

PROGRAM

Sep. 8/Room A

Symposium "Advances and perspectives in instrumentation and experimental methodology for research in magnetism"

Chief Organizer: A. Sandhu(UEC)

15:15 ~ 16:15

Chair:A. Sandhu(UEC)

- 8pA-1 Status and trends in high performance magnetic imaging using Scanning Probe Microscopy (SPM)
°A. Oral (METU)
- 8pA-2 Status and trends in high performance magnetic sensors and their applications
K. W. Kim, S.J. Kim, I. Song, °C.G. Kim (DGIST)

16:30 ~ 18:00

Chair:K. Noda(Wakayama Univ.)

- 8pA-3 Achievement of 1020 MHz NMR
°T. Shimizu¹, K. Hashi¹, S. Ohki¹, S. Matsumoto¹, G. Nishijima¹, A. Goto¹, K. Deguchi¹, K. Yamada¹, T. Noguchi¹, S. Sakai¹, M. Takahashi², Y. Yanagisawa², S. Iguchi², T. Yamazaki², H. Maeda², R. Tanaka³, Y. Nishiyama³, T. Nemoto³, H. Suematsu³, T. Miki⁴, K. Saito⁴ (¹NIMS, ²RIKEN, ³JEOL RESONANCE, ⁴Kobe Steel)
- 8pA-4 Microcapillary capsule for nanoscale and real time observation of materials in liquid by transmission electron microscopy
°T. Takamura¹, P.J. Ko², P. Southern^{3,4}, D. Ortega⁵, Q. Pankhurst^{3,4}, A. Sandhu^{1,2}
(¹Toyohashi Univ. Tech., ²UEC, ³Royal Inst. Great Britain, ⁴Univ. Collage London, ⁵IMDEA)
- 8pA-5 Magnetic nanoparticles for biomedical applications
°S. Maenosono (JAIST)

Sep. 8/Room B

Magneto-optics

13:00 ~ 14:30

Chair:T. Saito(Toho Univ.)

- 8pB-1 Magneto-optical effect of Ga substituted Bismuth Iron Garnet with metal nano-particles
°N. Adachi, D. Go, M. Igarashi, M. Ishikawa, T. Ota (Nagoya Inst. Tech.)
- 8pB-2 Characterization of large Nd_{3-x}Bi_xFe_{5-y}Ga_yO₁₂ thin films on glass substrates for magneto-optical imaging
°Q. Liu, G. Lou, M. Sasaki, T. Ishibashi (Nagaoka Univ. Tech.)
- 8pB-3 Optical and magneto-optical responses of Au/Bi: YIG periodic structures
°H. Uchida¹, K. Ooki¹, H. Sato², R. Isogai³, S. Saito², M. Inoue³ (¹Tohoku Inst. Tech., ²Tohoku Univ., ³Toyohashi Univ. Tech.)
- 8pB-4 Proposal for a magneto-optical memory based on molecular magneto-optical effects
°M. Karasawa, K. Ishii (Univ. of Tokyo)
- 8pB-5 Volumetric Thermomagnetic Recording into Magnetophotonic Crystals with Heat-absorbing Layers
°R. Isogai, S. Suzuki, K. Kawazu, T. Goto, H. Takagi, Y. Nakamura, P.B. Lim, M. Inoue (Toyohashi Univ. Tech.)
- 8pB-6 Wavelength dependence of near infrared on magnetorefractive effect for Co/Ru multilayer films
°H. Sato¹, S. Mizuno², K. Akahane¹, H. Uchida², S. Saito¹ (¹Tohoku Univ., ²Tohoku Inst. Tech.)

Magnetic phase transition

14:45 ~ 16:00

Chair:K. Kamishima(Saitama Univ.)

- 8pB-7 Expansion of Reverse Monte Carlo method for reconstruction of magnetic domain structure
°M. Tokii¹, E. Kita¹, C. Mitsumata², K. Ono³, H. Yanagihara¹, M. Matsumoto¹ (¹Univ. of Tsukuba, ²NIMS, ³KEK)
- 8pB-8 Magnetism of Ca_{1-x}Sr_xFeO₃ oxidized by ozone
E. Kawawa¹, °H. Kawanaka², Y. Nishihara¹, F. Iga¹ (¹Ibaraki Univ., ²AIST)
- 8pB-9 Slow dynamics of thermoremanent magnetization due to quantum well formation for epitaxial Fe/Au/Cr trilayers
°E. Wada, K. Fukida, K. Mukai, K. Yokoyama, D. Akahoshi, T. Saito (Toho Univ.)
- 8pB-10 Monte Carlo Simulation for thermal assisted reversal process of cylindrical magnetic cluster
°N. Sakamoto, K. Terashima, K. Yamaguchi (Fukushima Univ.)
- 8pB-11 Itinerant-electron metamagnetic transition and kinetic arrest of LaFe₁₂B₆ compound
°S. Fujieda, K. Fukamichi, S. Suzuki (Tohoku Univ.)

Ferrites, Magnetic ordering		16:15 ~ 17:30	Chair:S. Saito(Tohoku Univ.)
8pB-12	Negative perpendicular anisotropy in NiFe_2O_4 (001) epitaxial film grown on MgAl_2O_4 (001)	°M. Matsumoto, T. Tainosho, Y. Hisamatsu, J. Inoue, S. Sharmin, H. Yanagihara, E. Kita (Univ. of Tsukuba)	
8pB-13	Magnetic properties of 4d-element-replaced spinel ferrite(001) thin films.	°Y. Hisamatsu, M. Oka, D. Sekiba, S. Sharmin, H. Yanagihara, E. Kita (Univ. of Tsukuba)	
8pB-14	Large negative uniaxial magnetic anisotropy of epitaxial cobalt ferrite thin films	°T. Tainosho, M. Matsumoto, Y. Hisamatsu, J. Inoue, S. Sharmin, H. Yanagihara, E. Kita (Univ. of Tsukuba)	
8pB-15	Study of optimum preparation conditions of Fe-deficient Ca-based M-type ferrite	°M. Shigemura ¹ , K. Watanabe ² , K. Kakizaki ¹ , K. Kamishima ¹ (¹ Saitama Univ., ² RIKEN)	
8pB-16	Synthesis and magnetic properties of hexaferrite having new stacking structure	°K. Watanabe ¹ , K. Watanabe ² , K. Kakizaki ¹ , K. Kamishima ¹ (¹ Saitama Univ., ² RIKEN)	

Sep. 8/Room C

Film fabrication		10:00 ~ 12:00	Chair:H. Yanagihara(Univ. of Tsukuba)
8aC-1	Preparation of two-dimensional closed-packed shell structure of thin film formed using PMMA particles as a template	°H. Mori ¹ , K. Shinozaki ² , N. Sakamoto ¹ , H. Suzuki ¹ , N. Wakiya ¹ (¹ Shizuoka Univ., ² Tokyo Inst. Tech.)	
8aC-2	Polycrystalline and amorphous Co and Fe magnetic thin films on PEN organic substrates	°H. Kaiju ¹ , T. Abe ¹ , M. Ishimaru ² , K. Kubo ³ , J. Nishii ¹ (¹ Hokkaido Univ., ² Kyushu Inst. Tech., ³ Teijin DuPont Films)	
8aC-3	Preparation of iron oxide films deposited by Supersonic Free-Jet PVD	°F. Abe ¹ , A. Yumoto ¹ , Y. Masahiro ² , S. Ohkoshi ³ , A. Namai ³ , M. Yoshikiyo ³ , T. Yamamoto ⁴ (¹ Shibaura Inst. Tech., ² TANAKA, ³ Univ. of Tokyo, ⁴ Nagoya Univ.)	
8aC-4	Creation of non-magnetic layer and control of its layer thickness by ion irradiation on MnGa films	°D. Oshima ¹ , T. Kato ¹ , S. Takahashi ² , Y. Sonobe ² , S. Iwata ¹ , S. Tsunashima ³ (¹ Nagoya Univ., ² Samsung Research Inst. Jpn., ³ NISRI)	
8aC-5	Nd-Fe-B nano-composite film magnets prepared by high laser energy density	°K. Fujiyama, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)	
8aC-6	Structure and Magnetic Properties of SmCo_5 Alloy Epitaxial Thin Films Formed on $\text{Co}(11\bar{2}0)_{\text{hcp}}$ and $\text{Fe-Co}(100)_{\text{bcc}}$ Underlayers	°M. Ohtake ¹ , Y. Hotta ¹ , A. Suzuki ¹ , M. Yamada ¹ , M. Futamoto ¹ , F. Kirino ² , N. Inaba ³ (¹ Chuo Univ., ² Tokyo Univ. of Arts, ³ Yamagata Univ.)	
8aC-7	Dependence of magnetic domain size of ultra-thin CoPt perpendicular magnetic anisotropy films on applied magnetic field direction	°R. Hara, K. Hayakawa, H. Kawamura, R. Sugita (Ibaraki Univ.)	
8aC-8	Fabrication of highly-oriented Nd-Fe-B thin films	°Y. Azuma, S. Okamoto, N. Kikuchi, O. Kitakami (Tohoku Univ.)	

Ordered Alloy		13:00 ~ 14:15	Chair:T. Kubota (Tohoku Univ.)
8pC-1	Preparation of Epitaxial Magnetic Bi-layer Films Consisting of $L1_0$ Ordered Alloy and 3d Transition Metal	°R. Ochiai ¹ , M. Nakamura ¹ , Y. Noguchi ¹ , M. Ohtake ¹ , M. Futamoto ¹ , F. Kirino ² , N. Inaba ³ (¹ Chuo Univ., ² Tokyo Univ. of Arts, ³ Yamagata Univ.)	
8pC-2	Magnetic properties of $\text{D}_{022}\text{-Mn}_3\text{Ge}$ thin films with a high coercivity fabricated by laminated sputtering method	°K. Watanabe ¹ , M. Doi ² , T. Shima ² (¹ Tohoku Univ., ² Tohoku Gakuin Univ.)	
8pC-3	Fe content dependences of magnetic anisotropy and variant in $L1_0\text{-FePt}$ poly-crystalline films	°A. Hotta ¹ , T. Ono ^{1,2} , T. Shimatsu ¹ , N. Kikuchi ¹ , S. Okamoto ¹ , O. Kitakami ¹ (¹ Tohoku Univ., ² Fuji Electric)	
8pC-4	Formation of $L1_0$ phase for FeNi by sputtering and rapid thermal annealing	°T.Y. Tashiro ¹ , M. Mizuguchi ¹ , T. Koganezawa ² , K. Sato ¹ , T.J. Konno ¹ , K. Takanashi ¹ (¹ Tohoku Univ., ² JASRI/SPring-8)	
8pC-5	Crystal orientation and magnetic properties of Pd-Sb added $L1_0\text{-CoPt}$ thin films	°T. Kanou, K. Kakizaki, K. Kamisima (Saitama Univ.)	

Fine particles I **14:30 ~ 15:30** Chair: T. Ogawa (Tohoku Univ.)

