of Sm-Co wires produced by using in-rotating liquid spinning technique
° S. Matsumura, T. Todaka, M. Enokizono (Oita Univ.)
28pC- 2 Effect of Ti and C on magnetic anisotropy of Nd-Fe-B quenched ribbons
° Y. Nakanishi, M. Takezawa, Y. Morimoto, J. Yamasaki, M. Yagi* (Kyusyu Inst. Tech., *Sojo Univ.)
28pC- 3 Magnetic properties of Dy-diffused Nd-Fe-B powder prepared by crystallization from amorphous state
° I. Yamamoto, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)
28pC- 4 Evaluation of exchange coupling at the interface of $Nd_2Fe_{14}B(100)/\alpha$-Fe(110)
° D. Ogawa*, K. Koike**, S. Mizukami*, M. Oogane*, Y. Ando*, T. Miyazaki*, H. Kato*, **
(*Tohoku Univ., **Yamagata Univ.)
28pC- 5 Influence of dipolar interaction in $Nd_2Fe_{14}B$/Fe nanocomposite magnets
° S. Sato, S-J. Lee, C. Mitsumata*, H. Yanagihara, E. Kita (Univ. of Tsukuba, *Tohoku Univ.)
28pC- 6 Effect of exchange coupling of grain boundary phase on magnetic properties of Nd-Fe-B magnet
° Y. Yokoi, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)

——28th, Room D——

Symposium "Low Invasive Diagnosis and Therapy Using Magnetics"
9 : 00〜10 : 30 M. Abe (Tokyo Inst. Tech.)
28aD- 1 Magnetically guided drug delivery system using magnetic capsules
° Y. Kitamoto, T. Fuchigami, R. Kawamura, M. Nakagawa*, Y. Namiki**
(Tokyo Inst. Tech., *Tohoku Univ., **Jikei Univ. School of Medicine)
28aD- 2 Development of cancer therapies using a novel magnetic material
° R. Kurotani (Yamagata Univ.)
28aD- 3 Protein purification system using magnetic beads modified with gold nanoparticles
° S. Seino, Y. Okada, T. Y. Takano, T. Doi, Y. Koga, T. Nakagawa, T. A. Yamamoto (Osaka Univ.)

10 : 45〜12 : 15 Y. Takemura (Yokohama National Univ.)
28aD- 4 Enhanced potency of anticancer drugs by exposure to magnetic fields
° M. Kakikawa, S. Yamada (Kanazawa Univ.)
28aD- 5 Medical applications of magnetic actuators
° K. Ishiyama (Tohoku Univ.)
28aD- 6 Development of element technology of transcranial magnetic stimulation for noninvasive therapy
° Y. Katayama, K. Iramina (Kyushu Univ.)

——28th, Room E——

Magnetic Dots **10 : 00〜11 : 45** K. Matsuyama (Kyusyu Univ.)

28aE- 1 Magnetization reversal of Co/Pt multilayer dot array by in-plane pulse field
° Y. Suyama, N. Kikuchi, S. Okamoto, O. Kitakami (Tohoku Univ.)

28aE- 2 Switching field distribution in Co/Pt dot arrays
° N. Kikuchi, Y. Murayama, T. Yamaku, S. Okamoto, O. Kitakami, Y. Murakami, D. Shindo (Tohoku Univ.)

28aE- 3 Study on the CPW-FMR measurement of Ni-Fe rectangle dots
Y. Endo, ° N. Sakashita, Y. Shimada, M. Yamaguchi (Tohoku Univ.)

28aE- 4 Fabrication and magnetization process of [001] $L1_0$-FePtRh pattern with exchange coupling between dots by flat-patterning method using atomic diffusion
° T. Tomioka, T. Hasegawa, S. Takahasi, Y. Kondo*, S. Ishio
(Akita Univ., *Akita Industrial Technology Center)

28aE- 5 Micromagnetic approach to arrays of small FePt dots with perpendicular anisotropy
° Z. Yan, S. Takahashi, Y. Kondo*, J. Ariake*, S. Ishio (Akita Univ., *Akita Industrial Technology Center)

28aE- 6 Fabrication of $L1_0$-FePtRh ferro-paramagnetic pattern by flat-patterning method using Fe ion irradiation
° H. Kawato, T. Hasegawa, S. Nagamachi*, S. Ishio (Akita Univ., *Ion Technology Center)

28aE- 7 External magnetic field effects for arc signal pattern in MFM image generated by magnetic nano-contacts
° K. Miyake, T. Kaneko*, H. Imamura*, Y. Saki, S. Kawasaki, K. Sato**, T. Shima**, M. Doi**, S. Tanaka***,
Y. Majima***, M. Sahashi (Tohoku Univ., *ASIT, **Tohoku Gakuin Univ., ***Tokyo Inst. Tech.)

Thin Films I (Magnetic Domain Wall) **13 : 15〜14 : 30** N. Kikuchi (Tohoku Univ.)

28pE- 1 Numerical study of current-induced domain wall motion in a perpendicular magnetic anisotropy nanowire in the presence of wall pinning
° A. Ooba, Y. Fujimura, T. Komine, R. Sugita (Ibaraki Univ.)

28pE- 2 Change of magnetic properties in [Co/Pd] nanowires with parallel-aligned dents by nano-indentation
° M. Okuda, Y. Miyamoto, N. Hayashi (NHK)

28pE- 3 Phase control of spin wave by domain wall and application for logic operator
° K. Nagai, Y. Nakashima, T. Tanaka, K. Matsuyama (Kyushu Univ.)

28pE- 4 DW depinning properties of nanostructured Fe crossbar patterns
° T. Takashima, K. Noda, K. Ito, Anis Faridah Mh Nor*, T. Tanaka, K. Matsuyama
(Kyushu Univ., *Malaya Univ.)

28pE- 5 Reducing critical current density by reducing pinning sites in current-induced domain wall motion of rare-earth transition metal micro wire
° N. Kato, A. Matsumoto, X. Liu, A. Morisako (Shinshu Univ.)

——28th, Room F——

High Frequency Devices I **9 : 30〜10 : 30** M. Sonehara (Shinshu Univ.)

28aF- 1 A study on hybrid inductor composed of ferrite and magnetic particle
° S. Nezuka, T. Nezuka, S. Nagai, S. Ikeda, H. Nishida, Y. Sakurai (Toyama Nat. Coll. Tech.)

28aF- 2 Permeability measurement of magnetic thin film by meander type probe up to 10.8 GHz
° A. Sato, S. Yabukami, T. Ozawa, Y. Miyazawa*, K. Yanagi*, Y. Shimada**, M. Munakata***, T. Shiokawa
(Tohoku Gakuin Univ., *Toei Scientific Industrial, **Tohoku Univ., ***Sojo Univ.)

