

PROGRAM

Sep. 3/RoomA

Magnetic Phase Transition		13 : 30 ~ 14 : 30	Chair: M. Futamoto (Chuo Univ.)
3pA-1	Suppression of aqueous corrosion of $\text{La}(\text{Fe}_{0.88}\text{Si}_{0.12})_{13}$ magnetic refrigerant by reduction of dissolved oxygen	^o S. Fujieda, K. Fukamichi, S. Suzuki (Tohoku Univ.)	
3pA-2	Relation between latent heat and progress rate in itinerant electron metamagnetic transition of $\text{La}(\text{Fe}_{0.88}\text{Si}_{0.12})_{13}$	^o A. Fujita, H. Yako, M. Kano (Tohoku Univ.)	
3pA-3	Magnetic and transport properties of Heusler alloy Pd_2MnIn	^o H. Okada, R. Y. Umetsu*, T. Kanomata, S. Awaji* (Tohoku Gakuin Univ., *Tohoku Univ.)	
3pA-4	Magnetic properties of $\text{Mn}_{3-x}\text{Cr}_x\text{Ga}$ with the DO_{22} type structure	^o T. Sasaki, H. Okada (Tohoku Gakuin Univ.)	

Magnetic Anisotropy I		14 : 45 ~ 16 : 15	Chair: M. Sahashi (Tohoku Univ.)
3pA-5	Magnetic field dependence of the magnetic Compton profile in the Fe/MgO multilayer film	^o S. Takubo, T. Kato, K. Homma*, S. Emoto, K. Suzuki, H. Sakurai, M. Itou**, Y. Sakurai** (Gunma Univ., *Tohoku Univ., **JASRI)	
3pA-6	Magnetostriction behavior of Fe epitaxial films with different orientations	^o T. Aida, T. Ohtani, T. Kawai, M. Ohtake, M. Futamoto (Chuo Univ.)	
3pA-7	Magnetostriction behavior of FePd, FePt, CoPd, and CoPt alloy thin films under rotating magnetic fields	^o T. Ohtani, T. Kawai, M. Ohtake, M. Futamoto (Chuo Univ.)	
3pA-8	In-situ observation of anisotropic stress in FeCoB films with high magnetic anisotropy	^o H. Hayashibara, R. Yohena, S. Nakagawa (Tokyo Inst. Tech.)	
3pA-9	Aging variation of magnetic properties of ultra-thin CoPt perpendicular magnetic anisotropy films	^o H. Kawamura, R. Tojo, R. Sugita (Ibaraki Univ.)	
3pA-10	Study on magnetic anisotropy of magnetostrictive film by difference of thermal expansion coefficient	^o Y. Miwa, G. Kitazawa, J. W. Shin, S. Hashi, K. Ishiyama (Tohoku Univ.)	

Magnetic Physics		16 : 30 ~ 17 : 45	Chair: A. Fujita (Tohoku Univ.)
3pA-11	Magnetism of two dimensional Kondo lattices	^o T. Okano, T. Nakamura, A. Wakatsuki, S. Kitao*, M. Seto*, T. Atou**, M. Itoh**, M. Matoba, Y. Kamihara (Keio Univ., *Kyoto Univ., **Tokyo Inst. Tech.)	
3pA-12	High frequency magneto-impedance effects of $(\text{Co}, \text{CoTiO}_2)\text{-Bi}_4\text{Ti}_3\text{O}_{12}$ multilayered films	^o H. Kijima*, **, Y. Zhang*, N. Kobayashi***, S. Ohnuma*, ***, P. Muralt**, N. Setter**, H. Masumoto* (*Tohoku Univ., **EPFL, ***RIEMM)	
3pA-13	Electrical properties of magnetoelectric material Cr_2O_3	^o T. Ashida, M. Oida, N. Simomura, T. Nozaki, M. Sahashi (Tohoku Univ.)	
3pA-14	3-dimensional large-scale micromagnetics simulation using fast Fourier transform	^o N. Inami, C. Mitsumata*, K. Iwano, T. Ishikawa, Y. Takeichi, H. Yanagihara**, E. Kita**, K. Ono (KEK, *NIMS, **Univ. of Tsukuba)	
3pA-15	Minor hysteresis loop analysis for sensitized Alloy600	^o K. Terashima, K. Suzuki, K. Yamaguchi, T. Uchimoto*, T. Takagi* (Fukushima Univ., *Tohoku Univ.)	

Sep. 3/RoomB

Magnetic Domain Structure		9 : 15 ~ 10 : 30	Chair: T. Ishibashi (Nagaoka Univ. Tech)
3aB-1	Visualization of magnetic domain structure using Reverse Monte Carlo method	^o M. Tokii, E. Kita, C. Mitsumata*, K. Ono**, H. Yanagihara, M. Matsumoto (Univ. of Tsukuba, *KEK, **NIMS)	

- 3aB-2 Visualization of long-range magnetic interaction using scanning transmission x-ray microscopy
^oH. Ohtori, K. Iwano, C. Mitsumata*, Y. Takeichi, M. Yano**, A. Kato**, N. Miyamoto**, T. Shoji**,
A. Manabe**, K. Ono (KEK, *NIMS, **TOYOTA motor)
- 3aB-3 Photoelectron spectroscopic measurement of the Ni-based alloy with magnetic properties change
^oS. Akimoto, T. Takase, K. Yamaguchi (Fukushima Univ.)
- 3aB-4 Aging variation of domain structure of CoPt perpendicular magnetic anisotropy films
^oR. Tojo, H. Kawamura, R. Sugita (Ibaraki Univ.)
- 3aB-5 Development of a new μ -MOKE magnetometer observable in the same sight with domain scope
^oH. Ueno, M. Ishiwata, K. Terashima, K. Suzuki, T. Takase, K. Yamaguchi (Fukushima Univ.)

Magnetic Anisotropy II

10 : 45 ~ 12 : 00

Chair: K. Yamaguchi (Fukushima Univ.)

- 3aB-6 Detection and analysis of magnetization fluctuation in a nano-scale ferromagnetic wire
^oA. Yamaguchi, H. Miyajima* (Univ. of Hyogo, *Keio Univ.)
- 3aB-7 Crystalline orientation dependence of Gilbert damping constant for single-crystalline Fe films
^oY. Kasatani, Y. Nozaki (Keio Univ.)
- 3aB-8 Response of the triple-layered magnetic film in alternating magnetic field ^oM. Tsuruoka, N. Otsuji (Tokyo Univ. Tech.)
- 3aB-9 Pulsed high-field magnetization on permanent magnets ^oS. Noguchi, T. Ishida (Osaka Pref. Univ.)
- 3aB-10 Switching of the magnetic vortex core in elliptical disks by nano-second field pulses
^oT. Sato*, K. Yamada*, ***, Y. Nakatani*, S. Kasai****, D. Chiba**, **, K. Kobayashi**, **, A. Thiaville***,
T. Ono** (*UEC, **Kyoto Univ., ***Universite Paris Sud, ****NIMS, *****Univ. of Tokyo, *****Osaka Univ.)

Symposium "Physics and Application of Magnon"

13 : 30 ~ 15 : 45

Chair: M. Igarashi (Hitachi)

- 3pB-1 Magneto-optic analysis of magnetic microstructures ^oR. Schaefer (IFW)
- 3pB-2 Domain wall motion study for TbFeCo magnetic wire memory ^oH. Awano, D. Bang (Toyota Tech. Inst.)
- 3pB-3 Data flow direction control in magnetic quantum cellular automata
^oH. Nomura, S. Miura, A. Morita, R. Nakatani (Osaka Univ.)

Symposium "Physics and Application of Magnon"

16 : 00 ~ 18 : 00

Chair: R. Nakatani (Osaka Univ.)

- 3pB-4 Spin torque oscillation in microwave assisted recording heads ^oK. Yamada, M. Takagishi, K. Koi, A. Takeo (Toshiba)
- 3pB-5 Spin wave-assisted switching in $L1_0$ -FePt /permalloy bilayers ^oT. Seki, K. Takanashi (Tohoku Univ.)
- 3pB-6 Design consideration on spin wave based logic devices ^oK. Matsuyama, Y. Urazuka, T. Tanaka (Kyushu Univ.)
- 3pB-7 Flow control of spin waves with magnetic garnet-based magnonic crystals and their applications towards magnonics
^oM. Inoue, H. Takagi, N. Kanazawa, A. Buyandalai (Toyohashi Univ. Tech.)

Sep. 3/RoomC

Oxide Thin Film I

9 : 15 ~ 10 : 30

Chair: H. Saito (Akita Univ.)

- 3aC-1 Perpendicular magnetic anisotropy of cobalt-ferrite (001) thin films I —process condition and composition dependence—
^oY. Utsumi, T. Niizeki, H. Yanagihara, H. Hasa*, K. Koike*, E. Kita (Univ. of Tsukuba, *Hokkaido Univ.)
- 3aC-2 Perpendicular magnetic anisotropy in cobalt-ferrite (001) thin film II —lattice distortion and orbital moment—
^oT. Niizeki, Y. Utsumi, H. Yanagihara, Y. Yamazaki*, M. Sakamaki*, G. Shibata**, T. Kadono**, H. Nakao*,
K. Amemiya*, E. Kita (Univ. of Tsukuba, *KEK, **Univ. of Tokyo)
- 3aC-3 Perpendicular magnetic anisotropy of cobalt-ferrite thin films III - theory -
^oJ. Inoue, H. Yanagihara, E. Kita (Univ. of Tsukuba)
- 3aC-4 Perpendicular magnetic anisotropy in cobalt-ferrite thin films grown on different substrates
^oY. Hisamatsu, T. Niizeki, H. Yanagihara, E. Kita (Univ. of Tsukuba)
- 3aC-5 Magnetic properties of NiFe_2O_4 (001) films fabricated by reactive sputtering
^oJ. Morishita, T. Niizeki, H. Yanagihara, E. Kita (Univ. of Tsukuba)