- 8pC-6 Composition control of FePt particles in carbon nano-tube
^oT. Maeda¹, R. Muta¹, S. Takase¹, Y. Fujiwara¹, H. Sato¹, K. Maeda¹, M. Jimbo², T. Kobayashi¹ (¹Mie Univ., ²Daido Univ.)
- 8pC-7 Model Calculations on Magnetic Field Alignment of Cubic-Shaped $L1_0$ -FePt Nanoparticles on Substrate
^oS. Yamamoto (Kyoto Univ.)
- 8pC-8 Size-controlled synthesis and magnetic properties of FePt@PbS-core@shell nanoparticles
^oS. Yamamoto (Kyoto Univ.)
- 8pC-9 Preparation of Silica-coated Magnetite Particles and Evaluation of Their Magnetic Interaction
^oB. Jeyadevan¹, M. Fukunaga¹, E. Furukawa¹, J. Cuya¹, H. Miyamura¹, H. Mamiya² (¹Univ. Shiga Pref., ²NIMS)

Fine particles II **15:45 ~ 17:15** Chair: B. Jeyadevan (Univ. Shiga Pref.)

- 8pC-10 Characterization of $(\text{Cu,Fe})\text{Fe}_2\text{O}_4$ nanoparticles obtained via coprecipitation and flux methods
^oH. Latiff, M. Kishimoto, H. Yanagihara, S. Sharmin, E. Kita (Univ. of Tsukuba)
- 8pC-11 Dynamic hysteresis loops and explication of heat generation mechanism
^oT. Kuroiwa¹, K. Ota¹, A. Hawa¹, M. Kishimoto¹, H. Yanagihara¹, E. Kita¹, H. Mamiya² (¹Univ. of Tsukuba, ²NIMS)
- 8pC-12 Magnetic hysteresis scaling for ferromagnetic nanoparticles
^oT. Sato¹, S. Kobayashi¹, X.L. Dong², L. Zhang², T. Murakami¹ (¹Iwate Univ., ²Dalian Univ. of Tech)
- 8pC-13 Core loss properties of Fe nanoparticle assembly
^oM. Kin¹, H. Kura¹, H. Watanabe¹, Y. Hayashi¹, T. Ogawa² (¹DENSO, ²Tohoku Univ.)
- 8pC-14 Synthesis of α'' - Fe_{16}N_2 nanoparticles by using Fe nanoparticles covered by oleylamine
T. Ogawa, ^oY. Honnami (Tohoku Univ.)
- 8pC-15 Rotational hysteresis loss analysis for randomly oriented α'' - Fe_{16}N_2 nanoparticles assembly
^oM. Tobise, T. Ogawa, S. Saito (Tohoku Univ.)

Sep. 8/Room D

Antenna & Isolator **9:00 ~ 10:15** Chair: M. Sonehara (Shinshu Univ.)

- 8aD-1 Dielectric layer inserted single-feed spiral antenna for miniaturization and high frequency use
^oH. Aoki¹, J. Hayasaka², H. Masumoto¹, K. Arai², M. Yamaguchi¹ (¹Tohoku Univ., ²DENJIKEN)
- 8aD-2 Terrestrial digital TV broadcast reception antenna for folding type mobile phone
^oM. Yonehara, T. Wakamatsu, S. Fujii, H. Kurisu, S. Yamamoto (Yamaguchi Univ.)
- 8aD-3 Terrestrial digital TV broadcast reception antenna for smartphone
^oM. Yonehara, T. Wakamatsu, S. Fujii, H. Kurisu, S. Yamamoto (Yamaguchi Univ.)
- 8aD-4 Miniaturized top mount type isolators
^oM. Yonehara, T. Wakamatsu, S. Fujii, H. Kurisu, S. Yamamoto (Yamaguchi Univ.)
- 8aD-5 Miniaturized CPW top mount type isolators
^oM. Yonehara, T. Wakamatsu, S. Fujii, H. Kurisu, S. Yamamoto (Yamaguchi Univ.)

Magneto optics devices **10:30 ~ 11:45** Chair: M. Takezawa (Kyushu Inst. Tech.)

- 8aD-6 Design of Collinear Interference Optical System for Magneto-optic Effect Measurement
^oH. Takagi, K. Takakida, R. Hashimoto, T. Goto, M. Inoue (Toyohashi Univ. Tech.)
- 8aD-7 Estimation of defect depth using multi-cavity magnetophotonic crystal
^oR. Hashimoto, T. Goto, H. Takagi, M. Inoue (Toyohashi Univ. Tech.)
- 8aD-8 Design of Magneto Photonic Crystal for RGB Colors
^oK. Kudo, K. Nakamura, S. Sakai, T. Goto, H. Takagi, P.B. Lim, M. Inoue (Toyohashi Univ. Tech.)
- 8aD-9 Development of Magneto-optical Q-switch Using Magnetic Garnet Films
^oR. Morimoto¹, T. Goto¹, J. Pritchard², T. Yoshimoto¹, H. Takagi¹, Y. Nakamura¹, P.B. Lim¹, N. Pavel³, M. Mina², T. Taira³,
M. Inoue¹ (¹Toyohashi Univ. Tech., ²Iowa Univ., ³IMS)
- 8aD-10 Development of 10^{-8} order magnetostriction measuring system for thin film with calibration function of displacement and measuring function of Kerr signal
^oS. Meguro¹, T. Iida¹, J. Hatamochi¹, Y. Odagiri¹, S. Saito² (¹NEOARK, ²Tohoku Univ.)

Magnetic microscope **13:00 ~ 14:15** Chair:H. Nomura(Osaka Univ.)

- 8pD-1 Static magnetic field imaging of permanent magnet by alternating magnetic force with a fixed measuring direction of superparamagnetic tip
°S. Nakayama, G. Egawa, Y. Kinoshita, S. Yoshimura, H. Saito (Akita Univ.)
- 8pD-2 Effective directional sputtering deposition of FePt sharp end tips for 5nm resolution imaging of writing head by alternating magnetic force microscopy
H. Mizutani, K.Srinivasa Rao, F. Zheng, °S. Yoshimura, G. Egawa, Y. Kinoshita, H. Saito (Akita Univ.)
- 8pD-3 5 nm-resolution imaging of perpendicular magnetic recording media by alternating magnetic force with a soft magnetic tip
K. Srinivasa Rao, G. Egawa, Y. Kinoshita, S. Yoshimura, °H. Saito (Akita Univ.)
- 8pD-4 Relationship between Surface Morphology and Spatial Resolution of Magnetic Force Microscope Tip
°T. Kagawa¹, K. Kato¹, M. Ohtake¹, M. Futamoto¹, F. Kirino², N. Inaba³ (¹Chuo Univ., ²Tokyo Univ. Arts, ³Yamagata Univ.)
- 8pD-5 Scanning Transmission X-ray Microscope for Permanent Magnets
°N. Inami¹, Y. Takeichi¹, Y. Takahashi², K. Ono¹ (¹KEK, ²Univ. of Tokyo)

Magnetic sensors I **14:30 ~ 15:45** Chair:H. Kikuchi(Iwate Univ.)

- 8pD-6 Thin film strain sensor using inverse-magnetostriction effect on Si wafer
°H. Yokoi, Y. Kubo, S. Hashi, K. Ishiyama (Tohoku Univ.)
- 8pD-7 Frequency analysis of the current by magnetic thin film functional sensors
°S. Kisanuki, H. Tsujimoto (Osaka City Univ.)
- 8pD-8 Development and characterization of non-contact salinity sensor based on electromagnetic means
°N.V. Toai, M. Sonehara, T. Sato (Shinshu Univ.)
- 8pD-9 Motion capture system for tracking finger motion of hand work
°Y. Osaki¹, S. Hashi¹, S. Yabukami², H. Kanetaka¹, K. Ishiyama¹ (¹Tohoku Univ., ²Tohoku Gakuin Univ.)
- 8pD-10 Magnetic Motion Capture System using Super-Low-Frequency Signal
°D. Oyama¹, Y. Adachi¹, S. Kawabata², M. Higuchi¹, G. Uehara¹ (¹Kanazawa Inst. Tech., ²Tokyo Med. Dent. Univ.)

Magnetic sensors II **16:00 ~ 17:15** Chair:C. Mitsumata(NIMS)

- 8pD-11 Magnetic strain sensor having FeSiB free layer using GMR element
°N. Yamamoto, T. Kato, S. Iwata (Nagoya Univ.)
- 8pD-12 Development of meandering coplanar line type thin film magnetic field sensor
H. Uetake, T. Kawakami, K. Moriya, °S. Yabukami, T. Ozawa (Tohoku Gakuin Univ.)
- 8pD-13 Temperature drift suppression of amorphous magnetic wire orthogonal fluxgate by imparting induced magnetic anisotropy
°H. Karo, T. Nagatani, I. Sasada (Kyushu Univ.)
- 8pD-14 Reduction of fluxgate gradiometer susceptibility to uniform magnetic fields using permalloy shielding disk
°A.L. Elrefai, I. Sasada (Kyushu Univ.)
- 8pD-15 Miniaturization of fluxgate sensors by magnetic domain structure control of Fe-Si-B-C amorphous ribbons
°H. Miyata^{1,2}, R. Yamamoto², Y. Morimoto², M. Takezawa² (¹MTI, ²Kyushu Inst. Tech.)

Sep. 8/Room E

Medical Magnetic Beads **13:00 ~ 14:45** Chair:I. Sasada(Kyushu Univ.)

- 8pE-1 Improvement in Immunoassay using Magneto-Resistive Sensor
°K. Noguchi, T. Yoshida, K. Enpuku (Kyushu Univ.)
- 8pE-2 Study of ion concentration measurement by detecting response from magnetic particle
°S. Oda, S.B. Trisnanto, Y. Kitamoto (Tokyo Inst. Tech.)
- 8pE-3 Magnetic Particle Imaging using Electric Scanning of FFP
°K. Tanabe, S. Bai, K. Yamamoto, T. Sasayama, T. Yoshida, K. Enpuku (Kyushu Univ.)
- 8pE-4 Development of a three-dimensional magnetic particle imaging system using third harmonic signal
°N. Tsujimura, T. Yoshida, K. Enpuku (Kyushu Univ.)
- 8pE-5 Evaluation in harmonic signal of blood-pooling magnetic nanoparticles for magnetic particle imaging
°S. Ota, R. Takeda, T. Yamada, Y. Takemura (Yokohama National Univ.)

- 8pE-6 Study on sound generation delay time of sonic wave emission from magnetic fluid stimulated by alternating magnetic field application
°I. Ishida, T. Nakagawa, S. Seino, T.A. Yamamoto (Osaka Univ.)
- 8pE-7 Synthesis and characterization of hollow iron-oxide particles modified inside with gold nanoparticles
°K. Suga, S. Seino, T. Nakagawa, T.A. Yamamoto (Osaka Univ.)

Magnetic shield, Biomagnetism measurement 15:00 ~ 16:15 Chair:T. Sasayama(Kyushu Univ.)

- 8pE-8 Magnetic Tunnel Junctions with Low Magnetic Anisotropy Electrodes for Bio-magnetic Field Measurement
°D. Kato¹, M. Oogane¹, K. Fujiwara¹, J. Jono², H. Naganuma¹, H. Katsurada², Y. Ando¹ (¹Tohoku Univ., ²Konica Minolta)
- 8pE-9 The separate-shell active magnetic shield for MCG measurement
°K. Shimoda, Y. Maeda, H. Karo, I. Sasada (Kyushu Univ.)
- 8pE-10 Magnetic field measurement from the heart with supersensitive MI sensor
°Y. Asano¹, T. Uchiyama¹, S. Tajima², Y. Okuda¹, S. Nakayama¹ (¹Nagoya Univ., ²Oregon State Univ.)
- 8pE-11 Examination of estimated parameter in signal source estimation using spatial filter for MCG
°A. Mukaiguchi¹, K. Kobayashi¹, M. Yoshizawa¹, Y. Uchikawa² (¹Iwate Univ., ²Tokyo Denki Univ.)
- 8pE-12 Component selection method of noise rejection based on Independent Component Analysis for MCGs
°M. Iwai¹, K. Kobayashi¹, M. Yoshizawa¹, Y. Uchikawa², F.M. Bui³ (¹Iwate Univ., ²Tokyo Denki Univ., ³Univ. Saskatchewan)

Medical technology 16:30 ~ 18:00 Chair:T. Uchiyama(Nagoya Univ.)