28aF- 3 Shielding effect of ferromagnetic thin film noise suppressor applied to IC chip
° S. Muroga, Y. Endo, W. Kodate, Y. Sasaki, K. Yoshikawa*, Y. Sasaki*, M. Nagata*, M. Yamaguchi
(Tohoku Univ., *Kobe Univ.)

28aF- 4 Measurements of intra/inter-decoupling for an IC Chip integrated with magnetic thin-film
° W. Kodate, Y. Endo, Y. Mitsuzuka, M. Yamaguchi (Tohoku Univ.)

High Frequency Devices II **10 : 45〜12 : 00** S. Yabukami (Tohoku Gakuin Univ.)

28aF- 5 Film thickness ratio dependence of resistance in Cu/NiFe multilayered thin film coplanar transmission lines
° N. Sato, Y. Endo, M. Yamaguchi, S. Salomon*, A. Savan*, A. Ludwig* (Tohoku Univ., *Ruhr Univ. Bochum)

28aF- 6 Design method of planer power inductor for one-chip DC-DC converter
° M. Furuta, Y. Shimada, M. Yamaguchi (Tohoku Univ.)

28aF- 7 Investigation of permeability control in tunable magnetic thin film devices
° M. Yuki, M. Sonehara, T. Sato, K. Ikeda* (Shinshu Univ., *Taiyo Yuden)

28aF- 8 Preparation and characterization of Fe based amorphous particle dispersion composite material for planer power inductor core
° Y. Sugawa, H. Kobayashi, T. Sato, M. Sonehara (Shinshu Univ.)

28aF- 9 Fabrication and characterization of VHF helical antenna using Fe based amorphous particle dispersion composite material
° T. Maeda, T. Sato, M. Sonehara (Shinshu Univ.)

Control of Photo-Electromagnetic Waves **13 : 00〜14 : 30** M. Sonehara (Shinshu Univ.)

28pF- 1 Electro-magnetic wave absorption characteristics of powder-type magnetic wood using magnetic wood powder (1)
° A. Ito, H. Oka, K. Kubota, Y. Namizaki* (Iwate Univ., *Iwate Industrial Research Institute)

28pF- 2 Broadband electromagnetic wave absorption by providing magnetic loss
° M. Itoh, K. Machida (Osaka Univ.)

28pF- 3 Electromagnetic-wave absorption properties of carbon micro-coil coated by ferrites II
° A. Sano, M. Gomi, Y. Higashida*, Y. Ikuhara*, Y. Sasaki*, Y. Hishikawa**, K. Kawabe**
(Nagoya Inst. Tech., *JFCC, **CMC Tech. Develop.)

28pF- 4 High permeability features and EM noise suppression characteristics of Fe-B-P sub-micron particle chains
° C. Yao, Y. Shimada*, S. Muroga*, G. Qin, W. L. Pei, S. Okamoto*, O. Kitakami*, Y. Endo*, M. Yamaguchi*
(Northeastern Univ., *Tohoku Univ.)

28pF- 5 Investigation of enhanced magneto-optical effects in composite films with magnetic garnets and Au particles
° H. Uchida, Y. Nakai, Y. Mizutani*, M. Inoue* (Tohoku Inst. Tech., *Toyohashi Univ. Tech.)

28pF- 6 Noble metal-metalized magnetophotonic crystals as an approach to biosensor applications
° A. Baryshev, K. Kawasaki*, T. Goto*, M. Inoue* (*Toyohashi Univ. Tech.)

Presentation of Prize & Special Session

28 September 2011
International conference room, TOKI Messe
15 : 00〜16 : 00 Presentation of Prize
16 : 00〜17 : 00 Special Session

Reception Party

18 : 00〜20 : 00 Room TOKI, Hotel Nikko Niigata

——29th, Room A——

Magnetic Recording Media I **9 : 15〜10 : 30** H. Muraoka (Tohoku Univ.)

29aA- 1 High-resolution MFM imaging for perpendicular magnetic recording media by using very thin FePt coated high-coercivity tips fabricated with UHV sputtering system
° S. Yasui, G. Egawa, S. Yoshimura, A. Ito*, H. Kawamura*, H. Saito (Akita Univ., *Nitto Optical)

29aA- 2 Structure and perpendicular anisotropy of MBE grown FePd-Ag granular films
° Y. Seto, R. Ikeda, T. Kato, S. Iwata (Nagoya Univ.)

29aA- 3 Structure and magnetic properties of magnetic $L1_0$ ordered alloy epitaxial thin films formed on MgO(001) single-crystal substrates
° S. Ouchi, M. Ohtake, F. Kirino*, M. Futamoto (Chuo Univ., *Tokyo National Univ. Fine Arts and Music)

29aA- 4 Reduction of process temperature by adding Au to very thin FePt ordered alloy films with perpendicular magnetic anisotropy

° M. Tanaka, Y. Ogata, S. Nakagawa (Tokyo Inst. Tech.)

29aA- 5 Highly $L1_0$-ordered FePtAgC granular films for thermally-assisted magnetic recording (TAR) media on naturally oxidized Si substrates

° B. Varaprasad, L. Zhang, C. Ming, Y. K. Takahashi, B. C. Stipe, K. Hono (NIMS)

Magnetic Recording Media II **10 : 45〜11 : 45** R. Sugita (Ibaraki Univ.)

29aA- 6 Quantitative evaluation of intergranular exchange coupling field for granular media by Q-band ferromagnetic resonance

° S. Hinata, S. Saito, D. Hasegawa*, M. Takahashi (Tohoku Univ., *Waseda Univ.)

29aA- 7 Thickness evaluation of columnar-growth microstructure for CoPtCr-SiO_2 granular film

° S. Sasaki, Y. Sasaki*, S. Saito*, M. Takahashi* (Ichinoseki Nat. Coll. Tech., *Tohoku Univ.)

29aA- 8 Relationship between exchange coupling and ferromagnetic resonance peak widths of Fe-Co base anti-ferromagnetic coupled soft magnetic underlayers

° H. Ohashi, A. Suzuki, Md.S Nur Hanani, N. Inaba (Yamagata Univ.)