Oxide Thin Film II		10 : 45 ~ 12 : 00	Chair: E. Kita (Univ. of Tsukuba)
3aC-6	Low-temperature fabrication of high quality BiFeO ₃ based multiferroic thin films with (111) orientation by sputtering deposition process with VHF plasma irradiation	°S. Yoshimura, Y. Sugawara, J. Lu, G. Egawa, Y. Kinoshita, H. Saito (Akita Univ.)	
3aC-7	Determination of optical constants of α -Cr ₂ O ₃ thin film using magneto-optic Kerr spectrum	°K. Toyoki, Y. Shiratsuchi, T. Kato*, S. Iwata*, R. Nakatani (Osaka Univ., *Nagoya Univ.)	
3aC-8	Lattice strain dependence and crystal field dependence of magnetic anisotropy of thin CoFe ₂ O ₄ films	°M. A. Tanaka, K. Harada, M. Takemura, K. Mibu, J. Inoue* (Nagoya Inst. Tech., *Univ. of Tsukuba)	
3aC-9	Fabrication of (100) oriented CoFe ₂ O ₄ films prepared on FeO (100) underlayer	°T. Kashima, T. Suzuki, S. Nakagawa (Tokyo Inst. Tech.)	
3aC-10	Cr thickness dependence of magnetization process in CoFe ₂ O ₄ /Cr/Fe systems	°T. Kawai, S. Hiratani, T. Nagahama, T. Shimada (Hokkaido Univ.)	
Heusler GMR/TMR I		13 : 15 ~ 14 : 15	Chair: T. Ogawa (Tohoku Univ.)
3pC-1	Magnetoresistance property of CPP-GMR devices using polycrystalline Co ₂ (FeMn) Si Heusler alloy films	°N. Hase, S. Hashimoto, M. Kado, S. Shirotori, H. Iwasaki, M. Takagishi (Toshiba)	
3pC-2	DO ₃ disorder in Co ₂ Mn(Ga _{0.25} Ge _{0.75}) alloy and transport properties of CPP-GMR devices using it	°Y. K. Takahashi*, N. Hase**, M. Kodzuka**, A. Ito***, T. Koganezawa****, T. Furubayashi*, S. Li*, B. S. D. Ch. S. Varaprasad*, T. Ohkubo***, K. Hono** (*NIMS, **Univ. of Tsukuba, ***Tokyo Univ. Sci., ****JASRI)	
3pC-3	Structural and magnetotransport properties of CPP-GMR pseudo spin valves with (110) epitaxial layers of Co ₂ Fe(Ge _{0.5} Ga _{0.5}) Heusler alloy	°J. Chen**, S. Li**, T. Furubayashi**, Yukiko K. Takahashi**, K. Hono*** (*Univ. of Tsukuba, **NIMS)	
3pC-4	(001)-textured polycrystalline current-perpendicular-to-plane pseudo spin-valves using full Heusler alloy Co ₂ Fe(Ga _{0.5} Ge _{0.5})	°Y. Du**, B. S. D. Ch. Varaprasad**, T. Furubayashi**, Y. K. Takahashi**, K. Hono** (*Univ. of Tsukuba, **NIMS)	
Heusler GMR/TMR II		14 : 30 ~ 15 : 30	Chair: K. Yakushiji (AIST)
3pC-5	Giant magnetoresistance in Co ₂ Fe (Ge _{0.5} Ga _{0.5}) Heusler alloy based fully epitaxial current-perpendicular-to-plane pseudo spin valves	°S. Li, Y. K. Takahashi, T. Furubayashi, K. Hono (NIMS)	
3pC-6	Heusler type Mn-Co-Ga epitaxial thin films for magnetic tunnel junctions	°T. Kubota, S. Ouardi*, S. Mizukami, G. H. Fecher*, C. Felser*, H. Naganuma, M. Oogane, Y. Ando, T. Miyazaki (Tohoku Univ., *Max-Planck Institute)	
3pC-7	Effect of nonstoichiometry on the half-metallicity of Co ₂ MnSi thin films with various Mn compositions	°Y. Honda, G.-f. Li, H.-x. Liu, M. Arita, K. Matsuda, T. Uemura, M. Yamamoto, T. Saito*, Y. Miura**, M. Shirai** (Hokkaido Univ., *Toho Univ., **Tohoku Univ.)	
3pC-8	Giant tunneling magnetoresistance in fully epitaxial Co ₂ (Mn,Fe)Si/MgO/Co ₂ (Mn,Fe)Si magnetic tunnel junctions	°T. Kawami, H.-x. Liu, Y. Honda, T. Uemura, F. Shi*, P. M. Voyles*, M. Yamamoto (Hokkaido Univ., *Univ. of Wisconsin-Madison)	
Heusler Thin Film Fabrication		15 : 45 ~ 17 : 00	Chair: Y. Sakuraba (Tohoku Univ.)
3pC-9	Low-temperature growth of half-metallic Co ₂ MnSi films on diamond semiconductors by ion-beam assisted sputtering	°M. Nishiwaki, K. Ueda, K. Kawamoto, T. Miyawaki, H. Asano (Nagoya Univ.)	
3pC-10	Preparation and characterization of full-Heusler Co ₂ MnSi alloy thin films with perpendicular magnetization using [Pd/Co] _n superlattice	°Y. Fujino, Y. Kubota, N. Mastushita, Y. Takamura, Y. Sonobe*, S. Nakagawa (Tokyo Inst. Tech., *Samsung R & D Inst.)	
3pC-11	Characterization of full-Heusler Co ₂ FeSi alloy thin films formed by facing target sputtering method	Y. Takamura, °T. Suzuki, Y. Fujino, S. Nakagawa (Tokyo Inst. Tech.)	
3pC-12	Maximisation of activation volume in Co ₂ FeSi thin films	J. Sagar*, H. Sukegawa**, L. Lari*, V. Lazarov*, S. Mitani**, K. O'Grady*, °A. Hirohata*,*** (*Univ. of York, **NIMS, ***JST-PRESTO)	

- 3pC-13 Effect of lattice strain on the electrical properties of half-Heusler LaPtBi thin films
 °Y. Niimi, N. Sugimoto, T. Miyawaki, N. Fukatani, T. Yoshihara, T. Ito, N. Tanaka, H. Asano (Nagoya Univ.)

Sep. 3/RoomD

- Motor and Contactless Power Transmission** **9 : 00 ~ 10 : 30** Chair: Y. Sakamoto (Hachinohe Inst. Tech.)
- 3aD-1 A consideration of high-speed sr motor for electric power tools °K. Isobe, K. Nakamura, O. Ichinokura (Tohoku Univ.)
- 3aD-2 Efficiency improvement and torque ripple reduction of axial-gap-type PM motor
 °T. Takemae, K. Nakamura, O. Ichinokura (Tohoku Univ.)
- 3aD-3 High power IPM motor design with effective use of Dy-free MAGFINE
 °A. Watarai, M. Kato, Y. Hashimoto, M. Kayano, H. Matsuoka, H. Mitarai, Y. Honkura (Aichi Steel)
- 3aD-4 Development of primary coil interoperable with heterogeneous coil for contactless electric vehicle charging
 °H. Yamaguchi, T. Takura, F. Sato, T. Sato, H. Matsuki (Tohoku Univ.)
- 3aD-5 The relationship between leakage magnetic field reduction and coil figure on wireless power transfer
 °Y. Ota, T. Takura, F. Sato, H. Matsuki, T. Sato, A. Yuyama*, S. Sasaki*, T. Kato* (Tohoku Univ., *Hikaridenshi)
- 3aD-6 Reduction of leakage magnetic field by twisted-coil for contactless electric vehicle charge on moving
 °T. Fushimi, T. Takura, F. Sato, T. Sato, H. Matsuki (Tohoku Univ.)

- Power Inductor and Reactor** **10 : 45 ~ 12 : 00** Chair: T. Takura (Tohoku Univ.)
- 3aD-7 Loss reduction of saturable magnetically controlled reactor with grain-oriented electrical steel sheets by improving structure of magnetic valves °R. Kurashige, Y. Gao, H. Dozono, K. Muramatsu, B. Chen* (Saga Univ., *Wuhan Univ.)
- 3aD-8 Magnetic oscillation DC-AC converter using common mode choke with leakage inductance
 °S. Okanuma (Fukushima Univ.)
- 3aD-9 Basic characteristics of lap-winding type three-phase laminated-core variable inductor
 K. Nakamura, °K. Honma, T. Ohinata*, K. Arimatsu*, T. Shirasaki*, O. Ichinokura (Tohoku Univ., *Tohoku Electric Power)
- 3aD-10 Improvement of Zn-Fe ferrite core power inductor embedded in organic interposer for power supply integrated in LSI package
 °K. Hagita, Y. Yazaki, T. Watanabe*, T. Sato, M. Sonehara, N. Matsushita*, T. Fujii**, H. Shimizu**, K. Kobayashi** (Shinshu Univ., *Tokyo Inst. Tech., **Shinko)
- 3aD-11 Fabrication of hybrid core inductor embedded in LSI package
 °K. Ishidate, K. Hagita, Y. Yazaki, M. Sonehara, T. Sato, T. Watanabe*, N. Matsushita* (Shinshu Univ., *Tokyo Inst. Tech.)

- Powermagnetics I** **13 : 30 ~ 14 : 45** Chair: T. Honda (Kyushu Inst. Tech.)
- 3pD-1 Effect of a magnetic field from the horizontal direction on a magnetically levitated steel plate (fundamental considerations on levitation probability) °T. Narita, M. Tanaka, Y. Deng, S. Hasegawa, Y. Oshinoya (Tokai Univ.)
- 3pD-2 Bending levitation control for flexible steel plate (fundamental consideration on application of sliding mode control)
 °H. Marumori, T. Narita, S. Hasegawa, Y. Oshinoya (Tokai Univ.)
- 3pD-3 Active control of an ultra-compact vehicle seat with a voice coil motor (fundamental consideration on when fall from the bump) °M. Ishida, K. Sunaga, Q. Lan, H. Kato, S. Hasegawa, Y. Oshinoya (Tokai Univ.)
- 3pD-4 A electromagnet shift unit control using sliding mode control
 °Y. Yamamoto, S. Hasegawa*, Y. Oshinoya* (ISUZU, *Tokai Univ.)
- 3pD-5 Development of separation technology assisted by magnetic control for overlapping magnetic boards
 °K. Nishimura (Suzuka Nat. Coll. Tech.)

- Powermagnetics II** **15 : 00 ~ 16 : 00** Chair: O. Ichinokura (Tohoku Univ.)
- 3pD-6 Application of mother ship concept to magnetically driven underwater microrobot
 °R. Adachi, T. Honda (Kyushu Inst. Tech.)
- 3pD-7 Relationship between structure and thrust of small flapping mechanism driven by external magnetic field
 °T. Mizuno, T. Honda (Kyushu Inst. Tech.)
- 3pD-8 Preparation of Nd-Fe-B thick film magnets applied for magnetic devices
 K. Motomura, M. Oryoshi, T. Yanai, °M. Nakano, H. Fukunaga (Nagasaki Univ.)

3pD-9 Study on the field parameter for soft magnetic materials °A. Sorimachi, T. Horii (Ibaraki Univ.)

Film Magnets 16 : 15 ~ 17 : 15 Chair: M. Nakano (Nagasaki Univ.)

3pD-10 Fabrication and magnetic reversal properties of highly oriented Nd-Fe-B thin films
°R. Goto, K. Kadonosawa, S. Okamoto, N. Kikuchi, O. Kitakami (Tohoku Univ.)

3pD-11 Magnetic properties of Nd-Fe-B thin films coated by lanthanum
°H. Ishikawa, K. Koike, D. Ogawa, T. Miyazaki*, Y. Ando*, H. Kato (Yamagata Univ., *Tohoku Univ.)

3pD-12 Evaluation of magnetic properties of Nd-Fe-B wires produced by using in-rotating liquid spinning technique
°K. Oka, T. Todaka, M. Enokizono (Oita Univ.)

3pD-13 Nanoseconds pulsed magnetic field generator for magnetization reversal experiments on permanent magnets
°K. Kadonosawa, N. Kikuchi, R. Goto, S. Okamoto, O. Kitakami (Tohoku Univ.)

Sep. 3/RoomE

Magnetic Shielding 13 : 30 ~ 14 : 30 Chair: Y. Takemura (Yokohama National Univ.)

3pE-1 Investigation on method for evaluation on shielding factor of magnetically shielded room applied magnetic field with low-frequency. Part 1. Method for evaluation on shielding factor for environmental magnetic noise from the far distance.
°Y. Yoneyama, A. Sakai, K. Muramatsu*, S. Yuuki**, K. Kazami**, K. Yamazaki***, T. Shinnoh****, T. Yamaguchi****, M. Shimada***** (Giken-kogyo, *Saga Univ., **Yokogawa Electric, ***Takenaka, ****Kajima, *****Daido Plant Industries, *****Hitachi Metal)

3pE-2 Investigation on method for evaluation on shielding factor of magnetically shielded room applied magnetic field with low frequency. Part 2. Evaluation tests on magnetic noise near.
°S. Yuuki, K. Kazami, Y. Yoneyama*, A. Sakai*, K. Yamazaki**, T. Shinnoh***, T. Yamaguchi****, M. Shimada***** , K. Muramatsu***** (Yokogawa Electric, *Giken Kogyo, **Takenaka, ***Kajima, ****Daido Plant Industries, *****Hitachi Metal, *****Saga Univ.)

3pE-3 Eddy current analysis of shielding performance of magnetically shielded rooms at low frequency
°K. Muramatsu, Y. Gao, Y. Yoneyama*, A. Sakai*, S. Yuuki**, K. Kazami**, K. Yamazaki***, T. Shinnoh****, T. Yamaguchi****, M. Shimada***** (Saga Univ., *Giken-kogyo, **Yokogawa Electric, ***Takenaka, ****Kajima, *****Daido Plant Industries, *****Hitachi Metals)

3pE-4 Study on the shape optimization of HTS bulks for magnetic field control
°T. Abe, I. Eritate, M. Takahashi, S. Shima, S. B. Kim, H. Onodera* (Okayama Univ., *JST-CREST)

Medical Treatments, High Field Applications 14 : 45 ~ 16 : 00 Chair: T. Nakagawa (Osaka Univ.)

3pE-5 Development of magnetic nanoparticle imaging system
°D. Kitahara, T. Yoshida, B. O. Nurmiza, A. Hirokawa, K. Enpuku (Kyushu Univ.)

3pE-6 Development of the high throughput high quality protein crystal growth system based on the high magnetic force type superconducting magnet
°N. Hirota, H. Wada, M. Kiyohara*, M. Tanokura**, E. Suzuki***, A. Kita****, H. Okada, T. Ode*, A. Nakamura**, J. Ohtsuka**, T. Kashiwagi***, N. Numoto**** (NIMS, *Kiyohara Optics, **Univ. of Tokyo, ***Ajinomoto, ****Kyoto Univ.)

3pE-7 Study on the condensation and separation characteristics of the magnetic particles for magnetic chromatography system
°S. Tanaka, S. B. Kim, S. Noguchi* (Okayama Univ., *Hokkaido Univ.)

3pE-8 A study of the system to estimate the battery condition for rechargeable cardiac pacemaker
°T. Sato, N. Sakai, T. Takura*, F. Sato*, H. Matsuki* (Sendai Nat. Coll. Tech., *Tohoku Univ.)