- 8pE-13 System to estimate the rechargeable battery condition for rechargeable cardiac pacemaker
°T. Sato¹, N. Sakai², H. Matsuki² (¹Sendai Nat. Coll. Tech., ²Tohoku Univ.)
- 8pE-14 Magnetic actuator and excitation system for intravascular treatment
°Y. Shibata, M. Takahashi, T. Yamada, Y. Takemura (Yokohama National Univ.)
- 8pE-15 An invention of the magnetically-bended guidewire by a low magnetic field
°W. Goto, S. Hashi, K. Ishiyama (Tohoku Univ.)
- 8pE-16 Alternative magnetic fields might affect germination
°A. Hayashi¹, Y. Hirata², T. Naiki³, T. Hatta³ (¹Forestec, ²Hokkai-Gakuen Univ., ³Okayama Univ. Sci.)
- 8pE-17 Effect of ELF magnetic fields on anticancer drug doxorubicin potency to human lung cancer cells
°D. Matsui, T. Ushimaru, S. Hagihara, M. Kakikawa (Kanazawa Univ.)
- 8pE-18 Experiment of the Cerebral Cortex Stimulation for Direct Feeding Method
°E. Kurata¹, F. Sato^{1,2}, S. Miyahara¹, H. Matsuki¹, M. Suzuki³, G. St. Clair³, Y. Nishimura³
(¹Tohoku Univ., ²Tohoku Gakuin Univ., ³NIPS)

Sep. 9/Room A

Symposium "Energy Magnetics improving motor efficiency" 9:00 ~ 11:00 Chief Organizer: Y. Honkura(Magnedesign)
Chair:Y. Honkura(Magnedesign)

- 9aA-1 MH loop Modeling of NdFeB Anisotropic Bonded Magnet
°F. Akagi¹, Y. Honkura² (¹Kogakuin Univ., ²Magnedesign)
- 9aA-2 Behavior of a permanent magnet used for the high efficiency motor under the high frequency magnetic field
°C. Mishima¹, T. Ariizumi², Y. Honkura³ (¹Aichi Steel, ²Toe Industry, ³Magnedesign)
- 9aA-3 Future Trend of Electrical Motor Drive System
°K. Fujisaki (Toyota Tech. Inst.)
- 9aA-4 Hysteresis Model and Eddy Currents in FEM Analysis
°F. Ikeda (Photon)

11:15 ~ 12:15 Chair:K. Fujisaki(Toyota Tech. Inst.)

- 9aA-5 High density soft magnetic composite core of nanocrystalline FeSiBPCu alloys
°A. Urata¹, Y. Kanamori¹, M. Yamaki¹, K. Okamoto¹, S. Sato¹, N. Nakamura², M. Nakaseko², Y. Ozaki²
(¹NEC-TOKIN, ²JFE Steel)

- 9aA-6 High-efficiency IPM motor design and iron loss evaluation
M. Nakagawa¹, Y. Sanga¹, T. Kondo¹, °Y. Asano¹, A. Yamagiwa¹, Y. Inoue², M. Sanada², S. Morimoto²
(¹MagHEM, ²Osaka Pref. Univ.)

Ferrite magnet 13:00 ~ 14:30 Chair:G. Obara(Meiji Univ.)

- 9pA-1 ⁵⁷Fe NMR study of M-type calcium ferrites
°K. Takao, K. Uji, T. Waki, Y. Tabata, H. Nakamura (Kyoto Univ.)
- 9pA-2 ⁵⁷Fe NMR study in La-Co substituted M-type Sr Ferrite
°H. Sakai¹, T. Hattori¹, Y. Tokunaga¹, S. Kambe¹, A. Shimoda², T. Waki², Y. Tabata², H. Nakamura² (¹JAEA, ²Kyoto Univ.)
- 9pA-3 Single-crystalline M-type Sr hexaferrite with external magnetic fields studied by ⁵⁷Fe Mössbauer spectroscopy
°N. Nagasawa¹, S. Ikeda¹, A. Shimoda², T. Waki², Y. Tabata², H. Nakamura², H. Kobayashi¹ (¹Univ. Hyogo, ²Kyoto Univ.)
- 9pA-4 Growth and characterization of La-substituted M-type calcium ferrite single crystals
°K. Uji, T. Waki, Y. Tabata, H. Nakamura (Kyoto Univ.)
- 9pA-5 Single crystal growth and characterization of magnetic anisotropy in La,Co-substituted M-type Sr ferrites
°H. Morishita, Y. Tanioku, H. Ueda, C. Michioka, K. Yoshimura (Kyoto Univ.)
- 9pA-6 Tailoring perpendicular magnetic anisotropy in Co-ferrite thin films by FeCo underlayer
°Y. Hara, X. Liu (Shinshu Univ.)

Sep. 9/Room B

Multiferroics 9:00 ~ 10:00 Chair:K. Yamaguchi(Fukushima Univ.)

- 9aB-1 Synthesis of BiFe_{1-x}M_xO₃ (M= Ga, Al) powder for magnetic order control by electric field
°M. Gomi, K. Kurata, T. Sawamura, T. Yokota, K. Mibu (Nagoya Inst. Tech.)
- 9aB-2 Influence of magnetostriction on magnetoelectric effect at ferromagnetic-ferroelectric laminated composites
°H. Iwamizu, I. Kagomiya, K. Kakimoto (Nagoya Inst. Tech.)
- 9aB-3 Synthesis and magnetic properties of Fe substituted hibonite
°H. Nagumo¹, K. Watanabe², K. Kakizaki¹, K. Kamishima¹ (¹Saitama Univ., ²RIKEN)
- 9aB-4 BiFe_{1-x}M_xO₃ (M= Ga, Al) epitaxial thin films for magnetic order control by electric field
°M. Gomi, D. Kodera, H. Kyoukane, T. Kumagai, T. Yokota (Nagoya Inst. Tech.)

Magnetic anisotropy 10:15 ~ 12:00 Chair:S. Obata(Tokyo Denki Univ.)

- 9aB-5 Evaluation of magnetic anisotropy of CoFe₂O₄ matrix under localized surface plasmon resonance of Au nanocrystal
°S. Nishikawa, T. Sato (Keio Univ.)
- 9aB-6 Analysis of magnetic domain by residual stress using Monte Carlo method
°K. Terashima¹, K. Yamaguchi¹, T. Uchimoto², T. Takagi² (¹Fukushima Univ., ²Tohoku Univ.)
- 9aB-7 First principles study for the effect of spin fluctuation on the crystalline magnetic anisotropy in L1₀-type ordered alloys
°N. Kobayashi, K. Hyodo, A. Sakuma (Tohoku Univ.)
- 9aB-8 The Dependence of Crystal Orientation on deposition temperature of Nd-Fe-B thin films
°S. Wang, C. Ma, X. Liu (Shinshu Univ.)
- 9aB-9 Microscopic magnetization curves of Tb₂₃Co₇₇ film
°A. Agui¹, H. Sakurai², K. Suzuki², S. Takubo², X. Liu³ (¹JAEA, ²Gumma Univ., ³Shinshu Univ.)
- 9aB-10 The effect of strain induced by substrates on magnetic anisotropy in Nd_{0.5}Bi_{2.5}Fe₄GaO₁₂ thin films
°T. Hashinaka¹, M. Sasaki¹, T. Ishibashi¹, T. Taniyama² (¹Nagaoka Univ. Tech., ²Tokyo Inst. Tech.)
- 9aB-11 Magnetic anisotropy in ferromagnetic layered compounds ACo₂X₂
°M. Imai¹, T. Kanno¹, C. Michioka¹, J. Yang², B. Chen², H. Ueda¹, K. Yoshimura¹ (¹Kyoto Univ., ²Hangzhou Normal Univ.)

Computation physics 13:00 ~ 14:30 Chair:K. Mibu(Nagoya Inst. Tech.)

- 9pB-1 The Nonlinear Conjugate Gradient Method: An Energy Minimization Algorithm for the Speedup of Micromagnetic Simulation of the Permanent Magnets
°T. Tanaka¹, A. Furuya¹, Y. Uehara¹, K. Shimizu¹, J. Fujisaki¹, T. Ataka¹, H. Oshima², N. Požár³, S. Omata³
(¹Fujitsu, ²Fujitsu Labs., ³Kanazawa Univ.)

- 9pB-2 Calculation of Magnetization Reversal Times and Probabilities Using the LLG Equation
°N. Akitaya, H. Muraoka, S. Greaves (Tohoku Univ.)
- 9pB-3 Hysteresis loss simulations of Fe₃O₄ nanoparticles and adaptability for hyperthermia
°S. Obata¹, M. Yoneda² (¹Tokyo Denki Univ., ²Japan Electronics College)
- 9pB-4 Hysteresis calculation method in nano Fe₃O₄ for hyperthermia
°M. Yoneda¹, S. Obata² (¹Japan Electronics College, ²Tokyo Denki Univ.)
- 9pB-5 Calculation method of eddy-current heat embedded in micromagnetic simulator
°K. Yoshida, F. Akagi (Kogakuin Univ.)
- 9pB-6 Theoretical study of dipole field effects for reversal process within permanent magnet
°H. Tsukahara¹, N. Inami¹, K. Iwano¹, C. Mitsumata², K. Ono¹ (¹KEK, ²NIMS)

Sep. 9/Room C

Micromagnetics

9:00 ~ 10:00

Chair:S. Honda(Kansai Univ.)

- 9aC-1 Numerical simulation study of 3D-MQCA NAND/NOR logic gate
°K. Iwaki, H. Nomura, R. Nakatani (Osaka Univ.)
- 9aC-2 Analysis of the domain wall motion induced by the slope electric field
°S. Murayama, K. Yamada, Y. Nakatani (UEC)
- 9aC-3 Simulation of the field-driven magnetic domain wall motion under the Dzyaloshinskii-Moriya interaction
°K. Yamada, Y. Nakatani (UEC)
- 9aC-4 Study of the Skyrmion stability in ultrathin Co/Ni multilayers
°S. Hozumi, K. Yamada, Y. Nakatani (UEC)

Nanostructure and spin wave

10:15 ~ 12:00

Chair:D. Oshima (Nagoya Univ.)

- 9aC-5 Study on the Damping Constant of Ni-Fe Thin Films Using Field-domain CPW-FMR Measurements
°Y. Endo, M. Yamaguchi (Tohoku Univ.)
- 9aC-6 Nano-beam XMCD measurement on a Co/Pt multilayer dot excited by microwave field
°N. Kikuchi¹, S. Okamoto¹, O. Kitakami¹, T. Shimatsu¹, M. Suzuki² (¹Tohoku Univ., ²JASRI/SPRING-8)
- 9aC-7 Relationship between microwave assisted magnetization switching and ferromagnetic resonance of Co/Pt nanodots
°Y. Kusanagi, S. Okamoto, N. Kikuchi, O. Kitakami, T. Shimatsu (Tohoku Univ.)
- 9aC-8 Switching probability analysis on epitaxial Co/Pt multilayer single nanodots
°B. Lao, S. Okamoto, N. Kikuchi, O. Kitakami (Tohoku Univ.)
- 9aC-9 Spin wave coupling in ferromagnetic wire arrays
°S. Kasai¹, H. Tsukahara², S. Hirayama^{1,3}, S. Mitani^{1,3}, C. Mitsumata¹, K. Ono² (¹NIMS, ²KEK, ³Univ. of Tsukuba)
- 9aC-10 Current induced domain wall motion in Pt(2 nm)/GdFeCo(100 nm) bilayer magnetic wires
°Y. Kurokawa, M. Kawamoto, H. Awano (Toyota Tech. Inst.)
- 9aC-11 Effect of Soft Underlayer on Formation of Magnetic Domains in [Co/Pd] Nanowire
°M. Okuda^{1,2}, Y. Miyamoto¹, M. Kawana¹, E. Miyashita¹, N. Saito¹, N. Hayashi¹, S. Nakagawa² (¹NHK, ²Tokyo Inst. Tech.)

Oxide films

13:00 ~ 14:15

Chair:M. Ohtake(Chuo Univ.)

- 9pC-1 Fabrication of epitaxial Sn_xFe_{3-x}O₄ thin films by reactive Molecular Beam Epitaxy method
°M. Araki, T. Yanase, T. Shimada, T. Nagahama (Hokkaido Univ.)
- 9pC-2 Evaluating transport property of epitaxial Fe₃O₄/AlO_x/Fe tunnel junctions
°S. Sasaki, T. Nagahama, T. Shimada (Hokkaido Univ.)
- 9pC-3 Fabrication of LiTi₂O₄ epitaxial films and spin-filter junctions by MBE
°T. Takagi, T. Nagahama, T. Shimada (Hokkaido Univ.)
- 9pC-4 Effect of applying magnetic field during deposition on crystallization of epitaxial ferrite thin film by PLD
°W. Kumasaka¹, K. Shinozaki², N. Sakamoto¹, H. Suzuki¹, N. Wakiya¹ (¹Shizuoka Univ., ²Tokyo Inst. Tech.)
- 9pC-5 Epitaxial growth of cobalt ferrite (111) thin films on sapphire (0001) substrate using RF sputtering
°R. Patel, Y. Hisamatsu, T. Tainosho, S. Sharmin, H. Yanagihara, E. Kita (Univ. of Tsukuba)

Sep. 9/Room D

MI sensor		9:00 ~ 10:30	Chair:T. Ozawa(Tohoku Gakuin Univ.)
9aD-1	Miniaturization of thin film based magnetic field sensor with high sensitivity by controlling distribution of demagnetizing	°S. Oe ¹ , H. Kikuchi ¹ , H. Uetake ² , S. Yabukami ² , T. Nakai ³ , S. Hashi ⁴ , K. Ishiyama ⁴ (¹ Iwate Univ., ² Tohoku Gakuin Univ., ³ ITIM, ⁴ Tohoku Univ.)	
9aD-2	Development of high sensitivity multi core MI element	°A. Shimode, N. Hamada, M. Yamamoto (Aichi Steel)	
9aD-3	High sensitivity magnetic sensor with amorphous wire	°D. Song ¹ , T. Uchiyama ¹ , C. Cai ² , A. Shimode ² (¹ Nagoya Univ., ² Aichi Steel)	
9aD-4	Magneto-Impedance Sensor Based on TAD for Circuit Integration	°P. Wu ¹ , T. Watanabe ² , T. Uchiyama ¹ (¹ Nagoya Univ., ² DENSO)	
9aD-5	Development of Super Highly-sensitive nT Sensor for Foreign Substance Detective	°C. Cai, N. Hamada, A. Shimode, M. Mori, M. Yamamoto (Aichi Steel)	
9aD-6	Foreign substance detection in food by using primary gradiometer type MI sensor	°T. Takiya ¹ , K. Wang ¹ , T. Uchiyama ¹ , H. Aoyama ² (¹ Nagoya Univ., ² Aichi Steel)	
High frequency materials & measurements		10:45 ~ 12:15	Chair:S. Hashi(Tohoku Univ.)
9aD-7	Estimation of permittivity and permeability of interlayer for double-layered magnetic composites	°T. Mitsuhashi ¹ , K. Miura ¹ , H. Osada ¹ , N. Sekino ¹ , M. Kobayashi ² , M. Kiguchi ² , Y. Ohtomo ³ (¹ Iwate Univ., ² Forestry and Forest Products Res. Inst., ³ Air Water Ecoroca)	
9aD-8	Permeability measurement of magnetic thin film by microstrip probe	°K. Kusunoki ¹ , S. Yabukami ² , T. Ozawa ² , H. Uetake ² , H. Yamada ¹ , Y. Miyazawa ³ , R. Utsumi ³ , Y. Shimada ⁴ (¹ Sendai Nat. Coll. Tech., ² Tohoku Gakuin Univ., ³ Toei Scientific Industrial, ⁴ Tohoku Univ.)	
9aD-9	Permeability measurement of magnetic thin film by the shielded short-circuited MSL considering the substrate permittivity	°S. Takeda ¹ , T. Hotchi ² , S. Motomura ² , H. Suzuki ² (¹ Magnontech, ² KEYCOM)	
9aD-10	Measurement of complex permeability of Co- and Ti-substituted Sr-M by short-circuited coaxial transmission line method	°R. Sai ¹ , S. Takeda ² , Y. Endo ¹ , H. Aoki ¹ , M. Yamaguchi ¹ (¹ Tohoku Univ., ² Magnontech)	
9aD-11	Research on inspection of conductive and magnetic markers using eddy-current testing approach	°T. Minamitani, S. Yamada (Kanazawa Univ.)	
9aD-12	Study on the electric performance of micro-inductors with magnetically soft spheres and flakes composite	°Y. Endo ¹ , H. Sato ¹ , U. Erdenebat ¹ , T. Miyazaki ¹ , M. Yamaguchi ¹ , H. Kamada ² , M. Takahashi ² , M. Sakamoto ² , S. Maita ² , N. Kato ² , Y. Yoroze ³ , T. Yasui ³ (¹ Tohoku Univ., ² Hikaridenshi, ³ Richo)	
Measurement physics		13:00 ~ 14:30	Chair:H. Uchida(Tohoku Inst. Tech.)
9pD-1	Development of spin-wave interference logic element using yttrium iron garnet	°T. Goto ¹ , N. Kanazawa ¹ , H. Takagi ¹ , Y. Nakamura ¹ , C.A. Ross ² , A.B. Granovsky ³ , S. Okajima ⁴ , T. Hasegawa ⁴ , K. Sekiguchi ⁵ , M. Inoue ¹ (¹ Toyohashi Univ. Tech., ² MIT, ³ Moscow State Univ., ⁴ muRata, ⁵ Keio Univ.)	
9pD-2	Controlling of synthesized standing spin wave configuration in a permalloy strip with external fields	°K. Imamura, X. Ya, S. Oyabu, T. Tanaka, K. Matsuyama (Kyushu Univ.)	
9pD-3	Numerical simulation on standing spin wave excitation in exchange-coupled multilayer strips	°X. Ya, K. Imamura, S. Oyabu, T. Tanaka, K. Matsuyama (Kyushu Univ.)	
9pD-4	Magnetic domain wall movement in magnetic wires for battery-less rotation sensor	°A. Takebuchi ¹ , T. Yamada ¹ , Y. Ogawa ² , Y. Takemura ¹ (¹ Yokohama National Univ., ² Nikkoshi)	
9pD-5	Examination of excitation in electric generating element of vibration type using magnetic wire	°A. Takebuchi, N. Kameda, T. Yamada, Y. Takemura (Yokohama National Univ.)	
9pD-6	Effect of cold rolling and heat treatment on magnetic properties for transformation-induced plasticity steels	°K. Sasaki, R. Obara, S. Kobayashi, T. Hojo, T. Murakami, Y. Kamada (Iwate Univ.)	

Sep. 9/Room E**Hyperthermia****9:00 ~ 10:30**

Chair:K. Ishiyama(Tohoku Univ.)

- 9aE-1 Heat generation of composite particles composed of biodegradable polymer and iron oxide
°C. Oka¹, K. Ushimaru¹, N. Horiishi², T. Tsuge¹, Y. Kitamoto¹ (¹Tokyo Inst. Tech., ²Bengala Techno Lab.)
- 9aE-2 Preparation of gold plated LSMC perovskite sphere samples for magnetic hyperthermia
°Y. Akai, T. Nakagawa, K. Maeda, S. Seino, T. Yamamoto (Osaka Univ.)
- 9aE-3 Magnetic properties and medical applications of high heating agents using metallic magnetic particles
°Y. Shibata¹, S. Ota¹, T. Yamada¹, M. Fukase², Y. Fujita², Y. Takemura¹ (¹Yokohama National Univ., ²Daido Steel)
- 9aE-4 Effect of Size Distribution of Magnetic Nanoparticle and Solvent Viscosity on Heating Efficiency for Magnetic Hyperthermia
°T. Sasayama, K. Tanabe, N. Tsujimura, T. Yoshida, K. Enpuku (Kyushu Univ.)
- 9aE-5 Relaxation time properties of magnetic nanoparticles and their dependences on density and viscosity
°R. Kitaguchi, S. Ota, T. Yamada, Y. Takemura (Yokohama National Univ.)
- 9aE-6 Thermodynamics of magnetic suspensions in correlation with temperature dependence of magnetic susceptibility
°S.B. Trisnanto, Y. Kitamoto (Tokyo Inst. Tech.)

Magnetoresistance**10:45 ~ 11:45**

Chair:T. Nagahama(Hokkaido Univ.)

- 9aE-7 High-Density Formation of FePt Alloy Nanodots on SiO₂ and Their Electron Transport Properties
Y. Mitsuyuki, °K. Makihara, T. Kato, A. Ohta, S. Iwata, S. Miyazaki (Nagoya Univ.)
- 9aE-8 Electron Transport Properties of High Density FePt-NDs Stacked Structures
Y. Mitsuyuki, °K. Makihara, T. Kato, A. Ohta, S. Iwata, S. Miyazaki (Nagoya Univ.)
- 9aE-9 Anomalous hall effect in pseudo-single-crystal γ'-Fe₄N films
°K. Kabara¹, M. Tsunoda¹, S. Kokado² (¹Tohoku Univ., ²Shizuoka Univ.)
- 9aE-10 Anisotropic magnetoresistance effect and anomalous Hall effect of Mn₄N films
°K. Kabara¹, M. Tsunoda¹, S. Kokado² (¹Tohoku Univ., ²Shizuoka Univ.)

GMR/TMR (materials)**12:45 ~ 14:30**

Chair:M. Mizuguchi(Tohoku Univ.)

- 9pE-1 Improvement of MR output in Co₂MnGa_{0.25}Ge_{0.75} Heusler alloy based CPP-GMR devices through composition tuning
°S. Li, Y.K. Takahashi, Y. Sakuraba, T. Furubayashi, K. Hono (NIMS)
- 9pE-2 CPP-GMR devices using Co₂Fe(Ga_{0.5}Ge_{0.5}) full Heusler alloy and a AgZn alloy spacer
°Y. Du^{1,2}, T. Furubayashi¹, T. Sasaki¹, Y. Sakuraba¹, Y.K. Takahashi¹, K. Hono^{1,2} (¹NIMS, ²Univ. of Tsukuba)
- 9pE-3 Magnetization dynamics in mag-flip spin-torque oscillator with Heusler alloy Co₂FeGa_{0.5}Ge_{0.5} electrodes for microwave assisted magnetic recording
°S. Bosu, H. Sepehri-Amin, Y. Sakuraba, M. Hayashi, K. Hono (NIMS)
- 9pE-4 Fabrication of magnetic tunnel junction with spinel barrier layer
°M. Sasaki, M. Tsunoda (Tohoku Univ.)
- 9pE-5 Fabrication of magnetic tunnel junction with (Al,Ti)-N barrier layer
°Y. Sakai, S. Kobayashi, M. Tsunoda (Tohoku Univ.)
- 9pE-6 Fabrication of perpendicular magnetized spin filter junctions using CoFe₂O₄
°H. Kajita, T. Yanase, T. Shimada, T. Nagahama (Hokkaido Univ.)
- 9pE-7 Fabrication of perpendicular magnetization films using an ultrathin Co₂FeAl/MgAl₂O₄ epitaxial stack
°H. Sukegawa, J.P. Hadorn, T. Ohkubo, K. Hono, S. Mitani (NIMS)

Sep. 10/Room A**Rare earth magnet I****9:00 ~ 10:15**

Chair:K. Kobayashi(SIST)

- 10aA-1 SANS observations of initial magnetization process in Nd-Fe-B hot-deformed magnets
°K. Saito¹, T. Ueno², M. Yano³, T. Shoji³, N. Sakuma³, A. Manabe³, A. Kato³, E.P. Gilbert⁴, K. Ono¹
(¹KEK, ²NIMS, ³TOYOTA motor, ⁴ANSTO)

- 10aA-2 Observation of magnetization reversal process in Nd-Fe-B hot-deformed magnets by small-angle neutron scattering
^oT. Ueno^{1,2}, K. Saito², M. Yano³, M. Harada⁴, T. Shoji³, N. Sakuma³, A. Manabe³, A. Kato³, U. Keiderling⁵, K. Ono²
 (1NIMS, 2KEK, 3TOYOTA motor, 4TOYOTA Central R&D Labs., 5HZB)
- 10aA-3 Coercivity enhancement of hot-deformed Nd-Fe-B magnets by the eutectic grain boundary diffusion process
^oL. Liu^{1,2}, H. Sepehri-Amin¹, M. Yano³, A. Kato³, T. Shoji³, T. Ohkubo¹, K. Hono^{1,2}
 (1NIMS, 2Univ. of Tsukuba, 3Toyota Motor)
- 10aA-4 Effect of metallic glass infiltration on the coercivity and microstructure of Nd-Fe-B hot-deformed magnets
^oU.M.R. Seelam¹, L.H. Lihua¹, T. Akiya¹, H. Sepehri-Amin¹, T. Ohkubo¹, M. Yano¹, N. Sakuma², A. Manabe², A. Kato²,
 K. Hono² (1NIMS, 2TOYOTA Central R&D Labs.)
- 10aA-5 FORC diagram analysis on hot-deformed Nd-Fe-B magnets with and without Nd-Cu diffusion process
^oT. Yomogita¹, N. Kikuchi¹, S. Okamoto¹, O. Kitakami¹, T. Akiya², H. Sepehri-Amin², T. Ohokubo², K. Hono², K. Hioki³,
 A. Hattori³ (1Tohoku Univ., 2NIMS, 3Daido Steel)

Rare earth magnet II

10:30 ~ 11:45

Chair:S. Sugimoto(Tohoku Univ.)

- 10aA-6 Changes of microstructure and coercivity by annealing temperature for Nd-rich Ga-doped NdFeB sintered magnets
^oY. Takada¹, T. Sato¹, T. Sasaki², T. Ohkubo², K. Hono², A. Kato³, Y. Kaneko¹
 (1TOYOTA Central R&D Labs., 2NIMS, 3TOYOTA motor)
- 10aA-7 Microstructure characterization of Nd-rich Ga-doped Nd-Fe-B sintered magnet
^oT. Sasaki¹, T. Ohkubo¹, Y. Takada², T. Sato², A. Kato³, Y. Kaneko², K. Hono¹
 (1NIMS, 2TOYOTA Central R&D Labs., 3TOYOTA motor)
- 10aA-8 Grain boundary/Interface modification of Nd-Fe-B sintered magnets by low melting temperature Nd-TM (TM : Cu, Al, Zn) alloys
^oH. Sepehri-Amin¹, T. Ohkubo¹, Y. Kaneko², Y. Takada², A. Kato³, K. Hono¹
 (1NIMS, 2TOYOTA Central R&D Labs., 3Toyota motor)
- 10aA-9 Accurate measurement of hysteresis curve for Nd-Fe-B sintered magnet with superconducting magnet-based vibrating sample magnetometer
^oH. Nishio¹, K. Machida¹, K. Ozaki² (1Osaka Univ., 2AIST)
- 10aA-10 Reductive Diffusion Grain Boundary Modification for Nd-Fe-B Sintered Magnets using Heavy Rare Earth Compounds and Their Magnetic Properties
 G. Yamato, S.H. Jung, ^oK. Machida (Osaka Univ.)

Rare earth magnet III

13:00 ~ 14:15

Chair:K. Hono(NIMS)

- 10pA-1 Development of soft X-ray MCD imaging technique under high magnetic field
^oT. Nakamura^{1,2}, Y. Kotani¹, S. Hirosawa² (1JASRI/SPring-8, 2NIMS)
- 10pA-2 Relationship between magnetic domain structure and crystal structure of Nd-Fe-B sintered magnet
^oT. Nagaishi, Y. Morimoto, M. Takezawa (Kyushu Inst. Tech.)
- 10pA-3 Micromagnetic Simulation of Thermally Demagnetized Nd-Fe-B Magnet Thin-Films
^oJ. Fujisaki¹, A. Furuya¹, Y. Uehara¹, K. Shimizu¹, T. Ataka¹, T. Tanaka¹, H. Oshima² (1Fujitsu, 2Fujitsu Labs.)
- 10pA-4 Development of Dy free NdFeB anisotropic injection molding magnet with high heat resistance and high magnetic properties
^oM. Shintaku, K. Noguchi, C. Mishima, H. Mitarai (Aichi Steel)
- 10pA-5 Influences of Pr substitution on magnetic properties of Nd-Fe-B HDDR powder
^oN. Katayama, S. Kaneko, K. Shigeoka, K. Morimoto (TODA KOGYO)

Rare earth magnet IV

14:30 ~ 15:45

Chair:S. Hirosawa(NIMS)

- 10pA-6 Fabrication and magnetic properties of Nd-Fe-B thin films
^oC. Ma, Y. Hara, S. Wang, A. Morisako, X. Liu (Shinshu Univ.)
- 10pA-7 Structure and magnetic properties of interface-orientation-controlled nanocomposite films
^oD. Ogawa¹, K. Koike¹, T. Miyazaki², Y. Mizuno¹, M. Itakura³, Y. Ando², H. Kato¹
 (1Yamagata Univ., 2Tohoku Univ., 3Kyushu Univ.)

- 10pA-8 Magnetic Properties of Sm-Co/Ta/ α -Fe Multi-Layered Nanocomposite Thick Film-Magnets.
^oH. Koga, Y. Furukawa, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)
- 10pA-9 Magnetic property of an anisotropic Sm-Co thick magnet prepared by post-annealing
^oY. Furukawa, H. Koga, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)
- 10pA-10 Influence of additive elements on magnetic properties of Nd₆(Fe, M)₁₄ films
^oT. Sato¹, Y. Takada¹, T. Sasaki², T. Ohkubo², K. Hono², A. Kato³, Y. Kaneko¹
 (¹TOYOTA Central R&D Labs., ²NIMS, ³TOYOTA motor)

Rare earth magnet V

16:00 ~ 17:00

Chair:H. Kato(Yamagata Univ.)

- 10pA-11 Elemental substitution effect on ThMn₁₂ phase stability of (Nd_{0.7}Zr_{0.3})-(Fe_{0.75}Co_{0.25})_{11.5}-Ti_{0.5}-N powder
^oN. Sakuma^{1,2}, S. Suzuki³, T. Kuno³, K. Urushibata³, M. Yano^{1,2}, A. Kato^{1,2}, A. Manabe^{1,2}, K. Kobayashi³
 (¹TOYOTA motor, ²MagHEM, ³SIST)
- 10pA-12 Analysis of nitriding mechanism in ThMn₁₂ new magnet materials
^oT. Kuno¹, S. Suzuki¹, K. Urushibata¹, K. Kobayashi¹, N. Sakuma², K. Washio², M. Yano², A. Kato², A. Manabe²
 (¹SIST, ²TOYOTA motor)
- 10pA-13 Effects of substitution with Ti on the NdFe_{12-y}Ti_yN_x compounds with ThMn₁₂ structure
^oY. Hirayama, Y.K. Takahashi, S. Hirose, K. Hono (NIMS)
- 10pA-14 Magnetic properties of Sm-Fe-N melt-spun ribbons
^oT. Saito (Chiba Inst. Tech.)

Sep. 10/Room B

Symposium "Magnetic field sensors opening the age of big data"

Chief Organizer: H. Matsuki(Tohoku Univ.)

13:30 ~ 15:30

Chair:S. Yabukami(Tohoku Gakuin Univ.)

- 10pB-1 Development of Super High Resolution Micro size Magnetic Sensors and Their Highlights Applications
^oY. Honkura (Magnetdesign)
- 10pB-2 High Sensitive Magnetic Field Sensor Using Amorphous Wire and Micro-fabricated Fine Pitch Coil
^oT. Kato, D. Oshima, S. Iwata (Nagoya Univ.)
- 10pB-3 Micromagnetic analysis of dynamic magnetization process in an amorphous wire for MI sensors
^oY. Uehara¹, A. Furuya¹, K. Shimizu¹, J. Fujisaki¹, T. Ataka¹, T. Tanaka¹, H. Oshima² (¹Fujitsu, ²Fujitsu Labs.)
- 10pB-4 Signal-Noise Ratio Improvement of Magnetic Tunnel Junctions for Detection of Bio-Magnetic Field
^oK. Fujiwara¹, M. Oogane¹, D. Kato¹, J. Jono², H. Naganuma¹, M. Tsuchida², Y. Ando¹ (¹Tohoku Univ., ²Konica Minolta)
- 15:45 ~ 16:45 Chair:S. Iwata(Nagoya Univ.)
- 10pB-5 Development of pT resolution magnetic sensor utilizing MI element towards medical use
^oT. Uchiyama (Nagoya Univ.)
- 10pB-6 Thermally stable magnonic sensors using spin wave differential circuits
^oT. Goto¹, N. Kanazawa¹, H. Takagi¹, Y. Nakamura¹, S. Okajima¹, T. Hasegawa², A.B. Granovsky³, K. Sekiguchi⁴, C.A. Ross⁵,
 M. Inoue¹ (¹Toyohashi Univ. Tech., ²Murata, ³Moscow State Univ., ⁴Keio Univ., ⁵MIT)

Sep. 10/Room C

Grannular films

9:00 ~ 10:15

Chair:Y. Endo(Tohoku Univ.)

- 10aC-1 Fabrication of Co-AlN-SiO₂ nano-granular films with low magnetic-dielectric loss
^oH. Aoki¹, H. Masumoto¹, S. Ohnuma², M. Yamaguchi¹ (¹Tohoku Univ., ²DENJIKEN)
- 10aC-2 TMD effects of FeCo-MgF insulating nanogranular films
^oN. Kobayashi¹, T. Iwasa¹, K. Ishida¹, H. Masumoto², S. Takahashi², S. Maekawa³ (¹DENJIKEN, ²Tohoku Univ., ³JAEA)
- 10aC-3 Annealing temperature dependence of MR ratio of Co₂Fe(AlSi)-Al₂O₃ granular films
^oR. Ishii¹, Y. Fujiwara¹, K. Maeda¹, T. Kato², D. Ohshima², M. Jimbo³, T. Kobayashi¹, S. Iwata²
 (¹Mie Univ., ²Nagoya Univ., ³Daido Univ.)
- 10aC-4 Microstructure and magnetic characteristics of single-layered Fe-MgF₂ granular films
^oS. Honjo, T. Yokono, M. Arita, A. Thurumaki-Fukuchi, H. Kaiju, J. Nishii, Y. Takahashi (Hokkaido Univ.)

- 10aC-5 High-frequency magnetic properties of (FeCoNbB)-(SiO₂) nanocolumnar films
 °T. Eguchi, N. Nakagawa, M. Yonetsu, K. Okamoto, T. Suetsuna, S. Suenaga (Toshiba)

Film growth **10:30 ~ 12:15** Chair:M. Doi(Tohoku Gakuin Univ.)

- 10aC-6 Investigation of abrupt change of internal stress at the initial stage of FeCo thin film growth
 °M. Nakagome, H. Hayashibara, Y. Takamura, S. Nakagawa (Tokyo Inst. Tech.)
- 10aC-7 Tetragonal distortion and magnetic anisotropy of [Fe/C/Co/C] multilayer films
 °S. Fujishima¹, K. Shintaku², S. Ishio¹ (¹Akita Univ., ²AIT)
- 10aC-8 Perpendicular magnetic anisotropy of FeCoAl thin films grown on MgO and SrTiO₃ substrates
 °T. Kataguchi, S. Yoshida, S. Kanatani, K. Takahashi, A. Arakawa, T. Hasegawa, S. Ishio (Akita Univ.)
- 10aC-9 Tetragonally distorted structure and uniaxial magnetic anisotropy of MgO/Rh/Fe_{100-x}Co_x epitaxial film
 °S. Yoshida¹, T. Kataguchi¹, K. Takahashi¹, S. Kanatani¹, H. Ohmiya¹, A. Arakawa¹, T. Hasegawa¹, K. Hayasaka², S. Saito²,
 S. Ishio¹ (¹Akita Univ., ²Tohoku Univ.)
- 10aC-10 Strain controlled perpendicular magnetic anisotropy of W/Fe (001) epitaxial multilayers
 °Y. Matsumoto¹, S. Okamoto¹, N. Kikuchi¹, O. Kitakami¹, Y. Miura² (¹Tohoku Univ., ²Kyoto Inst. of Tech)
- 10aC-11 Effect of bumpy surface underlayer morphology on compositionally modulated atomic layer stacking of hcp Co₈₀Pt₂₀ alloy film
 °T. Kim Kong¹, S. Hinata^{2,3}, S. Saito² (¹TANAKA, ²Tohoku Univ., ³JSPS)
- 10aC-12 Relationship between Underlayer Morphology and Microstructure of Co Thin Film
 °M. Ohtake, M. Futamoto (Chuo Univ.)

Surface and interface manipulation **13:00 ~ 14:45** Chair:O. Kitakami(Tohoku Univ.)

- 10pC-1 Electric field effect on magnetic phase in FeRh/BaTiO₃ heterostructures
 °R. Iijima, I. Suzuki, M. Itoh, T. Taniyama (Tokyo Inst. Tech.)
- 10pC-2 Change in magnetism of ferromagnetic Pd(100) ultra thin film by phase transition of the substrate II
 °S. Sakuragi¹, T. Ogawa², T. Sato¹ (¹Keio Univ., ²Tohoku Univ.)
- 10pC-3 Effect on magnetism by voltage application to Pd(100) ultra-thin film on Nb-doped SrTiO₃
 °R. Itotani, S. Sakuragi, T. Sato (Keio Univ.)
- 10pC-4 Control of electric spin states of single organic molecules with STM atom manipulation
 °N. Ohta¹, S. Nakashima¹, N. K. M. Nazriq¹, K. Nakamura², T. Yamada¹ (¹Chiba Univ., ²Mie Univ.)
- 10pC-5 Growth orientation dependence of current induced magnetization switching in exchange-coupled antiperovskite nitride bilayers
 °H. Ando, Y. Kuroki, T. Hajiri, K. Ueda, H. Asano (Nagoya Univ.)
- 10pC-6 Anisotropic magnetoresistance study of Heusler-type half-metal ferromagnet and antiferromagnet Fe₂CrSi/Ru₂MnGe bilayer thin films
 °T. Hajiri, M. Matsushita, K. Ueda, H. Asano (Nagoya Univ.)
- 10pC-7 Exchange bias field of epitaxially grown Ni₂MnAl/X bilayers (X: Fe, Co, Co₂MnSi)
 °T. Tsuchiya¹, T. Sugiyama¹, T. Kubota¹, T. Huminiuc², A. Hirohata², K. Takanashi¹ (¹Tohoku Univ., ²Univ. of York)

Power magnetism I **15:00 ~ 16:15** Chair:T. Takura(Tohoku Inst. Tech.)

- 10pC-8 Analysis on the Magnetic Flux Fringing Phenomenon at Air Gap Portion of a Reactor
 °G. Kijima (JFE Steel)
- 10pC-9 Consideration of Winding Arrangement of High-frequency Amorphous Transformers for MW-class DC-DC Converters
 °H. Tanaka, K. Nakamura, O. Ichinokura (Tohoku Univ.)
- 10pC-10 Iron Loss Calculation for Concentric-Winding type Three-Phase Variable Inductor based on Reluctance Network Analysis
 °K. Nakamura¹, Y. Yamada¹, T. Ohinata², K. Arimatsu², T. Kojima³, M. Yamada³, R. Matsumoto³, M. Takiguchi³,
 O. Ichinokura¹ (¹Tohoku Univ., ²Tohoku Electric Power, ³Fuji Electric)
- 10pC-11 Evaluation of 1 MHz switching DC-DC converter using Carbonyl-iron/epoxy composite bulk core inductor
 °A. Ueno¹, K. Sugimura¹, M. Sonehara¹, T. Sato¹, K. Sato²
 (¹Shinshu Univ., ²Nagano Prefecture General Industrial Technology Center)

- 10pC-12 Fundamental characteristics of high-frequency LC oscillator and its application to gate driver
N. Ishibashi¹, X. Wei¹, °A. Katsuki¹, M. Hirokawa² (¹Nagasaki Univ., ²TDK)

Power magnetism II

16:30 ~ 17:45

Chair: T. Honda (Kyushu Inst. Tech.)

- 10pC-13 Reduction of Leakage Magnetic Field from Receiving Side by Separated Coil for Contactless Charging System for Moving Electric Vehicles
°S. Aoki¹, F. Sato^{1,2}, S. Miyahara¹, H. Matsuki¹, T. Takura³ (¹Tohoku Univ., ²Tohoku Gakuin Univ., ³Tohoku Inst. Tech.)
- 10pC-14 Effects of Inductance Compensation Methods on Efficiency via Inductive Power Transmission
°T. Takura¹, T. Nonaka², F. Sato³, H. Matsuki⁴
(¹Tohoku Inst. Tech., ²Hachinohe Nat. Coll. Tech., ³Tohoku Gakuin Univ., ⁴Tohoku Univ.)
- 10pC-15 Relationship between Transmission Efficiency and Magnetic Field Distribution at Contactless Charging System by Utilizing Repeater Coils
°N. Sakai¹, F. Sato^{1,2}, S. Miyahara¹, H. Matsuki¹, T. Takura³ (¹Tohoku Univ., ²Tohoku Gakuin Univ., ³Tohoku Inst. Tech.)
- 10pC-16 Center-constricted magnetic core-coil structures for resonant wireless power transfer
°H. Oshima, S. Shimokawa (Fujitsu Labs.)
- 10pC-17 Transient Analysis of Resonant Electromagnetic Induction Type Wireless Power Transfer by Mathematica
°T. Doi (Ashikaga Inst. of Tech.)

Sep. 10/Room D

FePt Media I

9:00 ~ 10:30

Chair: N. Inaba (Yamagata Univ.)

- 10aD-1 Granular Nanostructures and Magnetic Properties of FePt-C/FePt-SiO₂ Films
°L. Zhang¹, L. Liu¹, K. Hayasaka², S. Ishio¹ (¹Akita Univ., ²Tohoku Univ.)
- 10aD-2 Simulation of L1₀ FePt microstructure by using phase field model
°L. Liu¹, K. Ohsasa¹, T. Koyama², L. Liang³, L. Zhang¹, S. Ishio¹ (¹Akita Univ., ²Nagoya Univ., ³Argonne Nat. Lab.)
- 10aD-3 Effect of amorphous Cr-Ti texture inducing layer on highly (002) textured large grain Cr₈₀Mn₂₀ seed layer for L1₀ ordered FePt-C granular film
°S.J. Jeon¹, S. Hinata^{1,2}, S. Saito¹ (¹Tohoku Univ., ²JSPS)
- 10aD-4 Switching field distribution of FePt-C/FePt exchange coupled perpendicular media
°J. Wang¹, Y.K. Takahashi¹, J.Y. Kim², K. Hono¹ (¹NIMS, ²Seagate)
- 10aD-5 Microstructure and magnetic properties of L1₀ ordered FePt-C nanogranular films: Influence of graded structure with different C volume fraction
°H. Pandey, A. Perumal, J. Wang, Y.K. Takahashi, K. Hono (NIMS)
- 10aD-6 Structure and magnetic properties for FePt thin films prepared on MgAl₂O₄ and MgO substrates
°H. Iwama, M. Doi, T. Shima (Tohoku Gakuin Univ.)

FePt Media II

10:45 ~ 12:15

Chair: T. Seki (Tohoku Univ.)

- 10aD-7 Characterization of Crystallographic Orientation of FePt Alloy Thin Films Formed on MgO Underlayer
°Y. Noguchi¹, M. Nakamura¹, R. Ochiai¹, M. Ohtake¹, M. Futamoto¹, F. Kirino², N. Inaba³
(¹Chuo Univ., ²Tokyo Univ. of Arts, ³Yamagata Univ.)
- 10aD-8 Structure Analysis of FePt/FePd Bilayer Films Formed on MgO(001) Substrate
°M. Nakamura¹, R. Ochiai¹, Y. Noguchi¹, M. Ohtake¹, M. Futamoto¹, F. Kirino², N. Inaba³
(¹Chuo Univ., ²Tokyo Univ. of Arts, ³Yamagata Univ.)
- 10aD-9 Improvement of texture for MgO/FePt-C by Cr seed layer
°T. Shiroyama, B. S. D. Ch. S. Varaprasad, J. Wang, A. Felicia, Y. Takahashi, K. Hono (NIMS)
- 10aD-10 Helicity-dependent all-optical switching in FePt media
°Y.K. Takahashi¹, R. Medapali², K. Ishioka¹, J. Wang¹, S. Kasai¹, K. Hono¹, E.E. Fullerton² (¹NIMS, ²UCSD)
- 10aD-11 Fe, Cu, Pt Interfacial Effect Dependency in the Fabrication Process of Isolated FeCuPt Nano Particles and Induced Magnetic and Shape Properties
°R. Kobayashi, M. Imazato, A. Ogasawara, A. Tsukamoto (Nihon Univ.)
- 10aD-12 Compositional dependency of isolated FePt grains fabrication by RTA
°M. Imazato, A. Ogasawara, A. Tsukamoto (Nihon Univ.)

SMR, BPM **13:00 ~ 14:30** Chair:A. Tsukamoto(Nihon Univ.)

- 10pD-1 Influence of adjacent bits to bit reliability in SMR
^oR. Suzuto¹, Y. Okamoto¹, Y. Nakamura¹, H. Osawa¹, Y. Kanai², H. Muraoka³
 (1Ehime Univ., 2Niigata Inst. Tech., 3Tohoku Univ.)
- 10pD-2 A study of shingled write recording reading method using the DWDD
^oH. Hayashida, K. Yamada, Y. Nakatani (UEC)
- 10pD-3 Magnetization process of L1₀ FeMnPt dot pattern
^oT. Hasegawa¹, K. Sasaki¹, R. Ono¹, T. Thomson², S. Ishio¹ (1Akita Univ., 2Univ. Manchester)
- 10pD-4 Control of structure and magnetic properties of CrPt₃ films by heat treatment or ion irradiation
^oK. Fukuta¹, D. Oshima¹, T. Kato¹, S. Iwata¹, S. Tsunashima² (1Nagoya Univ., 2NISRI)
- 10pD-5 Control of magnetism of L1₀-MnGa(001) films by low energy ion irradiation
^oT. Matsunaga¹, T. Negoro¹, D. Oshima¹, T. Kato¹, S. Iwata¹, S. Tsunashima² (1Nagoya Univ., 2NISRI)
- 10pD-6 Magnetization reversal of 2-layer exchange coupled composite (ECC) dots with inclined anisotropy
^oN. Honda¹, K. Yamakawa² (1Tohoku Inst. Tech., 2AIT)

Heat assisted magnetic recording and optically induced magnetism **14:45 ~ 16:30**

Chair:Y. Nakamura(Ehime Univ.)

- 10pD-7 Study of plasmonic waveguide structure to suppress head temperature rise for heat assisted magnetic recording
^oY. Hayashi, K. Tamura, Y. Ashizawa, S. Ohnuki, K. Nakagawa (Nihon Univ.)
- 10pD-8 Study on anisotropy constant ratio for Heat Assisted Magnetic Recording media
^oY. Yuasa, T. Akao, Y. Isowaki, T. Kobayashi, Y. Fujiwara (Mie Univ.)
- 10pD-9 Development of the Curie temperature measurement system using infrared light
^oK. Akahane, H. Sato, S. Saito (Tohoku Univ.)
- 10pD-10 Optically induced demagnetization in Gd₂₃Fe_{77-x}Co_x
^oS. El Moussaoui, H. Yoshikawa, T. Sato, A. Tsukamoto (Nihon Univ.)
- 10pD-11 All –optical magnetization switching in the GdFeCo double layer films with dielectric intermediate layers
^oS. Terashita, H. Yoshikawa, T. Sato, A. Tsukamoto (Nihon Univ.)
- 10pD-12 The magnetic layer thickness dependency of all - optical magnetization switching
^oH. Yoshikawa, S. Terashita, R. Ueda, S. El Moussaoui, T. Sato, A. Tsukamoto (Nihon Univ.)
- 10pD-13 Thickness Dependence of Static and Dynamic Magnetic Properties in Rare-earth Transition Metal Ferrimagnetic GdFeCo Thin Films
^oR. Ueda, H. Yoshikawa, A. Tsukamoto (Nihon Univ.)

Sep. 10/Room E

Magnetotransport **9:00 ~ 10:30** Chair:S. Kasai(NIMS)

- 10aE-1 Spin conversion in polycrystalline Bi thin films
 H. Emoto¹, Y. Ando^{1,2}, G. Eguchi², T. Shinjo², E. Shikoh³, Y. Fuseya⁴, ^oM. Shiraishi^{1,2}
 (1Osaka Univ., 2Kyoto Univ., 3Osaka City Univ., 4UEC)
- 10aE-2 Detection of the Spin Transport with Itinerant d-orbital Electrons
^oR. Ohshima¹, Y. Ando², T. Shinjo², K. Matsuzaki³, T. Susaki³, M. Shiraishi² (1Osaka Univ., 2Kyoto Univ., 3Tokyo Inst. Tech.)
- 10aE-3 First-principles study on the dependence of anomalous Hall conductivity on degree of order in FePt and FePd alloys
^oK. Hyodo¹, Y. Kota², A. Sakuma¹ (1Tohoku Univ., 2Fukushima Nat. Coll. Tech.)
- 10aE-4 Material dependence of anomalous Nernst effect in ordered-alloy thin films
^oM. Mizuguchi^{1,2}, K. Hasegawa¹, Y. Sakuraba¹, T. Kubota¹, S. Mizukami¹, K. Takanashi¹ (1Tohoku Univ., 2JST-PREST)
- 10aE-5 Spin Seebeck effect in Ni-Zn ferrite thermoelectric conversion elements
^oT. Sachi, Y. Takemoto, T. Wakamatsu, H. Kurisu, K. Akai, S. Yamamoto (Yamaguchi Univ.)
- 10aE-6 Heating effect and thermal spin injection by the ferromagnetic resonance
^oK. Yamanoi¹, Y. Yokotani¹, G. Uematsu¹, S. Yakata², T. Kimura¹ (1Kyushu Univ., 2FIT)

DW, Spin-orbit interaction		10:45 ~ 12:00	Chair:K. Yamada(UEC)
10aE-7	Current induced domain wall motion in TbFeCo alloys with various magnetizations	°M. Quinsat, S. Nakamura, T. Shimada, Y. Ootera, H. Morise, T. Kondo (Toshiba)	
10aE-8	Measurement of current-induced domain wall shift in Co/ Ni wire	°K. Taura, T. Tanaka, K. Matsuyama (Kyushu Univ.)	
10aE-9	Current-induced dynamics for magnetic bubble domains in perpendicularly magnetized wires	°M. Tanaka ¹ , S. Sumitomo ¹ , N. Adachi ¹ , H. Kanazawa ¹ , S. Honda ² , K. Mibu ¹ , H. Awano ³ (¹ Nagoya Inst. Tech., ² Kansai Univ., ³ Toyota Tech. Inst.)	
10aE-10	Thermal artifacts in the current induced effective fields measurement	°M. Kawaguchi ¹ , T. Moriyama ¹ , H. Mizuno ¹ , K. Yamada ¹ , H. Kakizakai ¹ , T. Koyama ² , D. Chiba ² , T. Ono ¹ (¹ Kyoto Univ., ² Univ. of Tokyo)	
10aE-11	Spin torque dependence of the g-factor in Pt/Fe ultrathin films	°H. Mizuno ¹ , T. Moriyama ¹ , M. Kawaguchi ¹ , M. Nagata ¹ , K. Tanaka ¹ , T. Koyama ² , D. Chiba ² , T. Ono ¹ (¹ Kyoto Univ., ² Univ. of Tokyo)	
STO		13:00 ~ 14:15	Chair:T. Moriyama(Kyoto Univ.)
10pE-1	Frequency tuning in spin torque oscillator for MAMR by using negative-Ku material on field generation layer	°S. Murakami, M. Shimizu, N. Fujita, K. Koi, Ken-ichiro Yamada, A. Takeo (Toshiba)	
10pE-2	Self-synchronization on spin torque oscillator	°S. Tsunegi ¹ , E. Grimaldi ² , R. Lebrun ² , H. Kubota ¹ , K. Yakushiji ¹ , A. Fukushima ¹ , V. Cros ² , S. Yuasa ¹ (¹ AIST, ² CNRS/Thales)	
10pE-3	Oscillation properties for a spin torque oscillator with a negative polarity material as a SIL interface layer	°M. Shimizu, K. Koi, S. Murakami, N. Fujita, K. Yamada, A. Takeo (Toshiba)	
10pE-4	Vortex Spin Torque Oscillator using a Co ₂ (Fe, Mn)Si Heusler Alloy	°T. Yamamoto ¹ , T. Seki ^{1,2} , K. Takanashi ¹ (¹ Tohoku Univ., ² JST-PREST)	
10pE-5	Development of phase locked loop using a spin torque oscillator as a voltage controlled oscillator	°S. Tamaru, H. Kubota, K. Yakushiji, A. Fukushima, S. Yuasa (AIST)	
Magnetization dynamics		14:30 ~ 16:00	Chair:S. Tsunegi(AIST)
10pE-6	Detection of spin-transfer torque using spin-valve structures	°M. Takahashi, Y. Nozaki (Keio Univ.)	
10pE-7	Spin current in synthetic antiferromagnet	°K. Tanaka ¹ , T. Moriyama ¹ , M. Nagata ¹ , H. Mizuno ¹ , T. Seki ² , K. Takanashi ² , T. Chiba ² , S. Takahashi ³ , G.E.W. Bauer ^{2,3} , T. Ono ¹ (¹ Kyoto Univ., ² Tohoku Univ., ³ Delft Univ. of Tech.)	
10pE-8	Gilbert damping constant of TbFe/GdFeCo bilayers with various layer stacks	°T. Higashide ¹ , B. Dai ¹ , D. Oshima ¹ , T. Kato ¹ , S. Iwata ¹ , S. Tsunashima ² (¹ Nagoya Univ., ² NISRI)	
10pE-9	Laser-induced spin dynamics in Ta/CoFeB/MgO thin film	°Y. Sasaki, S. Iihama, Y. Ando, S. Mizukami (Tohoku Univ.)	
10pE-10	Correlation between Magnetization Dynamics and Magnetic Anisotropy in Gd / FeCo Superlattice Film	°T. Sato, A. Tsukamoto, H. Yoshikawa, K. Wakabayashi, A. Watanabe (Nihon Univ.)	
10pE-11	Current-induced frequency shift of backward volume wave	°N. Sato ¹ , K. Sekiguchi ^{1,2} (¹ Keio Univ., ² JST-PREST)	
TMR(sensors, STT, magnetization switching)		16:15 ~ 17:45	Chair:H. Sukegawa(NIMS)
10pE-12	Magnetic tunnel junction sensor applying magnetic vortex state	°M. Endo, M. Oogane, H. Naganuma, Y. Ando (Tohoku Univ.)	
10pE-13	Influence of stray field from pinned layer on linearity in magnetic tunnel junctions for magnetic sensor	°T. Nakano ¹ , Y. Sano ¹ , M. Oogane ¹ , T. Yano ² , K. Ao ² , H. Naganuma ¹ , Y. Ando ¹ (¹ Tohoku Univ., ² DENSO)	
10pE-14	Tunnel magnetoresistance properties and interface diffusion of MTJs with post-oxidized MgO barriers	°C. Yoshida, H. Noshiro, Y. Yamazaki, T. Sugii (Fujitsu)	
10pE-15	Inverse-magnetostriction-induced switching current reduction for spin-transfer torque MTJs	°Y. Takamura, S. Nakagawa, S. Sugahara (Tokyo Inst. Tech.)	

- 10pE-16 Effect of the Gilbert damping constant on the switching current in the spin-transfer switching with the thermal fluctuation interaction
°K. Yamada, Y. Nakatani (UEC)
- 10pE-17 Numerical study on microwave assisted spin transfer torque switching in a multilayer with perpendicular anisotropy
°H. Yu, X. Ya, T. Tanaka, K. Matsuyama (Kyushu Univ.)

Sep. 11/Room A

- Spin injection into semiconductors** **9:15 ~ 10:30** Chair:Y. Ando(Kyoto Univ.)
- 11aA-1 Coherent control of nuclear spins using spin injection into semiconductor
T. Akiho, Y. Ebina, M. Yamamoto, °T. Uemura (Hokkaido Univ.)
- 11aA-2 Sb δ -doping of non-degenerate Ge(001) for a spin-FET with a high-mobility channel
°T. Takada^{1,2}, H. Saito¹, A. Spiesser¹, R. Jansen¹, S. Yuasa¹, N. Miura² (¹AIST, ²Meiji Univ.)
- 11aA-3 Spin-dependent transport mechanisms in n-Si/MgO/CoFe junctions investigated by inelastic tunneling electron spectroscopy
°T. Inokuchi, M. Ishikawa, H. Sugiyama, Y. Saito (Toshiba)
- 11aA-4 Spin transport in *n*-Ge at room temperature by using Co₂FeSi_{0.5}Al_{0.5}/n⁺-Ge Schottky-tunnel contacts
°Y. Fujita¹, T. Oka¹, S. Yamada¹, M. Yamada², K. Sawano³, T. Kanashima¹, K. Hamaya¹
(¹Osaka Univ., ²Keio Univ., ³Tokyo City Univ.)
- 11aA-5 The effect of radical oxygen annealing on CoFe/TiO₂/Si tunnel-contact-type spin injector
°Y. Ikuse, T. Akushichi, Y. Shuto, Y. Takamura, S. Sugahara (Tokyo Inst. Tech.)

- Highly spin-polarized materials and devices** **10:45 ~ 12:00** Chair:Y. Saito(Toshiba)
- 11aA-6 Control of the effective damping constant for Heusler alloys by pure spin current
°S. Oki¹, M. Kawano¹, S. Yamada¹, T. Kanashima¹, Y. Nozaki^{2,3}, K. Hamaya^{1,3} (¹Osaka Univ., ²Keio Univ., ³JST-CREST)
- 11aA-7 Effect of off-stoichiometry on half-metallicity of quaternary Heusler alloy Co₂(Mn,Fe)Si investigated through saturation magnetization and tunneling magnetoresistance
°K. Moges¹, Y. Honda¹, H.X. Liu¹, B. Hu¹, T. Uemura¹, Y. Miura², M. Shirai³, M. Yamamoto¹
(¹Hokkaido Univ., ²Kyoto Inst. of Tech., ³Tohoku Univ.)
- 11aA-8 Characteristic temperature dependence of spin-dependent tunneling conductance of MTJs with highly spin-polarized electrodes
°B. Hu, K. Moges, Y. Honda, T. Uemura, M. Yamamoto (Hokkaido Univ.)
- 11aA-9 Fabrication of Mn₂CoAl thin films toward device applications for Spin-Gapless-Semiconductors
S. Hirose, °K. Ueda, S. Aichi, T. Hajiri, H. Asano (Nagoya Univ.)
- 11aA-10 Characterization of occupancy of nitrogen atoms in epitaxially grown Fe₄N films
°K. Ito^{1,2,3}, T. Gushi¹, S. Higashikozono¹, Y. Takeda⁴, Y. Saitoh⁴, K. Toko¹, H. Yanagihara¹, M. Tsunoda², T. Oguchi⁵, A. Kimura⁶, E. Kita¹, T. Suemasu¹ (¹Univ. of Tsukuba, ²Tohoku Univ., ³JSPS, ⁴JAEA, ⁵Osaka Univ., ⁶Hiroshima Univ.)

Symposium "Tutorial symposium on theoretical calculation and computer physics in magnetism and magnetism"

Chief Organizer: N. Kikuchi(Tohoku Univ.)

- 13:00 ~ 15:45** Chair:M. Hosomi(SONY)
- 11pA-1 Mapping of theoretical approach in magnetism – coarse graining theory–
°C. Mitumata (NIMS)
- 11pA-2 Fundamental knowledge of first-principles calculation
°M. Shirai (Tohoku Univ.)
- 11pA-3 Theory of electron transport in the presence of magnetization textures
°G. Tatara (RIKEN)
- 11pA-4 Numerical methods for quantum magnets
°S. Miyashita (Univ. of Tokyo)

16:00 ~ 17:30

Chair:N. Kikuchi(Tohoku Univ.)

11pA-5 Micromagnetic Simulation

°Y. Nakatani (UEC)

11pA-6 Finite Element Analysis for Electromechanical Design

°T. Yamada (JSOL)

Sep. 11/Room B

Soft magnetic materials I

9:00 ~ 10:30

Chair:M. Naoe(DENJIKEN)

11aB-1 Simple Synthesis and Characterization of Superparamagnetic Magnesium Ferrite Nanoparticles Coated with Silica Shell

°H. Das¹, T. Arai¹, N. Sakamoto¹, K. Shinozaki², H. Suzuki¹, N. Wakiya¹ (¹Shizuoka Univ., ²Tokyo Inst. Tech.)

11aB-2 Surface coating of high resistive thin film on Carbonyl-iron powder for Iron-based metal composite core

°K. Sugimura, Y. Miyajima, F. Hayashi, M. Sonehara, T. Sato, N. Zettsu, K. Teshima (Shinshu Univ.)

11aB-3 Structure and Magnetic Properties of Fe-Al Alloy Single-Crystal Thin Films Formed on MgO(001) Substrates

°T. Abe¹, T. Kawai¹, M. Ohtake¹, M. Futamoto¹, F. Kirino², N. Inaba³ (¹Chuo Univ., ²Tokyo Univ. of Arts, ³Yamagata Univ.)

11aB-4 Magnetostrictive behavior of Fe-Al(001) single-crystal film

°T. Kawai, M. Ohtake, M. Futamoto (Chuo Univ.)

11aB-5 Characteristics of Fe-Co films deposited on Si substrates by PLD method

°A. Yamashita, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)

11aB-6 Anomalous Nernst effect in Fe-based thin films

°T. Sachi, Y. Kugimiya, H. Kurisu, K. Akai, S. Yamamoto (Yamaguchi Univ.)

Soft magnetic materials II

10:45 ~ 12:00

Chair:H. Fukunaga(Nagasaki Univ.)

11aB-7 Depinning field of domain walls at a misaligned grain boundary in Fe-base soft magnets

°K. Yamada, S. Irie, S. Murayama, Y. Nakatani (UEC)

11aB-8 High-frequency complex permeability of CoPd-CaF₂ nanogranular soft magnetic films depending on CoPd nanogranule composition

°M. Naoe, A. Iizuka, N. Kobayashi, T. Iwasa (DENJIKEN)

11aB-9 Magnetic properties of FeSiBNb thin films

°Y. Takeuchi¹, Y. Fujiwara¹, M. Jimbo², K. Maeda¹, T. Kobayashi¹ (¹Mie Univ., ²Daido Univ.)

11aB-10 Soft Magnetic properties of Fe-base thick amorphous alloy sheets

T. Sato¹, °Y. Koyama², Y. Nakamura² (¹SACO, ²Tokyo Inst. Tech.)

11aB-11 Proposal of Large-scale Production Method for Thick Amorphous Sheet

°T. Sato (SACO)

Sep. 11/Room C

Power magnetism III

9:00 ~ 10:15

Chair:C. Kaido(Kitakyusyu Nat. Coll. Tech)

11aC-1 Basic Characteristics of Radial-Gap type Magnetic-Geared Motor

°K. Akimoto, K. Nakamura, O. Ichinokura (Tohoku Univ.)

11aC-2 Prototype Tests of High-Speed SR Motor for Electric Power Tools

°Y. Kumasaka, K. Isobe, K. Nakamura, O. Ichinokura (Tohoku Univ.)

11aC-3 Experimental study of Acoustic Noise from an axial-gap SR motor

°K. Ito, H. Goto, O. Ichinokura (Tohoku Univ.)

11aC-4 Study on the analysis accuracy improvement of induction motor in Reluctance Network Analysis

°T. Umesaka, K. Tajima, Y. Yoshida (Akita Univ.)

11aC-5 Demagnetizing Analysis of the Ferrite Magnet Using Two-Line Approximation Based on RNA

°D. Momma, Y. Yoshida, K. Tajima (Akita Univ.)

Power magnetism IV

10:30 ~ 11:45

Chair:K. Nakamura(Tohoku Univ.)

11aC-6 Effect of miniaturization on thrust force in small flapping mechanism driven by external magnetic field

°Y. Higashi, Y. Hanazawa, T. Honda (Kyushu Inst. Tech.)

- 11aC-7 Development of magnetically driven biopsy mechanism for capsule endoscope
^oS. Murata, Y. Hanazawa, T. Honda (Kyushu Inst. Tech.)
- 11aC-8 Improvement of Magnetic Actuator capable of Movement on Magnetic Substance
^oH. Yaguchi, S. Sakuma (Tohoku Gakuin Univ.)
- 11aC-9 Fabrication of vibrational circuit breaker and its temperature responses
^oK. Nishimura (Suzuka Nat. Coll. Tech.)
- 11aC-10 Enhanced surface flux density of anisotropic bond magnets by homopolar-faced magnetizing
 T. Sakai, M. Kanamaru, ^oS. Isogami (Fukushima Nat. Coll. Tech.)

Sep. 11/Room D

Microwave assisted magnetic recording 9:15 ~ 10:30 Chair:H. Muraoka(Tohoku Univ.)

- 11aD-1 Layer-selective switching of a double-layer perpendicular magnetic nanodot using microwave-assisted magnetization switching technique
^oH. Suto, T. Nagasawa, K. Kudo, T. Kanao, K. Mizushima, R. Sato (Toshiba)
- 11aD-2 Vortex dynamics-mediated magnetization switching in perpendicularly magnetized FePt | Ni₈₁Fe₁₉ nanodots
^oT. Seki^{1,2}, W. Zhou¹, H. Imamura³, H. Arai^{2,3}, K. Takanashi¹ (¹Tohoku Univ., ²JST-PREST, ³AIST)
- 11aD-3 The study of the transient region of ferromagnetic resonance by using sub-nanosecond pulsed fields
^oG. Okano, Y. Nozaki (Keio Univ.)
- 11aD-4 Microwave assisted magnetization switching behaviors of the CoCrPt-oxide granular ECC medium
^oY. Lu, S. Okamoto, N. Kikuchi, O. Kitakami (Tohoku Univ.)
- 11aD-5 Magnetization reversal of CoCrPt granular perpendicular media consisting of antiferromagnetically coupled grains for microwave assisted recording
^oY. Nakayama, Y. Kusanagi, T. Shimatsu, N. Kikuchi, S. Okamoto, O. Kitakami (Tohoku Univ.)

Magnetic recording media 10:45 ~ 11:45 Chair:S. Greaves(Tohoku Univ.)

- 11aD-6 Effective damping factor for CoPt based continuous/ granular stacked medium
^oS. Hinata^{1,2}, S. Saito¹ (¹Tohoku Univ., ²JSPS)
- 11aD-7 Effect of additional element on compositional modulated atomic layered structure of the hexagonal Co₈₀Pt₂₀ alloy film (I)
^oS. Hinata^{1,2}, A. Yamane¹, S. Saito¹ (¹Tohoku Univ., ²JSPS)
- 11aD-8 Effect of additional element on compositional modulated atomic layered structure of the hexagonal Co₈₀Pt₂₀ alloy film (II)
^oS. Hinata^{1,2}, A. Yamane¹, S. Saito¹ (¹Tohoku Univ., ²JSPS)
- 11aD-9 Dependence of demagnetized domain structure on applied field direction in hard disks with recording layers consisting of a stacked structure
^oH. Saito, R. Sugita (Ibaraki Univ.)