29aA- 9 Effect of Boron addition to FeCo soft magnetic underlayer for perpendicular magnetic recording media

° G. Saemma, S. Takahashi, S. Matsunuma*, T. Inoue*, S. Nakagawa (Tokyo Inst. Tech, *Hitachi Maxell Energy)

Magnetic Recording Media III **13 : 00〜14 : 00** S. Matsunuma (Hitachi Maxell Energy)

29pA- 1 Long-term archival stability of Barium-ferrite magnetic tape

° O. Shimizu, Y. Murata, Y. Kurihashi, T. Harasawa, M. Asai, M. Sueki, H. Noguchi (Fujifilm)

29pA- 2 Perpendicular magnetic printing by using a multi-layered perpendicular anisotropy master medium

° R. Kawasaki, M. Onose, T. Komine, R. Sugita (Ibaraki Univ.)

29pA- 3 Perpendicular magnetic printing characteristics on cross-track direction

° T. Kawamae, T. Komine, R. Sugita (Ibaraki Univ.)

29pA- 4 Effect of spacing between master and slave media on printing characteristics

° M. Onose, R. Kawasaki, T. Komine, R. Sugita (Ibaraki Univ.)

Magnetic Recording Characteristics **14 : 15〜15 : 00** S. Nakagawa (Tokyo Inst. Tech.)

29pA- 5 Magnetization transition width at track edge in perpendicular magnetic recording

° K. Tsushima, K. Miura, H. Muraoka (Tohoku Univ.)

29pA- 6 Dependence of erase band width on recording condition of adjacent track

° M. Oguma, K. Miura, H. Muraoka, H. Katada*, Y. Nishida* (Tohoku Univ., *Hitachi)

29pA- 7 Analysis of erase band for high-track-density recording

° H. Katada, Y. Nishida, J. Aoyama, K. Miura*, H. Muraoka* (Hitachi, *Tohoku Univ.)

Simulations (Magnetic Recording) **15 : 15〜16 : 15** N. Inaba (Yamagata Univ.)

29pA- 8 A study on modeling of writing process for two-dimensional magnetic recording

° M. Yamashita, Y. Okamoto, Y. Nakamura, H. Osawa, K. Miura*, S. Greaves*, H. Aoi*, Y. Kanai**, H. Muraoka* (Ehime Univ., *Tohoku Univ., **Niigata Inst. Tech.)

29pA- 9 Magnetic field direction dependence of magnetic cluster size in ECC medium

° Y. Yamaguchi, Y. Kawada, T. Komine, R. Sugita (Ibaraki Univ.)

29pA-10 Switching of a spin in linear field

° Y. Uesaka, Y. Suzuki, O. Kitakami*, Y. Nakatani**, H. Fukushima***, N. Hayashi**** (Nihon Univ., *Tohoku Univ., **UEC, ***Independent, Chiba city, ****Independent, Musashino city)

29pA-11 Experimental verification of extended Arrhenius-Neel law in magnetic thin-film

° T. Masujima, K. Yoshida, S. Yamazaki (Kogakuin Univ.)

——29th, Room B——

Spin Torque Devices **9 : 45〜11 : 30** H. Imamura (AIST)

29aB- 1 Numerical simulation of oscillation modes in a MgO-based spin-torque oscillator
° K. Kudo, T. Nagasawa, H. Suto, T. Yang, K. Mizushima, R. Sato (Toshiba)

29aB- 2 Characterization of MgO-based spin-torque oscillator with perpendicular polarizer layer and planar oscillation layer
° H. Suto, T. Yang, T. Nagasawa, K. Kudo, K. Mizushima, R. Sato (Toshiba)

29aB- 3 Spin-torque oscillation in $Co_2MnSi/Ag/Co_2MnSi$ fully epitaxial CPP-GMR devices
R. Okura, ° Y. Sakuraba, T. Seki, M. Mizuguchi, K. Takanashi (Tohoku Univ.)

29aB- 4 Spin transfer induced microwave emission in Heusler alloy based current perpendicular to plane giant magnetoresistive pillars
° M. Hayashi, J. Sinha, Y. K. Takahashi, T. M. Nakatani, S. Mitani, K. Hono (NIMS)

29aB- 5 High power microwave emission in NCMR spin-torque oscillator and its mechanism
° Y. Okutomi*, T. Nakamura*, **, K. Miyake*, S. Hashimoto***, H. Iwasaki***, M. Doi****, M. Sahashi* (*Tohoku Univ., **JAXA, ***Toshiba, ****Tohoku Gakuin Univ.)

29aB- 6 Diode noise in $Co_xFe_{1-x}B/MgO$ magnetic tunnel junctions
° S. Miwa, S. Ishibashi, H. Tomita, K. Ando, T. Saruya*, T. Seki*, T. Nozaki*, H. Kubota*, K. Yakushiji*, A. Fukushima*, S. Yuasa*, Y. Suzuki (Osaka Univ., *AIST)

29aB- 7 RF amplification in a magnetic tunnel junction by using field-induced ferromagnetic resonance
° K. Konishi, D. Dixit*, A. Tulapurkar*, T. Nozaki**, H. Kubota**, A. Fukushima**, S. Yuasa**, Y. Suzuki (Osaka Univ., *Indian Inst. Tech., **AIST)

Spin Currents **13 : 00〜14 : 30** M. Mizuguchi (Tohoku Univ.)

29pB- 1 Spin transport in lateral spin-valve devices with Heusler alloys/Cu junctions.
° S. Oki*, N. Hashimoto*, Y. Maeda*, S. Yamada*, T. Kimura*, **, M. Miyao*, **, K. Hamaya*, *** (*Kyushu Univ., **CREST-JST, ***PRESTO-JST)

29pB- 2 Influence of sides in a thick Py nanodot on spin current absorptions
° S. Nonoguchi*, T. Nomura*, Y. Ando*, T. Kimura*, ** (*Kyushu Univ., **JST-CREST)

29pB- 3 Annealing temperature dependence of spin injection efficiency and spin diffusion length in NiFe/MgO/Ag lateral spin valves
° Y. Fukuma*, L. Wang*, H. Idzuchi**, Y. Otani*, ** (*RIKEN, **Univ. of Tokyo)

29pB- 4 Observation of long-distance-diffusive spin precession
° H. Idzuchi*, Y. Fukuma**, L. Wang**, S. Takahashi***, ****, S. Maekawa****, *****, Y. Otani*, ** (*Univ. of Tokyo, **RIKEN, ***Tohoku Univ., ****CREST, *****JAEA)

29pB- 5 Material dependence of spin current induced by spin pumping in $Ni_{1-x}Fe_x/Pt$ thin films
° T. Yoshino*, K. Ando*, H. Nakayama*, E. Saitoh*, **, *** (*Tohoku Univ., **JAEA, ***CREST-JST)

29pB- 6 Observation of spin motive forces induced by magnetic vortex core dynamics
° K. Tanabe*, D. Chiba*, S. Kasai**, J. Ohe***, ****, H. Kohno*****, S. Maekawa****, ******, T. Ono* (*Kyoto Univ., **NIMS, ***Toho Univ., ****CREST-JST, *****Osaka Univ., ******JAEA)

Spin Torque Switching **14 : 45〜16 : 15** S. Nakamura (Toshiba)

29pB- 7 Switching current and thermal stability of perpendicular CoFeB/MgO magnetic tunnel junctions
° H. Sato*, M. Yamanouchi*, K. Miura*, **, S. Ikeda*, S. Fukami*, R. Koizumi*, H. Gan*, K. Mizunuma*, F. Matsukura*, H. Ohno* (*Tohoku Univ., **Hitachi)

29pB- 8 Statistical variance of switching probability of spin-torque switching
° A. Fukushima, K. Yakushiji, H. Kubota, S. Yuasa, K. Ando (AIST)

29pB- 9 Spin transfer switching properties of CPP-GMRs with various compositions of Gd-Fe free layers
° K. Aoshima, Y. Hashimoto, N. Funabashi, K. Machida, Y. Ohtsuka*, K. Kuga, H. Kikuchi, N. Shimidzu (NHK, *Tokai Univ.)

29pB-10 Simulation of magnetization reversal process of permalloy thin film by pure spin current injection
° S. Honda*, **, H. Itoh*, ** (*Kansai Univ., **JST-CREST)

29pB-11 Effect of the external fields on SpinRAM switching time
° M. Shiomi, Y. Nakatani (UEC)

29pB-12 Fast SpinRAM simulation by GPU
° K. Oomaru, Y. Nakatani (UEC)

Spin Dynamics **16 : 30〜18 : 00** M. Amano (Toshiba)

29pB-13 Dynamic magnetization switching by the pulse voltage application
° Y. Shiota*, S. Murakami*, **, F. Bonell*, T. Nozaki*, **, T. Shinjo*, Y. Suzuki*, ** (*Osaka Univ., **JST-CREST)

29pB-14 Measurements of magnetizations dynamics in an antiferro-magnetically coupled film by using optical pump probe method
° H. Tomita, A. Khorsand*, T. Seki**, A. Kirilyuk*, A. Kimel*, T. Rasing*, Y. Suzuki
(Osaka Univ., *Radboud Univ., **Tohoku Univ.)

29pB-15 Electric field induced ferromagnetic resonance in an ultrathin FeCo layer
° T. Nozaki*, **, Y. Shiota***, S. Murakami***, F. Bonell***, T. Shinjo***, Y. Suzuki***
(*AIST, **JST-PRESTO, ***Osaka Univ.)

29pB-16 Modulation of spinwave resonance frequency in multi-layered ferromagnetic wires
° Y. Kasatani*, A. Yamaguchi**, Y. Nozaki*, *** (*Keio Univ., **AIST, ***CREST-JST)

29pB-17 Low damping constant in Mn-Ga films with a large perpendicular magnetic anisotropy
° S. Mizukami, F. Wu, J. Walowski*, T. Kubota, X. Zhang, H. Naganuma, M. Oogane, A. Sakuma, Y. Ando, T. Miyazaki (Tohoku Univ., *Goettingen Univ.)

29pB-18 Optical detection of fast magnetization dynamics observed in $L1_0$-FePt thin films
S. Iihama, ° S. Mizukami, N. Inami, T. Hiratsuka, G. Kim, H. Naganuma, M. Oogane, Y. Ando (Tohoku Univ.)

——29th, Room C——

Contactless Power Transmission **9 : 45〜10 : 45** T. Honda (Kyushu Inst. Tech.)

29aC- 1 Analysis of a mid-range energy transfer circuit based on an equivalent circuit model
° I. Sasada (Kyushu Univ.)

29aC- 2 Basic examination of RF contactless power transmission system by moving magnetic field
° M. Torii, T. Takura, F. Sato, T. Sato, H. Matsuki (Tohoku Univ.)

29aC- 3 Contactless power transmission system of station-type charger in mobile device
° T. Futatsumori, T. Nonaka, T. Takura*, F. Sato*, H. Matsuki*, T. Sato*
(Hachinohe Nat. Col. Tech., *Tohoku Univ.)

29aC- 4 Meander type high efficient contactless power station system for moving EV using scale model
° J. Morita, T. Takura, F. Sato, T. Sato, H. Matsuki (Tohoku Univ.)

Magnetic Actuators **11 : 00〜12 : 00** S. Yamada (Kanazawa Univ.)

29aC- 5 Optimal placement of permanent magnets in hybrid magnetic levitation system for thin steel plate (Fundamental considerations on influence of gap between permanent magnet and steal plate)
° T. Narita, K. Yoshida, T. Nameki, S. Hasegawa, Y. Oshinoya, H. Kasuya (Tokai Univ.)

29aC- 6 Simultaneous operation of multiple underwater microrobots using external magnetic fields
° Y. Yamamatsu, T. Honda (Kyushu Inst. Tech.)

29aC- 7 Thrust improvement by wing shape for magnetically driven flying microrobot
° Y. Yasuoka, T. Honda (Kyushu Inst. Tech)

29aC- 8 Cableless in-piping magnetic actuator capable of locomotion by a new motion principle
T. Izumikawa, ° R. Watanabe, K. Kato, H. Yaguchi (Tohoku Gakuin Univ.)

Power Magnetics I **13 : 30〜14 : 45** O. Ichinokura (Tohoku Univ.)

29pC- 1 Characteristics improvement of a single-phase input three-phase parametric motor using a segment core-type stator
° H. Kasahara, M. Yoshida*, Y. Sakamoto (Hachinohe Inst. Tech., *Hachinohe Nat. Col. Tech.)

29pC- 2 Low-voltage driving of a laminated core parametric motor
° M. Yoshida, H. Kasahara*, M. Ohta*, Y. Sakamoto* (Hachinohe Nat. Col. Tech., *Hachinohe Inst. Tech.)

29pC- 3 Development and application to a clutch of environmentally-friendly MR fluid (V)
° T. Imai, S. Takata, R. Hanaoka, T. Fukami, K. Shima, K. Takamoto*, H. Kaneda*
(Kanazawa Inst. Tech., *Kanden Engineering)

29pC- 4 Active control of small vehicle seat with voice coil motor (Comparison of the control performances during driving on a bad road)
° H. Kato, K. Nakashima, Q. Lan, S. Hasegawa, Y. Oshinoya (Tokai Univ.)

29pC- 5 Calculation of losses of a capacitor motor with locked rotor
° T. Ogasawara, K. Tajima (Akita Univ.)

Power Magnetics II **15 : 00〜16 : 15** Y. Sakamoto (Hachinohe Inst. Tech.)

29pC- 6 Basic characteristics of 18-legs type three-phase laminated-core variable inductor
° M. Nagao, K. Nakamura, T. Ohinata*, K. Arimatsu*, K. Sakamoto*, O. Ichinokura
(Tohoku Univ., *Tohoku Electric Power)

29pC- 7 SR motor having permanent magnets and windings in the stator yoke
° Y. Hasegawa, K. Nakamura, O. Ichinokura (Tohoku Univ.)

29pC- 8 Development of in-wheel SR motor for electric bus
° H. Sato, Y. Kawatsu, H. Yagura, H. Goto, O. Ichinokura (Tohoku Univ.)

29pC- 9 Long-time running analysis of electric bus with SR motors utilizing realtime-workshop
° R. Kabasawa, H. Goto, O. Ichunokura (Tohoku Univ.)

29pC-10 Examination of magnetic gear using polar anisotropic bond magnet
° M. Fukuoka, K. Nakamura, O. Ichinokura (Tohoku Univ.)

Electromagnetic Analysis **16 : 30〜17 : 30** S. Hasegawa (Tokai Univ.)

29pC-11 A method for calculating eddy current loss distribution considering magnetic reaction field based on reluctance network analysis
° Y. Yoshida, K. Nakamura, O. Ichinokura (Tohoku Univ.)

29pC-12 Analysis of shielded magnetic fields using infinite elements
° H. Igarashi, Y. Watanabe, H. Sakamoto, K. Watanabe (Hokkaido Univ.)

29pC-13 Magnetic hysteresis modeling based on micromagnetics incorporating eddy current losses.
° Y. Uehara, K. Shimizu, J. Fujisaki, A. Furuya, H. Oshima*, J. Masuko**
(Fujitsu, *Fujitsu Laboratory, **Shinshu Univ.)

29pC-14 Quasi-static finite element analysis of magnetostrictive energy harvester
B. Rezaeealam, T. Ueno, ° S. Yamada (Kanazawa Univ.)

——29th, Room D——

Symposium "Magnetic and Magneto-transport Properties in Graphene"
13 : 00〜14 : 30 H. Kawanaka (AIST)

29pD- 1 Low temperature graphene synthesis by using microwave plasma CVD
° M. Hasegawa, J. Kim, M. Ishihara, Y. Koga, K. Tsugawa, T. Yamada, S. Iijima (AIST)

29pD- 2 Multiple spin state analysis of zigzag edge modified nano graphene
° N. Ota, N. Gorjizadeh*, Y. Kawazoe* (Univ. of Tsukuba, *Tohoku Univ.)

29pD- 3 Magnetic properties of graphene with edge and curvature
° K. Takai (Tokyo Inst. Tech.)

14 : 45〜16 : 45 Y. Kobayashi (Tokyo Medical Univ.)

29pD- 4 Calculation of magnetoresistance in FM/graphene/FM junctions
° S. Honda, H. Itoh, R. Sato*, A. Yamamura*, T. Hiraiwa*, J. Inoue*
(Kansai Univ., *Nagoya Univ.)

29pD- 5 Bias dependence of spin signals in graphene
M. Shiraishi*, **, ° E. Shikoh* (*Osaka Univ., **JST-PRESTO)

29pD- 6 STS observations of Landau quantization and edge states on graphite
° T. Matsui, K. Tagami*, Y. Niimi**, H. Kambara***, M. Tsukada****, H. Fukuyama
(*Univ. of Tokyo, **Advanced Corporation, ***Shinshu Univ., ****Tohoku Univ.)

29pD- 7 Quantum Hall transport in graphene junctions
° T. Osada, K. Uchida, A. Tsukuda, H. Okunaga, T. Konoike (Univ. of Tokyo)

——**29th, Room E**——

High Field Applications **9 : 15〜10 : 15** S. Seino (Osaka Univ.)

29aE- 1 Fundamental study on control of position for magnetic wire as medical application
° S. Tahara, S. Kim, H. Onodera* (Okayama Univ., *Nishitaga Hospital)

29aE- 2 Development of the device for high throughput high quality protein crystal growth using high magnetic force
° N. Hirota, H. Wada, M. Kiyohara*, M. Tanokura**, E. Suzuki***, A. Kita****
(NIMS, *Kiyohara Optics, **Univ. of Tokyo, ***Ajinomoto, ****Kyoto Univ.)

29aE- 3 Study on dynamic behavior of the magnetic particles by magnetic chromatography using 2D hydromagnetics analysis
° Y. Kouzai, S. B. Kim, S. Noguchi* (Okayama Univ., *Hokkaido Univ.)

29aE- 4 Influence of magnetic flux density on oriented structure in piezoelectric ceramics
° S. Tanaka, K. Uematsu, H. Shimizu*, Y. Doshida* (Nagaoka Univ. Tech., *Taiyo Yuden)

Multiferroics **10 : 30〜12 : 00** Y. Kobayashi (Tokyo Medical Univ.)

29aE- 5 Influence of Bi defects on electric properties of $BiFeO_3$ sputtered films
° T. Hattori, T. Ando, J. Yan, T. Yokota, M. Gomi (Nagoya Inst. Tech.)

29aE- 6 Influence of excess Bi on the electric properties of multiferroic $Bi_{m+1}Fe_{m-3}Ti_3O_{3m+3}$ thin films
° K. Yamaguchi, Y. Toida, T. Yokota, M. Gomi (Nagoya Inst. Tech.)

29aE- 7 Preparation and characterization of $SrFe_{12}O_{19}$-$BiFeO_3$ layered structures
° S. Kaneko, Y. Yasukawa, X. Liu, A. Morisako (Shinshu Univ.)

29aE- 8 Multiferroic properties in Heusler/perovskite layered structures
° K. Kobayashi, K. Ueda, H. Asano (Nagoya Univ.)

29aE- 9 Magneto-electoric effect of $CuFe_2O_4$-$BaTiO_3$ multi-layered thin films
° T. Kezuka, K. Kakizaki, K. Kamishima, N. Hiratsuka (Saitama Univ.)

29aE-10 Magneto-electric effect of Co ferrite thin films deposited on PZT substrate
° K. Io, K. Kakizaki, K. Kamishima, N. Hiratsuka (Saitama Univ.)

Magneto-Optics I **13 : 00〜14 : 15** M. Inoue (Toyohashi Univ. Tech.)

29pE- 1 Preparation and characterization of highly Bi-substituted YIG magnetic thin films grown on glass substrates
° S. Ikehara, K. Wada*, T. Kobayashi*, S. Goto*, T. Yoshida*, T. Nishi, T. Ishibashi*
(Kobe City College Tech., *Nagaoka Univ. Tech.)

29pE- 2 Magneto-optical and optical characterization of Bi-substituted $Y_3Fe_5O_{12}$ films prepared by the metal-organic decomposition method
° S. Tang, S. Gotoh, T. Kosaka, M. Sakurai*, T. Moriyama*, T. Ishibashi
(Nagaoka Univ. Tech., *HORIBA Scientific)

29pE- 3 Magneto-optical properties of GMR films with Pt/Co multilayer as a free layer
° S. Gotoh, S. Tang, M. Naganuma, K. Aoshima*, N. Funabashi*, K. Machida*, K. Kuga*, H. Kikuchi*,
N. Shimidzu*, T. Ishibashi (Nagaoka Univ. Tech., *NHK)

29pE- 4 Magneto-optical imaging of GMR periodic structure with perpendicular anisotropy
° Y. Oshino, T. Kobayashi, K. Wada, N. Funabashi*, K. Aoshima*, K. Machida*, K. Kuga*, H. Kikuchi*, N. Shimidzu*, A. Emoto**, T. Shioda, H. Ono, T. Ishibashi (Nagaoka Univ. Tech., *NHK, **AIST)

29pE- 5 MO properties of diffraction pattern of GMR periodic patterns with perpendicular magnetization.
° K. Wada, T. Kobayashi, Y. Oshino, H. Ono, T. Shioda, A. Emoto*, K. Machida**, N. Funabashi**, K. Aoshima**, K. Kuga**, H. Kikuchi**, N. Shimidzu**, T. Ishibashi (Nagaoka Univ. Tech., *AIST, **NHK)

Magneto-Optics II **14 : 30〜15 : 45** T. Ishibashi (Nagaoka Univ. Tech.)

29pE- 6 Magneto-optical property of rare-earth substituted $CoFeCrO_4$ thin film
° T. Misu, N. Sakamoto, N. Adachi*, K. Shinozaki**, H. Suzuki, N. Wakiya (Shizuoka Univ., *Nagoya Tech., **Tokyo Inst. Tech.)

29pE- 7 Faraday effect in plasmonic nanorod measured by laser diode
° G. Du, S. Saito, M. Takahashi (Tohoku Univ.)

29pE- 8 Selective crystallization of magnetic garnet films on dielectric mirror films with laser annealing technique
° Y. Suzuki, Y. Eto, T. Goto, H. Takagi, P. B. Lim, A. V. Baryshev, M. Inoue (Toyohashi Univ. Tech.)

29pE- 9 Fabrication of micro-cavity films with magneto-and electro-optic materials
° T. Goto, R. Isogai, Y. Suzuki, R. Araki*, H. Takagi, M. Inoue (Toyohashi Univ. Tech., *Ushio Inc.)

29pE-10 Formation of nano-scale magnetic pixels into amorphous TbFe films with perpendicular magnetization and the light modulation properties for 3-dimensional display
° T. Yonezawa, Y. Eto, K. Nakamura, H. Takagi, M. Inoue (Toyohashi Univ. Tech.)

Magnetostriction & Magnetic Anisotropy **16 : 00〜17 : 45** H. Mamiya (NIMS)

29pE-11 Super magnetostriction and soft magnetic properties of Ni_2MnGa
° M. Matsui (Nagoya Ind. Sci. Res. Inst.)

29pE-12 Structure and electrical properties of inverse perovskite Mn_3GaN thin films
H. Tashiro, ° T. Miyawaki, K. Ueda, H. Asano (Nagoya Univ.)

29pE-13 A study of magnetostriction and structure of Fe-B films
° T. Kawai, S. Ouchi, M. Ohtake, M. Futamoto (Chuo Univ.)

29pE-14 Preparation and magnetic properties of Nd-Fe-B permanent magnet thin films
° Y. Ota, X. Liu, A. Morisako (Shinsyu Univ.)

29pE-15 Anomaly in magnetic anisotropy of epitaxial MnSb thin films
° N. Nishizawa, T. Takita, H. Munekata (Tokyo Inst. Tech.)

29pE-16 Thickness dependence of magnetic properties of CoPt perpendicular magnetic anisotropy film
° Y. Kawada, M. Onose, R. Kawasaki, T. Komine, R. Sugita (Ibaraki Univ.)

29pE-17 Evaluation of magnetosriction in arbitrary direction of non-oriented electrical steel sheet under stress conditions
° Y. Kai, Y. Tsuchida*, T. Todaka*, M. Enokizono*
(Oita Prefectural Organization for Industry Creation, *Oita Univ.)

——29th, Room F——

Thin Films II (Exchange Coupling, Crystal Growth)
9 : 15〜10 : 30 M. Tsunoda (Tohoku Univ.)

29aF- 1 Effect of interfacial impurities on antiferromagnetic coupling between Fe_3O_4/Fe(001)
° H. Yanagihara, H. Kamita, E. Kita, H. Itoh*, S. Honda*, K. Mibu**, T. Kida***, J. Inoue***
(Univ. of Tsukuba, *Kansai Univ., **Nagoya Inst. Tech., ***Nagoya Univ.)

29aF- 2 Interlayer exchange coupling in Fe/Fe_3O_4/MgO(001) epitaxial film grown by reactive magnetron sputtering
° K. Miura, M. Myoka, H. Yanagihara, E. Kita (Univ. of Tsukuba)

29aF- 3 Selective growth of epitaxial Fe_3O_4 and γ-Fe_2O_3 films with a reactive rf-sputtering method
° M. Myoka, K. Miura, M. Minagawa, H. Yanagihara, E. Kita, K. Mibu*
(Univ. of Tsukuba, *Nagoya Inst. Tech.)

29aF- 4 The effects of magnetic field during deposition on the magnetic properties of $BaFe_{12}O_{19}$ thin films prepared using dynamic aurora PLD
° D. Suzuki, N. Sakamoto, K. Shinozaki*, H. Suzuki, N. Wakiya (Shizuoka Univ., *Tokyo Inst. Tech.)

29aF- 5 Effect of magnetic field during deposition on magnetic property of spinel ferrite thin films prepared using dynamic aurora PLD
° N. Wakiya, T. Kubo, N. Sakamoto, K. Shinozaki*, H. Suzuki (Shizuoka Univ., *Tokyo Inst. Tech.)

Thin Films III (Crystal Growth) **10 : 45〜12 : 00** S. Tomita (NAIST)

29aF- 6 Effect of CuP addition on reducing the ordering temperature of FePt thin films
° H. Sato, K. Hasegawa*, T. Asaki*, K. Kakizaki, K. Kamishima, N. Hiratsuka (Saitama Univ., *Ishifuku Metal Industry)

29aF- 7 (001) oriented FePt thin films with (200)Fe under layer
° T. Kono, T. Haeiwa (Shinshu Univ.)

29aF- 8 Structure analysis of Co and CoCrPt thin films formed on Au(111) underlayers
° K. Kobayashi, M. Ohtake, F. Kirino*, M. Futamoto (Chuo Univ., *Tokyo National Univ. of Fine Arts and Music)

29aF- 9 Perfect hcp atomic-layer stacking for sputtered Co film with c-plane sheet texture (I)
° S. Saito, S. Hinata, M. Takahashi (Tohoku Univ.)

29aF-10 Perfect hcp atomic-layer stacking for sputtered Co film with c-plane sheet texture (II)
° S. Hinata, S. Saito, T. Kimura, D. Hasegawa*, M. Takahashi (Tohoku Univ., *Waseda Univ.)

Thin Films IV (Ferromagnetic Resonance)
13 : 00〜14 : 45 H. Awano (Toyota Tech. Inst.)

29pF- 1 Dependence of damping constant on the perpendicular anisotropy for sputtered Co/Ni multilayers
T. Kato, ° Y. Matsumoto, S. Okamoto*, N. Kikuchi*, O. Kitakami*, S. Tunashima**, S. Iwata (Nagoya Univ., *Tohoku Univ., **NISRI)

29pF- 2 Ferromagnetic resonance experiment and Gilbert damping evaluation in Co/Pt multilayer
° J. Li, N. Kikuchi, S. Okamoto, O. Kitakami, T. Shimatsu, H. Aoi, T. Kato*, S. Iwata* (Tohoku Univ., *Nagoya Univ.)

29pF- 3 Measurement of damping factor of permalloy thin film by shorted microstrip line method
° S. Takeda, T. Hotchi*, S. Motomura*, H. Suzuki*, S. Mizukami**, T. Miyazaki** (Magnontech, *Keycom, **Tohoku Univ.)

29pF- 4 Effect of 3d-5d transition metal doping on the damping constant of Ni-Fe thin films
° Y. Endo, Y. Mitsuzuka, K. Okawa, Y. Shimada, M. Yamaguchi (Tohoku Univ.)

29pF- 5 Effects of FeCoB layer thickness on ferromagnetic resonance of Ru/FeCoB multilayers
° R. Yohena, Y. Mashiko, K. Hirata, S. Nakagawa (Tokyo Inst. Tech.)

29pF- 6 Damping constant in magnetic resonance of meta-materials
° C. Mitsumata, S. Tomita* (Tohoku Univ., *NAIST)

29pF- 7 Ferromagnetic resonance in artificially controlled twisted magnetic structures
° T. Seki, K. Utsumiya, Y. Watanabe, K. Takanashi (Tohoku Univ.)

Thin Films V (Magnetic Anisotropy) **15 : 00〜16 : 30** S. Saito (Tohoku Univ.)

29pF- 8 Electronic structure and magneto anisotropy in ordered and disordered $L1_0$ type FePt alloys
° Y. Kota, C. Mitsumata, A. Sakuma (Tohoku Univ.)

29pF- 9 First-principles calculations of the magnetic anisotropy in FeNi ordered alloys and Fe/Ni multilayers
° S. Ozaki, Y. Kuwahara, Y. Miura, K. Abe, M. Shirai (Tohoku Univ.)

29pF-10 Study of perpendicular magnetic anisotropy in interface controlled Co/Pd multilayer by MBE
° K. Suzuki, N. Go, S. Emoto, M. Itou*, Y. Sakurai*, H. Sakurai (Gunma Univ., *JASRI)

29pF-11 Voltage-induced coercivity control in an FePt thin film
° T. Seki, M. Kohda, J. Nitta, K. Takanashi (Tohoku Univ.)

29pF-12 Magnetic characteristics of Fe/MgO multilayers grown on GaAs substrate
° K. Noda, K. Ito, T. Takashima, T. Tanaka, A. Faridah*, K. Matsuyama (Kyushu Univ., *Malaya Univ.)

——30th, Room A——

Patterned Media I **9 : 00〜10 : 00** Y. Hosoe (Hitachi)

30aA- 1 Wider ordering of self assembly prepared SiO_2 nano-template
° N. Ogawa, A. Tsukamoto, A. Itoh (Nihon Univ.)

30aA- 2 Fabrication of nano structured metal/dielectric under layer by self-assembled nano-silica particles
° S. Fujii, K. Mizusawa*, A. Tsukamoto, A. Itoh (Nihon Univ., *Toshiba)

30aA- 3 Control of magnetic properties of MnAl films by Kr^+ ion irradiation
° D. Oshima, T. Kato, S. Iwata, S. Tsunashima* (Nagoya Univ., *NISRI)

30aA- 4 Fabrication of bit patterned structure of MnBiCu thin films by Kr^+ ion irradiation
° R. Kanbara, S. Jyo, T. Kato, S. Tsunashima*, S. Iwata (Nagoya Univ., *NISRI)

Patterned Media II **10 : 15〜11 : 30** T. Kato (Nagoya Univ.)

30aA- 5 Fabrication and magnetic properties of $L1_0$-FePt nano dot arrays using micro fabricating/annealing process
° S. Takahashi, Y. Kondo*, T. Hasegawa, H. Yamane*, M. Suzuki**, N. Kawamura**, M. Mizumaki**, J. Ariake*, S. Ishio (Akita Univ., *AIT, **JASRI)

30aA- 6 Fabrication of [001] $L1_0$-FePtRh ferro-antiferromagnetic pattern by flat-patterning method using atomic diffusion
° T. Hasegawa, T. Tomioka, Y. Kondo*, H. Yamane*, S. Ishio (Akita Univ., *AIT)

30aA- 7 Evaluation of pattern quality by analyzing signal of patterned media fabricated by nitrogen ion implantation
° T. Hinoue, K. Ito, Y. Hirayama, Y. Hosoe (Hitachi)

30aA- 8 Performance evaluation of error correcting codes in BPM R/W channel
° Y. Nakamura, Y. Okamoto, H. Osawa, H. Aoi*, H. Muraoka* (Ehime Univ., *Tohoku Univ.)

30aA- 9 Study on write margin of bit patterned media
° K. Shirahata*, H. Saga*, **, K. Miura*, H. Aoi*, H. Muraoka* (*Tohoku Univ., **Hitachi)

——30th, Room B——

Spin Injection into Semiconductors I **9 : 00〜10 : 00** T. Sasaki (TDK)

30aB- 1 Room-temperature structural ordering of Fe_3Si thin films
° G. Takemoto*, S. Yamada*, S. Oki*, Y. Maeda*, K. Mibu**, M. Miyao*, K. Hamaya*, ***
(*Kyushu Univ., **Nagoya Inst. Tech., ***PRESTO-JST)

30aB- 2 Spin injection into p-type Si using the spin pumping and spin transport in the Si at room temperature
° E. Shikoh, K. Ando*, E. Saitoh*, M. Shiraishi (Osaka Univ., *Tohoku Univ.)

30aB- 3 Detection of spin accumulation created in Si using three-terminal Hanle-effect measurements
° K. Masaki*, Y. Ando*, Y. Maeda*, K. Kasahara*, Y. Hoshi**, K. Sawano**, M. Miyao*, K. Hamaya*, *** (*Kyushu Univ., **Tokyo City Univ., ***PRESTO-JST)

30aB- 4 Electrical detection of spin injection into GaAs from a $Co_{50}Fe_{50}$ electrode
° T. Uemura, T. Akiho, M. Harada, K. Matsuda, M. Yamamoto (Hokkaido Univ.)

Spin Injection into Semiconductors II **10 : 15〜11 : 30** E. Shikoh (Osaka Univ.)

30aB- 5 Detection of spin accumulation created electrically in n-Ge
° Y. Baba*, K. Kasahara*, K. Masaki*, Y. Ando*, Y. Hoshi**, K. Sawano**, M. Miyao*, K. Hamaya*, ***
(*Kyushu Univ, **Tokyo City Univ, ***PRESTO-JST)

30aB- 6 Electrical creation and detection of spin accumulation in groupIV semiconductor Ge
° S. Watanabe*, **, H. Saito**, Y. Mineno**, S. Iba**, S. Sharma**, R. Jansen**, S. Yuasa**, K. Ando**
(*Univ. of Tsukuba, **AIST)

30aB- 7 Fabrication of ferromagnetic Schottky junctions using diamond semiconductors
° T. Soumiya, N. Fukatani, T. Miyawaki, K. Ueda, H. Asano (Nagoya Univ.)

30aB- 8 Magnetoresistance in ferromagnet/graphene junctions: effects of contacts and disorder
° R. Sato, T. Hiraiwa, J. Inoue, S. Honda*, H. Ito* (Nagoya Univ., *Kansai Univ.)
30aB- 9 Electronic and magnetic structure of fullerene-cobalt compound/magnetic metal interface
° S. Sakai, Y. Matsumoto, M. Ohtomo, S. Entani, P. Avramov, H. Naramoto, Y. Takagi*, T. Nakagawa*, T. Yokoyama* (JAEA, *NINS)

——30th, Room C——

Magnetic Vortices & Magnetization Processes

9 : 00〜10 : 30 S. Kasai (NIMS)

30aC- 1 Stability of the vortex structure on the core switching by AC current
° T. Sato, Y. Nakatani (UEC)
30aC- 2 Effects of the magnetostatic coupling in dynamics of magnetic vortices
° S. Sugimoto*, **, Y. Fukuma**, Y. Otani*, ** (*Univ. of Tokyo, **RIKEN)
30aC- 3 Time resolved Kerr effect measurements of magnetic vortices
° Y. Fukuma*, S. Sugimoto*, **, Y. Otani*, ** (*RIKEN, **Univ. of Tokyo)
30aC- 4 Magnetic hysteresis scaling for incommensurate magnetic ordering in rare-earth metal Dy
° S. Kobayashi (Iwate Univ.)
30aC- 5 Change the magnetic resistance of sensitized Alloy 600
° S. Kanou, T. Takase, K. Yamaguchi (Fukushima Univ.)
30aC- 6 Simulation of magnetic properties for local magnetic particles-dispersed cluster
° K. Suzuki, K. Yamaguchi, T. Takase, O. Nittono (Fukushima Univ.)

——30th, Room D——

Soft Magnetic Materials I (Metals & Magnetic Properties)

9 : 00〜10 : 30 M. Ohta (Hitachi Metals)

30aD- 1 Dynamic magnetic domain observation of toroidal amorphous ribbon by stroboscopic method
° K. Sakaya, M. Takezawa, Y. Morimoto, J. Yamasaki (Kyushu Inst. Tech.)
30aD- 2 Magnetic propeties of model transformer core under DC-biased magnetization
° H. Inoue, T. Ueyama, H. Yamaguchi, S. Okabe, M. Ishida (JFE Steel)
30aD- 3 Production of bilayer ribbon consisting of sharp memory nd permalloy
° Y. Ninomiya, T. Todaka, M. Enokizono (Oita Univ.)
30aD- 4 Fe-Mn-Si/6.5%Si-Fe bilayer composite materials produced by using melt spinning technique
° D. Imamura, T. Todaka, M. Enokizono (Oita Univ.)
30aD- 5 Substrate dependence of magnetic properties on bismuth iron garnet prepared MOD technique
° N. Adachi, K. Yogo, K. Watanabe, T. Ota, K. Ishiyama* (Nagoya Inst. of Tech., *Tohoku Univ.)
30aD- 6 Preparation and magnetic properties of single phase Zn_2U hexaferrites
° R. Tajima, K. Kamishima, K. Kakizaki, N. Hiratsuka (Saitama Univ.)

Soft Magnetic Materials II (Ferrites & High Frequency Properties)

10 : 45〜11 : 45 K. Kamishima (Saitama Univ.)

30aD- 7 Synthesis of $ZnFe_2O_4$ particle by ultrasonic spray pyrolysis and its photocatalytic property
° T. Nunome, N. Sakamoto, H. Irie*, K. Shinozaki**, H. Suzuki, N. Wakiya (Shizuoka Univ, *Univ. of Yamanashi, **Tokyo Inst. Tech.)
30aD- 8 Fabrication and properties of Y-type hexagonal ferrite thin films
° S. Isomura, X. Liu, A. Morisako (Shinshu Univ.)
30aD- 9 Perpendicular magnetic anisotropy control of high frequency soft magnetic properties in Co-Al-N films
° H. Kijima*, S. Ohnuma*, **, H. Masumoto* (*Tohoku Univ., **RIEMM)
30aD-10 An investigation on uni-axial magnetic anisotropy of CoFe and CoSm thin films for the higher frequency by using the effects of underlays in the carrousel sputtering method
° K. Fukami*, M. Ohkoshi**, K. Maki***, S. I. Aoqui*, M. Munakata* (*Sojo Univ., **Kyusyu Inst. Tech., ***Sumitomo Metal Mining)