3pE-9 Fabrication of magnetically driven actuator for brushing cytology embedded in capsule endoscope
°M. Yamashita, T. Honda (Kyushu Inst. Tech.)

Biomagnetic Measurements 16 : 15 ~ 17 : 00 Chair: M. Sekino (Univ. of Tokyo)

3pE-10 Prediction of rTMS effect on primary motor cortex °K. Nojima, Y. Katayama, K. Iramina (Kyushu Univ.)

3pE-11 Magnetic field measurement at the back of the head using highly sensitive magneto-impedance sensor
°S. Tajima, T. Uchiyama, Y. Okuda, K. Wang (Nagoya Univ.)

- 3pE-12 MCG measurement out of shielded room using transmission line type thin film sensor
 °S. Yabukami, K. Kato, T. Ozawa, N. Kobayashi*, K. Arai* (Tohoku Gakuin Univ., *RIEMM)

Sep. 3/RoomF

- Photonics** **10 : 00 ~ 11 : 30** Chair: H. Awano (Toyota Inst. Tech.)
- 3aF-1 Calculation study for improvement of diffraction efficiency with magnetic volumetric hologram
 °N. Sagara, P. B. Lim, H. Takagi, Y. Nakamura, M. Inoue (Toyohashi Univ. Tech.)
- 3aF-2 Characterization of Ni nano-wire / tube arrays for nano-composites meta-material
 °S.-J. Jeon, D.-Y. Kim, S.-S. Yoon (Andong Nat. Univ., Rep. of Korea)
- 3aF-3 Annealing temperature dependence on magnetic response of surface plasmons for Ag₇₅Co₂₅ granular films
 °T. Tachikawa, S. Isaka, Y. Ashizawa, K. Nakagawa (Nihon Univ.)
- 3aF-4 Magneto-optic imaging of surface defects using magnetophotonic crystal
 °R. Hashimoto, T. Yonezawa, H. Takagi, M. Inoue (Toyohashi Univ. Tech.)
- 3aF-5 Fundamental study of magneto-optical three dimensional display using magnetic garnet films
 °K. Nakamura, K. Matsugami, H. Takagi, P. B. Lim, M. Inoue (Toyohashi Univ. Tech.)
- 3aF-6 Effect of spin-dependent scattering on the optical properties for ferromagnetic metal thin film
 °S. Saito, T. Sasaki, G. X. Du, W. Wang, M. Takahashi (Tohoku Univ.)

- Magnetic Imaging I** **13 : 30 ~ 14 : 30** Chair: K. Sueoka (Hokkaido Univ.)
- 3pF-1 Development of magnetic field imaging technique using polarized pulsed neutrons
 °T. Shinohara, K. Sakai, H. Hayashida, T. Kai, K. Oikawa, M. Harada, M. Ooi, M. Arai, Y. Kiyanagi*
 (JAEA, *Hokkaido Univ.)
- 3pF-2 Transparent observation of magnetic domain of amorphous foils by polarized pulse neutron imaging
 °T. Imagawa, T. Hirano, H. Hayashida*, T. Shinohara* (Hitachi, *JAEA)
- 3pF-3 Faraday effect correction of the objective lens in the high field Kerr effect microscope
 °S. Meguro, E. Yanagisawa, K. Akahane, S. Saito*, M. Takahashi* (NEOARK, *Tohoku Univ.)
- 3pF-4 Measurement of magneto-optical Kerr effect using pulse magnetic field of 7 T
 °Y. Fukushi, A. Arakawa, T. Hasegawa, S. Ishio (Akita Univ.)

- Magnetic Imaging II** **14 : 45 ~ 15 : 45** Chair: Y. Endo (Tohoku Univ.)
- 3pF-5 Improvement of spatial resolution of a fluxgate-based magnetic microscope using modulation by mechanical vibration
 °Y. Adachi, D. Oyama (Kanazawa Inst. Tech.)
- 3pF-6 Observation of magnetic domains in [Co/Pd] nanowires by nano-MDS
 °M. Okuda, Y. Miyamoto, E. Miyashita, N. Hayashi (NHK)
- 3pF-7 Application of MR sensors in domain wall pinning structures to local magnetic field measurement
 °H. Kasai, N. Yamaguchi, H. Hosoi, A. Subagyo, K. Sueoka (Hokkaido Univ.)
- 3pF-8 Development of scanning SQUID probe microscope with application of STM / AFM
 °Y. Miyato, Y. Matsui, K. Hisayama, N. Watanabe, H. Itozaki (Osaka Univ.)

- Magnetic Imaging III** **16 : 00 ~ 17 : 15** Chair: T. Shinohara (JAEA)
- 3pF-9 Alternating magnetic force microscopy: high-frequency magnetic field measurement by excitation of tip magnetization
 °Y. Kinoshita, G. Egawa, S. Yoshimura, H. Saito (Akita Univ.)
- 3pF-10 Alternating magnetic force microscopy: proposal of absolute value measurement of magnetic field
 Y. Kinoshita, G. Egawa, S. Yoshimura, H. Nomura*, R. Nakatani*, °H. Saito (Akita Univ., *Osaka Univ.)
- 3pF-11 Study of estimation of GHz range magnetic near field on CPW using beating field type MFM
 °Y. Endo, M. Fukushima, K. Arai, K. Yanagi, Y. Shimada, M. Yamaguchi (Tohoku Univ.)
- 3pF-12 Preparation of high-resolution magnetic force microscope tip coated with Fe film
 °K. Kato, T. Hagami, S. Ishihara, R. Suzuki, M. Ohtake, M. Futamoto (Chuo Univ.)
- 3pF-13 Room-temperature preparation of magnetic force microscope tip with high switching field by coating Co/Pt multilayer film
 °R. Suzuki, M. Ohtake, M. Futamoto (Chuo Univ.)

Sep. 4/RoomA

Symposium “Magnetic Study Using Quantum Beam Spectroscopy”

9 : 00 ~ 10 : 30

Chair: Y. Kobayashi (Tokyo Med. Univ.)

- 4aA-1 Characterization of bulk magnetic properties using high-energy X-ray magnetic compton scattering
°Y. Sakurai, M. Itou (JASRI)
- 4aA-2 XMCD and EXAFS studies on Fe/Cu (001) and other magnetic thin films
°H. Abe (KEK)
- 4aA-3 Spin- and angle- resolved photoemission as a direct probe of spin textures in topological insulators
°A. Kimura (Hiroshima Univ.)

Symposium “Magnetic Study Using Quantum Beam Spectroscopy”

10 : 45 ~ 12 : 15

Chair: K. Ohishi (CROSS)

- 4aA-4 Ultrahigh-pressure magnetic study using a synchrotron radiation ⁵⁷Fe-Mössbauer source
°T. Mitsui (JAEA)
- 4aA-5 Application of μ SR technique to frustrated spin magnets
°T. Goto, T. Suzuki*, I. Watanabe*, F.-L. Pratt**, H. Manaka***, T. Sasaki****
(Sophia Univ., *RIKEN, **ISIS/RAL, ***Kagoshima Univ., ****Tohoku Univ.)
- 4aA-6 A new polarized neutron reflectometer installed at material life science facility in J-PARC for investigations of magnetic structures in thin films
°M. Takeda (JAEA)

Magneto-Optics

13 : 15 ~ 14 : 30

Chair: Y. Nozaki (Keio Univ.)

- 4pA-1 Nd_{3-x}Bi_xFe₄GaO₁₂ with perpendicular magnetic anisotropy prepared by metal organic decomposition method on glass substrates
°T. Yoshida, T. Nishi*, T. Ishibashi (Nagaoka Univ. Tech., *Kobe City Coll. Tech.)
- 4pA-2 Fundamental properties of voltage-driven non-reciprocal optical modulation with paramagnetic material
°R. Isogai, A. M. Grishin*, S. I. Khartsev*, T. Goto, H. Takagi, M. Inoue (Toyohashi Univ. Tech., *KTH)
- 4pA-3 Vacuum annealed CeYIG on Si waveguide
°T. Goto, N. Sagara*, M. Inoue*, C. A. Ross (MIT, *Toyohashi Univ. Tech.)
- 4pA-4 Magneto-Optical properties of first-order diffraction light generated from periodic patterns of magnetic material
°K. Wada, T. Kobayashi, A. Emoto*, H. Ono, Y. Kishimura**, H. Asada**, K. Machida***, K. Aoshima***, K. Kuga***, H. Kikuchi***, N. Shimidzu***, T. Ishibashi (Nagaoka Univ. Tech., *AIST, **Yamaguchi Univ., ***NHK)
- 4pA-5 Optical spectroscopy of 3 dimensional Au nano-structure with surface enhanced Raman effect
°A. Yamaguchi, R. Takahashi, R. Hara, T. Fukuoka, Y. Utsumi (Univ. of Hyogo)

Sep. 4/RoomB

Rare Earth MagnetsI

9 : 15 ~ 10 : 30

Chair: K. Kobayashi (Shizuoka Inst. of Sci. Tech.)

- 4aB-1 Finite element micromagnetic simulations of hot-deformed Nd-Fe-B magnets with directional intergranular phases
°H. Sepehri-Amin*, **, T. Ohkubo*, **, K. Hono*, ** (*NIMS, **JST-CREST)
- 4aB-2 Microstructure and coercivity relationships in Nd-Fe-B model thin films
°M. Gruber, T. Ohkubo, S. Suzuki*, T. Shima*, K. Hono (NIMS, *Tohoku Gakuin Univ.)
- 4aB-3 Microstructure evolution of hot-deformed Nd-Fe-B magnets
°J. Liu*, **, H. Sepehri-Amin*, T. Ohkubo*, K. Hioki***, A. Hattori***, K. Hono*, ** (*NIMS, **Univ. of Tsukuba, ***Daido Steel)
- 4aB-4 Single-particle XMCD spectroscopy of NdFeB nanocrystalline magnets
°Y. Takeichi, M. Yano*, A. Kato*, N. Miyamoto*, T. Shoji*, A. Manabe*, J. Raabe**, K. Ono (KEK, *TOYOTA motor, **PSI)
- 4aB-5 Magnetic domain observation of Nd-Fe-B sintered magnet in demagnetization process at elevated temperature
°H. Ogimoto, Y. Kimura, Y. Morimoto, M. Takezawa (Kyushu Inst. Tech.)

Rare Earth Magnets II

10 : 45 ~ 12 : 00

Chair: M. Takezawa (Kyushu Inst. of Tech.)

- 4aB-6 Application of diffusion process of low-eutectic rare-earth copper alloy for Nd-Fe-B bulk magnets
°T. Akiya*, L. H. Liu*, **, H. Sepehri-Amin*, T. Ohkubo*, K. Hioki***, A. Hattori***, K. Hono*, **, ** (*NIMS, **Univ. of Tsukuba, ***Daido Steel, ****JST-CREST)

- 4aB-7 Mechanism of shell structure formation by HRE grain boundary diffusion process of sintered Nd-Fe-B magnets
°U.M.R. Seelam, T. Ohkubo, T. Abe, K. Hono (NIMS, JST-CREST)
- 4aB-8 High-temperature magnetic properties of Nd-Fe-B magnet studied by soft X-ray MCD
°A. Yasui, Y. Kotani, T. Kinoshita, T. Nakamura, K. Hono*, S. Hirosawa* (JASRI, *NIMS)
- 4aB-9 Characterization of magnetic property of fractured surface of Nd-Fe-B sintered magnet using synchrotron radiation X-rays
°T. Nakamura, A. Yasui, Y. Kotani, T. Ohkuchi, Y. Narumi*, H. Nojiri*, T. Kinoshita, T. Ohkubo**, K. Hono**,
S. Hirosawa** (JASRI, *Tohoku Univ., **NIMS)
- 4aB-10 Surface state and magnetization reversal in Nd₂Fe₁₄B-type single crystals
°D. Ogawa, R. Saito, Y. Mizuno, K. Koike, H. Kato, T. Miyazaki*, Y. Ando* (Yamagata Univ., *Tohoku Univ.)

Rare Earth Magnets III

13 : 00 ~ 14 : 30

Chair: K. Koike (Yamagata Univ.)

- 4pB-1 Magnetic and elemental imaging of Nd-Fe-B sintered magnet using a hard-X-ray scanning microprobe
°M. Suzuki, T. Nakamura, A. Yasui, Y. Kotani, N. Tsuji, T. Ohkubo*, K. Hono*, S. Hirosawa* (JASRI, *NIMS)
- 4pB-2 Microstructures of Nd-Fe-B HDDR powder with high coercivity by low temperature desorption
°K. Morimoto, N. Katayama, Y. Tenkumo*, M. Itakura* (TODA KOGYO, *Kyushu Univ.)
- 4pB-3 Finite-element micromagnetics simulation of permanent magnet with multi-phase structure
°T. Ohkubo, M. Gruber, H. Sepehri-Amin, K. Hono (NIMS, JST-CREST)
- 4pB-4 Magnetic structure analysis of (Nd_{1-x}Dy_x)₂Fe₁₄B (x = 0, 0.125)
°K. Saito, N. Inami, T. Ueno*, H. Otori, Y. Takeichi, R. Sagayama, R. Kumai, T. Ishigaki**, M. Yano***, A. Kato***,
N. Miyamoto***, T. Shoji***, A. Manabe***, Y. Kaneko****, K. Ono (KEK, *NIMS, **Ibaraki Univ.,
TOYOTA motor, *TOYOTA Central R&D Labs.)
- 4pB-5 Magnetic structure of Nd₂Fe₁₄B
°T. Yoshioka, H. Tsuchiura, P. Novák* (Tohoku Univ., *ASCR)
- 4pB-6 Chang in magnetic characteristic in electrical discharge machining of Nd-Fe-B magnet
°H. Takezawa, N. Yokote, N. Mohri*
(Kogakuin Univ., *National Institution for Academic Degrees and University Evaluation)

Sep. 4/RoomC

Thin Film and Fabrication

10 : 00 ~ 11 : 00

Chair: K. Suemitsu (Renesas Electronics)

- 4aC-1 Preparation of MTJs with a post-oxidized Mg or Mg-Al barrier by using the thermal cracking method
°K. Yakushiji*, **, M. Konoto*, T. Nozaki*, A. Fukushima*, H. Kubota*, S. Yuasa* (*AIST, **JST-PREST)
- 4aC-2 Magnetic properties of perpendicular-magnetized D_{0.22}-Mn_{100-x}Ge_x thin films prepared at various substrate temperatures
°A. Sugihara, S. Mizukami, T. Kubota, Y. Kondo, T. Miyazaki (Tohoku Univ.)
- 4aC-3 Magnetic anisotropy with electric voltage of CoFe₂O₄ films
°S. Hiratani, T. Nagahama, T. Shimada (Hokkaido Univ.)
- 4aC-4 Fabrication of magnetic tunnel junctions by using reactive ion etching for STT-MRAM
°T. Yamamoto, H. Sato*, K. Kinoshita*, S. Ikeda*, H. Ohno* (ULVAC, *Tohoku Univ.)

Magnetic Dynamics

11 : 15 ~ 12 : 15

Chair: S. Fukami (Tohoku Univ.)

- 4aC-5 Effect of the angular dependence of the spin-transfer torque efficiency on the spin-transfer switching in perpendicularly magnetized devices
°S. Yamashita, S. Miwa, M. Fukumoto, H. Tomita, T. Nagase*, K. Nishiyama*, E. Kitagawa*, M. Yoshikawa*, T. Daibou*,
M. Nagamine*, T. Kishi*, S. Ikegawa*, N. Shimomura*, H. Yoda*, Y. Suzuki (Osaka Univ., *Toshiba)
- 4aC-6 Temperature dependence of STT switching for amorphous GdFeCo/TbFe bilayer with perpendicular magnetic anisotropy
B. Dai, °T. Kato, S. Iwata, S. Tsunashima* (Nagoya Univ., *NISRI)
- 4aC-7 Thermally assisted magnetic switching on magnetic tunnel junctions with TbFe layer with perpendicular anisotropy
°D. Yoshikawa, T. Kato, S. Iwata (Nagoya Univ.)
- 4aC-8 Sensitive detection of vortex-core dynamics under RF magnetic field using anisotropic magnetoresistance effect
°S. Yakata***, X. M. Cui*, T. Kimura*, ** (*Kyushu Univ., **JST-CREST)

Spin Torque

13 : 30 ~ 14 : 30

Chair: T. Seki (Tohoku Univ.)

- 4pC-1 Measurement of spin transfer torque using diffusive spin current
°S. Watanabe*, T. Kobayashi*, K. Sekiguchi*, **, Y. Nozaki*, *** (*Keio Univ., **JST-PREST, ***JST-CREST)

- 4pC-2 Estimation of temperature rising by self-heating effect in spin torque oscillation
^oK. Miyake, K. Sakamoto, M. Sahashi (Tohoku Univ.)
- 4pC-3 Theoretical study on the dependence of spin torque diode voltage on the magnetization alignment
^oT. Taniguchi, H. Imamura (AIST)
- 4pC-4 Spin Dice-Random number generator based on spin-torque magnetization switching
^oA. Fukushima, H. Imamura, H. Kubota, K. Yakushiji, S. Yuasa, K. Ando (AIST)

Sep. 4/RoomD

Thin Film I **9 : 00 ~ 10 : 15** Chair: H. Nomura (Osaka Univ.)

- 4aD-1 Perpendicular anisotropy and damping constant of Co/Pt multilayers
^oK. Adachi, T. Kato, S. Okamoto*, N. Kikuchi*, O. Kitakami*, S. Iwata (Nagoya Univ., *Tohoku Univ.)
- 4aD-2 Co layer thickness dependence of damping constant of Co/Pt multilayers
^oY. Kusanagi, S. Okamoto, N. Kikuchi, O. Kitakami, T. Kato*, S. Iwata* (Tohoku Univ., *Nagoya Univ.)
- 4aD-3 Fabrication and evaluation of magnetic properties of CoNi superlattice films
^oS. Fukami, H. Sato, M. Yamanouchi, S. Ikeda, H. Ohno (Tohoku Univ.)
- 4aD-4 Perpendicular anisotropy of [FePt/FeCo] multilayer film grown MgO (001) substrate
^oH. Oomiya, B. Wang, S. Yoshida, A. Arakawa, T. Hasegawa, S. Ishio (Akita Univ.)
- 4aD-5 Investigation of magnetization and magnetic anisotropy of tetragonal distorted FeCo alloy epitaxially grown on L10 FePt film
^oB. Wang, H. Oomiya, A. Arakawa, T. Hasegawa, S. Ishio (Akita Univ.)

Thin Film II **10 : 30 ~ 12 : 00** Chair: S. Okamoto (Tohoku Univ.)

- 4aD-6 Influence of Underlayer Morphology on the Structure of FePt, CoPt, and FePd Alloy Thin Films
^oY. Numata, A. Itabashi, M. Ohtake, F. Kirino*, M. Futamoto (Chuo Univ., *Tokyo Univ. Arts)
- 4aD-7 Epitaxial Growth of Fe₅₀Pd₂₅Pt₂₅ Alloy Thin Films on MgO Single-Crystal Substrates
^oS. Ishiguro, A. Itabashi, Y. Numata, M. Ohtake, F. Kirino*, M. Futamoto (Chuo Univ., *Tokyo Univ. Arts)
- 4aD-8 Direct observation of atomic-layer stacking for alloy film with superlattice diffraction by STEM-HAADF
^oS. Hinata*, S. Saito**, N. Nozawa**, K. Hoshino***, K. Shibuya***, M. Takahashi**, M. Sahashi**
 (*JSPS, **Tohoku Univ., ***MST)
- 4aD-9 Formation of hcp stacking and enhancement of uniaxial magnetocrystalline anisotropy of Co₅₀Pt₅₀ disordered alloy films by substituting Pt with Rh
 S. Saito, ^oN. Nozawa, S. Hinata, M. Takahashi (Tohoku Univ.)
- 4aD-10 Preparation and structure analysis of epitaxial tri-Layer film consisting of Co-Pt alloy with metastable ordered Structure and MgO
^oM. Ohtake, D. Suzuki, F. Kirino*, M. Futamoto (Chuo Univ., *Tokyo Univ. Arts)
- 4aD-11 Growth mechanism of MgO layer on Fe seed layer and TiN layer for control of crystalline alignment
^oT. Kawahara, S. Nakagawa (Tokyo Inst. Tech.)

Thin Film III **13 : 00 ~ 14 : 30** Chair: T. Kato (Nagoya Univ.)

- 4pD-1 Thickness dependence of uniaxial anisotropy of L1₀-FePt perpendicularly magnetized films
^oA. Hotta*, T. Ono***, T. Shimatsu*, N. Kikuchi*, S. Okamoto*, O. Kitakami* (*Tohoku Univ., **Fuji Electric)
- 4pD-2 Improvement of magnetic anisotropy for CuP added FePt thin films
^oK. Ito, K. Kamishima, K. Kakizaki (Saitama Univ.)
- 4pD-3 Structure analysis of magnetic alloy thin film with L1₀ structure by diffraction
^oM. Ohtake, A. Itabashi, M. Futamoto (Chuo Univ.)
- 4pD-4 Fabrication and characterization of ordered FePt thin films by rapid thermal annealing
^oM. Mizuguchi, T. Sakurada, T. Tashiro, K. Sato, T. Konno, K. Takanashi (Tohoku Univ.)
- 4pD-5 Fabrication of L1₀-FeNi thin films by sputtering on oxide substrates.
^oT. Tashiro, M. Mizuguchi, T. Kojima, K. Takanashi (Tohoku Univ.)
- 4pD-6 Perpendicular magnetization of L1₀-FeNi induced by vicinal step
^oM. Kotsugi, M. Mizuguchi*, T. Ohtsuki, T. Ohkochi, T. Kojima*, M. Ogiwara*, T. Tashiro*, K. Takanashi*
 (JASRI, *Tohoku Univ.)

Sep. 4/RoomE

Symposium "Progress in Superconducting Technology" 9 : 15 ~ 11 : 30

Chair: T. Hattori (Toyota Central R & D Labs.)

- 4aE-1 Iron-based superconductors: current status °H. Hosono (Tokyo Inst. Tech.)
- 4aE-2 Research and development of high temperature superconducting induction/synchronous machine for transportation equipment -current status and prospects for the future-
°T. Nakamura, H. Shimura, T. Nishimura, H. Kitano, S. Misawa, Q. Li, N. Amemiya, T. Matsuo, Y. Itoh*, M. Yoshikawa*, T. Terazawa*, N. Okumura**, S. Fukui***, M. Furuse**** (Kyoto Univ., *IMRA MATERIAL, ** AISIN SEIKI, ***Niigata Univ., **** AIST)
- 4aE-3 Linear motor car "Maglev" and superconductor technology °K. Nagashima (Railway Technical Research Inst.)
- 4aE-4 Recent trend of superconducting sensor technology development °K. Tanabe (SRL-ISTEC)

Symposium "Progress in Superconducting Technology" 13 : 15 ~ 14 : 30

Chair: N. Hirota (NIMS)

- 4pE-1 Recent rapid progress in superconducting technologies °J. Shimoyama (Univ. of Tokyo)
- 4pE-2 2G-HighTc superconducting applications for power networks °S. Mukoyama (Furukawa Electric)

Sep. 4/RoomF

Soft Magnetic Materials I (Metals)

9 : 45 ~ 10 : 45

Chair: K. Kamishima (Saitama Univ.)

- 4aF-1 Structure analysis of Ni and Ni-Fe thin films with metastable bcc structure formed on GaAs(100) substrates
°S. Minakawa, M. Ohtake, T. Soda, N. Inaba*, M. Futamoto (Chuo Univ., *Yamagata Univ.)
- 4aF-2 Structure characterization of Ni and Ni-Fe alloy thin films grown on GaAs(110) Substrates
°T. Soda, S. Minakawa, M. Ohtake, N. Inaba*, M. Futamoto (Chuo Univ., *Yamagata Univ.)
- 4aF-3 Bilayer ribbons of Fe-based ferromagnetic shape memory ribbons produced by means of melt spinning technique
N. Sakoh, °T. Todaka, M. Enokizono (Oita Univ.)
- 4aF-4 Measurement of magnetic and shape memory properties of Fe-Cr-Ni-Si-Co-Mn alloy
°H. Muto, T. Todaka, M. Enokizono (Oita Univ.)

Soft Magnetic Materials II (Metals)

11 : 00 ~ 11 : 45

Chair: S. Ohnuma (RIEMM)

- 4aF-5 Structure analysis of Fe-B and Fe-Co-B alloy thin films formed on MgO single-crystal substrates
°Y. Asai, T. Kawai, M. Ohtake, M. Futamoto (Chuo Univ.)
- 4aF-6 A Study of magnetostriction and structure of Fe-B-N films °T. Kawai, M. Ohtake, M. Futamoto (Chuo Univ.)
- 4aF-7 Crystal structure of FeCo-N thin films and their magnetic properties
°A. Hasegawa, K. Kamishima, K. Kakizaki (Saitama Univ.)

Soft Magnetic Materials III (Ferrite, Nano-Granular) 13 : 00 ~ 14 : 30

Chair: T. Todaka (Oita Univ.)

- 4pF-1 Micromagnetic simulation of random magnetic anisotropy in magnetic nanocrystals
°S. Lee, N. Inami*, T. Ishikawa*, K. Iwano*, C. Mitsumata**, K. Ono*, H. Yanagihara, E. Kita (Univ. of Tsukuba, *KEK, **NIMS)
- 4pF-2 Inter-particle speromagnetic ordering and thermally assisted soft-magnetism in nano-granular films
°H. Mamiya, S. Ohnuma*, M. Ohnuma**, H. Suzuki, H. Fuzimori* (NIMS, *RIEMM, **Hokkaido Univ.)
- 4pF-3 Giant anisotropy field of Co (Fe) Pd-CaF₂ nano-granular soft magnetic films fabricated by tandem sputtering method
°M. Naoe, N. Kobayashi, S. Ohnuma, T. Iwasa, K. Ishida, H. Masumoto*, Y. Kaneta, K. Arai (RIEMM, *Tohoku Univ.)
- 4pF-4 Synthesis of a new U-type hexaferrite and its magnetic properties
°K. Kamishima, R. Tajima, K. Kakizaki, A. Fujimori, M. Sakai, K. Watanabe* (Saitama Univ, *RIKEN)
- 4pF-5 The Magnetic property and preparation of hexaferrites of divalent iron
°M. Koide, K. Kakizaki, K. Kamishima (Saitama Univ.)
- 4pF-6 Buffler effect in in-plane ferromagnetic resonance of thin slab garnet
°S. Takeda, T. Kawai*, T. Hotchi**, S. Motomura**, H. Suzuki** (Magnontech, *Chuo Univ., **KEYCOM)

Sep. 5/RoomA

Magnetic Recording Media I

9 : 00 ~ 10 : 30

Chair: A. Itoh (Nihon Univ.)

- 5aA-1 Structure control of CoPtCr-SiO₂ granular film deposited by heat process (I) —Recrystallization of Ru underlayer and growth regime of granular magnetic layer—
°S. Hinata^{*,**}, S. Saito^{**}, K. Inoue^{**}, M. Takahashi^{**}, M. Sahashi^{**} (*JSPS, **Tohoku Univ.)
- 5aA-2 Structure control of CoPtCr-SiO₂ granular film deposited by heat process (II) —Columnar growth of magnetic layer with insertion of CoCr-SiO₂ buffer layer—
°K. K. Tham^{*}, S. Hinata^{***}, S. Saito^{**}, M. Takahashi^{**} (*TANAKA, **Tohoku Univ., ***JSPS)
- 5aA-3 Reduction of Ru intermediate layer for CoPtCr granular tape media using Si/NiFe seedlayer
°H. Sakai, G. Saemma, S. Nakagawa (Tokyo Inst. Tech.)
- 5aA-4 Fabrication of magnetic force microscope tip with high switching field by coating Co-based alloy film
°S. Ishihara, M. Ohtake, M. Futamoto (Chuo Univ.)
- 5aA-5 High-resolution magnetic force microscope tip coated with soft magnetic film with high saturation magnetization
°T. Hagami, T. Yanagawa, M. Ohtake, M. Futamoto (Chuo Univ.)
- 5aA-6 Preparation of ultra thin flat FePd alloy films with L1₀ structure on MgO single-Crystal substrates with different Orientations
°A. Itabashi, M. Ohtake, F. Kirino^{*}, M. Futamoto (Chuo Univ., *Tokyo Univ. Arts)

Magnetic Recording Media II

10 : 45 ~ 12 : 15

Chair: M. Ohtake (Chuo Univ.)

- 5aA-7 Structure and magnetic properties of MBE grown FePt-Ag and FePd-Ag films
°Y. Tokuoka, Y. Seto, R. Ikeda, T. Kato, S. Iwata (Nagoya Univ.)
- 5aA-8 Microstructure and magnetic properties of FePt-Cr₂O₃
°T. Shiroyama, B. S. D. Ch. S. Varaprasad, Y. Takahashi, K. Hono (NIMS)
- 5aA-9 Electrically conductive underlayer to grow FePt-C perpendicular recording media on glass substrates
°B. S. D. Ch. S. Varaprasad, Y. Takahashi, K. Hono (NIMS)
- 5aA-10 Microstructure and magnetic properties of B-added FePt-C thin films for heat-assisted magnetic recording media
°W. B. Cui, Y. Takahashi, K. Hono (NIMS)
- 5aA-11 Fabrication of isolated nano-magnetic grain with etching mask consist of nano-silica particle.
°K. Iida^{*}, S. Fujii^{*,**}, J. Tsukioka^{*}, A. Tsukamoto^{*}, A. Itoh^{*} (*Nihon Univ., **NIDEC TECHNO MOTOR)
- 5aA-12 Increase of areal density and single crystallization of isolated FeCuPt grain fabricated by rapid heating/cooling and additional annealing
°J. Tsukioka, T. Ubana, A. Tsukamoto, A. Itoh (Nihon Univ.)

Thermal Assisted Magnetic Recording

13 : 15 ~ 14 : 15

Chair: H. Muraoka (Tohoku Univ.)

- 5pA-1 Ultrafast heat pulse induced all-optical magnetization switching near magnetic compensation composition of GdFeCo ferrimagnet
°H. Yoshikawa, S. Kogure, T. Sato, A. Tsukamoto, A. Itoh (Nihon Univ.)
- 5pA-2 Contribution of magnetic circular dichroism to all-optical magnetization reversal phenomenon induced by ultra-short pulse laser in ferrimagnetic GdFeCo
°S. Kogure, A. Tsukamoto, A. Itoh (Nihon Univ.)
- 5pA-3 Analysis of surface plasmon propagating along a waveguide for thermally assisted magnetic recording
°K. Tamura, Y. Hayashi, Y. Ashizawa, S. Ohnuki, K. Nakagawa (Nihon Univ.)
- 5pA-4 Analyses of heat conduction and optical near-field generated by square antennas on magnetic recording media for thermally assisted magnetic recording
°Y. Hayashi, K. Tamura, H. Mano, Y. Ashizawa, S. Ohnuki, K. Nakagawa (Nihon Univ.)

Microwave Assisted Magnetic Recording

14 : 30 ~ 15 : 45

Chair: K. Nakagawa (Nihon Univ.)

- 5pA-5 Size dependence of microwave assisted magnetization switching of Co/Pt nanodots
°M. Furuta, S. Okamoto, N. Kikuchi, O. Kitakami, T. Shimatsu (Tohoku Univ.)
- 5pA-6 Dispersion of switching field and critical frequency of Co/Pt nanodot array in microwave-assisted magnetization switching
°M. Furuta, S. Okamoto, N. Kikuchi, O. Kitakami, T. Shimatsu (Tohoku Univ.)
- 5pA-7 Calculations of magnetic recording process of MAMR using integrated MAMR simulator
°K. Yoshida (Kogakuin Univ.)

- 5pA-8 Study on shingled recording with a microwave field assistance
^oS. Kashiwagi, Y. Otsuka, T. Tanaka, Y. Kanai*, K. Matsuyama (Kyushu Univ., *Niigata Inst. Tech.)
- 5pA-9 Magnetic field analysis of magnetic recording head for SMR-MAMR system
^oT. Katayama, H. Tamura, Y. Kanai, K. Yoshida*, S. Greaves**, H. Muraoka**
 (Niigata Inst. Tech., *Kogakuin Univ., **Tohoku Univ.)

Magnetic Recording

16 : 00 ~ 17 : 00

Chair: K. Yoshida (Kogakuin Univ.)

- 5pA-10 Evaluation of shingled magnetic recorded pattern by PRML system
^oH. Nobuhara, Y. Okamoto, Y. Nakamura, M. Yamashita, H. Osawa, H. Muraoka* (Ehime Univ., *Tohoku Univ.)
- 5pA-11 Information stability in magnetic recording and media design
^oT. Akao, Y. Isowaki, D. Nunome, T. Kobayashi, Y. Fujiwara (Mie Univ.)
- 5pA-12 Study of side shielded reader for ultra-high TPI magnetic recording.
^oT. Uesugi, T. Machita, S. Miura, N. Degawa, T. Yamane, M. Ohta, K. Makino, S. Kawasaki, H. Hatate, T. Nishizawa,
 T. Kanaya, T. Kagami, T. Oike (TDK)
- 5pA-13 Development of magnetic head inspection utilizing magnetic force microscopy
^oK. Zhang, T. Hirose, M. Watanabe, T. Sugiyama* (Hitachi, *Hitachi High-Tech Fine Systems)

Sep. 5/RoomB

Rare Earth Magnets IV

9 : 00 ~ 10 : 15

Chair: T. Saito (Chiba Inst. of Tech.)

- 5aB-1 Formation of SmCo₅ ordered alloy thin film on single-crystal bcc(100) metal underlayer by molecular beam epitaxy
^oY. Hotta, M. Yamada, T. Yanagawa, M. Ohtake, F. Kirino*, M. Futamoto (Chuo Univ., *Tokyo Univ. of Arts)
- 5aB-2 Preparation of Sm(Co,Cu)₅ ordered alloy epitaxial thin film with in-plane magnetic anisotropy
^oA. Suzuki, Y. Hotta, M. Yamada, T. Yanagawa, M. Ohtake, F. Kirino*, M. Futamoto (Chuo Univ., *Tokyo Univ. of Arts)
- 5aB-3 Single-crystal structure analysis of Sm₂Fe₁₇N₃
^oN. Inami, Y. Takeichi, T. Ueno*, K. Saito, R. Sagayama, R. Kumai, K. Ono (KEK, *NIMS)
- 5aB-4 Preparation and magnetic properties of Sm₂Fe₁₇N_x thin film
^oY. Hirayama, Y. Takahashi, K. Hono (NIMS)
- 5aB-5 Relationship between the domain wall pinning behavior in the initial magnetization process and the coercivity in
 Sm₂Fe₁₇N₃ magnet reacted with Zn (Zn/SFN)
^oK. Kobayashi, E. Saitoh, K. Urushibata, K. Hayakawa (SIST)

Permanent Magnets

10 : 30 ~ 12 : 00

Chair: R. Goto (Tohoku Univ.)

- 5aB-6 Magnetic properties of A-La-Co M-type ferrite anisotropic sintered magnets with SiO₂ and CaO inter-additives
 (A = Ca, Sr)
^oH. Hamada, G. Obara (Meiji Univ.)
- 5aB-7 Magnetic properties of Mn-Bi alloys produced by melt-spinning technique
^oT. Saito (Chiba Inst. Tech.)
- 5aB-8 Magnetic domain observation of FeNi (Co) alloys processed by high-pressure torsion
^oT. Ohtsuki*, **, M. Kotsugi*, **, T. Ohkochi*, **, S. Lee**, **, Z. Horita**, **, K. Takanashi**, ****
 (*JASRI, **JST, ***Kyushu Univ., ****Tohoku Univ.)
- 5aB-9 Precursor Influence in Synthesis of L1₀-type FeNi Alloy Powder by Reduction Method
^oY. Hayashi, H. Okamoto, S. Goto, M. Mizuguchi*, M. Kotsugi**, Y. Kitou, J. Hasegawa, K. Takanashi*
 (DENSO, *Tohoku Univ., **SPRING-8)
- 5aB-10 Kinetic study on thermal stability of a"-Fe₁₆N₂
^oS. Yamamoto*, R. Gallage*, **, Y. Ogata****, N. Kobayashi****, T. Ogawa****, M. Takahashi****, M. Takano*
 (*Kyoto Univ., **T&T Innovations Corp., ***TODA KOGYO, ****Tohoku Univ.)
- 5aB-11 Electrodeposited Fe-Pt film magnet from multilayer precursors
^oT. Ishida, N. Ikoma, S. Ikeda*, T. Kanazawa**, M. Nakano***, N. Fujita
 (Nara Nat. Coll. Tech., *OMTRI, **EEJA, ***Nagasaki Univ.)

Symposium “Elements Strategy Initiative for Permanent Magnets”

Jointly hosted by MSJ (Magnetics Society of Japan) and ESICMM (Elements Strategy Initiative for Magnetic Materials) under MEXT

13 : 00 ~ 15 : 00

Chair: M. Suzuki (JASRI)

- 5pB-1 Microstructure and coercivity relationships in Nd-Fe-B permanent magnets
°K. Hono, H. Sepehri-Amin, T. Ohkubo, J. Liu, T. Sasaki, T. Akiya (NIMS)
- 5pB-2 Determination of magnetic flux density for boundary phase in Nd-Fe-B sintered magnet by electron holography
°Y. Murakami*, **, T. Tanigaki*, **, T. Sasaki****, Y. Takeno*, **, H. S. Park*, **, T. Matsuda****, T. Ohkubo***, K. Hono***, D. Shindo*, **, (*Tohoku Univ., **RIKEN, ***NIMS, ****JST)
- 5pB-3 Magnetic domains and microstructures in Nd-Fe-B magnets observed by small-angle neutron scattering
°M. Yano, K. Ono*, **, M. Harada*, **, H. Nozaki*, **, A. Manabe, T. Shoji, A. Kato, J. Kohlbrecher***
(Toyota Motor, *KEK, **TOYOTA Central R&D Labs., ***PSI)
- 5pB-4 Magnetic microstructure of Nd-Fe-B sintered and hot-deformed magnets observed by scanning transmission x-ray microscopy
°K. Ono*, **, M. Yano*, **, T. Araki****, ****, Y. Takeichi*, **, A. Manabe*, **, N. Miyamoto*, **, T. Shoji*, **, A. Kato*, **, Y. Kaneko***, H. Nozaki***, J. Raabe***** (*KEK, **TOYOTA motor, ***TOYOTA Central R&D Labs., ****Diamond Light Source Ltd, *****Paul Scherrer Inst.)

Symposium “Elements Strategy Initiative for Permanent Magnets”

Jointly hosted by MSJ (Magnetics Society of Japan) and ESICMM (Elements Strategy Initiative for Magnetic Materials) under MEXT

15 : 15 ~ 17 : 15

Chair: T. Ohkubo (NIMS)

- 5pB-5 Development of high iron concentration Sm-Co magnet
°S. Sakurada (Toshiba)
- 5pB-6 First-principles calculations of magneto-crystalline anisotropy in L1₀-ordered FeNi and Fe/Ni multilayers
°M. Shirai*, **, Y. Miura*, **, S. Ozaki*, **, Y. Kuwahara*, **, M. Tsujikawa*, **, K. Abe*, **, (*RIEC, Tohoku Univ., **CSIS, Tohoku Univ.)
- 5pB-7 Micromagnetic simulation of pinning and nucleation in misaligned hard magnets
°A. Furuya, J. Fujisaki, K. Shimizu, Y. Uehara, H. Oshima*, **, T. Okubo*, **, S. Hirose*, **, K. Hono***
(Fujitsu, *Fujitsu Labs., **NIMS)
- 5pB-8 On the element strategy initiative in magnetic materials field, promoted by MEXT
°H. Homma (MEXT)

Sep. 5/RoomC

Oxide Barrier

9 : 15 ~ 10 : 30

Chair: T. Niizeki (Univ. of Tsukuba)

- 5aC-1 Fabrication and magnetotransport property of MgO-MTJ/Pt/CoFe₂O₄
°N. Takahashi, S. Hiratani, T. Nagahama, T. Shimada (Hokkaido Univ.)
- 5aC-2 Fabrication of magnetic tunnel multilayer junctions with CoCr₂O₄ spinel layers
°K. Tate, Y. Matsuda, T. Nagahama, T. Shimada (Hokkaido Univ.)
- 5aC-3 Magnetic tunnel junctions with a Mg-Al-O barrier
°H. Sukegawa, K. Inomata, S. Mitani (NIMS)
- 5aC-4 Fabrication of MgAl₂O₄ tunnel barriers by natural oxidation and reactive sputtering
°H. Tanaka, K. Inagaki, T. Miyawaki, K. Ueda, H. Asano (Nagoya Univ.)
- 5aC-5 Tunnel magnetoresistance effect through a maghemite/MgO hybrid barrier
°T. Nozaki*, **, H. Kubota*, **, A. Fukushima*, **, S. Yuasa*, **, (*AIST, **JST-CREST)

Magnetoresistance

10 : 45 ~ 12 : 00

Chair: T. Ono (Kyoto Univ.)

- 5aC-6 Fabrication of Fe₄N based magnetic tunnel junction with spinel barrier layer
M. Tsunoda, °R. Chiba (Tohoku Univ.)
- 5aC-7 Voltage control of magnetic anisotropy in an MgO/FeB/MgO structure
°T. Nozaki*, **, K. Yakushiji*, **, S. Tamaru*, **, R. Matsumoto*, **, M. Konoto*, **, H. Kubota*, **, A. Fukushima*, **, S. Yuasa*, **, (*AIST, **JST-CREST)
- 5aC-8 Evaluation of voltage-torque by voltage-induced ferromagnetic resonance excitation
°Y. Shiota*, **, S. Miwa*, **, F. Bonell*, **, N. Mizuochi*, **, T. Shinjo*, **, Y. Suzuki*, **, (*Osaka Univ., **JST-CREST)

- 5aC-9 Thin platinum effects on NCMR at the AlOx-NOL/FeCo interface
°H. Watanabe, Y. Shiokawa, K. Sakamoto, M. Sahashi (Tohoku Univ.)
- 5aC-10 Growth and anisotropic magnetoresistance of pseudo-single-crystal (Fe, Co)₄N films
M. Tsunoda, °K. Kabara (Tohoku Univ.)

Spin Current

13 : 15 ~ 14 : 45

Chair: M. Mizuguchi (Tohoku Univ.)

- 5pC-1 Control of the spin functionalities in a micro area by using Heusler compound bilayer films
°S. Oki*, K. Yamasaki*, K. Tanikawa*, S. Yamada*, M. Miyao*, **, K. Hamaya* (*Kyushu Univ., **JST-CREST)
- 5pC-2 Spin-current transport and thermal effect in lateral spin valves
°S. Kasai*, S. Hirayama*, **, S. Mitani*, ** (*NIMS, **Univ. of Tsukuba)
- 5pC-3 Theoretical study on the correlation between magnetic anisotropy and anomalous Hall effect of bct-Fe₅₀Co₅₀ alloy
°K. Hyodo, Y. Kota*, A. Sakuma (Tohoku Univ., *AIST)
- 5pC-4 Spin injection by spin motive-force in lateral spin valve structures
°M. Ichimura*, **, Jun-ichi Ieda**, **, S. Takahashi**, **, S. Maekawa**, **
(*Hitachi, **JST-CREST, ***JAEA, ****Tohoku Univ.)
- 5pC-5 Spin injection into superconducting Nb through excited quasi-particles
°T. Wakamura*, Y. Niimi*, Y. Otani*, ** (*Univ. of Tokyo, **RIKEN)
- 5pC-6 Spin polarization in TbFeCo thin film near compensation composition
°M. Ito, T. Komine, R. Sugita, H. Ueno*, K. Yamaguchi*, D. Bang**, H. Awano**
(Ibaraki Univ., *Fukushima Univ., **Toyota Tech. Inst.)

Dmain Wall, Dynamics

15 : 00 ~ 16 : 30

Chair: A. Yamaguchi (Univ. of Hyogo)

- 5pC-7 Observation of metastable bound state between domain walls in Co/Ni nanowires
°R. Hiramatsu, K.-J. Kim, H. Hata, H. Tanigawa*, E. Kariyada*, T. Suzuki*, T. Moriyama, T. Ono
(Kyoto Univ., *Renesas Electronics)
- 5pC-8 Field and current-induced motion of magnetic domain walls in (Co/Ni) nanostrips
°K. Yamada, J.-P. Jamet, Y. Nakatani*, K. Ueda**, R. Weil, A. Mougin, A. Thiaville, T. Ono**
(Univ. Paris Sud, *UEC, **Kyoto Univ.)
- 5pC-9 High-speed current-induced domain wall motion in Tb/Co-based multilayer wires with large perpendicular coercivities
°D. Bang, H. Awano (Toyota Tech. Inst.)
- 5pC-10 Experimental and theoretical study on depinning probability of magnetic domain wall in Co/Ni wire
°S. Fukami, M. Yamanouchi, S. Ikeda, H. Ohno (Tohoku Univ.)
- 5pC-11 Time-domain observation of Backward Volume Wave propagating in NiFe film
°N. Ishida*, K. Sekiguchi*, **, Y. Nozaki*, ** (*Keio Univ., **JST-PRESTO, ***JST-CREST)
- 5pC-12 Magnetization dependence of precessional motion in GdFeCo exchange coupled double layer film
°T. Sato, R. Shimizu, A. Tsukamoto, A. Itoh (Nihon Univ.)

Sep. 5/RoomD

Interface/Exchange Bias

9 : 00 ~ 10 : 30

Chair: M. Jimbo (Daido Univ.)

- 5aD-1 Spin orientation transition across the single-layer graphene and Ni thin film interface
°Y. Matsumoto, S. Entani, M. Ohtomo, P. V. Avramov, H. Naramoto, S. Sakai (JAEA)
- 5aD-2 Interfacial magnetic properties in Co₂MnSn/Cr or Ag contacts
°Y. Matsukawa, H. Itoh, N. Suzuki (Kansai Univ.)
- 5aD-3 Temperature dependent perpendicular magnetic anisotropy of Co-Pt film on Cr₂O₃
°T. Nozaki, M. Oida, T. Ashida, M. Sahashi (Tohoku Univ.)
- 5aD-4 Temperature dependence of perpendicular exchange bias in Pt/Co/Pt/a-Cr₂O₃ thin film
°Y. Shiratsuchi, K. Toyoki, Y. Takechi, Y. Nakano, S. Onoue, C. Mitsumata*, R. Nakatani (Osaka Univ., *NIMS)
- 5aD-5 First-principles study of exchange coupling in Cr₂O₃/α-Fe₂O₃ deposited-layer
°Y. Kota, H. Imamura (AIST)
- 5aD-6 A study of orientational dependence of in-plane and perpendicular exchange anisotropy in Mn-Ir / Fe-Co bilayers
H. Takahashi, °M. Tsunoda (Tohoku Univ.)

Thin Film IV		10 : 45 ~ 12 : 15	Chair: Y. Shiratsuchi (Osaka Univ.)
5aD-7	Preparation of magnetic bilayer films consisting of SmCo ₅ ordered alloy and 3d ferromagnetic transition metal °M. Yamada, Y. Hotta, T. Yanagawa, M. Ohtake, F. Kirino*, M. Futamoto (Chuo Univ., *Tokyo Univ. of Arts)		
5aD-8	Low-temperature epitaxial growth of FeRh films using atomic matched heterointerfaces °K. Tanikawa*, J. Hirayama*, S. Yamada*, M. Kawano*, M. Miyao*, **, K. Hamaya* (*Kyushu Univ., **JST-CREST)		
5aD-9	Phase stability and magnetic property of α' -(Fe100-xMx)-N (M = Cr, Mo, W) films °T. Ogawa, K. Hayashi, M. Takahashi (Tohoku Univ.)		
5aD-10	Temperature and crystalline direction dependence of magnetic damping in pseudo-single-crystal Fe ₄ N films °S. Isogami*, **, M. Tsunoda*, M. Oogane*, A. Sakuma*, M. Takahashi* (*Tohoku Univ., **Fukushima-nct.)		
5aD-11	Thickness dependent magnetic properties of ferromagnetic Pd(100) thin films °S. Sakuragi, T. Sato, M. Sawada*, H. Namatame*, M. Taniguchi* (Keio Univ., *Hiroshima Univ.)		
5aD-12	First principles analysis of Fe, Co, Ni-modified graphene ribbon °N. Ota (Univ. of Tsukuba)		
Surface		13 : 15 ~ 14 : 30	Chair: M. Kotsugi (SPRING8/JASRI.)
5pD-1	Structural and electronic properties of a modified Fe ₃ O ₄ (001) thin films surface °S. Hiura, A. Ikeuchi, S. Shirini, A. Subagyo, K. Sueoka (Hokkaido Univ.)		
5pD-2	Magnetic domain observation of recording medium by using spin-polarized STM °R. Kageyama, T. Sato, K. Honda, H. Matsuyama, K. Koike (Hokkaido Univ.)		
5pD-3	STM study on the surface atomic structures of the out-of-plane type APBs in Fe ₃ O ₄ thin film °A. Ikeuchi, S. Hiura, S. Shirini, A. Subagyo, K. Sueoka (Hokkaido Univ.)		
5pD-4	Magnetic anisotropy and magnetic structure of Ni ultrathin films on Pd (001) surface °T. Ueno, M. Sawada*, H. Furuta*, Y. Kishimizu*, H. Namatame*, M. Taniguchi* (NIMS, *Hiroshima Univ.)		
5pD-5	Magnetic properties on the surface of an Fe ₅₂ Al ₄₈ alloy induced by nanosecond pulsed laser irradiation °H. Kaiju, Y. Yoshida, K. Oosawa, S. Watanabe, K. Kondo, A. Ishibashi, K. Yoshimi* (Hokkaido Univ., *Tohoku Univ.)		
Fine Particles		14 : 45 ~ 16 : 15	Chair: N. Fujita (Nara Nat. Coll. Tech.)
5pD-6	Effect of grain size on magnetic properties and sensitization of Inconel 600 alloy °H. Takahashi, T. Sumimoto, H. Kikuchi (Iwate Univ.)		
5pD-7	Preparation of Fe nanoparticles assembly with Swiss roll shape by self-organization under magnetic field °H. Kura, K. Hiroi*, T. Sato*, T. Ogawa (Tohoku Univ., *Keio Univ.)		
5pD-8	Size distribution of FePt nanoparticles encapsulated in multi-walled carbon nanotube °S. Takase, K. Hori, Y. Fujiwara, H. Sato, K. Maeda, T. Kato*, T. Kobayashi, M. Jinbo**, S. Iwata* (Mie Univ., *Nagoya Univ., **Daido Univ.)		
5pD-9	Direct observation of magnetic arrangement in aggregated Fe nanoparticles with strong dipole interaction °H. Kambayashi, K. Hiroi, H. Kura*, T. Ogawa*, T. Sato (Keio Univ., *Tohoku Univ.)		
5pD-10	Verification of Ferromagnetism in Au Nanoparticles with Clean Surface °S. Ishikawa, T. Sato (Keio Univ.)		
5pD-11	Induced magnetic anisotropy of Fe-Co nanoparticle/polystyrene nanocomposite polymerized in magnetic field °H. Kura, K. Hata*, T. Oikawa*, M. Takahashi, T. Ogawa (Tohoku Univ., *Samsung R & D Inst. Jpn.)		
Fine Particles/Granular Films		16 : 30 ~ 18 : 00	Chair: T. Sato (Keio Univ.)
5pD-12	Improvement of saturation magnetization of Fe-Co nanoparticle by post-annealing under high pressure T. Ogawa, °Y. Nagumo, H. Kura, K. Hata*, T. Oikawa*, M. Takahashi (Tohoku Univ., *Samsung R&D Inst. Jpn.)		
5pD-13	Correlation between shape anisotropy and magnetic resonance frequency for Fe nanoparticle columnar structure assembly fabricated by magnetic-field-induced self-assembly method °T. Ogawa, R. Tate, H. Kura, T. Oikawa*, K. Hata*, M. Takahashi (Tohoku Univ., *Samsung R&D Inst. Jpn.)		
5pD-14	Temperature dependence of the coercive force of ferromagnetic TM-Al-O (TM = Co, Fe) granular films °S. Nakamura, A. Yoshihara*, S. Ohnuma**, T. Nojima (Tohoku Univ., *Ishinomaki Senshu Univ., **RIEMM)		
5pD-15	Brillouin light scattering from magnetic excitations in superparamagnetic Co-Al-O films at low temperatures °A. Yoshihara, Y. Miura, S. Nakamura*, T. Nojima*, S. Ohnuma** (ISU, *Tohoku Univ., **RIEMM)		
5pD-16	Magnetoresistance effect of Polyimide-Fe _x O _{1-x} granular films fabricated by hydrogen reduction method. °K. Suzuki, T. Niizeki, H. Yanagihara, E. Kita (Univ. of Tsukuba)		

- 5pD-17 Preparation of Fe doped titanium dioxide thin films by sol-gel process and their properties
 °Y. Watanabe, T. Takase, K. Yamaguchi (Fukushima Univ.)

Sep. 5/RoomE

Symposium “Generation and Utilization of a Magnetic Field for Medical Applications”

9 : 00 ~ 10 : 30

Chair: T. Yoshida (Kyushu Univ.)

- 5aE-1 Intensity and frequency of exciting magnetic field for biomedical applications °Y. Takemura (Yokohama National Univ.)
 5aE-2 Development of a compact magnetic stimulator for use at patients' home °M. Sekino (Univ. of Tokyo)
 5aE-3 Measurement of signal delay of the sonic wave emission by stimulated magnetic nanoparticles in the alternating magnetic field
 °T. Nakagawa, M. Tano, S. Seino, T. Yamamoto, T. Ueda* (Osaka Univ., *Neo-tech-lab)

Symposium “Generation and Utilization of a Magnetic Field for Medical Applications”

10 : 45 ~ 12 : 15

Chair: S. Seino (Osaka Univ.)

- 5aE-4 Magnetic nanoparticle imaging using harmonic signals for biomedical application °T. Yoshida, K. Enpuku (Kyushu Univ.)
 5aE-5 Soft-heating hyperthermia treatment and excitation coil properties
 °F. Sato, Y. Ota, T. Takura, T. Sato, H. Matsuki (Tohoku Univ.)
 5aE-6 Double pancake coil type applicator having wireless power transmission for hyperthermia therapy
 °S. Yamada (Kanazawa Univ.)

Medical Magnetic Beads

13 : 30 ~ 15 : 00

Chair: S. Yamada (Kanazawa Univ.)

- 5pE-1 Aggregation of polyethylenimine coated magnetic nanoparticles/DNA complexes inducing decrease of transfection efficiency
 °S. Ota, A. Tomitaka*, T. Yamada, D. Kami**, M. Watanabe, Y. Takemura (Yokohama National Univ., *Univ. Washington, **Kyoto Pref. Univ. Med.)
 5pE-2 New enzyme immobilization method onto gold/iron-oxide magnetic composite nanoparticles
 °S. Seino, K. Watanabe, T. Shikakura, M. Abe, T. Nakagawa, Y. Koga, Takao A. Yamamoto (Osaka Univ.)
 5pE-3 Carboxylated SiO₂-coated a-Fe nanoparticles: towards a versatile platform for biomedical applications
 °S. Yamamoto*, K. Kohara**, M. Takano* (*Kyoto Univ., **TODA KOGYO)
 5pE-4 Fabrication of magnetic and biodegradable composite particle for drug carrier
 °C. Oka, K. Ushimaru, N. Horiishi*, T. Tsuge, Y. Kitamoto (Tokyo Inst. Tech., *Bengala Techno Lab.)
 5pE-5 Self-assembly of iron oxide nanoparticles on silica particles
 °T. Fuchigami, Y. Miwa, Y. Namiki*, Y. Kitamoto (Tokyo Inst. Tech., *Jikei Univ. Sch. Med.)
 5pE-6 Fabrication of Multifunctional Magnetic Gold Nanocapsules for Image-guided Therapy and Drug Delivery
 °R. Zhang, Y. Kitamoto (Tokyo Inst. Tech.)

Hyperthermia

15 : 15 ~ 16 : 45

Chair: F. Sato (Tohoku Univ.)

- 5pE-7 Relaxation Dynamics of Superparamagnetic Suspension under Alternating Magnetic Field
 °S. B. Trisnanto Suko, Y. Kitamoto (Tokyo Inst. Tech.)
 5pE-8 Design of magnetic circuit for radiofrequency hyperthermia
 °M. Takahashi, T. Nakagawa, S. Seino, T. Yamamoto (Osaka Univ.)
 5pE-9 Preparation of La_{2/3}Sr_{1/3}Mn_{1-x}Me_xO₃ (Me = Zn, Ti, Ni) perovskite samples for magnetic hyperthermia
 °K. Maeda, D. Yamaguchi*, T. Nakagawa, S. Seino, T. Yamamoto (Osaka Univ., *Nara Nat. Coll. Tech.)
 5pE-10 Heating characteristics of ferromagnetic nano particles for magnetic thermoablation
 °A. Seki, D. Isaka, Y. Kikuchi, A. Horiuchi, R. Miyamoto, M. Kishimoto, H. Yanagihara, T. Oda, N. Ohkouchi, H. Mamiya*, Y. Ikehata**, I. Nagano**, E. Kita (Univ. of Tsukuba, *NIMS, **Kanazawa Univ.)
 5pE-11 Anti-cancer effect of magnetic hyperthermia combined with antibody
 °S. Ota, N. Yamazaki, A. Tomitaka*, T. Yamada, Y. Takemura (Yokohama National Univ., *University of Washington)
 5pE-12 Synthesis and magnetic properties of platelet iron oxide nanoparticles for thermoablation using hysteresis-loss heating
 °A. Horiuchi, A. Seki, M. Kishimoto, H. Yanagihara, E. Kita (Univ. of Tsukuba)

Sep. 5/RoomF

Magnetic Sensor I

10 : 00 ~ 11 : 45

Chair: H. Kikuchi (Iwate Univ.)

- 5aF-1 Eddy current position sensor °J. Inoue, A. Shiratsuki, E. Sano, Y. Watanabe, H. Nishizawa, M. Seki (MITSUBISHI)
- 5aF-2 Localization of magnetic marker using super-low frequency magnetic signal
°D. Oyama, Y. Adachi, M. Higuchi, G. Uehara (Kanazawa Inst. Tech.)
- 5aF-3 Position sensing system of wireless magnetic ribbon type marker
T. Chiba, °S. Yabukami, T. Ozawa, H. Kanetaka*, Y. Shimizu*, S. Hashi* (Tohoku Gakuin Univ., *Tohoku Univ.)
- 5aF-4 Dependence of ECT signal on shape of notch inside narrow hole by using needle type magnetic probe
°S. Kanamori, S. Yamada, T. Ueno (Kanazawa Univ.)
- 5aF-5 Development of a wide range current sensor with regularly-arrayed magnetic core
°Y. Watanabe, H. Nishizawa, M. Seki, T. Hirai, R. Nishiura (MITSUBISHI)
- 5aF-6 Eddy-current test using Nano-Granular In Gap Magnetic Sensor
°T. Ozawa, K. Hosoya, S. Yabukami, J. Totsuka*, S. Koyama*, M. Naoe**, N. Kobayashi**, Y. Kaneta**,
Ken Ichi Arai** (Tohoku Gakuin Univ., *Daido Steel, **RIEMM)
- 5aF-7 Relationship between sensor output of fluxgate magnetic sensor and magnetic domain structure of core
°H. Miyata, Y. Morimoto*, M. Takezawa* (MTI, *Kyushu Inst. Tech.)

Magnetic Sensor II

13 : 15 ~ 14 : 45

Chair: T. Ozawa (Tohoku Gakuin Univ.)

- 5pF-1 Development of high sensitivity multi structure MI element
°A. Shimode, S. Tatematsu, K. Genba, N. Hamada, M. Yamamoto (Aichi Steel)
- 5pF-2 Low noise self-oscillator made of magnetoelastic ribbon resonator °T. Takiya, O. Ishii, N. Kutsuzawa (Yamagata Univ.)
- 5pF-3 Application of magnetic ribbon coated with polystyrene to a wireless toluene sensor
°T. Suzuki, O. Ishii, N. Kutsuzawa (Yamagata Univ.)
- 5pF-4 Influence of a neighboring conductor on resonance behaviors of a LC wireless sensor
°T. Arai, O. Ishii, N. Kutsuzawa (Yamagata Univ.)
- 5pF-5 Magnetic strain sensor using GMR effect °H. Ito, H. Kim, T. Kato, S. Iwata (Nagoya Univ.)
- 5pF-6 Development of magnetic gyro sensor with use of MI sensor °Y. Honkura, K. Ogawa (ISP)

Magnetic Sensor III

15 : 00 ~ 16 : 15

Chair: S. Yabukami (Tohoku Gakuin Univ.)

- 5pF-7 Development of a compact magnetometer using HTS-SQUID and rotating sample
°N. Okamoto, D. Hamasaki, M. M. Saari, K. Sakai, T. Kiwa, K. Tsukada (Okayama Univ.)
- 5pF-8 Measurement of moisture content using HTS-SQUID magnetometer
°T. Kusaka, M. M. Saari, K. Sakai, T. Kiwa, K. Tsukada (Okayama Univ.)
- 5pF-9 Development of compact magnetometer with DC/AC unit employing High-Tc SQUID
°Y. Ishihara, M. M. Saari, R. Takagi, K. Sakai, T. Kiwa, K. Tsukada (Okayama Univ.)
- 5pF-10 Miniaturization of a FG sensor head using a micro-wire °S. Harada, I. Sasada (Kyushu Univ.)
- 5pF-11 Construction of an axial resolver with multiple anisotropy detection coils °K. Nakashima, I. Sasada (Kyushu Univ.)

Spin-Wave

16 : 30 ~ 17 : 45

Chair: T. Sato (Univ. of Tokyo)

- 5pF-12 Micromagnetic simulation for spin wave based parallel logic operations
°Y. Urazuka, S. Oyabu, H. Chen, B. Peng, H. Otsuki, T. Tanaka, K. Matsuyama (Kyushu Univ.)
- 5pF-13 Interferometric spin waves for NiFe thin film patterns
°S. Oyabu, Y. Urazuka, H. Chen, B. Peng, H. Otsuki, T. Tanaka, K. Matsuyama (Kyushu Univ.)
- 5pF-14 Electrical detection of collective dynamics in 3-chained magnetic vortices
°N. Hasegawa*, S. Sugimoto*, Y. Niimi*, Y. Otani*,** (*Univ. of Tokyo, **RIKEN)
- 5pF-15 Imaging of magnetic vortex investigated by femtosecond laser pulses
°M. Sozawa, T. Tachizaki, M. Goto, S. Watanabe, Y. Nozaki (Keio Univ.)
- 5pF-16 Observation of standing spin wave modes in spin torque oscillators by mag-noise measurement
°S. Tamaru, H. Kubota, K. Yakushiji, R. Matsumoto, T. Nozaki, M. Konoto, A. Fukushima, H. Imamura, T. Taniguchi, H. Arai, S. Yuasa, Y. Suzuki* (AIST, *Osaka Univ.)

Sep. 6/RoomA

Patterned Media I

9 : 30 ~ 10 : 15

Chair: S. Iwata (Nagoya Univ.)

- 6aA-1 Ferromagnetic-nonmagnetic phase transition on [001]-oriented $L1_0$ ($\text{Fe}_{1-x}\text{Mn}_x$)₅₀Pt₅₀ film
°H. Yamada, R. Kasahara, T. Hasegawa, K. Uebayashi*, A. Arakawa, S. Ishio (Akita Univ., *Akita Nat. Coll. Tech.)
- 6aA-2 Fabrication of [001] $L1_0$ -FePtRh ferromagnetic-antiferromagnetic pattern and ferromagnetic-paramagnetic pattern by Pt and Fe ion implantation
°T. Hasegawa, H. Kawato, Y. Kondo*, S. Ishio (Akita Univ., *AIT)
- 6aA-3 Fabrication of $L1_0$ -($\text{Fe}_{1-x}\text{Mn}_x$)₅₀Pt₅₀ ferromagnetic-paramagnetic flat pattern using Mn ion irradiation
°T. Yamazaki, K. Sasaki, T. Hasegawa, A. Arakawa, S. Ishio (Akita Univ.)

Patterned Media II

10 : 30 ~ 11 : 30

Chair: S. Ishio (Akita Univ.)

- 6aA-4 Switching field distribution of ion irradiation bit patterned MnGa film
°D. Oshima, T. Kato, S. Iwata, S. Tsunashima* (Nagoya Univ., *NISRI)
- 6aA-5 Effect of Kr^+ ion irradiation on perpendicular anisotropy and orbital moment of CrPt_3
°T. Kato, D. Oshima, M. Tanimoto, Y. Fujiwara*, T. Nakamura**, S. Iwata (Nagoya Univ., *Mie Univ., **JASRI)
- 6aA-6 Magnetization control and pattern formation of spinel ferromagnetic oxides by ion implantation
°E. Kita, K. Ono*, N. Yamaguchi*, T. Nishihashi*, Y. Liu, Y. Utsumi, J. Morishita, K. Suzuki, T. Kato**, T. Niizeki, K. Mibu***, H. Yanagihara (Univ. of Tsukuba, *ULVAC, **Nagoya Univ., ***Nagoya Inst. Tech.)
- 6aA-7 Effect of inter-dot interaction on magnetic switching of 3-layer ECC dot array
°N. Honda, K. Yamakawa* (Tohoku Inst. Tech., *AIT)

Sep. 6/RoomB

Symposium “The Challenge of Magnetics to Improve Energy Efficiency”

9 : 00 ~ 12 : 00

Chair: M. Futamoto (Chuo Univ.)

- 6aB-1 The challenge of energy magnetics to improve energy efficiency and its highlight target
°Y. Honkura (Aichi Steel)
- 6aB-2 Outline of R & D project “Development of magnetic material technology for high-efficiency motors”
°M. Nakamura (AIST)
- 6aB-3 New nano-crystalline soft magnetic materials “NANOMETTM” for energy saving
°A. Makino (Tohoku Univ.)
- 6aB-4 Recent development and current status of permanent magnets
°S. Sugimoto (Tohoku Univ.)
- 6aB-5 Development and future prospects for magnetic field analysis technology
°F. Ikeda (Photon)
- 6aB-6 Recent advances of high efficiency interior permanent magnet synchronous motors
°K. Ohyama (Daikin Industries)

Symposium “The Challenge of Magnetics to Improve Energy Efficiency”

13 : 00 ~ 14 : 15

Chair: S. Ogasawara (Hokkaido Univ.)

- 6pB-1 Technical feature and technical problem of motor for HEV
°H. Aihara (TOYOTA motor)
- 6pB-2 Electrical energy and magnetics
°K. Fujisaki (Toyota Tech. Inst.)
- 6pB-3 50% light weight motor for automobile application used by anisotropic bonded NdFeB magnets
°H. Mitarai (Aichi Steel)

Symposium “The Challenge of Magnetics to Improve Energy Efficiency”

14 : 30 ~ 15 : 30

Chair: T. Minowa (ShinEtsu)

- 6pB-4 Development of magnetic actuator
°T. Fujita, Y. Ando*, K. Nagaya*, T. Todaka**, M. Enokizono**, N. Wadaguri, M. Inagaki (Nissei, *Gunma Univ., **Oita Univ.)
- 6pB-5 Fundamental aspects of rare-earth permanent magnets
°K. Kobayashi (Shizuoka Inst. Sci. Tech.)

Symposium “The Challenge of Magnetics to Improve Energy Efficiency”

15 : 30 ~ 16 : 00

Chair: Y. Honkura (Aichi Steel)

- 6pB-6 Panel Discussion

Sep. 6/RoomC

Semiconductor I

9 : 30 ~ 10 : 45

Chair: T. Uemura (Hokkaido Univ.)

- 6aC-1 Epitaxial growth thin Al_2O_3 layer upon Si and its spin characteristics
 $^{\circ}$ Y. Watanabe, N. Takahashi, T. Nagahama, T. Shimada (Hokkaido Univ.)
- 6aC-2 Interlayer interactions at graphene-sapphire heterostructure
 $^{\circ}$ S. Entani, Y. Matsumoto, M. Ohtomo, P. V. Avramov, H. Naramoto, S. Sakai (JAEA)
- 6aC-3 Spin transports via the edge states in graphene nano-ribbon
 $^{\circ}$ K. Inuzuka, S. Honda, N. Sano (Univ. of Tsukuba)
- 6aC-4 Experiments which reveal non-thermal process in photo-induced FMR in (Ga,Mn)As
 $^{\circ}$ T. Matsuda, H. Munekata (Tokyo Inst. Tech.)
- 6aC-5 Temperature dependence of the spin-coherence in p-type silicon
 $^{\circ}$ E. Shikoh, K. Kubo*, S. Dushenko*, Y. Ando*, T. Shinjo*, M. Shiraishi* (Osaka City Univ., *Osaka Univ.)

Semiconductor II

11 : 00 ~ 12 : 00

Chair: E. Shikoh (Osaka City Univ.)

- 6aC-6 Maximisation of activation volume in Co_2FeSi thin films
 L. R. Fleet*, K. Yoshida**, H. Kobayashi***, Y. Kaneko***, S. Matsuzaka***, Y. Ohno****, H. Ohno***,
 S. Honda****, J. Inoue****, $^{\circ}$ A. Hirohata*,***** (*Univ. of York, **Nagoya Univ., ***Tohoku Univ.,
 ****Univ. of Tsukuba, *****JST-PREST)
- 6aC-7 Effect of CoFe insertion on spin injection properties in $\text{Co}_2\text{MnSi}/\text{CoFe}/\text{n-GaAs}$ junctions
 $^{\circ}$ Y. Ebina, T. Akiho, H.-x. Liu, M. Yamamoto, T. Uemura (Hokkaido Univ.)
- 6aC-8 Dynamic nuclear polarization observed in $\text{Co}_2\text{MnSi}/\text{CoFe}/\text{n-GaAs}$ heterojunctions
 $^{\circ}$ T. Akiho, H.-x. Liu, M. Yamamoto, T. Uemura (Hokkaido Univ.)
- 6aC-9 Influence of the interface structure on spin polarization of $\text{Fe}_3\text{Si}/\text{Ge}(111)$ contacts
 $^{\circ}$ T. Furukawa*, H. Itoh***, N. Suzuki*, S. Honda*** (*Kansai Univ., **JST-CREST, ***Univ. of Tsukuba)

Sep. 6/RoomD

Nano Structure/Thin Film

9 : 30 ~ 11 : 00

Chair: H. Takagi (Toyohashi Univ. Tech.)

- 6aD-1 Fabrication and spin wave resonance of cobalt chiral meta-molecules
 $^{\circ}$ T. Kodama, S. Tomita, N. Hosoito, H. Yanagi (NAIST)
- 6aD-2 Preparation of mesoporous silica thin films as nano template
 $^{\circ}$ Y. Saitou, T. Haeiwa (Shinshu Univ.)
- 6aD-3 Fine structure of the perpendicular oriented meso-porous silica thin films with the electrodeposition method.
 $^{\circ}$ T. Nakashima, T. Haeiwa (Shinshu Univ.)
- 6aD-4 Study on fabrication of composite magnetic film utilizing metal nanoparticles
 $^{\circ}$ Y. Hayashi, W. Goto, S. Hashi, K. Ishiyama (Tohoku Univ.)
- 6aD-5 Deposition of CoPtCr-SiO_2 granular films by reactive sputtering using CoPtCrSi target
 $^{\circ}$ S. Sasaki, S. Hinata*, S. Saito*, M. Takahashi*, K. K. Tham** (Ichinoseki Nat. Coll. Tech., *Tohoku Univ.,
 **TANAKA HOLDINGS)
- 6aD-6 Measurement of magnet-viscoelastic characteristics of composite fluid made of magnetic and fluid
 T. Fukushima, $^{\circ}$ T. Todaka, M. Enokizono (Oita Univ.)

Sep. 6/RoomF

High-Frequency Device I

9 : 30 ~ 10 : 45

Chair: M. Sonehara (Shinshu Univ.)

- 6aF-1 Development of on-chip integrated active magnetic probe for evaluation of IC chip-level EM noise
 $^{\circ}$ Y. Shigeta, N. Sato, K. Arai, S. Muroga, M. Yamaguchi, S. Kageyama* (Tohoku Univ., *Toppan technical Design Center)
- 6aF-2 Highly sensitive thin film sensor using coplanar line
 H. Uetake, $^{\circ}$ S. Yabukami, H. Bandai, T. Chiba, T. Ozawa, N. Kobayashi*, K. I. Arai* (Tohoku Gakuin Univ., *RIEMM)
- 6aF-3 Investigation on discrete impedance of MI elements based on simplified domain structure model.
 $^{\circ}$ Y. Takahashi, K. Takahashi, Y. Onodera, H. Kikuchi, T. Nakai*, S. Hashi**, K. Ishiyama**
 (Iwate Univ., *ITIM, **Tohoku Univ.)
- 6aF-4 Development of multi core magnetoimpedance sensor and its applications
 $^{\circ}$ T. Uchiyama, N. Hamada*, C. M. Cai* (Nagoya Univ., *Aichi Steel)

- 6aF-5 Permeability measurement of magnetic thin film by microstrip probe
 °T. Kimura, S. Yabukami, T. Ozawa, Y. Miyazawa*, H. Kenju*, Y. Shimada**
 (Tohoku Gakuin Univ., *Toei Scientific Industrial, **Tohoku Univ.)

High-Frequency Device II

11 : 00 ~ 12 : 00

Chair: T. Uchiyama (Nagoya Univ.)

- 6aF-6 Electrical characterization of micro-inductor coated with CoFeSiB flat particles
 °H. Sato, Y. Endo, S. Muroga, M. Yamaguchi, H. Kamata*, M. Takahashi*, M. Sakamoto*, S. Maita*, N. Kato*
 (Tohoku Univ., *Hikaridenshi)
- 6aF-7 Conductive and inductive noise suppression effect of magnetic thin film set on transmission line
 °O. Hirano, Y. Endo, T. Ito, K. Yanagi, S. Muroga, Y. Shimada, M. Yamaguchi (Tohoku Univ.)
- 6aF-8 Study on reduction of skin effect and loss in a transmission line using negative permeability material
 °H. Nakayama*, **, T. Yoshihara*, **, K. Nakamura**, ***, J. Koguchi**, ***, R. Nakagomi**, ***, M. Sonehara**, ***,
 T. Sato**, *** (*Nagano Nat. Coll. Tech, **Spin Device Technology Center, ***Shinshu Univ.)
- 6aF-9 Study on fundamental property of current sensor using magnonic crystals
 °H. Takagi, N. Kanazawa, A. Buyandalai, M. Inoue (Toyohashi Univ. Tech.)