

Contents

July 13, Tuesday	9:00~12:30	Main Hall / Oral
PLENARY		

Chair: Koki Takanashi, Xiaofeng Jin

09:00

Opening remark

M. Takahashi

Chairman of ISAMMA 2010

09:15

Plenary-1*(Invited) Controlling Magnetism with Light

T. Rasing,

Radboud University Nijmegen, Institute for Molecules and Materials, Heyendaalseweg 135, 6525AJ Nijmegen, The Netherlands

10:00

Plenary-2*(Invited) Magnetic Soft X-ray Microscopy

P. Fischer,

Center for X-ray Optics, Lawrence Berkeley National Laboratory, 1 Cyclotron Rd, Berkeley, CA 94720 U.S.A.

Coffee Break 10:45-11:00

11:00

Plenary-3*(Invited) High Efficiency and Dependable Spin Transfer Torque Writing on Perpendicular MTJs

H. Yoda¹, T. Kishi¹, M. Yoshikawa¹, T. Nagase¹, K. Nishiyama¹, E. Kitagawa¹, T. Daibou¹, M. Amano¹, N. Shimomura¹, S. Takahashi¹, T. Kai¹, M. Nakayama¹, H. Aikawa¹, S. Ikegawa¹, M. Nagamine¹, J. Ozeki¹, H. Tomita², Y. Suzuki², S. Yuasa³, S. Mizukami⁴, Y. Nakatani⁵, M. Oogane⁶, Y. Ando⁶, T. Miyazaki⁴, and K. Ando³,

¹Corporate Research & Development Center, Toshiba Corporation, Kawasaki, 212-8582, Japan,

²Department of Materials Engineering Science, Osaka University, Osaka, Japan, ³Nanoelectronics Research Institute, National Institute of AI ST, Tsukuba, Japan, ⁴WPI Advanced Institute for Materials Research, Tohoku University, Sendai, Japan, ⁵The University of Electro- Communications, Tokyo, Japan,

⁶Department of Applied Physics, Tohoku University, Sendai, Japan

11:45

Plenary-4*(Invited) Current status and recent topics of rare-earth permanent magnets

S. Sugimoto,

Department of Materials Science, Graduate School of Engineering, Tohoku University, 6-6-02, Aramaki Aza Aoba, Aoba-ku, Sendai, 980-8579, Japan

Lunch 12:30-13:30

July 13, Tuesday

13:30~14:30

Sakura / Poster

Session PA

MAGNETIZATION DYNAMICS AND MICROMAGNETICS

Chair: Ryoichi Nakatani

PA-01. Domain-Wall Pinning in Er and Dy Studied by Minor-Loop Scaling Laws

S. Kobayashi, S. Takahashi, H. Kikuchi, and Y. Kamada,
NDE & Science Research Center, Iwate University, Morioka 020-8551, Japan

PA-02. Damping Parameters of $\text{Ni}_x\text{Fe}_{1-x}$ Films Measured by the CPW-FMR Method

Y. Endo, Y. Mitsuzuka, Y. Shimada, M. Yamaguchi,
Graduate School of Engineering, Tohoku University, Sendai 980-8579, Japan

PA-03. Study of inter-dot coupling in nano-patterned permalloy dots array

C. T. Chao, C. Y. Kuo, Y. C. Tsai, C. K. Chang, J. F. Wang, L. Horng, and J. C. Wu,
Department of Physics, National Changhua University of Education, Taiwan

PA-04. Experimental investigations of interparticle interactions effects in magnetic nanoparticles

J. S. Lee¹, R. P. Tan², J. H. Wu³, Y. K. Kim¹,
¹*Department of Materials Science and Engineering, Korea University, Seoul 136-713, Korea,* ²*Université de Toulouse; INSA, UPS; LPCNO, 135 Avenue de Rangueil, F-31077 Toulouse, France and CNRS; LPCNO, F-31077 Toulouse, France,* ³*Pioneer Research Center for Biomedical Nanocrystals, Korea University, Seoul 136-713, Korea*

PA-05. A Monte Carlo Study of Uniaxial Single Domain Nanoparticle Systems

T. N. Lan, T. H. Hai,
Ho Chi Minh City Institute of Physics, 01 Mac Dinh Chi Str., Dist. 01, Ho Chi Minh City, Viet Nam

PA-06. Ferromagnetic Resonance in a single-crystalline Fe wire and a polycrystalline Fe wire

Y. Kasatani¹, A. Yamaguchi^{1,2}, H. Miyajima¹,
¹*Department of Physics, Keio University, Hiyoshi, Yokoahama 223-8522, Japan,* ²*PRESTO, JST, Honcho, Kawaguchi, Saitama 332-0012, Japan*

PA-07. Micromagnetics simulations of magnetization reversal of iron nanowires

H. Xiang¹, D. M. Jiang¹, J. C. Yao¹, Y. P. Zheng¹, W. Lu², G. Q. Li¹, H. Saito³, S. Ishio³, X. W. Tan¹, Y. Q. Lin¹,
¹*School of Physics, Southwest University, Chongqing, 400715, China,* ²*School of Material, Tongji University, Shanghai, 200092, China,* ³*Venture Business Laboratory, Akita University, Akita, 010-8502, Japan*

PA-08. Effect of surface roughness on magnetism of ultrathin Co films

M. Sakamaki, K. Amemiya,
Institute of Materials Structure Science, High Energy Accelerator Research Organization, Tsukuba, 305-0801 Ibaraki, Japan

PA-09. Magnetic anisotropy and domain structure in spin-valves based on MTJ

A. S. Samardak¹, E. V. Sukovatitsina¹, A. V. Ognev¹, M. V. Anisimova¹, E. Wahlström², L. A. Chebotkevich¹,
¹*Laboratory of thin film technologies, FENU, Vladivostok, 690950, Russia,* ²*Department of Physics, NTNU, N-7491 Trondheim, Norway*

PA-10. Stacking faults and uniaxial magnetocrystalline anisotropy for c-plane oriented CoPtRu

films

Y. Suzuki¹, S. Saito², S. Hinata², K. Inoue², and M. Takahashi²,
¹*Furuya Metal Co., Ltd., 1915, Morisojima, Chikusei, Ibaraki, 308-0861, Japan,* ²*Department of Electronics Engineering, Graduate School of Engineering, Tohoku University, 6-6-05, Aoba, Aramaki, Aoba-ku, Sendai 980-8579, Japan*

PA-11. Fourfold in-plane magnetic anisotropy in sputtered (100) MgO/Fe epitaxial films

M. Higuchi, K. Noda, Y. Komaki, T. Tanaka, Y. Nozaki, K. Matsuyama,
ISEE, Kyushu University, Motoooka 744, Nishi-ku, Fukuoka 819-0395, Japan

PA-12. Perpendicular Magnetic Anisotropy of CoFeSiB/Pt multilayers

D. K. Kim¹, Y. S. Kim¹, B. S. Chun¹, H. I. Yim², J. R. Rhee², and Y. K. Kim¹,
¹*Department of Materials Science and Engineering, Korea University, Seoul 136-713, Korea,* ²*Department of Physics, Sookmyung Women's University, Seoul 140-742, Korea*

PA-13. Effect of Annealing in Magnetic Field on Microstructure and Magnetic Properties of FePt Films

Y. B. Li, H. Lv, J. M. Bai, F. L. Wei,
Key Laboratory for Magnetism and Magnetic Materials of the Ministry of Education, Research Institute of Magnetic Materials, Lanzhou University, Lanzhou, 730000, P.R. China

PA-14. Effect of annealing process on internal strain/stress in FePt thin films

S. N. Hsiao¹, F. T. Yuan², S. K. Chen¹, A. C. Sun³, and H. Y. Lee⁴,
¹*Department of Materials Science and Engineering, Feng Chia University, Taichung, 407, Taiwan*
²*Institute of Physics, Academia Sinica, Nankang, 107 Taipei, Taiwan,* ³*Department of Chemical Engineering and Materials Science, Yuan-Ze University, Taoyuan, 320, Taiwan,* ⁴*National Synchrotron Radiation Research Center, Hsinchu, 300, Taiwan*

PA-15. Material guide for formation of stacking faults in pseudo-hcp structure

S. Saito and M. Takahashi
Department of Electronics Engineering, Graduate School of Engineering, Tohoku University, 6-6-05, Aoba, Aramaki, Aoba-ku, Sendai 980-8579, Japan

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Sakura / Poster

Session PB

NOVEL METHODS AND ROUTES FOR FUNCTIONALITY

Chair: Satoshi Okamoto

PB-01. Magnetic Properties of Nanocrystalline FeCuNbSiB with Huge Creep Induced Anisotropy

G. Herzer, V. Budinsky and C. Polak
Vacuumschmelze GmbH & Co. KG, D-63450 Hanau, Germany

PB-02. Strong Induced Anisotropy in Amorphous Co-Pd Alloy Thin Films

Y. J. Nam and S. H. Lim,
Department of Materials Science and Engineering, Korea University, Seoul 136-713, Korea

PB-03. Powder shape effect on magnetic properties in powder cores

Y. Aikawa¹, A. Yanagitani¹, T. Terai², and T. Kakeshita²,
¹*Metal Powder Manufacturing & Sales Division, Sanyo Special Steel Co., Ltd, 3007 Nakashima, Shikama-ku, Himeji 672-8677, Japan,* ²*Department of Material Science and Engineering, Graduate School*

of Engineering, Osaka University, 2-1 Yamadaoka, Suita, Osaka 565-0871, Japan

PB-04. $\text{Sm}_2\text{Co}_{17}$ Alloy Fabricated by Copper Mould Casting

H. Feng, W. Pan, R. Yu, W. Li,

¹*Division of Functional Materials, Central Iron & Steel Research Institute, Beijing, 100081, P.R.China*

²*Department of Materials Science and Engineering, Tsinghua University, Beijing, 100084, P.R.China*

PB-05. Low Temperature Annealing Behavior of Soft Magnetic Property Of Metallic Glasses

S. Habibi¹, B. Jaleh¹ and P. Ahmadi²,

¹*Physics Department, Bu Ali Sina University, Hamedan, I.R. Iran,* ²*Physics Department, University of Shahed, Tehran, I.R. Iran*

PB-06. Analysis of Responses of Dual-Cavity Magnetophotonic Crystals Fabricated by Bounding

T. Goto, Y. Haga, A. V. Baryshev, M. Inoue,

Toyohashi University of Technology, Hibari-ga-oka, Tempaku, Toyohashi, Aichi 441-8580, Japan

PB-07. Proton-irradiation Effect on [6,6]-phenyl- C_{61} -butyric acid methyl ester

H. Kim, K. W. Lee, C. E. Lee¹,

¹*Department of Physics and Institute for Nano Science, Korea University, Seoul 136-713, Korea*

PB-08. Magnetic, Optical and Physical Properties of Glass doped with Iron Oxide

P. Donthum¹, T. Ratana², S. Insiripong³, J. Kaewkhao⁴, T. Ratana¹, W. Siriprom⁵ and P. Limsuwan⁶,

¹*Department of Physics, King Mongkut's University of Technology Thonburi, Bangkok Thailand, 10140*

²*Industrial Chemistry Department, Faculty of Applied Science, King Mongkut's Institute of Technology North Bangkok, Bangkok, Thailand, 10800,* ³*Physics Program, Faculty of Science and Technology, Muban Chonbueang Rajabhat University Thailand, 70150,* ⁴*Center of Excellence in Glass Technology and Materials Science, Nakhon Pathom Rajabhat University, Nakorn Pathom, Thailand, 73000,* ⁵*Faculty of Resources and Environment, Kasetsart University, Sriracha Campus, Chonburi Thailand, 20110,* ⁶*Department of Physics, King Mongkut's University of Technology Thonburi, Bangkok Thailand, 10140*

PB-09. The Effect of an Orthogonal DC Bias Field on Demagnetization for U-shaped Bent Steel Plate

Y. -H. Kim¹, K.-C. Kim¹, K.-H. Shin², K.-S. Yoon³, J. Doh³, C.-S. Yang⁴

¹*Dep. of Elec. Eng., Pukyong University, Busan, 608-736 Korea,* ²*Dep. of Electronics and information Comm., Eng., Kyung Sung University, Busan, 608-737 Korea,* ³*Maritime R&D Lab., LIGNEX1 Co., Ltd., Yongin, 446-912 Korea,* ⁴*Agency for Defense Development, Jinhae, 645-016 Korea*

PB-10. The magnetic properties of Ni-doped LiFePO_4

I. K. Lee, C. H. Rhee. and C. S. Kim

Department of Physics, Kookmin University, Seoul 136-702, Republic of Korea

PB-11. Magnetic properties of FeGa_2O_4 thin film

B. R. Myoung¹, S. J. Kim¹, T. Kouh¹, Y. Hirose², T. Hasegawa², C. S. Kim¹,

¹*Department of Physics, Kookmin University, Seoul 136-702, Korea,* ²*Department of Chemistry, University of Tokyo, Tokyo 113-0033, Japan and Kanagawa Academy of Science and Technology (KAST), Kawasaki 213-0012, Japan*

PB-12. Magnetic properties of mechanically alloyed Mn-Al-C powders

O. Kohmoto, N. Kageyama, Y. Kageyama, H. Haji, M. Uchida, Y. Matsushima

Graduate school, Okayama University, Okayama-City, Okayama-700-8530, Japan

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Sakura / Poster

Session PC
HARD MAGNETIC MATERIALS I

Chair: Toshiyuki Shima

PC-01. The preparation of sintered NdFeB magnet with ultra-high-coercivity

G. H. Yan, Y. Ding, R. J. Chen, D. Lee, A. R. Yan

Zhejiang province Key Laboratory of Magnetic Materials and Application Technology; Key Laboratory of Magnetic materials and Devices, Ningbo Institute of Material technology & Engineering, Chinese Academy of Science, Ningbo, 315201, China

PC-02. Effect of DyH addition on the magnetic properties and microstructure of NdFeCoCuB magnets

S. Guo, D. Lee, A. R. Yan

Zhejiang province Key Laboratory of Magnetic Materials and Application Technology; Key Laboratory of Magnetic materials and Devices, Ningbo Institute of Material technology & Engineering, Chinese Academy of Science, Ningbo, 315201, China

PC-03. Grain boundary modifications in NdFeB sintered magnets to achieve increased coercivityL. Zhang¹, Q. Liu¹, F. Xu¹, M. Komuro²

¹School of Materials Science and Engineering, Shanghai Jiao Tong University, 800 Dong Chuan Road, Shanghai 200240, China, ²Advanced Research Laboratory, Hitachi Ltd., Hitachi-shi, Ibaraki-ken 319-1292, Japan

PC-04. Effect of Low-Temperature Annealing on the Coercivity in Sintered Nd-Fe-B MagnetsT. Akiya¹, F. Sato², Y. Une³, M. Sagawa³, H. Kato^{1,4}

¹New Industry Creation Hatchery Center, Tohoku Univ., Aoba 6-6-10, Aoba-ku, Sendai 980-8579, Japan, ²Dept. Appl. Phys., Tohoku Univ., Aoba 6-6-05, Aoba-ku, Sendai 980-8579, Japan, ³Intermetallics Co., Ltd., Nishi-Kyoku, Kyoto 615-8245, Japan, ⁴Dept. Appl. Math. & Phys., Yamagata Univ., Jonan 4-3-16, Yonezawa 992-8510, Japan

PC-05. Nd-Fe-B sintered magnets fabrication by using atomized powdersR. Goto¹, S. Sugimoto^{1,2}, M. Matsuura², N. Tezuka², Y. Une³, and M. Sagawa³

¹New Industry Creation Hatchery Center (NICHe), Tohoku University, 6-6-10, Aoba, Aramaki, Aoba-ku, Sendai 980-8579, Japan, ²Department of Materials Science, Graduate School of Engineering, Tohoku University, Aoba-yama 6-6-02, Aoba-ku, Sendai, 980-8579, JAPAN, ³Intermetallics Co., Ltd., Kyodaikatsura #303, 1-36 Goryo Ohara, Nishikyo-Ku, Kyoto-city 615-8245, Japan

PC-06. The analysis of adhesion failure between Ni-coating and sintered NdFeB substrate

H. X. Yang, Z. L. Song

Institute of Materials Technology and Engineering, Chinese Academy of Sciences, Ningbo, 315201, China,

PC-07. A study of hot deformation in nanocrystalline R-Fe-B backward extruded rings

A. H. Li, W. Li, B. Lai, H. J. Wang, H. B. Feng, M. G. Zhu, and W. Pan

Division of Functional Materials, Central Iron & Steel Research Institute, Beijing, 100081, China

PC-08. Preparation and Properties of Anisotropic Nano-crystalline NdFeB Powders Made by Hydrogen Dircipitation of Die Upsetting Magnets

P. Yi, D. Lee, A. Yan

Ningbo Institute of Materials Technology & Engineering, CAS, Ningbo city, 315201, People's Republic of China

PC-09. Redistribution of Nd-rich phase and coercivity change in HDDR processed Nd-Fe-B alloy during hot pressing

N. Nozawa¹, H. Sepehri-Amin^{2,3}, T. Nishiuchi¹, T. Ohkubo³, K. Hono³, S. Hirose¹

¹Magnetic Materials Research Laboratory, NEOMAX Company, Hitachi Metals, Ltd., Mishima-gun, Osaka, 618-0013, Japan, ²Graduate School of Pure and Applied Sciences, University of Tsukuba, Tsukuba, 305-8577, Japan, ³Magnetic Materials Center, National Institute for Materials Science, Tsukuba, Ibaraki, 305-0047, Japan

PC-10. Microstructure and magnetic properties of Nd-(Fe, Sn)-B nanocomposite alloys

M. Rajasekhar^{1,2}, S. Ram¹, S. Srinath²

¹Materials Science Centre, Indian Institute of Technology Kharagpur, Kharagpur 721 302, India, ²School of Physics, University of Hyderabad, Hyderabad 500 046, India

PC-11. Nd-Fe-B Wires Produced by Spinning Method In Rotating Liquid

D. Yamamichi¹, T. Todaka¹, M. Enokizono¹

¹Oita University, 700 Dannoharu, Oita-city, 870-1192 Oita, Japan

PC-12. Significant Changes in Crystallization Kinetics of Nd₂Fe₁₄B/ α -Fe Nanocomposites Induced by Nb Addition

C. Wang¹, W.C. Chang²

¹College of Materials Science and Engineering, Fuzhou University, Fuzhou 350108, China, ²Department of Physics, National Chung Cheng University, Chia-Yi 621, Taiwan

PC-13. Direct Iron Coating onto Nd-Fe-B Powder by Thermal Decomposition of Iron Pentacarbonyl

S. Yamamuro¹, M. Okano¹, T. Tanaka¹, K. Sumiyama², N. Nozawa³, T. Nishiuchi³, S. Hirose³, T. Ohkubo⁴

¹Dept. of Materials Sci. & Eng., Ehime University, Matsuyama 790-8577, Japan, ²Nagoya Institute of Technology, Nagoya 466-8555, Japan, ³Magnetic Materials Research Laboratory, NEOMAX Company, Hitachi Metals, Ltd., Osaka 618-0013, Japan, ⁴National Institute for Materials Science, Tsukuba 305-0047, Japan

PC-14. Effect of Pressure on the Crystallization of amorphous Mischmetal-FeB Permanent Magnets

K. Y. Ko¹ and S. K. Yoon²

¹School of Mechanical Engineering, Ulsan College University, Ulsan Metropolitan City 680-749, S. Korea,

²School of Materials Science and Engineering, Ulsan University, Ulsan Metropolitan City 680-749, S. Korea

PC-15. Ferromagnetic-Resonance Study of Exchange Coupling in α -Fe/Nd₂Fe₁₄B Interfaces

D. Ogawa¹, K. Koike², T. Miyazaki³, S. Mizukami⁴, M. Oogane¹, Y. Ando¹ and H. Kato^{2,5}

¹Department of Applied Physics, Tohoku Univ., 6-6-05 Aoba, Sendai, Japan, ²Department of Applied Math. & Phys., Yamagata Univ., Yonezawa, Japan, ³Faculty of Engineering, Tohoku Univ., Sendai, Japan, ⁴WPI-AIMR, Tohoku Univ., Katahira 2-1-1, Aoba-ku, Sendai, Japan, ⁵New Industry Creation Hatchery Center, Tohoku Univ., Sendai, Japan

PC-16. First principles study on interfacial electronic structures in exchange-spring magnets

Y. Toga¹, H. Moriya², H. Tsuchiura¹, A. Sakuma¹

¹Department of Applied Physics, Tohoku University, 6-6-05 Aoba, Aoba-ku, Sendai 980-8579, Japan,

²Mechanical Engineering Research Laboratory, Hitachi Ltd., 832-2 Horiguchi, Hitachinaka, Ibaraki 312-0034, Japan

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Sakura / Poster

Session PD
SPINTRONICS I

Chair: Hiroaki Sukegawa

PD-01. Thermal effect on sub-ns spin transfer switching for MgO-based magnetic tunnel junctions

T. Aoki, Y. Ando, M. Oogane, and H. Naganuma

Department of Applied Physics, Tohoku University, 980-8579 Sendai, Japan

PD-02. Dynamic intermediate state during ns spin-transfer switching for MgO-based magnetic tunnel junctions

T. Aoki, Y. Ando, M. Oogane, and H. Naganuma

Department of Applied Physics, Tohoku University, 980-8579 Sendai, Japan

PD-03. Spin Transfer Switching in Synthetic Free Layers under Magnetic Field along the Hard Axis

T. Ono^{1,2}, H. Naganuma¹, M. Oogane¹, Y. Ando¹

¹Graduate School of Engineering, Tohoku University, Aoba-yama 6-6-05, Sendai 980-8579, Japan, ²Fuji Electric Holdings Co., Ltd., 4-18-1 Tsukama, Matsumoto, Nagano, 390-0821 Japan

PD-04. Spin-transfer switching in nanosecond regime for CoFeB/MgO/CoFeB magnetic tunnel junctions

J. -M. Lee^{1,3}, C. -M. Lee^{1,2}, L. -X. Ye¹, J. -P. Su⁴, T. -H. Wu^{1,2,5}

¹Taiwan SPIN Research Center, National Yunlin University of Science and Technology, Douliou, 64002, Taiwan, ²Graduate School of Materials Science, National Yunlin University of Science and Technology, Douliou, 64002, Taiwan, ³Graduate School of Engineering Science and Technology, National Yunlin University of Science and Technology, Douliou, 64002, Taiwan, ⁴Department of Electrical Engineering, National Yunlin University of Science and Technology, Douliou, 64002, Taiwan, ⁵Graduate School of Information Technology, Overseas Chinese University, Taichung, 407, Taiwan

PD-05. MgO-based magnetic tunnel junctions with CoFeB/Ru/Co synthetic free layers

C. Ahn¹, B. -C. Min¹, I. -J. Shin¹, J. Langer², B. Ocker², W. Maass², S. -Y. Park³, Y. Jo³, and K. -H. Shin¹

¹Korea Institute of Science and Technology, Seoul 136-791, Korea, ²Singulus Technologies Ag, D-63796 Kahl am Main, Germany, ³Korea Basic Science Institute, Daejeon 305-333, Korea,

PD-06. Thermal stability and switching current of ferromagnetically coupled CoFeB/Ru/CoFeB synthetic free layer

S. Yakata, H. Kubota, T. Seki, K. Yakushiji, A. Fukushima, S. Yuasa, and K. Ando

National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, 305-8568 Japan

PD-07. Drift of switching probability of spin-transfer switching in MgO-MTJ

T. Seki, A. Fukushima, H. Kubota, K. Yakushiji, S. Yuasa and K. Ando

Advanced Industrial Science and Technology (AIST) AIST Tsukuba Central 2, Tsukuba, 305-8568 Ibaraki, Japan

PD-08. Current-induced magnetization switching in MTJs with high TMR ratio

H. D. Gan¹, S. Ikeda¹, J. Hayakawa², H. Yamamoto², K. Miura^{2,1}, K. Mizunuma¹, H. Hasegawa², F. Matsukura¹ and H. Ohno¹

¹RIEC, Tohoku University, Sendai 980-8577, Japan, ²Advanced Research Laboratory, Hitachi, Ltd., Kokubunji, Tokyo 185-8601, Japan

PD-09. Bias dependence of transverse and longitudinal spin-transfer torque in symmetric

MgO-based magnetic tunnel junctionsK. J. Lee¹, M. H. Jung¹, S. Park², C. -Y. You³, and S. Yuasa⁴¹Department of Physics, Sogang University, Seoul 121-742, Korea, ²Korea Basic Science Institute, Daejeon 305-333, Korea, ³Department of Physics, Inha University, Incheon 402-751, Korea, ⁴Nanoelectronics Research Institute, National Institute of Advanced Industrial Science and Technology, Tsukuba 305-8568, Japan**PD-10. Fabrication of magnetic tunnel junctions for magnetic field sensor using synthetic ferrimagnetic free layer**K. Fujiwara¹, F. Kou², M. Oogane¹, H. Naganuma¹, Y. Ando¹¹Department of Applied Physics, Tohoku University, Aoba-yama 6-6-05, Sendai 980-8579, Japan, ²Corporate Technology Development Group, RICOH COMPANY, LTD. 5-10 Yokotakami, Kumanodo, Takadate, Natori, Miyagi, 981-1241, Japan**PD-11. In situ X-ray diffraction study of CoFeB/MgO/CoFeB based P-SV and EB-SV magnetic tunnel junctions**J. Kanak¹, T. Stobiecki¹, P. Wiśniowski¹, A. Zaleski¹, W. Powroźnik¹, J. Cao², S. Cardoso², P. Freitas²¹Department of Electronics, AGH University of Science and Technology, 30-059 Kraków, Poland, ²INESC Microsystems and Nanotechnologies, 9-1, 1000-029 Lisbon, Portugal**PD-12. Studies of magnetoresistance on different aspect ratio in magnetic tunnel junctions structure**Y. F. Hsiao¹, J. W. Tseng¹, C. H. Huang², J. C. Wu², L. Horng²¹Institute of photonics, National Changhua University of Education, Changhua 500, Taiwan, ²Department of physics and Taiwan SPIN Research Center, National Changhua University of Education, Changhua 500, Taiwan**PD-13. Spin-torque induced RF oscillation in magnetic tunnel junctions with an Fe-rich CoFeB free layer**Y. Masugata¹, S. Ishibashi¹, H. Tomita¹, T. Seki¹, T. Nozaki¹, Y. Suzuki^{1,2}, H. Kubota², A. Fukushima², S. Yuasa²¹Graduate School of Engineering Science, Osaka Univ., 560-8531, Toyonaka, Japan, ²Nanoelectronics Research Institute, AIST, 305-8568 Tsukuba Japan**PD-14. Shot Noise in MgO-based Magnetic Tunnel Junctions**T. Arakawa¹, K. Sekiguchi¹, Y. Yamauchi¹, K. Chida¹, M. Yamada², H. Takahashi², D. Chiba¹, K. Kobayashi¹, and T. Ono¹¹Institute for Chemical Research, Kyoto-University, Uji, 611-0011 Kyoto, Japan, ²Advanced Research Laboratory, Hitachi, Ltd, Kokubunji, 185-0014 Tokyo, Japan**PD-15. MgO Magnetic Tunnel Junctions with NiFeSiB amorphous ferromagnetic Layer**D. H. Kim¹, D. K. Kim¹, J. U. Cho¹, R. Tan¹, S. Isogami², M. Tsunoda², M. Takahashi² and Y. K. Kim¹¹Department of Materials Science and Engineering, Korea University, Seoul 136-713, Korea, ²Department of Electronic Engineering, Tohoku University, Sendai 980-8579, Japan**PD-16. Electronic states at Fe/MgO interface with stepwise structure**S. Honda¹, J. Inoue¹, and H. Itoh²¹Department of Applied Physics, Nagoya University, Nagoya, 464-8603, Japan, ²Department of Pure and Applied Physics, Kansai University, Suita, 564-8680, Japan**PD-17. Bias-voltage-dependence of magnetoresistance for epitaxial Fe/MgO/Co₂MnSn tunnel junctions**M. Tanaka¹, T. Hori¹, S. Hori¹, K. Kondou², S. Kasai³, T. Ono², K. Mibu¹¹Nagoya Institute of Technology, Nagoya, 466-8555 Aichi, Japan, ²Institute for Chemical Research, Kyoto University, Uji, 611-0011 Kyoto, Japan, ³National Institute for Materials Science, Tsukuba, 305-0047 Ibaraki, Japan

PD-18. Magnetic tunnel junctions with a spinel MgAl_2O_4 barrier

H. Sukeyawa, H. Xiu, T. Furubayashi, T. Niizeki, W. H. Wang, S. Kasai, T. Ohkubo, S. Mitani, K. Inomata and K. Hono

National Institute for Materials Science (NIMS), Tsukuba, 305-0047 Japan

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Session PE SPINTRONICS II		

Chair: Kay Yakushiji

PE-01. A first-principles study on tunnelling magnetoresistance of $\text{Fe/MgAl}_2\text{O}_4/\text{Fe(001)}$ magnetic tunnel junctions

S. Muramoto, Y. Miura, K. Abe, and M. Shirai

Research Institute of Electrical Communication, Tohoku University, 2-1-1 Katahira, Aoba ward, 980-8577 Sendai, Japan

PE-02. Preparation of double barrier magnetic tunnel junctions

Y. Murooka, K. Yakushiji, T. Seki, H. Kubota, A. Fukushima, S. Yuasa, and K. Ando

National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, 305-8568 Japan

PE-03. Magnetoresistance Effect through GaAs for $\text{Fe/MgO/GaAs/MgO/Fe}$ Junctions

N. Tezuka, F. Mitsuhashi, S. Sugimoto

Graduate School of Engineering, Aoba-yama 6-6-02, 980-8579 Sendai, Japan

PE-04. Perpendicular magnetic tunnel junctions using CoPt alloy and MgO/CoFeB/Pt structures

I. -J. Shin^{1,2}, G. -M. Choi¹, B. -C. Min¹, Y. H. Heo¹, J. -P. Hong², and K. -H. Shin¹

¹Korea Institute of Science and Technology (KIST), Seoul 136-791, Korea, ²Department of Physics, University of Hanyang, Seoul 133-791, Korea

PE-05. Structure of Magnetic Tunnel Junction with Perpendicularly Magnetized $\text{L1}_0\text{-FePt}$ and CoPt

N. Inami¹, H. Naganuma¹, T. Miyazaki², K. Sato³, T. J. Konno³, G. Kim¹, M. Oogane¹, and Y. Ando¹

¹Dept. of Applied Physics, Tohoku Univ., 6-6-05 Aoba-yama, Sendai, 980-8579, Japan, ²School of Engineering, Tohoku Univ., 6-6-11 Aoba-yama, Sendai, 980-8579, Japan, ³Institute of Materials Research, Tohoku Univ., 2-1-1 Katahira, Sendai, 980-8577, Japan

PE-06. Fabrication of Magnetic Tunnel Junction with Out-of-plane free Layer

G. Kim, H. Naganuma, N. Inami, M. Oogane, Y. Ando

Department of Applied Physics, Graduate School of Engineering, Tohoku University, Aoba-yama 6-6-05, Sendai 980-8579, Japan

PE-07. Evaluation of Magnetization Interaction at the Interface between FeCo and TbFeCo for p-MTJ

N. Miyamoto, K. Mamiya and S. Nakagawa

Department of Physical Electronics, Tokyo Institute of Technology, O-okayama 2-12-1, Meguro-ku, Tokyo, 152-8552, Japan

PE-08. Negative Spin Polarization and Magnetoresistance Effects of $\gamma\text{-Fe}_4\text{N}$ Thin Films

M. Tsunoda¹, Y. Komazaki¹, S. Isogami¹, S. Kokado², M. Takahashi¹

¹Department of Electronic Engineering, Tohoku University, Aobayama 6-6-05, Sendai 980-8579, Japan,

²Faculty of Engineering, Shizuoka University, Hamamatsu 432-8561, Japan

PE-09. The effect of inserting thin Co₂MnAl layer into the Co₂MnSi/MgO interface on TMR effect

E. Ozawa, S. Tsunegi, M. Oogane, H. Naganuma and Y. Ando

Department of Applied Physics, Graduate School of Engineering, Tohoku University, Aoba-yama 6-6-05, Sendai 980-8579, Japan

PE-10. Fabrication of spin-transistor structure with MTJs using Co₂MnSi electrode

Y. Ohdaira, M. Oogane, H. Naganuma, and Y. Ando

Graduate School of Engineering, Tohoku University, Aoba-yama 6-6-05, 980-8579 Sendai, Japan

PE-11. Room temperature magnetoresistance in Fe₃Si/CaF₂/Fe₃Si MTJ epitaxially grown on Si(111)

K. Harada¹, K. M. Sadakuni¹, M. Suzuno¹, H. Akinaga² and T. Suemasu¹

¹Institute of Applied Physics, University of Tsukuba, Ibaraki 305-8573, Japan, ²Nanodevice Innovation Research Center, AIST, Tsukuba, Ibaraki 305-8569, Japan

PE-12. Magnetoresistance effect of Co₂FeAl_{0.5}Si_{0.5} – MgF₂ granular films

Y. Fujiwara¹, S. Ozaki¹, Y. Urakawa¹, K. Sato¹, M. Kondo², M. Jimbo², T. Kato³, T. Kobayashi¹

¹Graduate School of Engineering, Mie University, Mie 514-8507, Japan, ²Faculty of Engineering, Daido University, Nagoya 457-8530, Japan, ³Graduate School of Engineering, Nagoya University, Nagoya 464-8603, Japan

PE-13. Magnetoresistance and electronic structure of granular films with MgO or MgF₂ matrices

Y. Fujiwara¹, H. Matsuda¹, K. Sato¹, M. Jimbo², T. Kobayashi¹

¹Graduate School of Engineering, Mie University, Mie 514-8507, Japan, ²Faculty of Engineering, Daido University, Nagoya 457-8530, Japan

PE-14. Substrate bias effect on AlOx based magnetic tunnel junctions grown on Ge buffer layers

A. M. Sahadevan¹, J. S. Son¹, H. Yang^{1,2}, A. J. Danner^{1,2} and C. S. Bhatia^{1,3}

¹Department of Electrical and Computer Engineering, NUS, Singapore, ²NanoCore, NUS, Singapore, ³Institute of Materials Research and Engineering, 3 Research Link, Singapore

PE-15. Temperature Dependence of Spin Relaxation in Au Nanoparticles in Single Electron Tunneling Regime

T. Koda¹, S. Mitani², K. Takanashi¹

¹Institute for Materials Research, Tohoku University, Sendai, 980-8577 Miyagi, Japan, ²National Institute for Materials Science, Tsukuba, 305-0047 Ibaraki, Japan

PE-16. Current-in-plane tunneling measurement through patterned contacts on top surfaces of magnetic tunnel junctions

C. -M. Lee^{1,2}, L. -X. Ye¹, J. -M. Lee^{1,3}, Y. -C. Lin², J. C. Wu⁴, T. -h. Wu^{1,2,5}

¹Taiwan SPIN Research Center, National Yunlin University of Science and Technology, Douliou, 64002, Taiwan, ²Graduate School of Materials Science, National Yunlin University of Science and Technology, Douliou, 64002, Taiwan, ³Graduate School of Engineering Science and Technology, National Yunlin University of Science and Technology, Douliou, 64002, Taiwan, ⁴Taiwan SPIN Research Center, National Changhua University of Education, Changhua 500, Taiwan, ⁵Graduate School of Information Technology, Overseas Chinese University, Taichung 407, Taiwan

PE-17. Using anisotropic magneto-Coulomb effect to probe magnetization reversal with a few nanometre resolution

A. Bernard-Mantel^{1,2}, P. Seneor¹, K. Bouzehouane¹, S. Fusil¹, C. Deranlot¹, F. Petroff¹, A. Fert¹

¹Unité Mixte de Physique CNRS/Thales, 1 av. Fresnel, 91767 Palaiseau & Université Paris-Sud 11, 91405

Orsay, France, ²Institut Néel, CNRS & Université Joseph Fourier, BP 166, 25 Avenue des Martyrs, 38042 GRENOBLE Cedex 9, France

July 13, Tuesday	13:30~14:30	Sakura / Poster
Session PF STRUCTURED MATERIALS I		

Chair: Yoshitaka Kitamoto

PF-01. Structural instability of FeCo ultrathin films grown on MgO(100)

S. Mitani, T. Niizeki

National Institute for Materials Science, Tsukuba 305-0051, Japan

PF-02. Structural characterization of interfaces in exchange-coupled magnetic multilayers and relation with their magnetic properties

R. Lardé¹, J.M. Le Breton¹, A. Grenier¹, A. Zarefy¹, L. Lechevallier¹, J Juraszek¹, N. Tiercelin², P. Pernod², V. Baltz³, B. Rodmacq³, B. Dieny³

¹Groupe de Physique des Matériaux, UMR CNRS 6634, Université de Rouen, 76801 Saint Etienne du Rouvray, France, ²LEMAC, IEMN, UMR CNRS 8520, Cité Scientifique, 59652 Villeneuve d'Ascq, France, ³SPINTEC, URA 2512 CNRS/CEA, CEA-Grenoble, 38054 Grenoble, France

PF-03. Structural Analysis of hcp-Ni and hcp-NiFe Thin Films Epitaxially Grown on Au(100) Single-Crystals

Y. Sato¹, M. Ohtake¹, J. Higuchi¹, T. Tanaka¹, F. Kirino², M. Futamoto¹

¹Faculty of Science and Engineering, Chuo University, Tokyo, Japan, ²Tokyo National University of Fine Arts and Music, Tokyo, Japan

PF-04. Magnetic Properties of Fe(001) Thin Films on GaAs(001) Deposited by RF Magnetron Sputtering

H. Ikeya¹, Y. Takahashi¹, N. Inaba¹, F. Kirino², M. Ohtake³, and M. Futamoto³

¹Yamagata University, 4-3-16 Jonan, Yonezawa-shi, Yamagata, 992-8510, Japan, ²Tokyo National University of Fine Arts and Music, Tokyo, 110-8714, Japan, ³Chuo University, Tokyo, 112-8551, Japan

PF-05. Control of magnetic anisotropy of Cr/Cr superlattice by substrate inclination

Y. Shiratsuchi, S. Kuboya, R. Nakatani, M. Yamamoto

Graduate School of Engineering, Osaka University, 2-1 Yamadaoka, Suita Osaka, 565-0871 Japan

PF-06. Effects of sputtering argon pressure on the exchange anisotropy for NiFe/IrMn

P. C. Cheng¹, C. H. Huang², K. C. Chen², J. C. Wu², L. Horng²

¹Graduate Institute of photonics, National Changhua University of Education, Changhua 500, Taiwan, ²Department of physics and Taiwan SPIN Research Center, National Changhua University of Education, Changhua 500, Taiwan

PF-07. Fabrication and perpendicular magnetic anisotropy of L1₀-ordered FeNi films by alternate monatomic layer deposition

T. Kojima, M. Mizuguchi, K. Takanashi

Institute for Materials Research, Tohoku University, Sendai, 980-8577, Japan

PF-08. Layer resolved magnetization processes of magnetic layers in Ru-base trilayers by resonant x-ray magnetic reflectivity measurement

R. Yamagishi, T. Koike, K. Kodama, N. Hosoi

Graduate School of Materials Science, Nara Institute of Science and Technology, Ikoma, Nara 630-0192, Japan

PF-09. Systematic Study on the magnetic properties of MgO-based magnetic tunnel junctions in order to obtain High TMR ratio

Y. -J. Chang¹, A. Canizo-Cabrera¹, V. Garcia-Vazquez², Y. -H. Chang³, and T. -h. Wu¹

¹Taiwan SPIN Research Center, National Yunlin University of Science and Technology, 123 University Road, Section 3, Douliou, Yunlin 64002 Taiwan, R.O.C., ²Instituto de Física Luis Rivera Terrazas, Universidad Autónoma de Puebla, Apartado Postal J-48, Puebla, Pue. 72570, Mexico, ³Department and Institute of Electronic Engineering, National Yunlin University of Science and Technology, 123 University Road, Section 3, Douliou, Yunlin 64002 Taiwan, R.O.C.

PF-10. Highly (100) oriented MgO growth on thin Mg layer in MTJ structure

K. Jimbo and S. Nakagawa

Department of Physical Electronics, Tokyo Institute of Technology, O-okayama, 152-8552, Tokyo, Japan

PF-11. Drastic time-dependent effect of Co/Pd multilayers with perpendicular anisotropy

F. S. Wen, Z. Y. Liu, L. Li, B. Xu, D. L. Yu, J. L. He, Y. J. Tian

State key lab of metastable materials science & technology, Yanshan University, Qinhuangdao 066004, China

PF-12. Irradiation Induced Modifications in Magnetic Property of Mn/n-Si Structure

M. K. Srivastava, P. C. Srivastava

Department of Physics, Banaras Hindu University, Varanasi-221 005, India

PF-13. Co/Pt Nanoparticle Array Fabrication by Nanoindentation Lithography

T. Hashimoto, N. Kikuchi, S. Okamoto, and O. Kitakami

IMRAM, Tohoku University, Sendai 980-8577, Japan

PF-14. Magnetic properties of FePt bit patterned media investigated by MFM

Z. J. Yan^{1,2}, S. Takahashi¹, T. Hasegawa¹, X. Liu¹, T. Sakon¹, Y. Kondo³, J. Ariake³, D. S. Xue², S. Ishio¹

¹VL of Akita University, Gakuen Machi 1-1, Tegata, Akita 010-8502, Japan, ²Key Laboratory for Magnetism and Magnetic Materials of Ministry of Education, Lanzhou University, Lanzhou 730000, People's Republic of China, ³Research Institute of Advanced Technology, Akita 010-1623, Japan

PF-15. Influence of asymmetry disk on control over existence of vortex in Submicro-scaled Permalloy Disks

C. -H. Huang¹, K. -M. Wu¹, Y. -F. Hsiao², C. -Y. Wang¹, J. -C. Wu¹, L. Horng¹

¹Department of Physics and Taiwan SPIN Research Center, National Changhua University of Education, Changhua 50007, Taiwan, ²Institute of Photonics, National Changhua University of Education, Changhua 50007, Taiwan

PF-16. Growth and Magnetic Properties of Mn Nanodots Embedded in GaAs (001)

T. D. Van, D. D. Duc, H. Younghun, W. Feng, Y. Shin and S. Cho

Department of physics, University of Ulsan, Ulsan 680-749, Republic of Korea

PF-17. Exchange bias in NiFe/IrMn antidot arrays

S. Y. Lo¹, C. H. Huang², Y. H. Chen², Y. F. Hsiao¹, J. C. Wu², L. Horng^{1,2}

¹Institute of photonics, National Changhua University of Education, Changhua 500, Taiwan, ²Department of physics and Taiwan SPIN Research Center, National Changhua University of Education, Changhua 500, Taiwan

July 13, Tuesday

13:30~14:30

Sakura / Poster

Session PG
STRUCTURED MATERIALS II

Chair: Masaki Mizuguchi

PG-01. Assembly of FePt nanoparticles on surface of silica microspheres covered with poly (diaryldimethylammonium chloride) and formation of magnetic soft-shell microspheres

T. Fuchigami¹, R. Kawamura¹, M. Nakagawa², Y. Namiki³, Y. Kitamoto¹¹Department of Innovative and Engineered Materials, Tokyo Institute of Technology, Yokohama, 226-8502, Japan, ²IMRAM, University of Tohoku, Sendai, 980-8577, Japan, ³ICMR, University of Jikei, Kashiwa, 277-8567, Japan

PG-02. Magnetic properties of α -Fe nanoparticles agglomerate with strong magnetic dipole interaction

H. Kura, M. Takahashi, T. Ogawa

Graduate School of Engineering, Department of Electronic Engineering, Tohoku University, 6-6-05 Aza-Aoba, Aramaki, Aoba-ku, Sendai 980-8579, Japan.

PG-03. Fabrication of Fe nanoparticle-based nanostructured material via post-annealing

M. Kamata¹, H. Kura², T. Tanaka¹, M. Takahashi², T. Ogawa²¹Graduate School of Science and Engineering, Department of Material Science and Biotechnology, Ehime University, 3, Bunkyo-cho, Matsuyama, Ehime, 790-8577, Japan, ²Graduate School of Engineering, Department of Electronic Engineering, Tohoku University, 6-6-05, Aza-Aoba, Aramaki, Aoba-ku, Sendai, Miyagi, 980-8579, Japan

PG-04. Effect of Hydrogen Plasma Treatment on Reduction Process of Iron Oxide Nanoparticles

T. Maki^{1, 2}, H. Kura², H. Ishida², T. Kaneko², R. Hatakeyama², M. Takahashi², and T. Ogawa²¹Hitachi Metals, 1-2-1, Shibaura, Minato-ku, 105-8614 Tokyo, Japan, ²Graduate School of Engineering, Department of Electronic Engineering, Tohoku University, 6-6-05, Aoba, Aramaki, Aoba-ku, Sendai, 980-8579 Miyagi, Japan

PG-05. High thermal stability of the ferrimagnetic moment in exchange biased FeO (core)/spinel (shell) nanocubes

H. T. Hai, H. Kura, M. Takahashi, T. Ogawa

Graduate School of Engineering, Department of Electronic Engineering, Tohoku University, 6-6-05 Aza-Aoba, Aramaki, Aoba-ku, Sendai 980-8579, Japan

PG-06. Contribution of Magnetic Anisotropy to Magnetic Behavior of Nanoparticle Assembly with Interparticle Distance Controlled by Silica Coating

K. Hiroi, T. Sato

Faculty of Science and Technology, Keio University Kanagawa, Japan

PG-07. Fabrication of Close-Grained and L1₀ Ordered FePt Thin Films by Gas Flow Sputtering

H. Sakuma, R. Odashima, S. Shidara, K. Ishii

Research Division of Functional Materials Design, Utsunomiya University, Utsunomiya 321-8585, Japan

PG-08. Origin of high coercivity in nanocomposites by singleprecursor solgel method

J. P. Vejpravova¹, A. Mantlikova¹, D. Niznansky², P. Brazda³, J. Rohovec⁴¹Charles University Prague, Faculty of Mathematics and Physics, DCMP, Ke Karlovu 5, 121 16 – Prague 2, Czech Republic, ²Charles University Prague, Faculty of Science, Dept. of Inorganic Chemistry, Hlavova 2, 128 40 – Prague 2, Czech Republic, ³Institute of Inorganic Chemistry, Czech Academy of Sciences, Rez near Prague, 250 68, Czech Republic, ⁴Institute of Geology, Czech Academy of Sciences, Rozvojova 269, 165 00 – Prague 6, Czech Republic

PG-09. Self-assembling and Magnetism of Fe Nanostructures on Au(111) Herringbone Reconstructed SurfaceH. -Y. Chang¹, Y. -C. Hu¹, Y. -Y. Lin², C. -H. Hsu², W. -C. Lin² and C. -C. Kuo^{1,3}¹Department of Physics, National Sun Yat-sen University, Kaohsiung 80424, Taiwan, ²Department of Physics, National Taiwan Normal University, 11677 Taipei, Taiwan, ³Center for Nanoscience and Nanotechnology, National Sun Yat-sen University, Kaohsiung 80424, Taiwan.**PG-10. Achieving a Noninteracting Magnetic Nanoparticle System by Direct Control of Interparticle Spacing**

H. T. Yang, H. L. Liu, H. F. Du, N. N. Song, X. Q. Zhang and Z. H. Cheng

State Key Lab. of Magnetism, Institute of Physics and Beijing National Lab. for Condensed Matter Physics, Chinese Academy of Sciences, Beijing 100190, China

PG-11. Crystal structure and Morphology dependence of the phase of Mollusc Shell: A Case Study of XRD, SEM and ESRP. Donthum¹, J. Kaewkhao², W. Siriprom³, S. Asavavisithchai⁴ and P. Limsuwan^{1,5}¹Department of Physics, King Mongkut's University of Technology Thonburi, Bangkok Thailand, 10140,²Center of Excellence in Glass Technology and Materials Science, Nakhon Pathom Rajabhat University, Nakorn Pathom, Thailand, 73000, ³Faculty of Resources and Environment, Kasetsart University, Sriracha Campus, Chonburi Thailand, 20110, ⁴Department of Metallurgical Engineering, Faculty of Engineering, Chulalongkorn University, Bangkok Thailand, 10330, ⁵Thailand Center of Excellence in Physics, CHE, 328 Si Ayutthaya Rd., Bangkok 10400, Thailand**PG-12. Magnetic Domain-Wall Speed Dispersion in Magnetic Nanowires**J. Kim¹, J. -C. Lee^{1, 2}, S. -G. Je¹, K. -J. Kim¹, C. -W. Lee³, Y. J. Cho³, S. Seo³, K. -H. Shin², H. -W. Lee⁴, and S. -B. Choe¹¹Department of Physics, Seoul National University, Seoul 151-742, Korea, ²Center for Spintronics Research, Korea Institute of Science and Technology, Seoul 136-791, Korea, ³Samsung Advanced Institute of Technology, Yongin 449-712, Korea, ⁴PCTP and Department of Physics, Pohang University of Science and Technology, Pohang 790-784, Korea**PG-13. Ab Initio Calculation on Magnetism of Zigzagged Monatomic Fe Nanowire**T. Yasui¹, M. Nawate¹¹Department of Electronic and Control Systems Engineering, Shimane University, Matsue, 690-8504 Shimane, Japan**PG-14. Effect of Si substitution on phase transformation and exchange bias in Ni-Mn-In ribbons**X. G. Zhao^{1,2}, C. C. Hsieh¹, W. C. Chang¹, W. Liu², Z. D. Zhang²¹Department of Physics, National Chung Cheng University, Chia-Yi 621, Taiwan, ²Shenyang National Laboratory for Materials Science, Institute of Metal Research, and International Centre for Materials Physics, Chinese Academy of Sciences, 72 Wenhua Road, Shenyang 110016**PG-15. Synthesis of Au nanowires using polycarbonate membrane for biosensing applications**V. Sudha Rani¹, S. Anandakumar¹, T. S. Ramulu¹, S. S Yoon², C. G. Kim¹¹Department of Materials Science and Engineering, Chungnam National University, Daejeon-305-764, South Korea, ²Department of Physics, Andong National University, Andong 760-749, Korea**PG-16. Tailoring of magnetic properties of NiFe nanowire arrays embedded in anodic alumina templates**S. G. Cho¹, J. B. Kim¹, K. H. Kim², J. Kim¹¹Department of Metallurgy and Materials Engineering, Hanyang University, 426-791 Ansan, Korea ²Department of Physics, Yeungnam University, 712-749 Gyeongsan, Korea

July 13, Tuesday	14:30~16:00	Tachibana / Oral
Session AX HARD MAGNETIC MATERIALS II		

Chair: Wen-Cheng Chang, Kazuhiro Hono

14:30

AX-01*(Invited) Nd-Fe-B sintered magnets produced by the Grain Boundary Diffusion Process

H. Nakamura, K. Hirota, T. Ohashi, T. Minowa

Magnetic Materials Research Center, Shin-Etsu Chemical Co., Echizen 915-8515, Japan

15:00

AX-02. Microstructure and coercivity of Dy diffusion processed Nd-Fe-B sintered magnets

H. Sepehri-Amin^{1,2}, T. Ohkubo², K. Hono^{2,1}

¹Graduate School of Pure and Applied Sciences, University of Tsukuba, Tsukuba 305-8577, Japan,

²National Institute for Materials Science, Tsukuba 305-0047, Japan

15:15

AX-03. Grain growth control of high coercive (Nd, Dy)-Fe-B sintered magnets during sintering process

S. H. Kim, J. W. Kim, D. -G. Kim and Y. D. Kim

Department of Materials Science and Engineering, Hanyang University, Seoul 133-791, Korea

15:30

AX-04. Effects of Dy additive on microstructures and magnetic properties of rapidly solidified Nd-Fe-B strips

Y. Ding, R.J. Chen, D. Lee and A.R. Yan

Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, Zhe Jiang, Province Key Laboratory of Magnetic Materials and Application Technology, Ningbo, 315201

15:45

AX-05. First-principles calculation of crystal field parameters of Dy ions substituted for Nd in Nd-Fe-B magnets

S. Tanaka¹, H. Moriya², H. Tsuchiura¹ and A. Sakuma¹, M. Diviš³, and P. Novák⁴

¹Department of Applied Physics, Tohoku University, Sendai 980-8579, Japan, ²Mechanical Engineering Research Laboratory, Hitachi Ltd., Ibaraki 312-0034, Japan, ³Department of Condensed Matter, Charles University, Prague, Czech Republic, ⁴Institute of Physics of ASCR, Cukrovarnická 10, 162 53 Prague 6, Czech Republic

Coffee Break 16:00-16:15

July 13, Tuesday	16:15~18:00	Tachibana / Oral
Session AX HARD MAGNETIC MATERIALS III		

Chair: Wen-Cheng Chang, Kazuhiro Hono

16:15

AX-06*(Invited) Alloying effect on the magnetic properties of RFeB-type bulk magnets

H. W. Chang¹, C. C. Hsieh², J. Y. Gan², Y. T. Cheng², M. F. Shin², W. C. Chang²

¹Department of Physics, Tunghai University, Taichung, 407 Taiwan, ²Department of Physics, National

Chung Cheng University, Chia-Yi, 621 Taiwan

16:45

AX-07*(Invited) High performance hard magnetic films for micro-system applications

N. M. Dempsey¹, F. Dumas-Bouchiat¹, M. Kustov^{1, 2}, D. O'Brien¹, L. Zanini^{1, 2}, G. Ciuta¹, Y. Zhang¹, P. Kauffmann², O. Cugat², G. Reyne², D. Givord¹

¹Institut Néel, CNRS/UJF, Grenoble, France, ²G2Elab, Grenoble-INP / UJF / CNRS, Grenoble, France

17:15

AX-08. Interface Nanostructure and Coercivity in Nd-Fe-B Magnets

H. Kato^{1, 2}, T. Akiya², K. Koike¹, and D. Ogawa³

¹Dept. Appl. Math. & Phys., Yamagata Univ., Yonezawa, 992-8510, Japan, ²New Industry Creation Hatchery Center, Tohoku Univ., Sendai, 980-8579, Japan, ³Dept. Appl. Phys., Tohoku Univ., Sendai, 980-8579, Japan

17:30

AX-09. Magnetization reversal mechanism in Nd-Fe-B ultra thin films with perpendicular magnetic anisotropy

X. Liu, G. Ishida, A. Morisako

Faculty of Engineering, Shinshu University, Wakasato 4-17-1, Nagano, 380-8553, Japan

17:45

AX-10. Magnetic Properties of Nd-Fe-B/ α -Fe Multi-layered Thick Film Magnets Prepared by PLD Method

H. Fukunaga¹, H. Nakayama¹, T. Kamikawatoko¹, T. Yanai¹, M. Nakano¹, F. Yamashita²

¹Faculty of Engineering, Nagasaki University, Nagasaki 852-8521, Japan, ²Rotary Component Tech., Div., Minebea Co., Ltd., Shizuoka 437-1193, Japan

July 13, Tuesday	14:30~16:15	Hagi / Oral
Session AY SPIN DYNAMICS I		

Chair: Theo Rasing, Yasuo Ando

14:30

AY-01*(Invited) Laser-induced demagnetization of RE-TM GdFeCo

A. Tsukamoto^{1, 2}, T. Sato¹, S. Toriumi¹, A. Itoh¹

¹College of Science and Technology, Nihon University, 7-24-1 Narashino-dai, Funabashi, Chiba 274-8501, Japan, ²PRESTO, Japan Science and Technology Agency, 4-1-8 Honcho Kawaguchi, Saitama, Japan

15:00

AY-02*(Invited) Control of magnetic domain nucleation using spin current in Permalloy nanowires

Y. Togawa^{1, 2}, T. Kimura³, K. Takayanagi¹, K. Harada^{4, 5}, A. Tonomura^{2, 4}, S. Mori⁵, Y. Nakatani⁶, Y. Otani^{2, 7}

¹Nanosquare RC, Osaka Prefecture University, Sakai, 599-8570 Osaka, Japan, ²Advanced Research Institute, RIKEN, Wako, 351-0198 Saitama, Japan, ³Inamori Frontier RC, Kyushu University, Nishiku, 819-0395 Fukuoka, Japan, ⁴Advanced Research Lab., Hitachi Ltd., Hatoyama, 350-0395 Saitama, Japan, ⁵Dept. of Material Sciences, Osaka Pref. Univ., Sakai, 599-8531 Osaka, Japan, ⁶University of Electro-Communications, Choufu, 182-8585 Tokyo, Japan, ⁷Inst. for Solid State Physics, Univ. of Tokyo, Kashiwa, 277-8581 Chiba, Japan

15:30

AY-03. Current-induced Domain Wall Motion in Co/Ni wire under Magnetic Field

T. Koyama¹, D. Chiba¹, G. Yamada¹, K. Ueda¹, H. Tanigawa², S. Fukami², T. Suzuki², N. Ohshima², N.

Ishiwata², Y. Nakatani³ and T. Ono¹

¹*Institute for Chemical Research, Kyoto University*, ²*Device Platforms Research Laboratories, NEC Corporation*, ³*University of Electro-communications*

15:45

AY-04. A magnetization switching phase diagram of a nanostructured magnetic thin film

J. M. Lee, S. H. Lim

Department of Materials Science and Engineering, Korea University, Seoul 136-713, Korea

16:00

AY-05. Dynamic and temperature effects on the switching of coupled magnetic particles

D. Cimpoesu, A. -V. Plamadă, and A. Stancu

Department of Physics, "Al. I. Cuza" University, Iasi 700506, Romania

Coffee Break 16:15-16:30

July 13, Tuesday	16:30~18:00	Hagi / Oral
Session AY SPIN DYNAMICS II		

Chair: Theo Rasing, Yasuo Ando

16:30

AY-06*(Invited) Current-induced vortex dynamics and pinning potentials probed by homodyne detection

J. -S. Kim¹, O. Boulle¹, S. Verstoep¹, L. Heyne¹, J. Rhensius^{1,2}, L. Heyderman², F. Kronast³, R. Mattheis⁴, C. Ulysse⁵, G. Faini⁵, and M. Kläui¹

¹*Universität Konstanz, Germany*, ²*Laboratory for Micro- and Nanotechnology, Paul Scherrer Institut, Viligen PSI, Switzerland*, ³*Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Berlin, Germany*, ⁴*Institute für Photonische Technologien e. V., Jena, Germany*, ⁵*CNRS, Phynano team, Laboratoire de Photonique, et de Nanostructures, Marcoussis, France*

17:00

AY-07. Detection of vortex-core dynamics using current-induced self-bistable rectifying effect

M. Goto¹, H. Hata¹, A. Yamaguchi^{1,2}, H. Miyajima¹ and Y. Nakatani³

¹*Department of Physics, Keio University, Hiyoshi, Yokohama, Kanagawa, 223-8522, Japan*, ²*PRESTO, JST, Honcho4-1-8, Kawaguchi, Saitama, 332-0012, Japan*, ³*University of Electro-communications, Chofugaoka, Chofu, Tokyo 182-8585, Japan*

17:15

AY-08. Micromagnetic simulations of nonlinear spin-wave excitation in spin-valve nanocontacts

F. Ciubotaru¹, A. Serga¹, B. Leven¹, L. Lopez Diaz², B. Hillebrands¹

¹*Department of Physics and Landesforschungszentrum OPTIMAS, University of Kaiserslautern, 67663 Kaiserslautern, Germany*, ²*Departamento de Fisica Aplicada, University of Salamanca, I-37008 Salamanca, Spain*

17:30

AY-09. Controlling the asymmetry of magnetic vortices by nanostructure geometry

A. Vansteenkiste¹, M. Weigand², M. Curcic², H. Stoll², G. Schütz² and B. Van Waeyenberge¹

¹*Department of Solid State Sciences, Krijgslaan 281-S1, 9000 Ghent, Belgium*, ²*Max Planck Institute for Metals Research, Heisenbergstr. 3, 70596 Stuttgart, Germany*

17:45

AY-10. Influence of dipolar interaction on vortex dynamics

A. Vogel¹, A. Drews^{1, 2}, M. Bolte^{1, 2}, G. Meier¹

¹*Institut für Angewandte Physik und Zentrum für Mikrostrukturforschung, Universität Hamburg, Hamburg, Germany,* ²*Arbeitsbereich Technische Informatiksysteme, Universität Hamburg, Hamburg, Germany*

July 14, Wednesday	9:00~10:30	Tachibana / Oral
Session BX SPINTRONICS III		

Chair: Atsufumi Hirohata, Mikihiro Oogane

9:00

BX-01*(Invited) Invited High-speed MRAM Based on Spin-Torque Domain Wall Motion

N. Ishiwata, S. Fukami, T. Suzuki, N. Ohshima, K. Nagahara, S. Miura, and T. Sugibayashi
Device Platforms Research Laboratories, NEC, Sagami-hara, Japan

9:30

BX-02*(Invited) A Study on MgO-based MTJs for STT-RAM

K. -H. Shin¹ and B. -C. Min¹

¹*Korea Institute of Science and Technology, Seoul 136-791, Korea*

10:00

BX-03*(Invited) Bias-voltage Dependence of Perpendicular Spin-Transfer Torque in Asymmetric MgO-based Magnetic Tunnel Junctions

S. -C. Oh¹, S. -Y. Park², A. Manchon³, M. Chshiev³, J. -H. Han⁴, H. -W. Lee⁴, J. -E. Lee¹, K. -T. Nam¹, Y. Jo², Y. -C. Kong⁵, B. Dieny³, and K. -J. Lee⁵

¹*Semiconductor R&D Center, Samsung Elec. Co., Korea*, ²*Nano Material Research Team, Korea Basic Sci. Inst., Korea*, ³*SPINTEC, UMR8191CEA/CNRS/UJF, France*, ⁴*Dept. of Physics, Pohang University of Science and Technology, Korea*, ⁵*Dept. of Mater. Sci. & Eng., Korea University, Korea*

Coffee Break 10:30-10:45

July 14, Wednesday	10:45~12:30	Tachibana / Oral
Session BX SPINTRONICS IV		

Chair: Atsufumi Hirohata, Mikihiro Oogane

10:45

BX-04. Temperature and bias voltage dependence the conductance in MgO based magnetic tunnel junctions

G. Reiss¹, J. Schmalhorst¹, A. A. Khan¹, M. Meinert¹, M. Münzenberg²

¹*Physics Department, Bielefeld University, P.O.Box 100131, 33501 Bielefeld, Germany*, ²*IV. Phys. Institut, Universität Göttingen, 37077 Göttingen, Germany*

11:00

BX-05. TMR Properties of Perpendicular MTJs with Thin Pd Based Multilayers

K. Mizunuma¹, S. Ikeda¹, H. Yamamoto^{2,1}, H. Gan¹, K. Miura^{2,1}, J. Hayakawa², K. Ito², F. Matsukura¹ and H. Ohno¹

¹*RIEC, Tohoku University, Sendai 980-8577, Japan*, ²*Advanced Research Lab., Hitachi, Ltd., 1-280, Kokubunji 185-8601, Japan*

11:15

BX-06. High magnetoresistance and low resistance-area product in perpendicular-MgO-MTJs

K. Yakushiji, K. Noma, T. Saruya, H. Kubota, A. Fukushima, T. Nagahama, S. Yuasa and K. Ando

National Institute of Advanced Industrial Science and Technology (AIST), Umezono 1-1-1, Tsukuba, 305-8568 Japan

11:30

BX-07. The Effect of Non-collinear Magnetic Structures at the Interfaces in Co₂MnSi/MgO/Co₂MnSi Tunnel Junctions

Y. Miura, K. Abe, and M. Shirai

Research Institute of Electrical Communication, Tohoku University, 2-1-1 Katahira, Aoba ward, 980-8577 Sendai, Japan

11:45

BX-08. Tunnel magnetoresistance effect in magnetic tunnel junctions with very thin insertion layer

M. Oogane, S. Tsunegi, E. Ozawa, H. Naganuma, and Y. Ando

Graduate School of Engineering, Tohoku University, Sendai 980-8579, Japan

12:00

BX-09. High spin-filter efficiency in a Co ferrite fabricated by a thermal oxidation

Y. K. Takahashi, S. Kasai, T. Furubayashi, S. Mitani, K. Inomata and K. Hono

National Institute for Materials Science, Tsukuba, 305-0047 Ibaraki, Japan

12:15

BX-10. Magnetic Anisotropy Modulation in Ta/ CoFeB/ MgO Structure by Electric Fields

S. Kanai, M. Endo, S. Ikeda, F. Matsukura, and H. Ohno

Laboratory for Nanoelectronics and Spintronics, Research Institute of Electrical Communication, Tohoku University, Katahira 2-1-1, Aoba-ku, Sendai 980-8577, Japan

Lunch 12:30-13:30

July 14, Wednesday	9:00~12:30	Hagi / Oral
Session BY		
ELECTRONIC STRUCTURE AND MAGNETISM OF NANOWIRES		

Chair: Masafumi Shirai, Eiji Kita

9:00

BY-01*(Invited) Ab Initio Studies of Magnetism in Transition Metal Nanowires

J. C. Tung¹, G. Y. Guo^{1,2}

¹Department of Physics, National Taiwan University, Taipei 106, Taiwan, ²Graduate Institute of Applied Physics, National Chengchi University, Taipei 116, Taiwan

9:30

BY-02. Electronic structure of Co reconstructed structures on Ag/Ge(111) $\sqrt{3}\times\sqrt{3}$ surfaces

T. -Y. Fu, X. -L. Huang, C. -L. Lin, S. -L. Tsay

Department of Physics, National Taiwan Normal University, Taipei, Taiwan

9:45

BY-03. Fabrication and magnetic properties of 30 and 60 nm Co₃O₄ nanowires

P. F. Wu¹, Y. C. Chen¹, J. B. Shi², S. H. Tin²,

¹Ph. D. Program in Electrical and Communications Engineering, Feng-Chia University, Taichung 40724, Taiwan, ²Department of Electronic Engineering, Feng-Chia University, Taichung 40724, Taiwan

10:00

BY-04. Domain wall propagation in single crystalline iron wiresA. Yamaguchi^{1,2}, Y. Kasatani¹ and H. Miyajima¹¹*Department of Physics, Keio University, Hiyoshi, 3-14-1, Yokohama, Kanagawa 223-8522, Japan,*²*PRESTO, JST, Honcho 4-1-8, Kawaguchi, Saitama, 332-0012, Japan*

Coffee Break 10:15-10:30

July 14, Wednesday

10:30~10:15

Hagi / Oral

Session BY

STRONGLY CORRELATED MATERIALS AND PHASE TRANSITION I

Chair: Masafumi Shirai, Eiji Kita

10:30

BY-05*(Invited) Interplay of strain and magnetism in manganites from First-Principles

A. Filippetti, G. Colizzi, V. Fiorentini

CNR-IOM SLACS and Physics Department, University of Cagliari, Monserrato (Ca) 09042, Italy

11:00

BY-06. Paramagnetic Spin Dynamics in Doped Lanthanum Manganites: The Theory Predictions versus Experimental Data for La-Ca SystemM. Auslender¹, A. I. Shames², E. Rozenberg²¹*Department of Electrical and Computer Engineering, ²Department of Physics, Ben-Gurion University of the Negev, POB 653, 84105, Beer-Sheva, Israel*

11:15

BY-07. Structure and Magnetic Properties of DyMn_xFe_{1-x}O₃ PerovskitesF. -K. Chiang^{1,2,3}, F. R. Chen³, C. H. Chen¹, and M. -W. Chu¹¹*Center for Condensed Matter Sciences, National Taiwan University, ²Taiwan International Graduated Program, Academia Sinica (TIGP), ³Department of Engineering and System Science, National Tsing-Hwa University*

11:30

BY-08. Magnetic and Electric Properties of Partially Sulphur-Substituted Ferrites

T. Tanaka and S. Yamamuro

Department of Materials Science and Engineering, Ehime University, Matsuyama, 790-8577 Japan

11:45

BY-09. Antiferromagnetic fluctuations and magnetic ordering in '111' Fe-based superconductorsP. Jeglič¹, M. Klanjšek¹, B. Lv², A. M. Guloy², K. Koch³, H. Rosner³, D. Arčon^{1,4}¹*Jožef Stefan Institute, Ljubljana, Slovenia, ²Department of Chemistry and TCSUH, University of Houston, USA, ³Max-Planck-Institut für Chemische Physik fester Stoffe, Dresden, Germany, ⁴Faculty of Mathematics and Physics, University of Ljubljana, Slovenia*

12:00

BY-10. Magnetic correlations in Ni-Mn based martensitic shape memory alloysS. Aksoy¹, M. Acet¹, L. Manosa², A. Planes² and P. Deen³¹*Experimentalphysik, Universität Duisburg-Essen, D-47048, Duisburg, Germany, ²Department ECM,*

12:15

BY-11. Liner Laws of Bulk Elasticity in Properties and Structural Phase TransitionsP. I. Polyakov¹, A. S. Mazur²¹Inst. For Phys. of Mining Processes, Donetsk, 83114, Ukraine, ²Inst. for Phys. and Engineering n.a. O.O. Galkin, Donetsk, 83114, Ukraine

Lunch 12:30-13:30

July 14, Wednesday	13:30~14:30	Sakura / Poster
Session QA SOFT MAGNETIC MATERIALS I		

Chair: Masaki Nakano

QA-01. DC-Biased Magnetic Properties of a Fe-Si Alloyed Dust Core and ModelingsS. Handa¹, Y. Oshima¹, K. Akaiwa¹¹Tamura Corporation, 15-5-30 Chiyoda Sakado 350-0214 Saitama, Japan**QA-02. A study on the relationship between ordered phases and iron loss of GO silicon steel with high silicon content**H. Jung¹, E. Yu¹, D. Kim¹, S. -B. Kim², J. Kim¹¹Department of metallurgy and material science, Hanyang university, Ansan 426-791, Korea, ²Advanced energy and materials group, Korea Electric Power Research Institute, Daejeon 305-380, Korea**QA-03. High-B Fe-Cu-Si-B Nanocrystalline Powder Cores**T. Miyamoto¹, S. Tanigawa¹, M. Ohta², Y. Yoshizawa²¹Development Center, Hitachi Metals, Ltd., Tottori-shi, 689-1121 Tottori, Japan, ²Materials Development Laboratory, New Business Development Center, Hitachi Metals, Ltd., Shimamoto, 618-0013 Osaka, Japan**QA-04. 3DAP studies on Fe-B based high Bs nanocrystalline soft magnetic alloys**Y. M. Chen¹, T. Ohkubo³, M. Ohta³, Y. Yoshizawa³, K. Hono^{1,2}¹Univ. Tsukuba, Tsukuba 305-0047 Japan, ²NIMS, Tsukuba 305-0047 Japan, ³Hitachi Metals, Ltd., 5200 Mikajiri, Kumagaya 360-0843 Japan**QA-05. Core Losses of Ring-Shaped Fe-B-Si-Nb Bulk Metallic Glass with Thickness of 0.3-0.5 mm**

T. Bitoh, T. Ishikawa, H. Okumura

Department of Machine Intelligence and System Engineering, Akita Prefectural University, Yurihonjo, 015-055, Japan

QA-06. Effects of the Hf content on the soft magnetic properties of Co-Hf-Ta thin films

S. -W. Huang and J. -G. Duh

Department of Material Science and Engineering, National Tsing Hua University, Hsinchu 30013, Taiwan

QA-07. Structural analysis of Fe₈₀Ag₂₀ mechanical alloysD. -S. Yang¹, W. K. Na¹, S. -C. Yu¹¹Department of Physics Education, Chungbuk National University, Cheongju, 361-763, Korea**QA-08. Nanostructures and magnetic properties in Co-metal oxide nano-granular films**

Y. Oba¹, M. Ohnuma¹, K. Suresh¹, and S. Ohnuma²

¹National Institute for Materials Science, 1-2-1 Sengen, 305-0047 Tsukuba, Japan, ²Research Institute for Electric and Magnetic Materials, 2-1-1 Yagiyama-minami, Taihaku-ku, 982-0807 Sendai, Japan

QA-09. High frequency soft magnetic properties of Co-Al-N nano-granular films

H. Kijima¹, S. Ohnuma² and H. Masumoto¹

¹Center for Interdisciplinary Research, Tohoku University, Sendai 980-8578, Japan, ²Research Institute for Electric and Magnetic Materials, Sendai 982-0807, Japan

QA-10. Magnetic properties and high frequency characteristics of sputtered FeAl and FeAlB thin films

C. C. Hsieh¹, M. Y. Jian¹, H. W. Chang² X. G. Zhao¹, W. C. Chang¹

¹Department of Physics, National Chung Cheng University, Chia-Yi, 62102 Taiwan, R.O.C., ²Department of Physics, Tunghai University, Taichung, 40704, Taiwan, R.O.C.

QA-11. Preparation and magnetic properties of amorphous Co-Fe-B nanoparticles

K. Shimba, N. Tezuka, S. Sugimoto

Department of Materials Science, Graduate School of Engineering, Tohoku University, 6-6-02, Aramaki Aza Aoba, Aoba-ku, Sendai, 980-8579, Japan

QA-12. Synthesis and Magnetic Properties of FeNi/Au Barcode Nanowires

I. T. Jeon¹, J. H. Wu², J. S. Lee¹, Y. K. Kim^{1,2}

¹Department of Materials Science and Engineering, Korea University, Seoul 136-713, Korea, ²Pioneer Research Center for Biomedical Nanocrystals, Korea University, Seoul 136-713, Korea

QA-13. Magnetic Properties of Ion Irradiated Epitaxial Fe Films

Y. Kamada¹, H. Watanabe², S. Mitani³, J. Echigoya¹, J. N. Mohapatra¹, H. Kikuchi¹, S. Kobayashi¹ and K. Takanashi⁴

¹NDE&SRC, Faculty of Engineering, Iwate University, Morioka 020-8551, Japan, ²Research Institute for Applied Mechanics, Kyusyu University, Fukuoka, Japan, ³National Institute for Materials Science, Tsukuba, Japan, ⁴Institute for Materials Science, Tohoku University, Sendai, Japan

QA-14. Preparation of hcp-Ni Thin Films on Ru Underlayers Hetero-epitaxially Grown on Single-Crystal Substrates

J. Higuchi, M. Ohtake, Y. Sato, T. Nishiyama, M. Futamoto

Faculty of Science and Engineering, Chuo University, 112-8551 Tokyo, Japan

QA-15. Preparation and Characterization of Co Epitaxial Thin Films on Al₂O₃(0001) Single-Crystal Substrates

O. Yabuhara, M. Ohtake, Y. Nukaga, M. Futamoto

Faculty of Science and Engineering, Chuo University, Tokyo 112-8551, Japan

QA-16. The effect of underlayers on FeCo thin films

X. Liu, H. Kanda, A. Morisako

Faculty of Engineering, Shinshu University, Wakasato 4-17-1, Nagano, 380-8553, Japan

QA-17. Magnetic properties of iron films on anodized aluminum underlayer

H. Xiang¹, J. C. Yao¹, X. J. Mo¹, G. Q. Li¹, Y. Zhang¹, H. Saito²

¹School of Physics, Southwest University, Chongqing, 400715, China, ²Venture Business Laboratory, Akita University, Akita, 010-8502, Japan

July 14, Wednesday

13:30~14:30

Sakura / Poster

Session QB
SOFT MAGNETIC MATERIALS II

Chair: Shigehiro Ohnuma

QB-01. A novel hydrothermal synthesis, structural and magnetic properties of nanocrystalline spinel ferrite powders

S. Maensiri¹, S. Phumying¹, and S. Labuayai¹

¹Small & Strong Material Group (SSMG), Department of Physics, Faculty of Science, Khon Kaen University, Khon Kaen, 40002 Thailand.

QB-02. Interacting or non-interacting nanoparticles of $\text{Mn}_{0.6-x}\text{Cu}_x\text{Zn}_{0.4}\text{Fe}_2\text{O}_4$ ($x = 0 - 0.5$) ferrite synthesized by reverse micelle?

A. Ghasemi, X. Liu, A. Morisako

Spin Device Technology Center, Faculty of Engineering, Shinshu University, Nagano, Japan

QB-03. Effect of Igepal-CO 520 in Sonochemical Synthesis of Monodisperse Superparamagnetic Fe_3O_4 Nanoparticles

Md. N. Islam, L. Van Phong, T. Q. Hung, V. T. Son, C. G. Kim, and J. -R. Jeong

Department of Materials Science and Engineering, Chungnam National University, Daejeon 305-764, Korea

QB-04. Monosized ZnFe_2O_4 Nanocrystals: Synthesis and Magnetic Properties

J. Jeong¹, J. H. Wu², J. H. Min¹, A. -Y. Song¹, Y. K. Kim¹

¹Department of Materials Science and Engineering, Korea University, Seoul 136-713, Korea, ²Pioneer Research Center for Biomedical Nanocrystals, Korea University, Seoul 136-713, Korea

QB-05. Few-domain magnetic states of the millimeter-size single crystals of ErFeO_3 and TmFeO_3

Ya. B. Bazaliy^{1,2}, L. T. Tsymbal³, G. N. Kakazei^{2,4}, S. V. Vasiliev³, and Yu. I. Nepochatykh³

¹University of South Carolina, Columbia SC, USA, ²Institute of Magnetism, NASU, Kyiv, Ukraine, ³O. Galkin Donetsk Physics & Technology Institute, NASU, Donetsk, Ukraine, ⁴IFIMUP-IN/Departamento di Fisica, Universidade do Porto, Porto, Portugal

QB-06. Stress-induced modulation for voltage driven type magneto-optic spatial light modulator

S. Mito¹, J. Kim¹, K. Yamada¹, H. Takagi² and M. Inoue¹

¹Toyohashi University of Technology, Toyohashi, Aichi 441-8580, Japan, ²Toyota National College of Technology, Toyohashi, Aichi 471-8525, Japan

QB-07. Properties of magneto-optic spatial light modulators with amorphous TbFe film driven by Joule heating

J. Heo, J. Kim K. Takine, and M. Inoue

Toyohashi University of Technology, Toyohashi, Aichi 441-8580, Japan

QB-08. Giant Magnetoimpedance Effect in As-deposited FeCuNbSiB Multilayer Film

S. Xiao¹, Y. Dai¹, Y. Chen¹, W. Wang², H. Yuan², S. Yan¹

¹School of Physics, Shandong University, Jinan250100, Shandong, China, ²Department of Physical Science and Technology, Shandong Institute of Education, Jinan250013, Shandong, China

QB-09. Optimized giant magnetoimpedance effect in $\text{NiFe}/\text{Au}/\text{CoFeSiB}$ trilayer geometry microwires for sensing magnetic applications

N. Q. Hoa¹, P. D. Tam², N. V. Hieu³, M. -H. Phan⁴, N. H. Nghi⁵, M. Vázquez⁶, A. -T. Le²

¹Center for Materials Science, Vietnam National University, Hanoi, Vietnam, ²Department of Nanoscience

and Nanotechnology, Hanoi Advanced School of Science and Technology (HAST), 40 Ta Quang Buu street, Hanoi, Vietnam, ³International Training Institute of Materials Science (ITIMS), Hanoi University of Technology, Vietnam

⁴Department of Physics, University of South Florida, Tampa, FL 33620, USA, ⁵Institute of Engineering Physics, Hanoi University of Technology, Vietnam ⁶De Instituto de Ciencia de Materiales de Madrid, CSIC, Campus de Cantoblanco, 28049 Madrid, Spain

QB-10. Multi-polarly Micro Rotor Prepared from Isotropic Nano-crystalline Films

F. Yamashita¹, N. Menjo¹, S. Nishimura¹, O. Kobayashi¹, M. Itoh², K. Terada³, M. Nakano³, H. Fukunaga³, K. Ishiyama⁴

¹Rotary Component Tech., Div., Minebea Co., Ltd., Shizuoka 437-1193, Japan, ²Center for Advanced Science and Innovation, Osaka Univ., Osaka, 565-0871, Japan, ³Faculty of Engineering, Nagasaki Univ., Nagasaki, 852-8521, Japan, ⁴RIEC, Tohoku Univ., Sendai 980-8577, Japan.

QB-11. Quadratic Electromagnetic Linear Actuator for Active Vibration Control

J. -H. Lee¹, J. -H. Kim¹, U. -H. Park², S. -H. Oh²

¹School of Mechanical Engineering, Yeungnam University, 712-749 Gyeongbuk, Korea, ²Product Design Team of R&D center, Pyung Hwa co., 711-855, Daegu, Korea

QB-12. Lumped-parameter modelling and analysis of single-axis flat-coil type of electro-magnetic actuator with shorted turn for fast initial response

K. I. Hwang, J. H. Kim

Department of Mechanical Engineering, Yeungnam University Gyeongsan214-1, Gyeongbuk, Korea

QB-13. Frequency response of GMR sensor under sinusoidal excitation field

J. -T. Jeng¹, T. -Y. Xu¹, C. -C. Lu²

¹Graduate Institute of Mechanical and Precision Engineering, National Kaohsiung University of Applied Sciences, Kaohsiung 80778, Taiwan, ²Institute of Mechatronic Engineering, National Taipei University of Technology, Taipei 10608, Taiwan.

QB-14. Magnetic design for an electrodeless discharged lamp

T. Yanai¹, Y. Sakamoto¹, K. Takahashi¹, M. Nakano¹, H. Ogasawara², H. Kakehashi², H. Fukunaga¹

¹Dept. of Electrical and Electronics, Nagasaki Univ., Nagasaki, Japan, ²Lighting R&D Center, Panasonic Electric Works, Ltd., Kadoma, Osaka, Japan

QB-15. Development of Micro Magnetostrictive Wireless Controllable Actuator

H. -S. Lee¹, C. Cho¹, K. -w. Choi², A. T. Zehnder³

¹Department of Mechanical Engineering, Inha University, Incheon, 402-751, South Korea, ²Department of Electrical and Computer Engineering, Illinois Institute of Technology, Chicago, Illinois, USA, ³Department of Theoretical and Applied Mechanics, Cornell University, Ithaca, NY, USA

QB-16. Study of thermal ageing behaviour of Fe-Cr model alloys by magnetic hysteresis loop technique

J. N. Mohapatra¹, Y. Kamada¹, H. Kikuchi¹, S. Kobayashi¹, J. Echigoya¹, D. G. Park², Y. M. Cheong²

¹NDE and Science Research Center, Iwate University, 4-3-5 Ueda, Morioka, 020-8551, Japan, ²Korea Atomic Energy Research Institute, Yuseong, Daejeon, 305-600, South Korea

July 14, Wednesday	13:30~14:30	Sakura / Poster
Session QC SPINTRONICS V		

Chair: Akinobu Yamaguchi

QC-01. Improvement of MR ratio by high DC bias Voltage application in TaO_x-NOL NCMR spin-valve

K. Miyake, Y. Saki, A. Suzuki, S. Kawasaki, M. Doi, and M. Sahashi
Graduate School of Engineering, Tohoku University, Sendai, Japan

QC-02. Ion Assisted Oxidation Process in AlO_x NOL for Nanocontacts MagnetoResistive Devices

Y. Shiokawa, M. Shiota, T. Otsuka, M. Doi, and M. Sahashi
Department of Electronic Engineering, Tohoku University, Sendai 980-8579, Japan

QC-03. Angle dependence of the magnetoresistance of CCP-CPP-GMR system

T. Taniguchi^{1,2}, H. Imamura²

¹Institute of Applied Physics, University of Tsukuba, 1-1-1 Tennou-dai, Tsukuba, Ibaraki 305-8573, Japan,

²Nanotechnology Research Institute, National Institute of Advanced Industrial Science and Technology, 1-1-1 Umezono, Tsukuba, Ibaraki 305-8568, Japan

QC-04. CPP-GMR devices using Co₂Fe_{0.4}Mn_{0.6}Si Heusler alloy

J. Sato, T. Kubota, M. Oogane, H. Naganuma, Y. Ando
Department of applied Physics, Tohoku University, Sendai, Japan

QC-05. Annealing temperature dependence of magneto-transport properties in Co₂MnSi/Ag/Co₂MnSi CPP-GMR devices

K. Izumi, Y. Sakuraba, S. Bosu, K. Saito, K. Takanashi
IMR, Tohoku University, 2-1-1 Katahira, Aoba-ku, Sendai 980-8577, Japan

QC-06. Bulk scattering contribution to CPP-GMR of Co₂FeAl_{0.5}Si_{0.5}/Ag/Co₂FeAl_{0.5}Si_{0.5} trilayer

T. M. Nakatani^{1,2}, T. Furubayashi², S. Kasai², H. Sukegawa², Y. K. Takahashi², S. Mitani² and K. Hono^{2,1}

¹University of Tsukuba, Tsukuba, 305-0047, Japan, ²National Institute for Materials Science, Tsukuba, 305-0047, Japan

QC-07. Enhancement of spin asymmetry by substitution of Cr for Fe in Co₂FeSi all metal spin-valves

H. S. Goripati^{1,2}, T. Furubayashi², S. V. Karthik², Y. K. Takahashi², K. Hono^{1,2}

¹Graduate School of Pure and Applied Sciences, University of Tsukuba, Tsukuba 305-0047, Japan,

²National Institute for Materials Science, Tsukuba 305-0047, Japan

QC-08. Magnetoresistance Effect in Co₂MnSi/ Semimetallic-Fe₂VAl/CoFe Junctions

T. Kubota¹, M. Oogane¹, S. Mizukami², H. Naganuma¹, T. Miyazaki², and Y. Ando¹

¹Department of Applied Physics, Tohoku University, Sendai, 980-8579 Japan, ²WPI, