

PROGRAM

Apr. 21/Room A

Opening ceremony & AUMS award ceremony 13:00 ~ 13:30

Opening ceremony

Y. K. Kim (Korea Univ.)

AUMS award ceremony

Y. K. Kim (Korea Univ.)

Plenary talk I 13:30 ~ 14:30

Chair: S. Yuasa (AIST)

21PL-1 Invention of Nd-Fe-B sintered magnet and development of basic research

°M. Sagawa (Daido Steel)

21PL-2 Asian Magnetism Initiative

°K. Shin (DGIST)

Symposium "MRAM"

15:00 ~ 18:15

Chair: T. Ono (Kyoto Univ.)

21pA-1 [Invited] Challenges toward voltage-controlled MRAM

°S. Yuasa, T. Nozaki, T. Yamamoto, T. Nozaki, H. Nakayama, T. Ichinose, J. Kim, S. Tsunegi, K. Yakushiji, H. Kubota (AIST)

21pA-2 [Invited] Low-Power SOT-MRAM using MTJs with Strain-Induced Magnetic Anisotropy

°H. Yoda, T. Yoda, Y. Ohsawa, Y. Yamazaki, T. Yoda (YODA-S, Inc.)

21pA-3 [Invited] Spin-orbit torque switching of magnetic tunnel junctions for memory and compute applications

°K. Garello (Spintec)

21pA-4 [Invited] Spin-Transfer-Torque MRAM: the Next Revolution in Memory

°D. C. Worledge (IBM Research)

21pA-5 [Invited] Key Technologies of Scaling Embedded MRAM and Various Applications

°S. Ko, T. Lee, H. Jung, S. Han, Y. Song (Samsung)

21pA-6 [Plenary: AUMS Awardee] STT-MRAM: From Technology Breakthroughs to Products and Applications

°Y. Huai (Avalanche Technology Inc.)

Apr. 21/Room B

Nuromorphic computing and related techniques 15:00 ~ 17:00

Chair: Y. Igarashi (Univ. of Tsukuba), E. Xiao (NIMS)

21pB-1 [Invited] 2D Spintornics: Skyrmion and beyond

°Y. Wu (UF)

21pB-2 [Invited] Probabilistic computing with stochastic magnetic tunnel junctions

°S. Fukami (Tohoku Univ.)

21pB-3 Study on Neuromorphic Characteristics and Functionalities of Mn₃Sn-based Devices

°E. Lim, S. Lee, E. Jun, S. Kim (University of Ulsan)

21pB-4 Tailored Exchange Bias and Multilevel Magnetization Control in CoPt/FeMn SOT Devices for Neuromorphic Computing

°S. Lee, Y. Lin, Z. Wu, Y. Tseng (NYCU)

21pB-5 Enhancing spin selectivity in a quantum dot spin qubit using reservoir spin accumulation

°R. Jansen, W. Klich, A. Spiesser, S. Yuasa (AIST)

- 21pB-6 Assessing Insertion Impacts on STT-MRAM for Energy-Efficient CIM
 °Z. Wu¹, K. Chen², J. Wei², S. Sheu², T. Hou¹, Y. Tseng¹ (¹NYCU, ²ITRI)

Machine Learning for Magnetic Material Development 17:15 ~ 18:00

Chair: S. Fukami (Tohoku Univ.), Y. Wu (Univ. of Florida)

- 21pB-7 Dictionary Learning-Based Screening of Layered Materials via Interface Fermi Surface Matching
 Y. Mizutori¹, K. Simalao^{1,2}, Y. Shimazaki¹, Y. Miura^{2,3}, Y. Sakuraba^{1,2}, Y. Iwasaki², °Y. Igarashi^{1,2}
 (¹Univ. of Tsukuba, ²NIMS, ³Kyoto Inst. of Tech)
- 21pB-8 Comprehensive ab initio Stability Analysis of Heusler Compounds with Phonon Considerations for Enhanced Material Discovery
 °E. Xiao, T. Tadano (NIMS)
- 21pB-9 Feature Extraction Using Audio Dataset for Electric Motor Performance Classification
 °F. Mujaahid^{1,2}, M. F. Hsieh¹, T. Huda¹ (¹NCKU, ²UMY)

Apr. 21/Room C

Spin caloritronics I

15:00 ~ 16:30

Chair: J. Jeong (Chungnam National Univ.), Y. Sakuraba (NIMS)

- 21pC-1 [Invited] Electron orbital dynamics in solids
 °H. Lee (POSTECH)
- 21pC-2 [Invited] Magnon-drag thermoelectric transport in non-uniform spin structures
 °J. Ohe (Toho Univ.)
- 21pC-3 Figure of merit of transverse thermoelectric conversion for magnetic thin film measured by all-in-one evaluation method
 °T. Yamazaki¹, N. L. Okamoto¹, T. Ichitsubo¹, T. Seki^{1,2} (¹IMR, Tohoku Univ., ²CSIS, Tohoku Univ.)
- 21pC-4 Enhancement of thermal conductivity change induced by magneto-thermal resistance effect in Cu/CoFe multilayers
 °F. Makino^{1,2,3}, T. Hirai², T. Shiga⁴, H. Suto², H. Fujihisa⁴, K. Oyanagi³, S. Kobayashi³, T. Sasaki², T. Yagi⁴, K. Uchida^{1,2,5},
 Y. Sakuraba^{1,2} (¹Univ. of Tsukuba, ²NIMS, ³Iwate Univ., ⁴AIIST, ⁵Univ. of Tokyo)

Spin caloritronics II

16:45 ~ 17:45

Chair: H. Lee (POSTECH), T. Yamazaki (Tohoku Univ.)

- 21pC-5 [Invited] Spin Seebeck effect in nanostructure embedded magnetic insulator
 °J. Jeong¹, P. Cao Van¹, B. Park², S. Kim², S. Park³, H. Jin³ (¹Chungnam National University, ²KAIST, ³POSTECH)
- 21pC-6 Electric field control of anomalous Nernst effect in FePt thin films
 °S. Yoshida, B. Qiang, T. Miyamachi, M. Mizuguchi (Nagoya Univ.)
- 21pC-7 Advancement of anomalous Nernst heat flux sensor : new sensor structures for higher performance
 °Y. Sakuraba¹, W. Zhou¹, Y. Tabata², S. Inamura², K. Taguchi², M. Orito² (¹NIMS, ²SEMITEC)

Apr. 21/Room D

Hard magnetic materials I

15:00 ~ 16:15

Chair: Y. Hirayama (AIST), J. Yoo (KIMS)

- 21pD-1 [Invited] Coercivity Enhancement of Nd₂Fe₁₄B Magnets through Suppressing Pr-rich Shell Formation: Insights from Micromagnetic Simulations
 G. Kim^{1,3}, T. Kim², °K. Lee³ (¹School of Materials Science and Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan, Republic of Korea, ²Department of Magnetic Materials, Korea Institute of Materials Science (KIMS), Changwon, Republic of Korea, ³Graduate School of Semiconductor Materials and Devices Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan, Republic of Korea)
- 21pD-2 [Invited] Microstructure and magnetic properties of 2:17-type Sm-Co permanent magnets according to heat treatment conditions
 S. Park¹, G. Min¹, K. Bae², °T. Kim¹ (¹Chonnam National University, ²R&D Center of Star Group Co. Ltd)

- 21pD-3 A comparative study on shell formation and coercivity improvement of Pr-free and Pr-alloyed Nd-Fe-B sintered magnets during grain boundary diffusion process with low-melting Pr-Cu-Al-Ga alloy
 °S. Lee¹, G. Kim², K. S. Lee², S. Kim¹, T. H. Kim¹, S. H. Lee³, D. H. Kim³, J. G. Lee¹
 (¹Korea Institute of Materials Science, ²Ulsan National Institute of Science and Technology, ³Star Group Ind. Co., Ltd.)

Hard magnetic materials II

16:30 ~ 18:00

Chair: A. Yamashita (Nagasaki Univ.), S. Lee (Korea Institute of Materials Science)

- 21pD-4 [Invited] Advancements in Compositional and Processing Methods for ThMn₁₂-Type Permanent Magnetic Materials
 °J. Park (Korea Institute of Materials Science)
- 21pD-5 Constituent phases and microstructural characteristics of anisotropic hot-deformed magnets produced by (Nd_{1-x}Ce_x)-Fe-B Hydrogenation-Disproportionation-Desorption-Recombination treated precursors
 °J. Yoo, T. Kim, H. Cha, S. Kim, J. Lee (Korea Institute of Materials Science)
- 21pD-6 Fe-rich Sm-Fe-N anisotropic nanopowder prepared by induction thermal plasma process
 °Y. Hirayama, P. Kwangjae, Z. Liu (AIST)
- 21pD-7 [Invited] Recent Progress and Future Prospects on Fe-based Magnetocaloric Compounds
 °A. Fujita (AIST)

Apr. 21/Poster Room

Poster session I

15:00 ~ 18:00

- 21pPS-1 Sensitive detection of non-linear spin wave using amplitude modulated RF magnetic field
 °S. Yamaguchi¹, S. Yakata², T. Kimura¹ (¹Kyushu Univ., ²Fukuoka Inst. Tech.)
- 21pPS-2 Threshold Power Reduction for Parametric Pumping in Perpendicular Standing Spin Wave Modes
 °S. Nezu, S. Kataoka, K. Kagawa, K. Sekiguchi (Yokohama National Univ.)
- 21pPS-3 Stability of Magnonic Soliton through Head-On Collision
 °T. Iwata, S. Nezu, K. Sekiguchi (Yokohama National Univ.)
- 21pPS-4 Non-Adiabatic Magnon Pumping in Single-Crystal Iron
 °S. Yokouchi, S. Nezu, K. Imamura, M. Ohtake, K. Sekiguchi (Yokohama National Univ.)
- 21pPS-5 Spin-Wave Channeling by Cubic Anisotropy
 °R. Iwami, K. Kagawa, S. Nezu, K. Imamura, M. Ohtake, K. Sekiguchi (Yokohama National Univ.)
- 21pPS-6 Spoken Digit Classification using Micro Spin-Wave Reservoir Chips
 °R. Yoshida, S. Nagase, S. Nezu, K. Sekiguchi (Yokohama National Univ.)
- 21pPS-7 Nonreciprocal spin wave excitation in Ni_xFe_{1-x} alloy induced by surface acoustic waves
 °S. Sakai¹, K. Yamanoi¹, Y. Nozaki^{1,2} (¹Keio Univ., ²CSRN Keio)
- 21pPS-8 Ultrastrong to nearly deep-strong magnon-magnon coupling with a high degree of freedom in synthetic antiferromagnets
 °Y. Wang¹, F. Ma², G. Yu¹ (¹Institute of Physics CAS, ²Nanjing Normal University)
- 21pPS-9 Nonreciprocal magnon polaritons in magneto-chiral metamolecule
 °K. Mita¹, T. Kodama¹, T. Ueda², T. Nakanishi³, K. Sawada⁴, T. Chiba¹, S. Tomita¹
 (¹Tohoku Univ., ²Kyoto Inst. of Tech., ³Kyoto Univ., ⁴RIKEN)
- 21pPS-10 Structural design of surface acoustic wave resonators for enhanced magnon-phonon coupling
 °A. Nagao¹, K. Yamanoi¹, Y. Nozaki^{1,2} (¹Dept. of Phys., Keio Univ., ²CSRN, Keio Univ.)
- 21pPS-11 Magnon-phonon interaction mapping using high-overtone SAW devices in Co-based Heusler alloys
 °K. Yamanoi¹, S. Yamada², K. Hamaya², Y. Nozaki¹ (¹Keio Univ., ²Osaka Univ.)
- 21pPS-12 Magnetization-Referenced Current Injection Patterns for Reservoir Computing Using Spin Torque Oscillators
 °H. Kayama, S. J. Greaves (Tohoku Univ.)
- 21pPS-13 Phase recognition of topological spin-wave by machine learning
 °S. Kamakura, J. Ohe (Toho Univ.)

- 21pPS-14 Magnetization dynamics in GdFeCo ferrimagnet induced by inner-shell excitation using X-ray Free-Electron Laser
 °Y. Akiyama^{1,2}, R. Kobayashi^{1,2}, K. T. Yamada³, H. Yoshikawa⁴, K. Takemura^{1,2}, R. Obata⁵, A. Gocho^{2,5}, S. Sasakura^{2,5},
 K. Kaneshima⁵, T. Togashi⁶, Y. Kubota², A. Tsukamoto⁴, Y. Tanaka^{2,5}, M. Suzuki^{1,2}
 (¹Kwansei Gakuin Univ., ²RIKEN, ³Institute of Science Tokyo, ⁴Nihon Univ., ⁵Univ. Hyogo, ⁶JASRI)
- 21pPS-15 Néel Vector Rotation Driven by Spin-Orbit Torque in Amorphous Ferrimagnetic GdCo Thin Films
 °T. Mandokoro¹, Y. Shiota^{1,2}, T. Ito¹, H. Matsumoto¹, H. Narita¹, R. Hisatomi^{1,2}, S. Karube^{1,2}, T. Ono^{1,2} (¹ICR, ²CSR/N)
- 21pPS-16 Nonlinear linewidth behavior of the optic ferromagnetic resonance mode in Co/Ru/Co synthetic antiferromagnets
 °Y. Hisada, S. Komori, T. Taniyama (Nagoya Univ.)
- 21pPS-17 Anomalous ferromagnetic resonance linewidth broadening in Fe thin films
 °S. Baek¹, S. Komori¹, K. Imura², T. Taniyama¹ (¹Nagoya Univ., ²ILAS, Nagoya Univ.)
- 21pPS-18 Analysis of Substitutional Effects of Sn and Sb on Magnetocrystalline Anisotropy of MnBi at Finite Temperature
 °Y. Harashima^{1,2}, A. Nishida¹, Y. Morishita³, M. Matsui³, N. Umezawa, R. Umetsu⁴, Y. Shigeta⁵, H. Lim⁶, N. Kim⁶, S. Bae⁶,
 S. D. Roh⁶, S. Takasuka¹, T. Takayama^{1,2}, M. Fujii^{1,2,7} (¹NAIST, ²DSC, NAIST, ³LG Japan Lab inc., ⁴IMR, Tohoku Univ.,
⁵CCS, Univ. Tsukuba, ⁶LG Innotek Co., LTD, ⁷CMP, NAIST)
- 21pPS-19 Ferroaxial order-dependent circularly polarized Raman scattering in ilmenite NiTiO₃
 °G. Kusuno¹, T. Hayashida², T. Nagai², H. Watanabe², T. Kimura², T. Satoh^{1,3} (¹Science Tokyo, ²Univ. of Tokyo, ³IMS)
- 21pPS-20 Probing magnetic anisotropy in Cr-intercalated CrTe₂ layered transition metal halides: Spin-orbit torque method
 °Y. Tseng, B. Huang, Y. Tang (NCU)
- 21pPS-21 Contribution of lattice distortion and N addition to high uniaxial magnetic
 °C. Murakami, T. Hasegawa (Akita Univ.)
- 21pPS-22 Enhanced Stress Stability in Flexible Co/Pt Multilayers with Strong Perpendicular Magnetic Anisotropy
 M. Li, H. Yang, Y. Xie, °X. Bao, R. Li (NIMTE)
- 21pPS-23 Ab-initio study on correlation between magnetostriction and magnetic damping
 I. Kurniawan¹, K. Ito², T. Seki^{2,3}, K. Masuda¹, °Y. Miura^{1,4}
 (¹NIMS, ²IMR, Tohoku Univ., ³CSIS, Tohoku Univ., ⁴Kyoto Institute of Technology)
- 21pPS-24 Synthesis of the iron-based superconductor Sr₂Mg_{0.3}Ti_{0.7}FeAsO_{3-δ}
 °Y. Ueno, N. Azuma, M. Matoba, Y. Kamihara (Keio Univ.)
- 21pPS-25 Electrical transport properties of Co₂MnGa and Co₂MnSi bulk single crystals
 °G. Mimuro¹, T. Tanaka¹, T. Kubota¹, S. Kokado², R. Umetsu¹ (¹Tohoku Univ., ²Shizuoka Univ.)
- 21pPS-26 Phase control of the ground state parity in quantum dot Josephson junctions
 °S. Kobayashi^{1,2}, S. Matsuo^{1,3}, M. Spethmann⁴, P. Stano¹, D. Loss^{1,4}, T. Lindemann⁵, S. Gronin⁵, G. Gardner⁵, M. Manfra⁵,
 S. Tarucha¹ (¹RIKEN, ²Tokyo Univ. Sci., ³Tokyo Inst. Tech., ⁴Univ. of Basel, ⁵Purdue Univ.)
- 21pPS-27 Shapiro response of the Josephson diode derived from Andreev molecules
 °S. Matsuo^{1,2}, R. S. Deacon¹, S. Kobayashi^{1,3}, Y. Sato¹, T. Yokoyama⁴, T. Lindemann⁵, S. Gronin⁵, G. C. Gardner⁵,
 K. Ishibashi¹, M. J. Manfra⁵, S. Tarucha¹ (¹RIKEN, ²Tokyo Inst. Tech., ³Tokyo Univ. Sci., ⁴Osaka Univ., ⁵Purdue Univ.)
- 21pPS-28 Effect of Preparation Method on the Magnetic and Martensitic Transformation on Ferromagnetic MnCoGe
 °T. Tsunematsu¹, M. Onoue¹, Y. Mitsui¹, R. Umetsu², K. Koyama¹ (¹Kagoshima Univ., ²Tohoku Univ.)
- 21pPS-29 Cooling rate dependence of magnetostriction on melt-spun ribbons of Fe-Ga alloy and the rare earth elements doping
 °L. Chen, R. Y. Umetsu (Tohoku Univ.)
- 21pPS-30 Phase stability of Mn₃Ga with D0₂₂-type structure
 °D. Nobayashi, Y. Mitsui, M. Onoue, K. Koyama (Kagoshima Univ.)
- 21pPS-31 Shielding Frequency Control of Conformal NiFeCuMo/Cu Multilayer EMI Shield
 °A. Kikitsu, S. Shirotori (Toshiba)
- 21pPS-32 Directional-enhancement of magnetic resonance in soft magnetic CoNbZr films with uniaxial magnetic anisotropy
 °H. Kijima-Aoki, L. Tonthat, S. Yabukami (Tohoku Univ.)
- 21pPS-33 Development of nT meter applied by GSR sensor
 °M. Hikishima, S. Honkura, Y. Honkura (Magnedesign)
- 21pPS-34 Enhancement of anomalous Hall and Nernst effects in tetragonal distorted FeCo induced by the addition of V and N elements
 °A. K. Patel¹, C. Murakami², T. Nakatani¹, T. Hasegawa², Y. Sakuraba¹ (¹NIMS, ²Akita Univ.)

- 21pPS-35 Theoretical study on anomalous Hall sensors with the second-order uniaxial anisotropy
°H. Arai, H. Imamura (AIST)
- 21pPS-36 Investigation of harmonic components in thin film magnetoimpedance elements
°R. Chida, H. Kikuchi (Iwate Univ.)
- 21pPS-37 Thermal distribution in Joule heating of thin-film element and its effect on adjacent element
°S. Kawasaki, H. Kikuchi (Iwate Univ.)
- 21pPS-38 Study of an Arbitrary Waveform Magnetic Scale Based on Magnet Width Modulation Method
°A. Hotta, T. Musha (MITSUBISHI ELECTRIC CORPORATION)
- 21pPS-39 Feedback Cooling of High-Q Magnetically-Levitated Resonator for Ultraprecise Accelerometer
S. Tian¹, D. Kim¹, A. Hodges¹, G. Hermosa³, C. Padilla¹, P. Romagnoli¹, R. Lecamwasam¹, J. Downes², °J. Twamley¹
(¹OIST, ²Macquarie U, ³YuanZe U)
- 21pPS-40 Impact of manganese and lanthanum substitution on the structural, morphological, and magnetic properties of cobalt ferrite synthesized via co-precipitation for microwave absorption applications
°N. Prasetya¹, R. Rahmawati¹, S. Suharno², Y. Taryana³, R. Riyatun¹, U. Utari¹, N. Nuryani¹, B. Purnama¹ (¹Department of Physics, Faculty of Mathematics and Natural Sciences, Universitas Sebelas Maret, Surakarta 57126, Indonesia, ²Department of Physics Education, Faculty of Teacher Training and Education, Universitas Sebelas Maret, Surakarta 57126, Indonesia, ³Center for Research of electronic and telecommunication, Indonesia Institute of Sciences, Bandung 40135, Indonesia)

Apr. 22/Room A

Symposium "AI driven magnetics"

9:30 ~ 12:00

Chair: M. Kotsugi (Tokyo Univ. Sci)

- 22aA-1 [Invited] Representation of magnetic properties by a data-driven extended free energy model
°C. Mitsumata¹, A. Lira Foggiatto², M. Kotsugi² (¹Univ. of Tsukuba, ²Tokyo Univ. Sci.)
- 22aA-2 [Invited] Extended Free Energy Model: Automated Analysis of Magnetic Domain Structure
°M. Kotsugi (Tokyo Univ. Sci.)
- 22aA-3 [Invited] Autonomous materials search using simulation, robotics, and machine learning
°Y. Iwasaki (NIMS)
- 22aA-4 [Invited] Accelerating Magnetic Materials Discovery with Explainable AI Frameworks
°H. C. Dam^{1,2}, H. Kino³, T. Miyake⁴ (¹JAIST, ²Tohoku Univ., ³NIMS, ⁴AIST)

Symposium "Recent developments of spintronics in a variety of symmetries"

13:30 ~ 17:30

Chair: T. Moriyama (Nagoya Univ.)

- 22pA-1 [Invited] Manipulation of the altermagnetic order via crystal symmetry
°C. Song¹, Z. Zhou¹, X. Chen², J. Liu², F. Pan¹ (¹Tsinghua University, ²The Hong Kong University of Science and Technology)
- 22pA-2 [Invited] Spin-orbit torque devices for AI and quantum-inspired applications
°C. Pai (National Taiwan University)
- 22pA-3 [Invited] Generation of Large Spin Current during Magnetic Phase Transition of FeRh
T. Lee¹, M. Park², H. Ko¹, J. Oh¹, S. Ko¹, S. Hwang¹, J. Jang¹, G. Baek¹, S. Kim¹, H. Lee³, M. Jung², °K. Kim¹, K. Lee¹
(¹KAIST, ²Sogang University, ³POSTECH)
- 22pA-4 [AUMS Young Researcher Awardee] Handedness manipulation and electrical readout of propagating antiferromagnetic magnons
°Y. Shiota (Kyoto Univ.)
- 22pA-5 [Invited] Molecular vibration-driven spin polarization as a source of chirality-induced spin selectivity
°S. Miwa (Univ. of Tokyo)

22pA-6 [Invited] Photonic generation of electron orbital in ferromagnetic film probed by laser-induced magnetization dynamics measurement

°S. Iihama¹, K. Nukui², K. Ishibashi², S. Mizukami² (¹Nagoya Univ., ²Tohoku Univ.)

22pA-7 [Plenary: AUMS Awardee] X-spintronics

°T. Ono (Kyoto Univ.)

Apr. 22/Room B

Unconventional magnetic phenomena I

9:00 ~ 10:30

Chair: R. Toyama (NIMS), T. Zhu (IOPCAS)

22aB-1 [Invited] Topological Chiral Crystals for Orbitronics

°D. Go (Johannes Gutenberg University Mainz)

22aB-2 [Invited] Highly efficient spin-charge conversion in ferromagnetic metal Fe / topological Dirac semimetal α -Sn heterostructures

°L. D. Anh¹, M. Ishida¹, S. Fukuoka¹, T. Chiba², Y. Kota³ (¹Univ. of Tokyo, ²Tohoku Univ., ³NIT, Fukushima Coll.)

22aB-3 Growth of Highly Textured BiSb Topological Insulator on Si/SiO_x substrates for Spin-Orbit Torque Devices Using TiO_x/MgO Buffer Layers

°W. Li¹, H. Ho Hoang¹, S. Takahashi², Y. Hirayama², Y. Kato², P. N. Hai¹ (¹Institute of Science Tokyo, ²Samsung Japan)

22aB-4 Anisotropic spin polarization induced by Fermi surface manipulation

°S. Sugimoto¹, Y. Araki², J. Ieda², S. Kasai¹ (¹NIMS, ²JAEA)

Unconventional magnetic phenomena II

10:45 ~ 12:45

Chair: D. Go (JGU Mainz), S. Sugimoto (NIMS)

22aB-5 [AUMS Young Researcher Awardee] Exploring Anomalous Hall Effect in Rare-Earth Transition-Metal (RE-TM) Ferrimagnets for Spintronics Applications

°R. Bhatt, L. Ye, T. Wu (YunTech Taiwan)

22aB-6 High-throughput material exploration system for the anomalous Hall effect using combinatorial experiments and machine learning

°R. Toyama, Y. Iwasaki, P. D. Kulkarni, H. Suto, T. Nakatani, Y. Sakuraba (NIMS)

22aB-7 Compensation-Level Dependent Probabilistic Behavior in Stochastic Magnetic Tunnel Junction with Synthetic Antiferromagnetic Free Layer

°T. Kinoshita, J. Yoon, N. Cacoilo, H. Kaneko, S. Kanai, H. Ohno, S. Fukami (Tohoku Univ.)

22aB-8 Altermagnetic RuO₂(101) thin films exhibiting a single variant

°Z. Wen¹, C. He¹, J. Okabayashi², Y. Miura^{1,3}, T. Ohkubo¹, T. Seki⁴, H. Sukegawa¹, S. Mitani¹
(¹NIMS, ²Univ. of Tokyo, ³KIT, ⁴Tohoku Univ.)

22aB-9 Polarized neutron reflectometry at CSNS and its application to the study of the magnetic thin films

°T. Zhu (IOPCAS)

22aB-10 [Invited] Searching of Spin-triplet Superconductivity at High-T_c Superconductor/Ferromagnetic-Oxide Interfaces

°H. Chou^{1,2}, S. J. Sun^{1,2}, K. W. Hsueh¹, A. J. Grutter³, Z. Q. Su³, L. T. Chen¹, D. Cortie⁴, T. Y. Huang⁵, S. C. Weng⁵,
Y. Y. Chin⁶, H. J. Lin⁵, J. W. Chiou^{1,2}

(¹Sun Yat-sen Univ., ²Nat. Univ. Kaohsiung, ³NIST Center for Neutron Research, ⁴ANSTO, ⁵NSRRC, ⁶Chung Cheng Univ.)

SOT switching I

13:30 ~ 15:15

Chair: P. Nam Hai (Science Tokyo), Z. Wang (NIMTE,CAS)

22pB-1 [Invited] Dual SOT Switching Modes in a Single Device Geometry for Neuromorphic Computing

°C. Lai (National Tsing Hua Univ.)

22pB-2 Current-induced spin-orbit torque magnetization switching in electrochemically deposited CoPt thin film

°T. Huang¹, S. Isogami², T. Shirokura¹, M. M. Hasan³, M. Saito³, J. Uzuhashi², T. Ohkubo², S. Kasai², S. Nakagawa¹,
Y. Takamura¹ (¹Science Tokyo, ²NIMS, ³Waseda Univ.)

22pB-3 Investigation of current induced magnetization switching in the SOT devices with low-Z elements

°G. K. Shukla, P. Kumar, S. Isogami (NIMS)

- 22pB-4 Multilayered MXenes for future two-dimensional nonvolatile magnetic memories with ultrahigh integration
P. Kumar¹, Y. Miura^{1,2}, Y. Kotani³, A. Sumiyoshiya³, T. Nakamura^{3,4}, G. Shukla¹, °S. Isogami¹
(¹NIMS, ²Kyoto Inst. of Tech, ³NanoTerasu, ⁴Tohoku Univ.)
- 22pB-5 Impact of Nitrogen on magnetization switching in non-collinear antiferromagnetic Mn₃PtN compared to Mn₃Pt
°N. Tripathi¹, S. K. Mishra¹, S. Isogami² (¹IIT (BHU), ²NIMS)
- 22pB-6 Field-free perpendicular magnetic memory driven by out-of-plane spin-orbit torques
°S. Liang¹, A. Chen^{2,3}, L. Han¹, X. Zhang², C. Song¹ (¹Tsinghua University, ²KAUST, ³UESTC)

SOT switching II

15:45 ~ 17:30

Chair: S. Isogami (NIMS), C. Lai (National Tsing Hua Univ.)

- 22pB-7 Giant bulk spin-orbit torque driven spin Hall nano-oscillators using PtBi alloys
°U. Shashank¹, A. Kumar^{1,4}, T. Parvini², H. Heyen², M. Rajabali³, M. Munzenberg², J. Akerman^{1,4}
(¹University of Gothenburg, ²Universitat Grefswald, ³NanOsc AB, ⁴Tohoku Univ.)
- 22pB-8 Giant spin-orbit torque in a symmetry-enforced topological Dirac semimetal
X. Zheng¹, S. Peng¹, M. Radovic², R. Li¹, °Z. Wang¹ (¹NIMTE,CAS, ²PSI)
- 22pB-9 Role of Pt and Bi on the giant spin Hall effect in topological semimetal YPtBi
°S. Kagami¹, O. Fujie¹, D. Ito¹, Q. Le², B. York², C. Hwang², X. Liu², S. Le², M. Maeda³, T. Fan³, Y. Tao³, H. Takano³, P. N. Hai¹ (¹Department of Electrical and Electronic Engineering, Institute of Science Tokyo, ²Western Digital Inc., Great Oaks site, ³Western Digital Inc., Fujisawa site)
- 22pB-10 Doped BiSbX Topological Insulator For Spin-Orbit Torque Devices
°F. Tuo¹, Q. Le², B. R. York², C. Hwang², X. Liu², M. A. Gribelyuk², S. Le², L. Xu², J. James², J. Ortega², M. Maeda¹, Y. Tao¹, H. Takano¹, M. Liu³, R. Zhang³, S. Namba³, P. N. Hai³
(¹Western Digital Inc., Fujisawa Site, ²Western Digital Inc., Great Oaks Site, ³Tokyo Inst. Tech.)
- 22pB-11 Symmetry and conductivity modulation in SrRuO₃ for efficient orbital torque and field-free magnetization switching
°X. Zheng, S. Peng, R. Li, Z. Wang (NIMTE,CAS)
- 22pB-12 Spin Hall effect in Platinum deposited by atomic layer deposition for 3D spin-orbit torque devices
°P. N. Hai, K. Ishida, K. Sato (Ins. Sci. Tokyo)
- 22pB-13 Spin Orbit Torque in Gd/FeCo Multilayers with Layer Thickness Gradient
°R. Yabushita¹, D. Oshima¹, S. Takahashi², Y. Hirayama², Y. Kato², T. Kato¹ (¹Nagoya Univ., ²Samsung Japan)

Apr. 22/Room C

MR effect

10:45 ~ 12:30

Chair: A. Spiesser (AIST), H. Sukegawa (NIMS)

- 22aC-1 [Invited] Improvement in tunnel magnetoresistance of CoFeB-based magnetic tunnel junctions by MgO barrier interface modification
°H. Sukegawa, T. Scheike, J. Uzuhashi, Z. Wen, S. Kasai, T. Ohkubo, S. Mitani (NIMS)
- 22aC-2 [Invited] Competing magnetic exchange effects in FeRh/NiFe bilayers
°M. Jung (Sogang University)
- 22aC-3 Scaling of the Two-Terminal Magnetoresistance in Lateral Spin-Valve Devices
°A. M. Spiesser, R. Jansen, S. Yuasa (AIST)
- 22aC-4 Shape-dependent magnetoresistance of singular electrodeposited one-dimensional magnetic nanostructures
°K. Rogachev, M. Sobirov, T. Rakhmatullaev, I. Sapovsky, M. Bazrov, A. Samardak (FEFU)
- 22aC-5 Novel magnetoelectric properties in topological materials containing magnetic atoms
°Z. Y. Ma^{1,2}, W. Sun^{1,2}, W. G. Li^{1,2} (¹CAS Key Laboratory of Magnetic Materials and Devices, Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, ²University of Chinese Academy of Sciences)

Functional magnetic devices I

13:30 ~ 15:15

Chair: Y. Wu (NIMTE, CAS), S. Yabukami (Tohoku Univ.)

- 22pC-1 [Invited] Observation of optical vortex generation in magnon-induced Brillouin light scattering
°R. Hisatomi^{1,2,3}, A. Osada⁴, K. Taga¹, H. Komiyama¹, H. Narita^{1,3}, S. Karube^{1,2,3}, Y. Shiota^{1,2}, T. Ono^{1,2}
(¹Kyoto Univ., ²CSRN, ³PRESTO, ⁴QIQB)

- 22pC-2 Exploring 3D Magnetic Sensing via Antiferromagnetic Order in Cox/Ptx Superlattices: Insights from Experiment and Simulation
 °A. Fathy¹, Y. Huang¹, V. Bhukya¹, C. Hu¹, L. Chang², P. Lin³, M. Lai³, Y. Tseng¹ (¹NYCU, ²ITRI, ³iSenteck)
- 22pC-3 Spin Hall sensor using topological insulator
 °M. Liu¹, R. Zhang¹, Q. Le², B. York², C. Hwang², X. Liu², M. Gribelyuk², X. Xu², S. Le², M. Maeda³, F. Tuo³, Y. Tao³,
 H. Takano³, P. N. Hai¹
 (¹Institute of Science Tokyo, ²Western Digital Inc., Great Oaks site, ³Western Digital Inc., Fujisawa site)
- 22pC-4 Analysis of Output Signals in Domain Wall Displacement GMR Sensors with CoFeB Free layers
 °K. Komuro, D. Oshima, T. Kato (Nagoya Univ.)
- 22pC-5 Detection of Green-Synthesized Magnetic Ferrofluid Nanotags Using Commercial Chip-based Giant Magnetoresistance Sensor
 °H. Ajrina¹, H. Ardiyanti^{1,2}, P. E. Swastika^{1,3}, N. I. Istiqomah¹, Z. Zurnansyah¹, L. Shifa¹, E. Suharyadi¹
 (¹Universitas Gadjah Mada, ²Institut Teknologi Sumatera, ³Universitas Negeri Yogyakarta)
- 22pC-6 Non-hysteretic tunnel magnetoresistive sensors using soft-pinning through noncollinear interlayer exchange coupling
 P. D. Kulkarni, °T. Nakatani (NIMS)

Functional magnetic devices II

15:45 ~ 17:30

Chair: R. Hisatomi (Kyoto Univ.), T. Nakatani (NIMS)

- 22pC-7 [Invited] Shape-modification of soft magnetic particles for electromagnetic wave absorption and thermal management
 °Y. Kwon, J. Jeong, B. Park, K. Kim, S. Yang (Korea Institute of Materials Science)
- 22pC-8 [Invited] Giant Magneto-Impedance effect in soft magnetic microwires: challenges, advances and perspectives.
 V. Zhukova¹, P. Corte-Leon², A. Gonzalez¹, °A. Zhukov³ (¹Univ. Basque Country, UPV/EHU, ²Univ. Cambridge and
 Basque Country, UPV/EHU, ³Univ. Basque Country, UPV/EHU and Ikerbasque)
- 22pC-9 High frequency magnetoelectric antenna excited by acoustic waves with large bandwidth
 °Y. M. Ma, C. Song, F. Pan (Tsinghua University)
- 22pC-10 High-frequency drive type thin film sensor using coplanar line with slit
 R. Suzuki, L. Tonthat, J. Honda, H. Kijima-Aoki, °S. Yabukami (Tohoku University)
- 22pC-11 Flexible Magnetic Pressure/Strain Sensors Based on GMI Effect
 °Y. Wu, S. Li, Y. Liu, R. Li (NIMTE,CAS)

Apr. 22/Room D

Symposium "Recent trends in advanced molecular magnetism: bulk, nano to quantum nature"

9:00 ~ 12:30

Chair: S. Hayami (Kumamoto Univ.)

- 22aD-1 [Invited] Spin Crossover System with Multifunction
 °S. Hayami (Kumamoto University)
- 22aD-2 [Invited] Molecular Spin Qubits toward Quantum Computer and High-Density Memory Devices Based on Molecular Magnets
 °M. Yamashita (Tohoku University)
- 22aD-3 [Invited] Quantum Computing with Molecules
 °M. Ruben (KITANO)
- 22aD-4 [Invited] Organometallic Single-Molecule Magnets Containing Radicals and Bismuth
 °S. Demir (Department of Chemistry, Michigan State University, East Lansing, Michigan 48824, USA)
- 22aD-5 [Invited] A molecular approach to 2D magnetic materials
 °E. Coronado (Valencia University)
- 22aD-6 [Invited] Light-Induced Magnetic and Dielectric switching in Spin Transition Molecular Materials
 °Y. Meng (Dalian University of Technology)

Symposium "Frontier research on soft magnetic materials and devices for power electronics applications"

13:30 ~ 17:00

Chair: S. Okamoto (Tohoku Univ.)

- 22pD-1 [AUMS Young Researcher Awardee] Deep supercooling solidification for high-performance soft magnetic alloys
°C. Wu, Q. Chen, K. Wang, X. Zhang, G. Liu, M. Yan (Zhejiang Univ.)
- 22pD-2 [Invited] Magnetic Losses in Soft Magnetic Materials up to Radiofrequencies: Experimental and Theoretical Approaches
°S. Dobak¹, C. Beatrice², F. Fiorillo², C. Ragusa³, V. Tsakaloudi⁴, J. Fuzer¹, P. Kollar¹ (¹Inst. of Physics, Fac. of Science, P. J. Safarik University, Kosice, 04154, Slovakia, ²Advanced Materials Metrology & Life Sciences Div., INRIM, Torino, 10135, Italy, ³Energy Dpt. 'G. Ferraris', Politecnico di Torino, Torino, 10129, Italy, ⁴Lab. of Inorganic Materials, CPERI, CERTH, Thessaloniki, 54124, Greece)
- 22pD-3 [Invited] Effect of additives on soft magnetic properties of Fe-B-based nanocrystalline alloys prepared by ultra-rapid annealing
°Z. Tang, K. Suzuki (Monash University)
- 22pD-4 [Invited] Study of domain wall dynamics in soft magnetic materials using magnetic Barkhausen noise measurements
°S. Tamaru¹, T. Yamazaki² (¹AIST, ²TUS)
- 22pD-5 [Invited] How to use soft magnetic materials from the power electronics designer
°H. Matsumori (Nagoya Inst. Tech.)
- 22pD-6 [Invited] Sustainable SMC material developments for automotive electrification
°Z. Ye, T. Hiroki (Ube Material Industry)

Apr. 22/Room E

Magnetic nanoparticles for biomedical application I 9:30 ~ 10:30

Chair: L. Subbiah (Anna Univ.), M. Takahashi (JAIST)

- 22aE-1 Smart PNIPAM/FeRh composite activated by magnetocaloric effect for biomedical applications
°A. Amirov (MISIS)
- 22aE-2 Optimization of B₁-field homogeneity in transcranial MR-guided focused ultrasound system based AutoML: A simulation study
°E. Lee¹, T. Nam¹, D. Hernandez², H. Kim², E. Ozhinsky³, K. Kim⁴, K. Kim^{1,2} (¹GAIHST, Gachon University, ²Neuroscience Research Institute, Gachon University, ³University of California, San Francisco, ⁴Kyung Hee University)
- 22aE-3 Advanced TMR Sensor-Based Magnetodes for High-Sensitivity Biomagnetic Field Detection
°J. Chen^{1,2,3}, J. Luo^{1,2}, Z. Xu^{1,2}, Y. Wang^{1,2}, Z. Jin^{1,2}, M. Wang^{1,2}, X. Cai^{1,2} (¹State Key Laboratory of Transducer Technology, Aerospace Information Research Institute, Chinese Academy of Sciences, ²School of Electronic, Electrical and Communication Engineering, University of Chinese Academy of Sciences, ³College of Materials Sciences and Opto-Electronic Technology, University of Chinese Academy of Sciences)
- 22aE-4 Estimating magnetometer position, orientation, and sensitivity at extended distance from the calibration coil array in a magnetically shielded room
°T. Fukui^{1,3}, T. Shibuya², Y. Adachi¹ (¹Kanazawa Inst. Tech., ²TDK, ³LibreFields)

Magnetic nanoparticles for biomedical application II 11:00 ~ 12:15

Chair: Y. Adachi (Kanazawa Inst. Tech.), J. Chen (Chinese Academy of Sciences)

- 22aE-5 Magnetic separation of lysosomes from cells with lysosome dysfunction using superparamagnetic-plasmonic hybrid nanoparticles
°M. Takahashi, T. S. Le, Y. Hiratsuka, K. Matsumura, S. Maenosono (JAIST)
- 22aE-6 Green Synthesis of CoFe₂O₄/C-dots Nanocomposites Utilizing Moringa Oleifera and Watermelon Peels for Enhanced Magnetic Hyperthermia
°S. F. Azzahro¹, A. Jiananda¹, D. A. Larasati¹, M. Y. Darmawan^{1,2}, E. K. Sari¹, N. I. Istiqomah¹, D. Oshima³, T. Kato^{3,4}, E. Suharyadi¹ (¹Department of Physics, Universitas Gadjah Mada, ²Department of Physics, Institut Teknologi Sumatera, ³Department of Electronics, Nagoya University, ⁴Institute of Materials and Systems for Sustainability, Nagoya University)

- 22aE-7 Estimation of 2-dimensional distribution of anisotropy energy and magnetization in easy-axes oriented magnetic nanoparticles
 °H. Goto¹, M. Futagawa¹, Y. Takemura², S. Ota¹ (¹Shizuoka Univ., ²Yokohama National Univ.)
- 22aE-8 Polyvinyl Alcohol-Based Ferrogel System for Sustained, Magnetic Field-Guided, Acid-Triggered Delivery of Omeprazole
 °L. Subbiah, S. Palanisamy, K. Nagarajan, M. Ramasamy Govindaraj (Anna University)
- 22aE-9 Synthesis of Magnetic-Biodegradable Periodic Mesoporous Organosilica Nanoparticles for Biomedical Applications
 °D. N. Mai^{1,2}, H. T. Nguyen^{1,2}, H. K. Ta^{1,2,3}, H. T. Lai^{1,2}, K. Matsumoto⁴, F. Tamanoi⁴, T. L. Doan^{1,2}, T. B. Phan^{1,2}
 (¹INOMAR, ²VNU-HCM, ³Univ. of Science, ⁴CeMS, Kyoto Univ.)

Symposium "Recent developments in medical applications of magnetics"

13:30 ~ 17:00

Chair: Y. Takemura (Yokohama National Univ.)

- 22pE-1 [Invited] Selective destruction of cancer cells without affecting healthy cells by low frequency magneto-mechanical stimulation
 P. Obeid³, R. Morel², A. Visona^{1,2}, C. Naud², A. Nicolas¹, H. Joisten², X. Gidrol³, F. Berger⁴, °B. Dieny² (¹Univ. Grenoble Alpes, CNRS/LTM, Grenoble, France, ²Univ. Grenoble Alpes, CEA, CNRS, IRIG, SPINTEC, Grenoble, France, ³Univ. Grenoble Alpes, CEA, INSERM, IRIG, Biomics, Grenoble, France, ⁴Univ. Grenoble Alpes, INSERM/Brain Tech Lab, Grenoble, France)
- 22pE-2 [Invited] Magnetic Particle Imaging based Targeted Therapy of Brain Disorders
 °J. Yoon (Gwangju Institute of Science and Technology)
- 22pE-3 [Invited] Ultra-Fast and High-Power Nanoscale Heating Mechanism via Spin Precession in Magnetic Nanoparticles for Potential Biomedical Hyperthermia Applications
 °S. Kim (Seoul National University)
- 22pE-4 [Invited] Engineering Magnetic Nanoparticles for Targeted Brain Imaging : A Focus on Intranasal Administration of Tailored Nanoparticles
 °S. Seino, T. Nakagawa (Osaka Univ.)
- 22pE-5 [Invited] Design of human body sized magnetic particle imaging scanner
 °T. Yoshida, T. Sasayama (Kyushu Univ.)
- 22pE-6 [Invited] Magnetically Guided Effervescent Pantoprazole Tablets for Targeted Anti-Ulcer Therapy: Development and Optimization
 °S. Palanisamy¹, L. Subbiah¹, K. Nagarajan¹, Y. Takemura², S. Ota³ (¹Department of Pharmaceutical Technology, Centre for Excellence in Nanobio Translational Research, University College of Engineering, Bharathidasan Institute of Technology Campus, Anna University, Tiruchirappalli, Tamil Nadu, India. PIN-620024, ²Yokohama National University, Japan, ³Shizuoka University, Japan)

Apr. 22/Poster Room

Poster session II

9:00 ~ 12:00

- 22aPS-1 Strain regulation of skyrmions density on flexible substrates
 °R. Zou, H. Yang, Y. Xie, R. Li (NIMTE)
- 22aPS-2 Machine Learning Analysis of Temperature- and Frequency-Dependent Self-Organization Mechanisms in YIG Magnetic Domain Structures
 °R. Nagaoka¹, A. Lira Foggatto¹, T. Yamazaki¹, C. Mitsumata², M. Kotsugi¹ (¹Tokyo Univ. Sci., ²Univ. of Tsukuba)
- 22aPS-3 Growth of Co Thin Films with Low Roughness by ALD for 3D Magnetic Memory
 °Y. Hu, K. Sato, R. Zhang, K. Ishida, P. N. Hai (Tokyo Inst. Tech.)
- 22aPS-4 Magnetic and magneto-transport properties of non-collinear antiferromagnet Mn₃Ge epitaxial films
 °Y. Takeuchi¹, H. Sepehri-Amin², S. Sugimoto², T. Hiroto³, S. Kasai² (¹ICYS, NIMS, ²CMSM, NIMS, ³RNFS, NIMS)

- 22aPS-5 Magnetic and crystallographic properties of pulsed electrochemically deposited CoPt thin films
 °Y. Takamura¹, T. Huang¹, Y. Tanaka¹, M. Tanaka², M. Saito², P. Allongue³, J. Uzuhashi⁴, T. Ohkubo⁴, S. Kasai⁴, S. Nakagawa¹
 (1Science Tokyo, 2Waseda Univ., 3Ecole Polytechnique Palaiseau, 4NIMS)
- 22aPS-6 Enhanced Stress Stability in Flexible Co/Pt Multilayers with Strong Perpendicular Magnetic Anisotropy
 M. Li, H. Yang, Y. Xie, °R. Li (NIMTE)
- 22aPS-7 Evaluation of crystal structure and magnetic properties in Cobalt thin films deposited on LiTaO₃ substrates
 °T. Abe¹, S. Shikano¹, K. Shimamura², H. Sugiyama², S. Ono³, M. Shima¹, K. Yamada¹
 (1Gifu Univ., 2Kanazawa Univ., 3Muroan Int. Univ.)
- 22aPS-8 Reduction of antiphase boundary density of spinel ferrite thin films by oxidation annealing
 °K. Takeo, H. Yanagihara (Univ. of Tsukuba)
- 22aPS-9 The transformation of the preferred orientation axis in ordered FePt alloy thin films on heat treatment
 °K. Daike, H. Yoshikawa, A. Tsukamoto (Nihon Univ.)
- 22aPS-10 Coherent harmonic generation of magnons in spin textures
 °G. Lan¹, K. Liu¹, Z. Wang², G. Liu¹, P. Yan², G. Yu¹ (1IOP, CAS, 2UESTC)
- 22aPS-11 Asymmetry of domain walls motion in out of plane and in plane magnetic fields in Pd/Co/Pd epitaxial system
 °N. N. Chernousov, A. V. Davydenko, A. S. Pashenko, A. A. Turpak, A. G. Kozlov (Far Eastern Federal University)
- 22aPS-12 Anomalous increase of Gilbert damping in La_{0.5}Sr_{0.5}MnO₃ thin films induced by the emergence of antiferromagnetic phase
 °R. Arakawa, T. Onogi, S. Komori, T. Taniyama (Nagoya Univ.)
- 22aPS-13 Preparation of Al₂O₃ films applied to multi-layered magnetic films
 °F. Yamashita, R. Sankoda, A. Yamashita, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)
- 22aPS-14 Demonstration of non-collinear ferrimagnetism in (111)-oriented Mn₄N thin films by X-ray magnetic circular dichroism
 °A. Hatate¹, T. Yasuda¹, K. Amemiya², T. Suemasu¹ (1Univ. of Tsukuba, 2KEK)
- 22aPS-15 Thinned Nd-Fe-B sintered magnets for donors in LIFT technique
 °R. Sankoda¹, K. Masuda¹, F. Yamashita¹, T. Motomura¹, A. Yamashita¹, T. Yanai¹, M. Nakano¹, T. Shinshi², H. Fukunaga¹
 (1Nagasaki Univ., 2Institute of Science Tokyo)
- 22aPS-16 Crystal Growth and Phase Formation of Fe-N Epitaxial Thin Films on MgO(001) Substrates
 °K. Imamura¹, S. Isogami², M. Ohtake¹ (1Yokohama National Univ., 2NIMS)
- 22aPS-17 Perpendicularly magnetized synthetic antiferromagnetic layers based on CoPd/Ru/CoPd(111) multilayers for magnetic tunnel junctions
 °K. B. Fathoni, T. Scheike, Z. Wen, S. Mitani, H. Sukegawa (NIMS)
- 22aPS-18 Indirect Exchange Interaction for Perpendicularly Magnetized CoFeB Layers through W Interlayer
 °X. Hou, K. Ito, V. K. Kushwaha, T. Yamazaki, T. Seki (Tohoku Univ.)
- 22aPS-19 Thermo-Magnetic Image of a Magnetic Wire Using a Laser Induced Electromotive Force
 °S. Sumi, M. Mohammadi, K. Tanabe, H. Awano (Toyota Tech. Inst.)
- 22aPS-20 Fabrication and analysis of Co-Pt multilayer nanowires prepared by dual-bath electrodeposition
 °R. Kawana¹, N. Ohguchi¹, M. Saito², T. Homma^{2,3}, T. Kato⁴, T. Ono⁵, M. Shima¹, K. Yamada¹ (1Gifu Univ., 2Res. Org. for Nano and Life Innov. Waseda Univ., 3Dept. of Appl. Chem. Waseda Univ., 4Nagoya Univ., 5ICR Kyoto Univ.)
- 22aPS-21 Effect of smooth transition from crystalline to amorphous phase on magnetic behavior of gradient Co-CoW nanowires
 °T. Rakhmatullaev, I. Sapovskii, M. Sobirov, K. Rogachev, N. Ilin, A. Samardak (FEFU)
- 22aPS-22 Crystalline/amorphous three-segmented Co/CoW nanowires: synthesis and magnetic properties
 °I. Sapovskii, T. Rakhmatullaev, M. Sobirov, K. Rogachev, N. Ilin, A. Samardak (FEFU)
- 22aPS-23 Exchange bias in ultrathin epitaxial Pd/Co/CoO films
 °E. V. Tarasov^{1,2}, A. F. Shishelov¹, I. A. Tkachenko², A. G. Kozlov¹ (1FEFU, 2ICh FEB RAS)
- 22aPS-24 Enhancement of Hydrogen Evolution Reaction in Water Splitting with the Gadolinium doped Molybdenum Disulfide Magnetic Catalyst
 K. Tang, J. Wu, °C. Lee (NTHU)
- 22aPS-25 Non-linear Hall effect in graphene induced by strong orbital diamagnetism
 M. Wang¹, Y. Fan², H. Wu², °C. Chang^{1,3} (1Quantum information center, Chung Yuan Christian University, 2School of Physics, Beijing Institute of Technology, 3Department of Physics, National Taiwan University)
- 22aPS-26 Current-voltage characteristics in NiPS₃/Pt/Co multilayers
 °K. Tada, Y. Suzuki, T. Hattori, K. Hayashi, S. Iihama, T. Moriyama (Nagoya Univ.)

- 22aPS-27 Magnetic controlled spin qubit simulation in h-BN defect
°C. Lee, Y. Tang (National Central University)
- 22aPS-28 Effect of stacked granular buffer layer with carbon on nanostructure and magnetic properties of FePt granular films for heat assisted magnetic recording media
°D. Miyazaki¹, K. Tham¹, S. Saito² (¹TANAKA, ²Tohoku Univ.)
- 22aPS-29 Small grain size FePt granular films with co-addition of nitride and carbon as grain boundary materials for HAMR media
°K. Tham¹, D. Miyazaki¹, S. Saito² (¹TANAKA, ²Tohoku Univ.)
- 22aPS-30 Oscillation stability vs. applied field to STO for MAMR
°Y. Kanai¹, K. Tatsuno¹, S. J. Greaves² (¹Niigata Inst. Tech., ²Tohoku Univ.)
- 22aPS-31 A Study on Error Correction for Domain Wall Motion Memory
°Y. Nakamura, M. Nishikawa, Y. Okamoto (Ehime Univ.)
- 22aPS-32 Perpendicular magnetic anisotropy and microstructure of FePt (x-N, Ag, C) (x=B, Al) films
°J. Tsai, Y. Lin, M. Lin, C. Tsai, H. Huang (NCHU)
- 22aPS-33 Design and properties of HDL multilayered media with diffusion barrier for magnetic hologram memory
°Y. Nakamura, M. Okamoto, S. B. Chauhan, P. Lim (Toyoashi Univ. Tech.)

Poster session III

14:00 ~ 17:00

- 22pPS-1 Spin current in superconductors with structural chirality
°K. Hara, Y. Yanase (Kyoto Univ.)
- 22pPS-2 Superconducting lateral spin valve with Permalloy/Al transparent interface
S. Tsuboguchi, °R. Oshima, S. Kammoto, K. Yamada, T. Kimura (Kyushu Univ.)
- 22pPS-3 Signature of nonreciprocal magneto-transport in conventional superconducting films
°Y. Sawada¹, S. Obinata¹, R. Oshima¹, K. Ohnishi², T. Kimura¹ (¹Kyushu Univ., ²Kindai Univ.)
- 22pPS-4 High- T_c superconducting spin valves with multiple pair breaking effects
°T. Kikuta, S. Komori, K. Imura, T. Taniyama (Nagoya Univ.)
- 22pPS-5 Effect of highly off-stoichiometric deposition in epitaxial $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ film
°Y. Chen¹, D. Qu^{1,2}, S. Huang³, J. G. Lin^{1,2} (¹Center for Condensed Matter Sciences, National Taiwan University, ²Center for Atomic Initiatives for New Materials, National Taiwan University, ³Department of Physics, National Taiwan University)
- 22pPS-6 Pt thickness dependence of superconductivity in Nb/V/Pt/Fe/Pt/V/Ta superlattices
°F. Tokoro¹, H. Narita¹, R. Kawarazaki¹, R. Iijima¹, R. Hisatomi^{1,2}, S. Karube^{1,2}, Y. Shiota^{1,2}, T. Ono^{1,2} (¹ICR, Kyoto Univ., ²CSRN, Kyoto Univ.)
- 22pPS-7 Device Width Dependence of Superconducting Diode Effect in Nb/V/Ta Artificial Superlattice
°R. Iijima, R. Kawarazaki, F. Tokoro, R. Hisatomi, S. Karube, Y. Shiota, T. Ono (Kyoto Univ.)
- 22pPS-8 Effects of Quantum Geometry on Unconventional Superconductivity
°Y. Hirobe, T. Kitamura, Y. Yanase (Kyoto Univ.)
- 22pPS-9 Detection and Modulation of Surface-Acoustic-Wave-Driven Magnetization Dynamics
°C. Chen, F. Pan, C. Song (Tsinghua University)
- 22pPS-10 Understanding magnetoelectric coupling in type-II multiferroic $\text{Yb}_2\text{Cu}_2\text{O}_5$ by neutron diffraction
°P. Kusuma¹, C. H. Lee¹, C. W. Wang² (¹Department of Applied Physics, Tunghai University, Taichung 407224, Taiwan, ²National Synchrotron Radiation Research Center, Hsinchu 300092, Taiwan)
- 22pPS-11 Crystallographic, magnetic, and magneto-optical properties of Ga substituted single crystal yttrium iron garnet
°T. Satoh, Y. Miyazawa, S. Iwamoto, Y. Yang, S. Lee, X. Liu (Shinshu Univ.)
- 22pPS-12 Voltage controlled magnetic anisotropy effect in a magnetic tunnel junction with a crystalline $\text{MgO}/\text{ZrO}_2/\text{MgO}$ tunnel barrier
H. Onoda, °T. Nozaki, T. Nozaki, S. Yuasa (AIST)
- 22pPS-13 Voltage-controlled magnetization reversal of a 100-nm-thick magnetic layer characterized by micromagnetic simulation
°M. Kawana, N. Funabashi, K. Aoshima, K. Machida (NHK)

- 22pPS-14 Dual engineering of Co/MgO interface using ultrathin heavy metal insertion and post-oxidation for voltage-controlled magnetic anisotropy effect
 °H. Nakayama, T. Nozaki, T. Nozaki, S. Yuasa (AIST)
- 22pPS-15 In-situ LTEM Observation and Kinetics of Magnetic Skyrmion Crystal Formation from the Conical Phase
 C. Seol, S. Park, G. Min, S. Lee, Y. Lee, °T. Kim (Chonnam National University)
- 22pPS-16 Magnetic Domain Observation on Curvature Surface by Polarization Angle Detection Using 16-bit Polarization Camera
 °S. Meguro¹, S. Saito² (¹NEOARK, ²Tohoku Univ.)
- 22pPS-17 Evaluation of spin torque efficiency in composition-graded materials
 °M. Kawai¹, S. Takagi¹, H. Nakayama¹, K. Yamanoi¹, Y. Nozaki^{1,2}
 (¹Dept. of Phys., Keio University, ²Center for Spintronics Research Network, Keio University)
- 22pPS-18 Analysis of Curvature Effect of Yoke and Specimen on Barkhausen Noise Measurement
 °H. Chiba¹, H. Kikuchi¹, K. Matsumura² (¹Iwate Univ., ²Infitech.M)
- 22pPS-19 Effect of Yoke Material on Barkhausen noise of Curved Surface Specimens
 °H. Saito, H. Chiba, H. Kikuchi (Iwate Univ.)
- 22pPS-20 Iron loss measurement in high-frequency Large amplitude magnetic field
 °H. Tanaka, T. Mannen, T. Isobe, E. Kita, H. Yanagihara (Univ. of Tsukuba)
- 22pPS-21 Estimating parameters from magnetic domain images with different imaging scales using machine learning
 °S. Hashimoto¹, Y. Nakatani², H. Awano¹, K. Tanabe¹ (¹Toyota Tech. Inst., ²UEC)
- 22pPS-22 Evaluation of physical reservoir based on vortex spin torque oscillator with modified free layer
 °K. Horizumi¹, T. Chiba^{2,3}, T. Komine¹ (¹Ibaraki Univ., ²FRIS, ³Tohoku Univ.)
- 22pPS-23 Demonstration of image classification using 1-layer magneto-optical diffractive deep neural networks
 °H. Sakaguchi¹, T. Honma¹, S. Sumi², H. Awano², H. Nonaka³, F. Z. Chafi¹, T. Ishibashi¹
 (¹Nagaoka Univ. Tech., ²Toyota Tech. Inst., ³Aichi Inst. Tech.)

Apr. 23/Room A

Symposium "Ultra-sensitive magnetic sensors operated at room temperature"

9:00 ~ 12:30

Chair: M. Oogane (Tohoku Univ.)

- 23aA-1 [Invited] Ultra-sensitive tunnel magneto-resistive sensors
 °M. Oogane (Tohoku Univ.)
- 23aA-2 Withdrawn
- 23aA-3 [Invited] Fabrication and application of Flexible giant magnetoresistive elec-tronic skin
 °Z. Jin^{1,2}, C. Zhang¹, J. Chen^{1,2}
 (¹Aerospace Information Research Institute, Chinese Academy of Sciences, ²University of Chinese Academy of Sciences.)
- 23aA-4 [Invited] Toward Quantum Imaging of Bio-medical Systems based on Diamond NV Centers
 °D. Lee (Korea Univ.)
- 23aA-5 [Invited] Quantum sensing at nanoscale enabled by diamond spin qubits
 °F. Jelezko (Ulm University)
- 23aA-6 [Invited] Diamond magnetometer and magnetic nanoparticles for biomedical applications
 °A. Kuwahata (Tohoku Univ.)

Plenary talk II

13:30 ~ 14:30

Chair: M. Mizuguchi (Nagoya Univ.)

- 23PL-1 Magnetic Tunnel Junctions and Josephson junctions formed from 2D van der Waals layers
 °S. S. Parkin (Max Planck Institute of Microstructure Physics)
- 23PL-2 Using skyrmions for AI and using AI for skyrmion research
 °M. Kläui (Uni Mainz)

Symposium "Recent advances in spin-orbitronics"

15:00 ~ 18:15

Chair: S. Miwa (Univ. of Tokyo)

- 23pA-1 [Invited] Spin-Charge Interconversion in Topology Materials and Chiral Perovskites
°H. Yang (National University of Singapore)
- 23pA-2 [Invited] Giant Modulation of Longitudinal Magnetoresistance of the $\text{Fe}_{5-x}\text{GeTe}_2$ with In-Plane Bias
°S. Kim (University of Ulsan)
- 23pA-3 [Invited] Low-Power Electronics: Advancing SOT-MRAM and Low-Voltage Magnetoelectric Devices
°Y. Huang (National Yang Ming Chiao Tung University)
- 23pA-4 [Invited] Unconventional responses in non-collinear antiferromagnets
°J. Han, S. Fukami (Tohoku Univ.)
- 23pA-5 [Invited] Spin-torque diode effect in a noncollinear antiferromagnet $\text{Mn}_3\text{Sn}/\text{W}$ bilayer
°S. Sakamoto¹, T. Nomoto², T. Higo¹, Y. Hibino³, T. Yamamoto³, S. Tamaru³, Y. Kotani⁴, H. Kosaki¹, M. Shiga¹, D. Nishio-Hamane¹, T. Nakamura^{4,5}, T. Nozaki³, K. Yakushiji³, R. Arita^{1,6}, S. Nakatsuji¹, S. Miwa^{1,7}
(¹Univ. of Tokyo, ²Tokyo Metropolitan Univ., ³AIST, ⁴JASRI/SPring-8, ⁵Tohoku Univ., ⁶RIKEN, ⁷Johns Hopkins Univ.)
- 23pA-6 [Invited] Superparamagnetic Superparticles for Advanced Hyperthermia and Biodetection: Overcoming the Particle Size Limit
°M. Phan (Univ. of South Florida)

Apr. 23/Room B

Skymion I

9:00 ~ 10:30

Chair: B. Qiang (Nagoya Univ.), S. Yang (KRISS)

- 23aB-1 [AUMS Young Researcher Awardee] Emergence of Giant Magnetic Chirality during Dimensionality Crossover of Magnetic Materials
°D. Kim (Korea Institute of Science and Technology)
- 23aB-2 [Invited] Classical and Quantum Skymionics
°C. Hwang (KRISS)
- 23aB-3 [Invited] Metadynamics calculations of skymion stability
°J. Barker, I. Charalampidis (University of Leeds)

Skymion II

11:00 ~ 12:30

Chair: S. Kasai (NIMS), D. Kim (KIST)

- 23aB-4 Hardware Implementation of Homeostasis in Skymion-Based Neuron Devices
°S. Yang, K. Moon, C. Hwang (KRISS)
- 23aB-5 Topological Data Analysis for Configurational Properties in Skymion Lattice System: Persistent Homology
°M. Taniwaki¹, T. B. Winkler², J. Rothörl², R. Gruber², C. Mitsumata³, M. Kotsugi¹, M. Kläui²
(¹Tokyo Univ. Sci., ²JGU Mainz, ³Univ. of Tsukuba)
- 23aB-6 Colossal Topological Nernst effect by Skymions in the Filled β -Mn-type $\text{Fe}_{2-x}\text{Pd}_x\text{Mo}_3\text{N}$ Chiral Magnetic Epitaxial Thin Films
°B. Qiang, K. Yamamoto, H. Asano, T. Miyamachi, M. Mizuguchi (Nagoya University)
- 23aB-7 Nonlinear collective dynamics excited for room-temperature skymions
°S. Yadav¹, S. Chatterjee¹, S. Sugimoto², S. Kasai² (¹IIT(BHU) Varanasi, ²NIMS)
- 23aB-8 Higher Order Nonlinear Hall Effects in the Presence of Chiral Spin Textures
°T. Tasaki^{1,2}, T. Dohi¹, K. V. De Zoysa¹, K. Saijo^{1,2}, H. Ohno^{1,3,4,5}, S. Fukami^{1,2,3,4,5,6} (¹RIEC, Tohoku Univ., ²Graduate School of Engineering, Tohoku Univ., ³WPI-AIMR, Tohoku Univ., ⁴CSIS, Tohoku Univ., ⁵CIES, Tohoku Univ., ⁶Inamori Research Institute for Science)
- 23aB-9 Giant topological Hall effect induced by bulk Dzyaloshinskii-Moriya interaction in van der Waals $\text{Cr}_{1+\delta}\text{Te}_2$
°S. Rho¹, D. Jeong², H. Kim², J. Huh¹, H. Son¹, Y. Kwon², M. Cho¹ (¹Yonsei University, ²Kyung Hee University)

THz spin dynamics**15:00 ~ 16:00**

Chair: D. Kim (Chungbuk National Univ.), K. Nawa (Mie Univ.)

- 23pB-1 [Invited] Photoinduced THz Emission Dynamics in Ferromagnetic Multilayers
Y. Zhao^{1,2}, Q. Mustaghfiroh¹, A. Gayen¹, L. Huang^{1,3}, J. Shim⁴, H. Piao⁴, J. Kim⁵, H. Shin⁶, K. Kim¹, °D. Kim¹ (¹Chungbuk National University, ²Westlake University, ³Tsinghua University, ⁴Yanbian University, ⁵Kunsan National University, ⁶Pohang Accelerator Laboratory)
- 23pB-2 Antiferromagnetic spin pumping and spin transfer torque in α -Fe₂O₃/Pt
°T. Hattori¹, T. Moriyama¹, K. Kawagita², Y. Ishikawa², Y. Fujii², Y. Tatematsu², K. Hayashi¹, S. Iihama¹, K. Tada¹
(¹Nagoya Univ., ²Fukui Univ.)
- 23pB-3 Lattice-distortion effect on antiferromagnetic resonance frequency in NiO with Li substitution
°K. Nawa^{1,2}, S. Rhim³, K. Nakamura¹ (¹Mie Univ., ²NIMS, ³Univ. of Ulsan)

Molecular magnetism**16:15 ~ 18:30**

Chair: H. Miyasaka (Tohoku Univ.), N. Yoshioka (Keio Univ.)

- 23pB-4 [Invited] Towards deeper brain stimulation using magnetically induced electric fields
°M. Sekino, A. Iino, Z. Xin, M. Fushimi (Univ. of Tokyo)
- 23pB-5 [Invited] Chemo-Switchable MOF Magnets
°H. Miyasaka (Tohoku Univ.)
- 23pB-6 Magneto-structural correlation of stable nitroxyl radical derivatives with rigid cardo structure and substituent effect of ethynyl group
°M. Takii, Y. Miura, N. Yoshioka (Keio Univ.)
- 23pB-7 Switching Diamagnetism and Paramagnetism in Naphthalene Bisnitroxides
°R. Takano, R. Uesugi, D. Iida, T. Ishida (UEC)
- 23pB-8 Construction of indole nitronyl nitroxide self-assemblies exhibiting strong magnetic interactions and substituent effect
°N. Yoshioka, M. Takii, M. Kunimoto, R. Ohtaka, H. Masuda, Y. Hisatomi, H. Memida, Y. Miura (Keio Univ.)
- 23pB-9 [Invited] Investigation of Spin State of Magnetic Molecule in Tunneling Junction Combined with RF Signal
°T. Komeda (Tohoku Univ.)

Apr. 23/Room C**Magnetic characterizations****9:00 ~ 10:15**

Chair: V. Chahar (IIT Delhi), H. Koizumi (Tohoku Univ.)

- 23aC-1 [Invited] Advanced structural and magnetic characterization of compositionally complex systems with synchrotron X-rays
°A. Smekhova (HZB)
- 23aC-2 [Invited] Characterization of thin films and multilayers by Generalized Magneto-optical Ellipsometry
°A. Berger (CIC nanoGUNE)
- 23aC-3 Correlations between Defect Density and Magnetic Properties in Heusler Alloy Films
C. Leung¹, Y. Ling¹, H. Koizumi², E. Lesne³, C. Felser³, °A. Hirohata^{2,3}
(¹City University of Hong Kong, ²Tohoku Univ., ³Max Planck Inst.)

Fundamental properties of magnetic materials I**10:45 ~ 12:30**

Chair: Y. Kamihara (Keio), D. Kriegner (ASCR)

- 23aC-4 [Invited] The influence of ZnO nanoparticle addition on the magnetic properties of conductive polymers based on poly-alkylthiophene
°L. Safriani¹, S. J. Eda¹, G. K. Kwando¹, S. Winarsih², Y. Maryati¹, M. A. Syakuur^{3,6}, A. Aprilia¹, U. Widayawati⁴, D. P. Sari^{5,6}, T. Saragi¹, R. Risdiana¹ (¹Dept. of Physics, Univ. Padjadjaran, ²BRIN, ³Dept. of Chemistry, Univ. Padjadjaran, ⁴Dept. of Physics, Univ. Pendidikan Indonesia, ⁵Shibaura Inst. Tech., ⁶RIKEN)
- 23aC-5 [Invited] Perpendicular magnetic anisotropy induced by antiferromagnetic layers through antiferromagnetic proximity effects and long-range exchange coupling
°B. Wang¹, T. Li¹, F. Lin¹, Y. Huang¹, T. Chuang², D. Wei²
(¹Department of Physics, National Changhua University of Education, ²National Synchrotron Radiation Research Center)

- 23aC-6 Magnetic and transport properties of ferrimagnetic chalcogenide compounds (Cr,Fe)Z (Z = S, Se)
 °W. Yin^{1,2}, M. Miyakawa¹, R. Y. Umetsu^{1,3} (¹Institute for Material Research, Tohoku University, ²Graduate School of Engineering, Tohoku University, ³Center for Science and Innovation in Spintronics, Tohoku University)
- 23aC-7 Construction of magnetic models from non-perturbative calculations
 °T. Tanaka, Y. Gohda (Science Tokyo)
- 23aC-8 Magneto-transport and magnetic property studies of rare-earth based intermetallic compound
 °V. Chahar¹, K. Manna¹, R. Umetsu², R. Chatterjee¹ (¹IIT Delhi, ²Tohoku Univ.)

Fundamental properties of magnetic materials II 15:00 ~ 17:00

Chair: T. Tanaka (Science Tokyo), B. Wang (National Changhua Univ. of Edu.)

- 23pC-1 [Invited] Altermagnetism and its manifestation in MnTe
 °D. Kriegner (Institute of Physics of ASCR)
- 23pC-2 [Invited] Novel superconducting properties in few-layer T_d -MoTe₂
 °T. Wakamura¹, M. Hashisaka², Y. Nomura³, M. Bard¹, S. Okazaki⁴, T. Sasagawa⁴, T. Taniguchi⁵, K. Watanabe⁵, K. Muraki¹, N. Kumada¹ (¹NTT, ²Univ. of Tokyo, ³Tohoku Univ., ⁴Tokyo Inst. Tech., ⁵NIMS)
- 23pC-3 [Invited] The crucial role of the spin state of cobalt in determining the magnetic properties of cobalt oxides
 °Y. Y. Chin¹, Z. Hu², H. J. Lin³, S. Agrestini², J. Weinen², C. Martin⁴, S. Hebert⁴, A. Maignan⁴, A. Tanaka⁵, J. C. Cezar⁶, N. B. Brookes⁶, Y. F. Liao³, K. D. Tsuei³, C. T. Chen³, D. I. Khomskii⁷, J. J. Li^{8,9}, X. X. Wang^{8,9}, K. Yamaura^{8,9}, L. H. Tjeng²
 (¹Department of Physics, National Chung Cheng University, ²Max Planck Institute for Chemical Physics of Solids, ³National Synchrotron Radiation Research Center, ⁴Laboratoire CRISMAT, Normandy University, ⁵Department of Quantum Matter, ADSM, Hiroshima University, ⁶European Synchrotron Radiation Facility, ⁷Institute of Physics II, University of Cologne, ⁸National Institute for Materials Science, ⁹Department of Chemistry, Hokkaido University)
- 23pC-4 [Invited] The Extraordinary Room Temperature Ferromagnetic Behavior in Gamma ray induced and Gd-Doped few-layered MoS₂ Thin Films Deposited via Magnetron Sputtering with Wafer Size
 °C. Lee, F. Hu, M. Wu, A. K. Anbalagan, C. Wang, W. Chan, H. T. Chen (NTHU)

Fundamental properties of magnetic materials III 17:15 ~ 18:45

Chair: Y. Chin (National Chung Cheng Univ.), T. Wakamura (NTT)

- 23pC-5 Withdrawn
- 23pC-6 Tc of a Copper-based high-Tc superconductor after heat treatments under hydrogen atmosphere
 H. Namita¹, H. Sato¹, M. Matoba¹, S. Iwasaki³, M. Fujioka³, Y. Hara², T. Harada², M. Miura², °Y. Kamihara¹
 (¹Keio Univ., ²Seikei Univ., ³Hokkaido Univ.)
- 23pC-7 Intrinsic planar Hall effect and x-ray magnetic linear dichroism by Yafet-Kittel Structure in NiCo₂O₄ film
 °H. Koizumi¹, Y. Yamasaki², H. Yanagihara³ (¹Tohoku Univ., ²NIMS, ³Univ. of Tsukuba)
- 23pC-8 Magnetic and dielectric properties of β -NaFeO₂ single crystals
 °A. Nugroho¹, M. P. Akbar¹, R. Loke², P. Pupal³, M. Isobe³, B. Prijamboedi¹, J. Hemberger²
 (¹Institut Teknologi Bandung, ²University of Cologne, ³Max-Planck Inst. Stuttgart)
- 23pC-9 Neutron diffraction study of the Mn spin arrangement in Mn₂OBO₃
 °C. Lee, C. Lin, G. Chen (Department of Applied Physics, Tunghai University, Taichung 407224, Taiwan)
- 23pC-10 Interplay between structure and phase transition parameters in FeRh alloy
 °N. S. Perov¹, A. S. Komlev¹, T. A. Taaev², D. G. Merkel³, G. Z. Radnoczi⁴, A. Chirkova⁵ (¹Lomonosov Moscow State University, ²Amirkhanov Institute of Physics of the Daghestan, ³Wigner Research Centre for Physics, ⁴Centre for Energy Research, ⁵Hochschule Bielefeld University)

Apr. 23/Room D

Symposium "Electric machines and their soft and hard magnetic materials"

9:00 ~ 12:30

Chair: H. Kikuchi (Iwate Univ.)

- 23aD-1 [Invited, IEEE Mag. Soc. DL talk] AI-Assisted Reliable Fault Diagnosis in Permanent Magnet Synchronous Motors
°M. Hsieh (National Cheng Kung University)
- 23aD-2 [Invited] Development of a High-Torque IPMSM Using Sm-Fe-N Bonded Magnets
°Y. Yoshida¹, R. Yoshida², T. Uwano¹, S. Sakurai¹, M. Abe², S. Tada², M. Yamamoto², K. Tajima¹ (¹Akita Univ., ²NICHIA)
- 23aD-3 [Invited] Synthesis of high-performance Sm₂Fe₁₇N₃ powder with reduction-diffusion process
°S. Okada (AIST)
- 23aD-4 [Invited] The Status of SmFe₁₂-based Alloys: Employing Machine Learning for Optimization
°A. Bolyachkin¹, T. Subagja^{1,2}, N. Kulesh¹, X. Tang¹, T. Ohkubo¹, H. Sepehri-Amin^{1,2} (¹NIMS, ²Univ. of Tsukuba)
- 23aD-5 [Invited] Nanocrystalline Magnetic Materials & Components: Applications Roadmap for Advanced Power Electronic Systems
°B. R. Andapally (CBMM)
- 23aD-6 [Invited] Next-Generation Soft Magnetic Composites: Implications for Axial Flux Motors
°D. Azuma, K. Izumiya, Y. Enokizono, T. Saito, T. Ueno (Sumitomo Electric)

Motors

14:45 ~ 16:15

Chair: N. Kar (Univ. of Windsor), S. Sakurai (Akita Univ.)

- 23pD-1 [Invited] Application of Emerging Materials for Improved Electric Motor Performance
°N. Kar (Univ. Windsor)
- 23pD-2 [Invited] Magnetic Material Characteristics for Improving Performance of Permanent Magnet Motors
°J. Choi (Chungnam Nat'l Univ.)
- 23pD-3 Design and Analysis of Outer-Rotor PM Motor with Segmented rotor-shape for drone
°S. Sakurai, Y. Yoshida, K. Tajima (Akita Univ.)
- 23pD-4 An investigation on estimation error in AC loss of toroidal dust cores based on machine learning
°S. Matsumoto, S. Muroga, Y. Kodama, S. Ajia, Y. Endo (Tohoku Univ.)

Magnetic refrigeration

16:30 ~ 18:45

Chair: K. Matsumoto(Kanazawa Univ.), H. Mamiya (NIMS)

- 23pD-5 [Invited] Hydrogen liquefaction by active magnetic regenerative refrigeration
°K. Kamiya¹, K. Natsume¹, A. Uchida¹, T. Shirai¹, A. T. Saito¹, T. Numazawa¹, K. Matsumoto² (¹NIMS, ²Kanazawa Univ.)
- 23pD-6 [Invited] Magnetic, thermal, and transport properties of magnetocaloric materials for hydrogen liquefaction magnetic refrigerator
°K. Matsumoto¹, A. T. Saito², H. Kitazawa², T. Numazawa² (¹Kanazawa Univ., ²NIMS)
- 23pD-7 [Invited] Figure of Merit of Rare Earth Magnetocaloric Materials
T. Cheng¹, J. Chen¹, S. Fang², °Y. Tseng¹ (¹NYCU, ²ITRI)
- 23pD-8 Magnetic Refrigerant Particles for Hydrogen Liquefaction by Active Magnetic Regenerative Refrigeration
°A. T. Saito¹, H. Takeya¹, T. D. Yamamoto², K. Matsumoto³, H. Kitazawa¹, K. Kamiya¹, T. Numazawa¹
(¹NIMS, ²Tokyo University of Science, ³Kanazawa University)
- 23pD-9 High-throughput Evaluation of Magnetic Refrigerants using Multi-sample Neutron Transmission Spectroscopy
°H. Mamiya¹, N. Terada¹, S. R. Larsen¹, T. Shinohara², H. Sepehri-Amin¹ (¹NIMS, ²JAEA)
- 23pD-10 Caloric effect in Ni-Mn-Sn metamagnetic shape memory alloys
°W. Sun¹, H. Y. Qian¹, X. Lu¹, J. Liu², Z. J. Mo³, G. W. Li¹ (¹Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, ²School of Materials Science and Engineering, Shanghai University, ³Ganjiang Innovation Academy, Chinese Academy of Sciences)

Apr. 23/Room E

Magnetic recording

9:00 ~ 10:30

Chair: S. Greaves (Tohoku Univ.), K. Kankhunthod (King Mongkut's Inst. Tech. Ladkrabang)

- 23aE-1 [Invited] Microwave-assisted magnetic recording using a dual FGL STO with a soft magnetic layer
°S. Greaves¹, Y. Kanai² (¹Tohoku Univ., ²Niigata Inst. Tech.)
- 23aE-2 Double-Track PRML Detection for Two-Track Reading with a Wide-Track Reader in Shingled Magnetic Recording Systems
°A. Khametong¹, C. Warisarn¹, S. J. Greaves² (¹King Mongkut's Institute of Technology Ladkrabang, ²Tohoku Univ.)
- 23aE-3 Feasibility Study of Implementing Simple Dual-bit Detection in Dual-Layer Bit-Patterned Magnetic Recording Systems
R. Sriyapai¹, °N. Rueangnetr¹, C. Warisarn¹, S. J. Greaves²
(¹King Mongkut's Institute of Technology Ladkrabang, ²Tohoku Univ.)
- 23aE-4 Track Misregistration Prediction Scheme of Two-Track Reading with a Wide-Track Reader for Shingled Track Recording
°P. Kochcha, A. Khametong, K. Kankhunthod, C. Warisarn (King Mongkut's Institute of Technology Ladkrabang)
- 23aE-5 Proof-of-concept for selective magnetization switching by spin wave excitation
°V. K. Kushwaha, T. Yamazaki, T. Seki (Tohoku Univ.)

Interface-driven novel magnetic phenomena

10:45 ~ 12:30

Chair: S. Lee (Academia Sinica), Y. Niimi (Osaka Univ.)

- 23aE-6 [Invited] Anomalous Hall effect in magnetic proximity-induced topological insulator trilayers
°S. Lee¹, K. M. Chen², M. Hong³, R. J. Kwo² (¹Academia Sinica, Taiwan, ²NTHU, ³NTU)
- 23aE-7 Magnetic behavior of bisegmented Co/Ni jellyfish nanowires induced by different combinations of magnetocrystalline and shape anisotropy
°A. Samardak¹, M. Sobirov¹, K. Rogachev¹, N. Ognev¹, A. Ognev^{1,2}, A. Samardak^{1,2} (¹FEFU, ²SSU)
- 23aE-8 Comparative study of influence of shape and crystalline structure on magnetic properties and domain structure of Fe, Co and Ni nanowire arrays
°M. Sobirov, I. Sapovskii, T. Rakhmatullaev, K. Rogachev, N. Ilin, A. Samardak (Far Eastern Federal University)
- 23aE-9 Flexible Exchange-Biased Films with Superior Strain Stability
°H. Yang¹, X. Bao¹, Y. Xie¹, D. Makarov², R. Li¹ (¹NIMTE, CAS, ²HZDR)
- 23aE-10 [Invited] Observation of the crossover from quantum fluxoid to half-quantum fluxoid in a chiral superconducting device
°Y. Niimi (Osaka Univ.)

Magnetic and magnetotransport properties in advanced thin films

15:00 ~ 17:00

Chair: T. Yamada (Chiba Univ.), Y. Xie (Chinese Academy of Sciences)

- 23pE-1 Strain induced reversible sign change of the anomalous Hall effect in multilayers
°T. Morita¹, T. Koyama^{1,2,3,4}, D. Chiba^{1,2,3,5}
(¹SANKEN, Osaka Univ., ²CSRN, Osaka Univ., ³OTRI, Osaka Univ., ⁴PRESTO, JST, ⁵SRIS, Tohoku Univ.)
- 23pE-2 Tuning Robotic Motion of Molecular Magnet Array
°T. Yamada¹, P. Krueger¹, M. Horie² (¹Chiba Univ., ²Nat. Tsing Hua Univ.)
- 23pE-3 Effect of TMDs underlayer on spin-orbit effects in Pt/Co films
°A. G. Kozlov¹, F. Meng², Y. Feng², W. B. Li², T. Zhang², Z. Z. Namsaraev¹, M. A. Kuznetsova¹, A. F. Shishelov¹,
A. V. Prihodchenko¹, M. A. Bazrov¹, M. E. Letushev¹, A. V. Davydenko¹, A. V. Ognev^{1,3}, L. I. Davydenko¹, Y. Wang²
(¹FEFU, ²DUT, ³SSU)
- 23pE-4 Spin-dependent transport properties in sputter-deposited ferromagnetic high-entropy alloy thin films.
°K. Z. Suzuki¹, K. Takanashi^{1,2} (¹JAEA, ²Tohoku Univ.)
- 23pE-5 Ultra-low damping in GdOx inserted magnetic stacks with large perpendicular magnetic anisotropy
°J. Kim¹, T. Nozaki¹, J. Uzuhashi², S. Tamaru¹, T. Ichinose¹, T. Ochiai¹, T. Yamamoto¹, T. Ohkubo², K. Yakushiji¹, S. Yuasa¹
(¹AIST, ²NIMS)
- 23pE-6 Growth temperature dependence of ferrimagnetic epitaxial Mn₂N on Pt/Fe/SrTiO₃(001)
°S. Akita¹, T. Yasuda¹, K. Amemiya², D. Ogawa³, T. Suemasu¹ (¹Univ. of Tsukuba, ²KEK, ³NIMS)

- 23pE-7 Magnetic compensation in $Mn_{4-x}Ag_xN$ epitaxial films at room temperature
 °Y. Sobukawa¹, T. Yasuda¹, K. Toko¹, K. Amemiya², T. Suemasu¹ (¹Univ. of Tsukuba, ²KEK)
- 23pE-8 Stretchable spin-valve sensor array with stable giant magnetoresistance performance
 °Y. L. Xie, H. L. Yang, R. W. Li (Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences)

Apr. 23/Poster Room

Poster session IV

10:30 ~ 13:30

- 23aPS-1 Interface engineering of topological BiSb/CoFeB heterostructures for efficient spin-charge conversion.
 °R. Mondal^{1,2}, Z. Wen¹, C. Murapaka², H. Sukegawa¹, Q. Le³, X. Liu³, B. York³, M. Maeda³, S. Mitani¹ (¹NIMS, ²IITH, ³WD)
- 23aPS-2 Current-induced magnetization switching using Si/Al compositional graded materials
 °S. Takagi, K. Yamanoi, Y. Nozaki (Keio Univ.)
- 23aPS-3 Spin-orbit torque engineering by Ti alloying in beta W-based heterostructures
 °D. Kim¹, J. Lee¹, Q. T. Nguyen², J. Lee¹, S. H. Rhim², Y. Kim¹ (¹korea university, ²University of Ulsan)
- 23aPS-4 Perpendicular magnetic tunnel junctions with β -W spin-orbit torque channels
 °S. Yoon¹, Z. Wen², S. Kasai², S. Mitani², H. Sukegawa², Y. Kim¹ (¹Korea Univ., ²NIMS)
- 23aPS-5 Precise quantification of spin-orbit torques in highly resistive Pt/Co multilayers
 °Y. Jo, C. Yun, M. Kim, S. Yu, J. Park, J. Lee, W. Lee, A. Nam, K. Rhie, K. Lee (Korea University)
- 23aPS-6 Modulation of spin-orbit torque in Cu based heterostructures with oxide gating
 °M. Kim, C. Yun, J. Lee, S. Yu, Y. Jo, K. Lee, K. Rhie (Korea University)
- 23aPS-7 Current-induced domain wall motion in Gd-Fe wires with vertical composition gradient
 °J. Mizuno, H. Awano, K. Tanabe (Toyota Tech. Inst.)
- 23aPS-8 Inductance and capacitance emerged from topological electromagnetism
 °Y. Araki, J. Ieda (Japan Atomic Energy Agency)
- 23aPS-9 Current direction dependence of spin-orbit field in a crystalline ferromagnetic layer with perpendicular anisotropy
 °S. Park¹, K. Lee¹, S. Lee¹, X. Liu², M. Dobrowolska², J. K. Furdyna² (¹Korea University, ²University of Notre Dame)
- 23aPS-10 Fabrication of perpendicular magnetic anisotropic films on the side of uneven structures toward 3D devices
 °Y. Yasuda¹, Y. Kurokawa², S. Sumi¹, H. Awano¹, K. Tanabe¹ (¹Toyota Tech. Inst., ²Kyushu Univ.)
- 23aPS-11 Unconventional scaling law of spin-orbital Hall effect in SrRuO₃ and efficient magnetization switching
 °S. Peng, X. Zheng, Z. Wang (Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences)
- 23aPS-12 Observation of writing and driving using spin-orbit torque writing for racetrack memory application
 °H. Hasegawa, Y. Kurokawa, H. Yuasa (Kyushu Univ.)
- 23aPS-13 Circularly polarized light-induced magnetic torque in Co alloy films
 °K. Nukui¹, S. Iihama², K. Ishibashi¹, S. Mizukami¹ (¹Tohoku Univ., ²Nagoya Univ.)
- 23aPS-14 Generation and detection of orbital current using Ni/heavy metal system
 °Y. Furukawa, S. Obinata, T. Kimura (Kyushu Univ.)
- 23aPS-15 Magnetoresistance of (001), (110), and (111) textured RuO₂/Pt bilayer
 °S. Yoon¹, S. Ko², K. Kim², J. Jeong³, B. Park⁴, K. Eom¹, S. Lee¹ (¹Department of Semiconductor Engineering, Gachon University, Seongnam 13120, Korea, ²Department of Physics, KAIST, Daejeon 34141, Korea, ³Department of Materials Science and Engineering, Chungnam National University, Daejeon 34134, Korea, ⁴Department of Materials Science and Engineering, KAIST 34141, Daejeon, Korea)
- 23aPS-16 Magnetic tunnel junctions with metastable cubic GaN barriers
 °H. Kwon^{1,2}, K. Suzuki^{1,2}, K. Deepak², M. Tsujikawa³, R. Tufan^{3,4}, M. Shirai^{3,4}, S. Mizukami^{2,4} (¹Graduate School of Engineering, Tohoku University, ²WPI-Advanced Institute for Materials Research, Tohoku University, ³Research Institute of Electrical Communication, Tohoku University, ⁴Center for Science and Innovation in Spintronics, Tohoku University)
- 23aPS-17 Temperature-dependence of Anomalous Hall Effect in Al and Ta-seeded TbCo Gradient Structures
 R. C. Bhatt, °L. Ye, M. Tsai, T. Wu (YunTech Taiwan)
- 23aPS-18 Accurate evaluation of spin relaxation in Bi-based Rashba interface using weak anti-localization effect
 S. Kammoto, °M. Nakamoto, S. Tsuboguchi, K. Yamada, T. Kimura (Kyushu Univ.)

- 23aPS-19 Exploring Magnetization Switching and Extraordinary Hall Effect in Compositionally Graded GdFeCo Device
 °R. C. Bhatt¹, L. Ye¹, J. Lin¹, N. T. Hai², J. Wu², T. Wu¹ (¹YunTech Taiwan, ²NCUE Taiwan)
- 23aPS-20 Omnidirectionally stretchable spin-valve sensor array with stable giant magnetoresistance performance
 °L. Pan, Y. Xie, H. Yang, X. Bao, J. Chen, M. Zou, R. Li (Chinese Academy of Sciences)
- 23aPS-21 Simulating the spin dynamics of antiferromagnetic materials under electromagnetic waves
 °T. Mukita, S. Kishimoto, K. Nakagawa, S. Ohnuki (Nihon Univ.)
- 23aPS-22 Dependence of ferrimagnetic GdFe thickness on current induced domain wall velocity for Pt/GdFe wires
 °T. Tokuyama¹, T. Sakamoto¹, H. Tozuka¹, M. Tanaka¹, S. Honda², H. Awano³, K. Mibu¹
 (¹Nagoya Inst. Tech., ²Kansai Univ., ³Toyota Tech. Inst.)
- 23aPS-23 Magnetotransport in Ru_{1-x}Cr_xO₂ film as a candidate of altermagnet
 °Y. Inaoka¹, S. Karube^{1,2,3}, H. Narita^{1,3}, R. Hisatomi^{1,2,3}, Y. Shiota^{1,2}, T. Ono^{1,2}
 (¹ICR, Kyoto Univ., ²CSRN, Kyoto Univ., ³JST-PRESTO)
- 23aPS-24 CoTb alloy for ultrafast-demagnetization-driven spin current and orbital current
 °H. Lee, S. Kim (skku)
- 23aPS-25 Spin-to-Charge Convention via Inverse Altermagnetic Spin-Splitting Effect in RuO₂
 C. Liao¹, °Y. Wang¹, Y. Tien¹, S. Huang¹, D. Qu² (¹Department of Physics, National Taiwan University, Taipei, Taiwan,
²Center for Condensed Matter Sciences, National Taiwan University, Taipei, Taiwan)
- 23aPS-26 Characterization of spin transport through NiO in the vicinity of the Néel temperature
 °I. Sugiura¹, Y. Shiota^{1,2}, R. Hisatomi^{1,2}, S. Karube^{1,2}, T. Ono^{1,2}, T. Moriyama^{3,4}
 (¹ICR, Kyoto Univ., ²CSRN, Kyoto Univ., ³Dept. of Materials Physics, Nagoya Univ., ⁴PRESTO, JST)
- 23aPS-27 Rashba effect and band structure change by metastable structuring of heavy metals at the interface
 °T. Yamazaki, Y. Kodani, R. Iimori, K. Yamada, T. Kimura (Kyushu Univ.)
- 23aPS-28 Spin-current excitation using ultrafast laser pulses in a heavy-metal/rare-earth iron garnet heterojunction
 °S. Takahashi¹, Y. You², K. Yamanoi², Y. Nozaki², T. Satoh¹, K. T. Yamada¹ (¹Science Tokyo, ²Keio Univ.)
- 23aPS-29 Thermal transport of angular momentum at the interface of insulative orbital ferrimagnet/non-magnet
 °T. Onuma, H. Yanagihara (Univ. of Tsukuba)
- 23aPS-30 Large Spin Nernst Effect in Ni₇₀Cu₃₀ Alloy
 °W. Li^{1,2}, C. Lin¹, G. Guo^{1,3}, S. Huang^{1,4}, D. Qu^{2,4} (¹Department of Physics, National Taiwan University, Taipei 10617,
 Taiwan, ²Center for Condensed Matter Sciences, National Taiwan University, Taipei 10617, Taiwan, ³Physics Division,
 National Center for Theoretical Sciences, Taipei 10617, Taiwan, ⁴Center of Atomic Initiatives for New Materials, National
 Taiwan University, Taipei 10617, Taiwan)
- 23aPS-31 Method for measuring thermal conductivity in thin films using anomalous Nernst effect
 °K. Tanabe, H. Awano (Toyota Tech. Inst.)
- 23aPS-32 Influence of impurity doping on anomalous Nernst effect in amorphous GdCo alloys toward heat flux sensing
 °T. Koizumi, H. Imaeda, H. Awano, K. Tanabe (Toyota Tech. Inst.)
- 23aPS-33 Visualization of in-plane magnetization in a Co thin film via the laser-induced anomalous Nernst effect
 °S. Mochizuki¹, I. Sugiura², T. Ono², T. Satoh¹, K. T. Yamada¹ (¹Science Tokyo, ²Kyoto Univ.)
- 23aPS-34 Enhanced anomalous Nernst effect in Fe₄N films substituted by Pt and Pd atoms
 °K. Ito¹, H. Yu^{1,2}, T. Yamazaki¹, R. Y. Umetsu^{1,3}, T. Seki^{1,3}
 (¹IMR, Tohoku Univ., ²Grad. Sch. Eng., Tohoku Univ., ³CSIS, Tohoku Univ.)
- 23aPS-35 Enhancement of anomalous Nernst coefficient in CoFe thin film by Cu-Ir addition
 °A. Ray^{1,2}, S. Biswas¹, P. Alagarsamy¹, R. Modak³, N. K. Gupta², T. Hirai², K. Uchida^{2,3}, Y. Sakuraba² (¹Indian Institute of
 Technology Guwahati, Guwahati 781-039, India, ²National Institute for Materials Science, Tsukuba 305-0047, Japan, ³The
 University of Tokyo, Kashiwa, Chiba 277-8561, Japan)
- 23aPS-36 3D heat flux sensor based on anomalous Nernst effect
 °H. Imaeda, R. Toida, T. Takeuchi, H. Awano, K. Tanabe (Toyota Tech. Inst.)
- 23aPS-37 The voltage-controlled magnetic anisotropy at the interface of Fe and NiO
 °S. Jung, H. Yanagihara (Univ. of Tsukuba)
- 23aPS-38 Topological Hall Transport and Skyrmion Nucleation in Co/Pd Multilayers
 °C. Chen¹, T. Huang¹, W. Tang¹, Y. Tang¹, S. Lamichhane², S. Liou², G. Chen³, S. Huang³, X. Fan⁴, J. Hong⁵
 (¹National Central Univ., ²Univ. of Nebraska-Lincoln, ³National Taiwan Univ., ⁴Univ. of Denver, ⁵Tamkang Univ.)

- 23aPS-39 Withdrawn
- 23aPS-40 The Cu thickness dependence of orbital torques in Co/Cu/oxide multilayers
 °J. Lee, M. Kim, Y. Jo, S. Yu, J. Park, A. Nam, W. Lee, K. Rhie, K. Lee (Korea University)
- 23aPS-41 Quantum Geometry Induced Nonlinear Transport in Altermagnets RuO₂
 °R. Chu¹, L. Han¹, X. Fu², J. Liu², C. Song¹ (¹Tsinghua University, ²HKUST)
- 23aPS-42 Numerical analysis of dispersion relation and fabrication of magnetic dots in honeycomb Phononic crystals
 °Y. You, K. Yamanoi, Y. Nozaki (Keio Univ.)

Poster session V

15:00 ~ 18:00

- 23pPS-1 Higher permeability of nanogranular films using CoFe alloys by annealing
 °M. Naoe¹, M. Sato¹, M. Sonehara², K. Miyaji², T. Sato², N. Kobayashi¹ (¹DENJIKEN, ²Shinshu Univ.)
- 23pPS-2 Relationship between structural and magnetostrictive properties in flat Fe-Co single-crystal thin films
 °Y. Nakamura, M. Ohtake (Yokohama National Univ.)
- 23pPS-3 Phase-field simulation of liquid-phase sintering for investigating microstructural evolution of Nd-Fe-B sintered magnets
 °A. Ishii¹, T. Koyama^{1,2}, T. Abe¹, M. Ode¹ (¹NIMS, ²Nagoya Univ.)
- 23pPS-4 Fe and Mn substitution effects on structural and magnetic properties of FCC-type Fe₅₀Mn₂₅Ga₂₅
 °S. Kitahara¹, H. Okada¹, S. Awaji² (¹Tohoku Gakuin Univ., ²Tohoku Univ.)
- 23pPS-5 Influence of deposition rate on the structural and magnetic properties of anisotropic Nd-Fe-B film magnets by PLD method
 °A. Yamashita, M. Yamamoto, Y. Yamada, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)
- 23pPS-6 Effect of Two-Step Annealing on Hard Magnetic Properties of Fe-Pt Films prepared by Electroplating Method
 °A. Hamakawa, Y. Yamaguchi, A. Yamashita, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)
- 23pPS-7 Improving the thermal stability of Sm(Fe-Co)₁₂-B thin films by diffusion of Nb element
 °Y. Mori, S. Nakatsuka, M. Doi, T. Shima (Tohoku Gakuin Univ.)
- 23pPS-8 Magnetic properties and applications of glass-coated ferromagnetic microwires
 °V. Zhukova¹, P. Corte-Leon², M. Ipatov¹, J. Blanco⁴, A. Zhukov³ (¹Dept. Polym. Adv. Mater, Univ. Basque Country, UPV/EHU, ²Dept. Mater. Science & Metallurgy, Univ. Cambridge and Dept. Polym. Adv. Mater, Univ. Basque Country, UPV/EHU, ³Dept. Polym. Adv. Mater, Univ. Basque Country, UPV/EHU and Ikerbasque, ⁴Dept. Appl. Phys. I, EIG, Univ. Basque Country, UPV/EHU)
- 23pPS-9 High Frequency Magnetic Properties of Submicron-sized Fe-Co-B particles by Aqueous Solution Reduction Method
 °K. Sato, K. Wakabayashi, C. Masumoto, T. Miyazaki, S. Ajia, S. Muroga, Y. Endo (Tohoku Univ.)
- 23pPS-10 Accuracy Evaluation of AC Magnetization Process Measurements for Soft Magnetic Materials
 °R. Onodera¹, E. Kita², H. Yanagihara² (¹NIT, Ibaraki college, ²Univ. of Tsukuba)
- 23pPS-11 Annealing Experiments to Set the Optimal Heat Treatment Conditions for As-spun Fe-Co Ribbons
 °H. Choi-Yim, Y. Choi, H. Lee (Sookmyung Women's University)
- 23pPS-12 Withdrawn
- 23pPS-13 The effect of annealing temperature on the structure and magnetic properties of Fe-Si ribbons
 °T. Takasu¹, R. Umetsu¹, S. Mikami², T. Hiraki², S. Muroga¹, Y. Endo¹ (¹Tohoku Univ., ²Toho Zinc Co., Ltd)
- 23pPS-14 Preparation of Soft Magnetic Films using Solid/Liquid Hybrid Electroplating Method
 °M. Tashiro, K. Shiraki, A. Yamashita, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)
- 23pPS-15 A simulation method of magnetic properties of Fe-Ni bilayer ribbons under bending stress
 °S. Nakashima, R. Hirose, T. Yanai, A. Yamashita, M. Nakano, H. Fukunaga (Nagasaki Univ.)
- 23pPS-16 Improvement in magnetic properties of soft magnetic Ni and Co films electroplated in gel electrolytes
 °K. Shiraki, M. Tashiro, A. Yamashita, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)
- 23pPS-17 Enhancing Resistivity of Fe-(Cr, Si, B, Nb) Soft Magnetic Micron Particles by Surface Oxidation under Dry Air Atmosphere
 °A. Nishikura, S. Ohnishi, H. Nakashinden, M. Tobise, S. Saito (Tohoku Univ.)

- 23pPS-18 Micromagnetic simulation of the microstructure parameters influence on the realization of high coercivity state in hard-magnetic MnAl alloys
 °E. A. Smirnov, M. V. Gorshenkov (NUST MISIS)
- 23pPS-19 Effect of Cu content on the magnetic properties for SmCo₅ thin films fabricated on polyimide substrates
 °K. Murakata, S. Kudo, T. Shima, M. Doi (Tohoku Gakuin Univ.)
- 23pPS-20 Study of the magnetic field effect on the density of dysprosium ions
 °E. Ushijima^{1,3}, I. Yamamoto², M. Yamato¹ (¹Tokyo Metropolitan Univ., ²Yokohama National Univ., ³IMRA Japan Co., Ltd.)
- 23pPS-21 Coercivity of LIFT-made Nd-Fe-B micromagnets
 °G. Tahara, T. Amiya, H. Todoroki, K. Higashi, A. Yamashita, T. Yanai, M. Nakano, H. Fukunaga (Nagasaki Univ.)
- 23pPS-22 Effect of Short-Time Nd-Al Grain Boundary Diffusion on Coercivity of Isotropic Nd-Fe-B Magnet Films
 °S. Hattori, Y. Iwayama, A. Yamashita, M. Nakano, T. Yanai, H. Fukunaga (Nagasaki Univ.)
- 23pPS-23 Fe-Pt dotted film magnets prepared via LIFT technique
 °H. Todoroki¹, G. Tahara¹, K. Higashi¹, A. Yamashita¹, T. Yanai¹, M. Nakano¹, T. Shinshi², H. Fukunaga¹
 (¹Nagasaki Univ., ²Institute of Science Tokyo)
- 23pPS-24 Preparation of Fe-Pt/Pr-Fe-B/Fe-Pt three-layered thin sheet magnets
 °K. Okamura¹, K. Fujii¹, A. Yamashita¹, T. Yanai¹, M. Nakano¹, T. Shinshi², H. Fukunaga¹
 (¹Nagasaki Univ., ²Institute of Science Tokyo)
- 23pPS-25 Synthesis of high-purity Nd₂Fe₁₄B submicron particles via reduction-diffusion process for fabricating fine-grained sintered magnets
 °J. Kim¹, K. Yoon¹, H. Jeon¹, T. Kim², Y. Lee¹
 (¹Seoul National University of Science and Technology, ²Korea Institute of Materials Science)
- 23pPS-26 Fundamental investigation on LIFT-made Nd-Fe-B micromagnets
 °T. Amiya¹, G. Tahara¹, H. Todoroki¹, A. Yamashita¹, T. Yanai¹, M. Nakano¹, K. Koike², H. Fukunaga¹
 (¹Nagasaki Univ., ²Yamagata Univ.)
- 23pPS-27 Magneto-optical and magnetic properties of rapidly quenched amorphous NiCoSiFeB ribbons
 °N. N. Perova, S. V. Samchenko, T. B. Shapaeva, N. S. Perov, E. A. Ganshina (MSU)
- 23pPS-28 Investigation of the glass forming ability and thermal stability of the alloy Co₅₈Fe₅Ni₁₀Si₁₁B₁₆ depending on the spinning parameters
 °K. E. Pinchuk, V. S. Plotnikov, G. S. Kraynova, V. V. Tkachev, A. M. Frolov (Far Eastern Federal University)
- 23pPS-29 Magnetic parameters of amorphous alloys composed of transition metals (Fe, Co, Mn) and metalloids (Si, B) with varying compositions
 °I. Sapovskii, N. Ilin, T. Rakhmatullaev, G. Kraynova, V. Plotnikov, V. Tkachev (FEFU)
- 23pPS-30 Perpendicular magnetic field assisted electromagnetic vibration powered generators using amorphous Fe-B alloy ribbons
 °N. Isogai, S. Kamiya, Y. Nakamura, T. Kawai, M. Ohtake (Yokohama National Univ.)
- 23pPS-31 Synthesis of hexagonal W-type ferrite particles with SrZn_xFe_{18-x}O₂₇ composition using KBr flux
 °A. Hirata¹, K. Horie¹, M. Kishimoto¹, H. Yanagihara^{1,2} (¹Univ. of Tsukuba, ²TREMS)
- 23pPS-32 La-Co substituted strontium ferrite particles synthesized by heat treatment in molten potassium bromide flux
 °K. Horie, A. Hirata, M. Kishimoto, H. Yanagihara (Univ. of Tsukuba)

Apr. 24/Room A

Symposium "Spin entropy and transport in magnetic materials and devices"

9:00 ~ 12:30

Chair: G. Bauer (UCAS)

- 24aA-1 [Invited] Skyrmion Hall effect in altermagnets
 Z. Jin, Z. Zeng, Y. Cao, °P. Yan (UESTC)
- 24aA-2 [Invited] Magnetic domain lithography and its applications in spintronic devices
 °G. Yu (Institute of Physics, Chinese Academy of Sciences)
- 24aA-3 [Invited] Modulation of Thermal Spin Pumping by Angular Momentum of Rare Earth
 °A. B. Cahaya (Univ. Indonesia)

- 24aA-4 [Invited] Hybrid transverse magneto-thermoelectric conversion in artificially tilted multilayers
°T. Hirai (NIMS)
- 24aA-5 [Invited] Effective generation of probabilistic bits by exploiting spin-orbit torques in magnetic trilayers
°B. Park¹, S. Kim¹, M. Kohda², J. Nitta², K. Lee¹ (¹Korea Advanced Institute of Science and Technology, ²Tohoku University)
- 24aA-6 [Invited] Entropy transport in magnets and ferroelectrics
°G. Bauer (UCAS, Tohoku Univ.)

Spin dynamics related phenomena

13:30 ~ 15:00

Chair: S. Mangin (Univ. de Lorraine), K. Yamada (Science Tokyo)

- 24pA-1 [Invited] ULTRA-FAST ALL OPTICAL SWITCHING IN SPINTRONIC DEVICES
J. Gorchon, T. Hauet, M. Hehn, J. Hohlfeld, J. Lin, G. Malinowski, °S. Mangin (Univ. de Lorraine)
- 24pA-2 Nonlinear microwave scattering by permeability time-varying metamaterials
°T. Kodama¹, T. Chiba¹, N. Kikuchi², S. Okamoto¹, S. Ohno¹, S. Tomita¹ (¹Tohoku Univ., ²Akita Univ.)
- 24pA-3 All-optical helicity-dependent switching in magneto-plasmonic nanostructures
°Y. Le Guen^{1,2}, J. Hohlfeld¹, M. Hehn¹, S. Mangin¹, S. Van Dijken² (¹IJL, ²Aalto)
- 24pA-4 Ultrafast excitation of standing and propagating exchange spin waves in nanophotonic structures
°V. I. Belotelov, D. M. Krichevsky, S. I. Lutsenko, A. E. Bezmenova (Moscow State Univ.)
- 24pA-5 Ultrafast spin dynamics induced by circularly polarized hard x-ray pulses in a Pt/Co/Pt multilayer
°K. T. Yamada¹, R. Kobayashi², I. Sugiura³, Y. Kubota^{4,5}, Y. Akiyama^{2,4}, S. Sasakura⁶, A. Gocho⁶, K. Takemura^{2,4}, S. Mochizuki¹, S. Takahashi¹, T. Ohkochi^{4,5,6}, I. Matsuda⁷, T. Ono^{3,8}, T. Togashi^{4,5}, Y. Tanaka⁶, M. Suzuki^{2,4} (¹Science Tokyo, ²Kwansei Gakuin, ³ICR, Kyoto Univ., ⁴RIKEN, ⁵JASRI/SPring-8, ⁶Univ. Hyogo, ⁷ISSP, Univ. of Tokyo, ⁸CSRN, Kyoto Univ.)

Awards Ceremony & Closing Ceremony

15:30 ~ 16:30

MIGAKU Award ceremony
Closing remark

J.R. Jeong (Chungnam National Univ.)

Apr. 24/Room B

Unique magnetic phenomena in 2D magnetic layers 9:00 ~ 10:30

Chair: T. Miyamachi (Nagoya Univ.), W. Wulf (KIT)

- 24aB-1 [Invited] Phasons and magnon-polarons in 2D magnetic layers
°W. Wulfhekel (KIT)
- 24aB-2 Withdrawn
- 24aB-3 Modulation of the size of magnetic skyrmions in a van der Waals ferromagnet Fe₃GaTe₂ via proton irradiation
°Y. Ji¹, S. Yang², H. Ahn³, K. Moon², M. Im⁴, J. Lee⁵, S. Park⁵, C. Lee³, K. Kim¹, C. Hwang² (¹Korea Advanced Institute of Science and Technology, ²Korea Research Institute of Standards and Science, ³Sungkyunkwan University, ⁴Lawrence Berkeley National Laboratory, ⁵Korea Basic Science Institute)
- 24aB-4 Hall voltage distributions in two-dimensional materials
°K. Kim^{1,2}, T. Park², K. Kim³, S. Kim¹ (¹University of Ulsan, ²KIST, ³Yonsei University)

Novel magnetic materials

11:00 ~ 12:15

Chair: T. Ideue (Univ. of Tokyo), J. Huang(NCKU)

- 24aB-5 [Invited] Nonlinear optical responses in symmetry-controlled two-dimensional van der Waals magnets
°T. Ideue (Univ. of Tokyo)
- 24aB-6 [Invited] Magnetism in biomass - derived graphenic carbon
°D. Darminto¹, R. Asih¹, F. Astuti¹, M. A. Baqiya¹, D. Ristiyani¹, A. J. Nenohai¹, D. P. Sari², H. Nakajima³, Y. Koike⁴, I. Watanabe⁵ (¹Institut Teknologi Sepuluh Nopember, ²Shibaura Institute of Technology, ³Synchrotron Light Research Institute, ⁴Tohoku University, ⁵RIKEN Nishina Center)
- 24aB-7 Enhanced field-free current-induced magnetization switching by two-dimensional metastable MXene
°P. Kumar¹, H. Abe², S. Isogami¹ (¹NIMS, ²KEK)

2D magnetic materials and altermagnetism**13:30 ~ 15:00**

Chair: J. Okabayashi (Univ. of Tokyo), S. Ahn (POSTEC)

- 24pB-1 Effect of thermal magnetization fluctuation on geometrically constrained magnetic domain wall at the ferromagnetic nanowire
°S. Ahn (POSTECH)
- 24pB-2 Large MCD and strong spin polarization in nanoscale Cr₂Te₃
T. Huang¹, °J. A. Huang¹, H. Hsu², H. Wu¹, T. Chang¹ (¹NCKU, ²NPTU)
- 24pB-3 Atomic-scale magnetic doping of monolayer stanene by revealing Kondo effect from self-assembled spin entities
°N. Kumar¹, Y. Lan¹, Y. Lin¹, C. Chen¹, T. Lin¹, H. Jeng^{1,2,3,4}, P. Chang¹, P. Hsu^{1,2} (¹Department of Physics, National Tsing Hua University, Hsinchu 300044, Taiwan, ²Center for Quantum Technology, National Tsing Hua University, Hsinchu 300044, Taiwan, ³Physics Division, National Center for Theoretical Sciences, Taipei 10617, Taiwan, ⁴Institute of Physics, Academia Sinica, Taipei 11529, Taiwan)
- 24pB-4 giant spin seebeck and piezoelectricity of 2D V₂SeTeO altermagnet
D. Besserga, A. Ullah, °J. Hong (Pukyong National University)
- 24pB-5 Visualizing Strain-Induced Noncollinear Spin Textures in Mn Atomic Bilayer on Ag(111)
°C. Chen¹, T. Drevelow², Y. Lin¹, Y. Chen¹, T. Cheng¹, Y. Lin¹, S. Heinze², P. Hsu¹
(¹Natioanl Tsing Hua University, ²University of Kiel)
- 24pB-6 Detecting Altermagnetism in RuO₂ by Angular-Dependent X-ray Magnetic Linear Dichroism
°J. Okabayashi¹, Z. Wen², Y. Miura³, H. Sukegawa², S. Mitani² (¹Univ. Tokyo, ²NIMS, ³Kyoto Tech.)

Apr. 24/Room C**Magnetic tunneling phenomena****9:00 ~ 9:45**

Chair: G. Mihajlovic (Western Digital), M. Oogane (Tohoku Univ.)

- 24aC-1 Spin transfer torque switching in double magnetic tunnel junctions based on dual MgO layers
°G. Mihajlovic, W. Jung, R. Chopdekar, J. Lille, M. K. Gorbis (Western Digital Corporation)
- 24aC-2 Structural stability and perpendicular magnetocrystalline anisotropy in Co layers on buckled and planar h-BN structures
°D. P. Hastuti, Y. Kitaoka, H. Imamura (AIST)
- 24aC-3 Theoretical study on the effect of shape anisotropy on switching voltage of voltage-controlled MRAM
°S. Miyazaki^{1,2}, H. Arai², H. Imamura^{1,2}, Y. Yasukawa¹ (¹Chiba Inst Tech, ²AIST)

Soft magnetic materials**10:15 ~ 12:00**

Chair: J. Jeong (Korea Institute of Materials Science), Y. Tomita (Daido Steel)

- 24aC-4 [Invited] Effect of co-added transition metal elements on the glass forming ability and soft magnetic properties of high-M_s nanocrystalline alloys
°J. Jeong, H. Im, S. An, K. Kim, S. Yang (Korea Institute of Materials Science)
- 24aC-5 [Invited] Rapidly annealed high-B_s FeCo-based nanocrystalline soft magnetic alloys for high-temperature applications
°I. Skorvanek¹, B. Kunca¹, J. Marcin¹, P. Svec² (¹IEP SAS, Kosice, ²IP SAS, Bratislava)
- 24aC-6 Analysis of complex permeability for Permalloy foil
°Y. Tomita¹, T. Ogasawara², H. Takabayashi¹, T. Iriyama¹ (¹Daido Steel, ²National Inst. Tech.)
- 24aC-7 Effect of Yttrium addition on magnetic softness and dynamic magnetic properties of (Fe₇₁Ga₂₉)_{1-x}Y_x films
°S. Ajaia, R. Nishina, T. Miyazaki, S. Muroga, Y. Endo (Tohoku Univ.)
- 24aC-8 Sweep Rate Dependency of Permeability and Coercivity in DC B-H Measurements
°S. Hashimoto, T. Morita, H. Takabayashi (Daido Steel)

Hard magnetic materials III**13:00 ~ 14:00**

Chair: W. Yamaguchi (AIST), T. Hasegawa (Akita Univ.)

- 24pC-1 Sm₂Fe₁₇N₃ powder for heat-resistant bonded magnets
°W. Yamaguchi, A. Hosokawa, K. Takagi, Y. Hirayama (AIST)
- 24pC-2 Evaluation of magnetic properties of mechanically ground SmCo₅ fine powder
°K. Park, Y. Hirayama, J. Wang (AIST)

- 24pC-3 Evaluation of equilibrium oxygen partial pressure of W-type ferrite solid-solution state $\text{SrCo}_x\text{Fe}_{18-x}\text{O}_{27}$ ($0 < x < 2$)
^oS. Nakai, T. Waki, Y. Tabata, H. Nakamura (Kyoto Univ.)
- 24pC-4 Phase diagrams and magnetic properties of Fe-Co-X and Fe-Co-V-X (X = B, C, N, O) films
^oT. Hasegawa, C. Shirai, T. Nishikawa, T. Osanai (Akita Univ.)

Ferrites: from fundamental to applications

14:15 ~ 15:15

Chair: H. Nakamura (Kyoto Univ.), K. Park (AIST)

- 24pC-5 Influence of Partial Substitution of Mn on Magnetostrictive Properties of $\text{Cu}_{0.5}\text{Co}_{0.5}\text{Fe}_2\text{O}_4$
^oM. Hisamatsu¹, S. Kosugi¹, K. Suzuki¹, Y. Ohishi¹, S. Seino¹, H. Muta¹, T. Nakagawa¹, S. Fujieda²
 (¹Osaka Univ., ²Shimane Univ.)
- 24pC-6 Oxygen potential controlled hexagonal ferrites
^oH. Nakamura, T. Waki, S. Nakai, M. Ade, Y. Tabata (Kyoto University)
- 24pC-7 Photocatalytic Degradation Enhancement of Rhodamin B using Magnetically Separable and Reusable $\text{MnFe}_2\text{O}_4/\text{rGO}$ Nanocomposites Green-Synthesized Utilizing Plant Leaf Extract
^oK. Kurnia¹, N. P. Rini¹, D. L. Puspitarum¹, E. K. Sari¹, N. I. Istiqomah¹, L. J. Mahardhika¹, T. Kato^{2,3}, D. Oshima³, A. D. Nugraheni¹, E. Suharyadi¹ (¹Department of Physics, Universitas Gadjah Mada, ²Institute of Materials and Systems for Sustainability, ³Department of Electronics, Nagoya University)
- 24pC-8 Photodegradation of doxycycline antibiotic using magnetically separable and reusable $\text{Fe}_3\text{O}_4/\text{Chitosan}$ nanocomposites green-synthesized utilizing moringa oleifera extract
^oS. Sudarmono^{1,2}, E. Suharyadi¹, N. I. Istiqomah¹, L. J. Mahardhika¹, C. Chotimah¹
 (¹Universitas Gadjah Mada, ²Universitas Cenderawasih)

Apr. 24/Room D

Advances in interplay between superconductivity and magnetism

9:00 ~ 10:45

Chair: K. Jeon (Chung-Ang Univ.), T. Yamashita (Tohoku Univ.)

- 24aD-1 [Invited] Zero-field polarity-reversible Josephson supercurrent non-reciprocity and non-volatile anomalous phase-shift
^oK. Jeon (Department of Physics, Chung-Ang University (CAU), Seoul 06974, Republic of Korea)
- 24aD-2 [Invited] Pure spin current transport and spin-triplet superconductors: Insights and Advances
^oS. Huang (National Taiwan University)
- 24aD-3 Nb/GdN/Nb Josephson junction for future superconducting spintronics and quantum computing
^oF. Li¹, W. F. Holmes-Hewett², J. Miller², S. Granville², B. Ruck², M. Tanaka¹, A. Fujimaki¹
 (¹Nagoya University, ²Victoria University of Wellington)
- 24aD-4 [Invited] Superconducting spintronics for scalable superconducting flux qubits
^oT. Yamashita (Tohoku Univ.)

Spin related phenomena in functional materials I

11:00 ~ 12:30

Chair: S. Karube (Kyoto Univ.), H. Koo (KIST)

- 24aD-5 [Invited] Symmetry manipulation and spin conversion
^oJ. Yoo (Unsan National Institute of Science and Technology)
- 24aD-6 [Invited] Topological Surface States in Alpha-Sn
^oM. Wu (Northeastern University)
- 24aD-7 Spin current enhancement by a WSe_2 spin sink
^oY. Chu¹, K. Chiu¹, M. Lin^{1,2,3} (¹National Taiwan University, ²Institute of Atomic and Molecular Sciences, Academia Sinica, ³Research Center for Applied Sciences, Academia Sinica)
- 24aD-8 Observation of unconventional spin current in altermagnetic CrSb
^oC. Tseng, S. Karube, H. Narita, R. Hisatomi, Y. Shiota, D. Kan, Y. Shimakawa, T. Ono (Kyoto Univ.)

Spin related phenomena in functional materials II 13:30 ~ 15:15

Chair: Y. Shiota (Kyoto Univ.), J. Yoo (Ulsan National Institute of Science and Technology)

- 24pD-1 [Invited] Tailoring Spin-Orbit Torque Efficiency via Facilitating Global Néel Order in W/NiO/CoFeB Trilayer
H. Chang¹, K. Chi², Y. Lin¹, Y. Lai¹, Y. Huang¹, C. Pai², °C. Yang¹
(¹National Yang Ming Chiao Tung University, ²National Taiwan University)
- 24pD-2 Observation of anisotropy of orbital Hall effect in an epitaxial titanium
°S. Karube¹, Y. Yahagi², H. Narita¹, R. Hisatomi¹, Y. Shiota¹, T. Ono¹ (¹Kyoto Univ., ²NEC)
- 24pD-3 Spin-torque efficiency of Si-Al alloy films with varying compositional ratios and deposition methods
°H. Nakayama¹, T. Horaguchi², K. Yamanoi¹, Y. Nozaki¹ (¹Keio Univ., ²Fukuoka Univ.)
- 24pD-4 Reciprocity of charge-spin conversion in a quantum well channel
°H. Koo^{1,2}, S. Kim^{1,2}, J. Lee^{1,2}, W. Choi^{1,2} (¹KIST, ²Korea University)
- 24pD-5 [Invited] Multiferroic heterostructured devices for energy efficient electronics and biomedical applications
°J. Hong (Hubei Univ. Tech.)

Apr. 24/Room E

Strain-induced related phenomena 9:45 ~ 10:30

Chair: J. Okabayashi (Univ. of Tokyo), K. Toyoki (Osaka Univ.)

- 24aE-1 Elastic anomaly and strain-induced pseudo-gap modulation in semimetallic antiferromagnet Cr_{0.8}Al_{0.2} thin film
°K. Toyoki, Y. Tsujimoto, Y. Shiratsuchi, R. Nakatani (Osaka Univ.)
- 24aE-2 Elastic anomaly and pseudo-gap formation in antiferromagnetic semimetal (Cr_{1-y}Fe_y)_{1-x}Al_x thin films
°F. Kamimura¹, T. Matsumura¹, Y. Tsujimoto¹, K. Toyoki^{1,2,3}, Y. Shiratsuchi^{1,2,3}, R. Nakatani^{1,2,3}
(¹Osaka Univ., ²CSRN, ³OTRI)
- 24aE-3 Microscopic origin of magnetostriction in Fe₃Ga studied by operando XMCD and Mössbauer spectroscopies
°J. Okabayashi¹, T. Usami², S. Sakai³, K. Fujiwara³, Y. Kobayashi⁴, T. Mitsui³, K. Hamaya²
(¹Univ. of Tokyo, ²Osaka Univ., ³QST, ⁴Kyoto Univ.)

Novel magnetic phenomena 11:00 ~ 12:00

Chair: S. Li (QST), J. Lin (National Yang Ming Chiao Tung Univ.)

- 24aE-4 [Invited] Observation of spin-triplet superconductivity in CoSi₂/TiSi₂ heterojunctions
S. Chiu², S. Yeh¹, V. Mishra³, F. Zhang³, S. Kirchner¹, °J. Lin¹
(¹National Yang Ming Chiao Tung University, ²Fu Jen Catholic University, ³University of Chinese Academy of Sciences)
- 24aE-5 [Invited] Identification of Many-body Entanglement in Quantum Magnetism
°E. Moon (KAIST)

Electrical manipulation of magnetic properties 13:00 ~ 14:30

Chair: T. Nozaki (AIST), J. S. Tsay (National Taiwan Normal Univ.)

- 24pE-1 [Invited] Large voltage-controlled magnetic anisotropy effect in magnetic tunnel junctions prepared by cryogenic temperature deposition
°T. Nozaki¹, T. Ichinose¹, T. Yamamoto¹, J. Uzuhashi², T. Nozaki¹, H. Nakayama¹, A. Sugihara¹, M. Konoto¹, K. Yakushiji¹, T. Ohkubo², S. Yuasa¹ (¹AIST, ²NIMS)
- 24pE-2 Electric field control of magnetic anisotropy for oriented Co/graphene and application as an inductor with field tunability
C. Chang², P. Jiang², Y. Chow², T. Yang², °J. Tsay¹
(¹National Taiwan Normal University, ²Minghsin University of Science and Technology)
- 24pE-3 Voltage Control of Perpendicular Anisotropy with High-Endurance Ferroelectric Hf1-xZrxO2 Gate Oxide
°J. Chen, Y. Lin, K. Yeh, T. Yang, Y. Tseng (NYCU)
- 24pE-4 Voltage induced bi-polar AFM spin reversal using magnetoelectric effect in Pt/Cr₂O₃/V₂O₃/Pt epitaxial films
°N. Murayama¹, H. Sameshima¹, K. Ujimoto¹, Y. Matsumoto¹, K. Toyoki^{1,2,3}, R. Nakatani^{1,2,3}, Y. Shiratsuchi^{1,2,3}
(¹Osaka Univ., ²CSRN, ³OTRI)
- 24pE-5 Low-voltage AFM spin reversal in Pt/Cr₂O₃/Ru/Pt epitaxial thin layer
°Y. Matsumoto¹, H. Sameshima¹, N. Murayama¹, K. Toyoki^{1,2,3}, R. Nakatani^{1,2,3}, Y. Shiratsuchi^{1,2,3}
(¹Osaka Univ., ²CSRN, ³OTRI)

Apr. 24/Poster Room

Poster session VI

10:30 ~ 13:30

- 24aPS-1 Study on a Low Iron Loss Motor Using Amorphous Ribbon Cut Cores
°T. Saito, Y. Yoshida, S. Sakurai, K. Tajima (Akita Univ.)
- 24aPS-2 A Study on LSPM high efficiency design considering initial operation characteristics
°J. Lee¹, D. Jung², K. Lee¹ (¹Korea Electronics Technology Institute, ²Andong National University)
- 24aPS-3 A Study on Ac Loss Analysis According to Stator Winding Method and High-Speed Design
°J. Lee¹, D. Jung², K. Lee¹ (¹Korea Electronics Technology Institute, ²Andong National University)
- 24aPS-4 Characteristic Analysis of an Outer Rotor Type Permanent Magnet Synchronous Motor using Subdomain Method
°M. Koo¹, H. Shine² (¹Purpose Built Mobility Group, KITECH, ²Specialized Machinery and Robotics Group, KITECH)
- 24aPS-5 Prediction of annealing temperature influence for magnetic alloy ribbon using random forest regression trained with process information
°S. Muroga¹, T. Takasu¹, S. Matsumoto¹, S. Ajia¹, R. Umetsu¹, S. Mikami², T. Hiraki², Y. Endo¹ (¹Tohoku Univ., ²Toho Zinc)
- 24aPS-6 Influence of annealing temperature and compaction pressure on magnetic properties of dust cores composed of iron powders
°Y. Kodama, S. Ajia, T. Miyazaki, S. Muroga, Y. Endo (Tohoku Univ.)
- 24aPS-7 Numerical analysis of magnetization characteristics in curved chain magnetic nanoparticles
°H. Zhang, Y. Sun, H. Wang, T. Sasayama, T. Yoshida (Kyushu Univ.)
- 24aPS-8 Synthesis and Evaluation of Smart Magnetic Nanocarriers Incorporating Polyphenols for Targeted Breast Cancer Intervention
°M. Mohammed Mustafa, K. Natarajan, S. Palanisamy, L. Subbiah (Anna University)
- 24aPS-9 Highly sensitive detection of sub pT magnetic field in nondestructive inspection using magnetoresistive sensor
°Y. Kono¹, H. Ahn¹, A. Tanaka¹, S. B. Trisnanto¹, T. Kasajima², T. Shibuya², Y. Takemura¹
(¹Yokohama National Univ., ²TDK)
- 24aPS-10 Detection of magnetic nanoparticles by using magnetoresistive sensor coupled with induction coil
°K. Suzaki¹, S. Nabeta¹, S. B. Trisnanto¹, T. Kasajima², T. Shibuya², Y. Takemura¹ (¹Yokohama National Univ., ²TDK)
- 24aPS-11 Development of a Drying Method for Magnetic Nanoparticle Dispersions with Enhanced Re-dispersibility
°S. Seino¹, K. Nishigaki¹, A. Tanaka², T. Sakane², T. Kiwa³, M. Washino⁴, T. Nakagawa¹
(¹Osaka Univ., ²Kobe Pharm. Univ., ³Okayama Univ., ⁴Mitsubishi Electric Corp.)
- 24aPS-12 Effect of preparation method and size on magnetic properties of Mn_{0.6}Zn_{0.4}Fe₂O₄ ferrite
°E. Bekhbaatar, S. Kobayashi, H. Li (Iwate Univ.)
- 24aPS-13 Design and optimization of magnetically activated letrozole nanoliposomes for targeted breast cancer therapy
°K. N, M. R G, A. R, L. S, S. P (Anna University - BIT Campus)
- 24aPS-14 Magnetic Lipidome-Infused Sirolimus: A Targeted Ferroptosis-Driven Approach for Breast Cancer Therapy
°M. Ramasamy Govindaraj, K. Natarajan, K. Ganesan, S. Palanisamy, L. Subbiah (Anna University)
- 24aPS-15 Blue Light-induced Radical Pairs in Flavin-Tryptophan Dyads in the Solid States
°Y. Oka, K. Inoue (Hiroshima Univ.)
- 24aPS-16 Development of superparamagnetic nanocluster probes for the realization of a multiplex immunoassay using magnetic particle spectroscopy
°S. Shimizu¹, A. Sakai¹, M. Takahashi¹, T. Yoshida², S. Maenosono¹ (¹JAIST, ²Dept. Electrical Eng., Kyusyu Univ.)
- 24aPS-17 Improvement of absorption force of magnetic attachment by utilizing stainless steel magnets
°C. Mishima, T. Mitsunaga, Y. Honkura (Magnedesign)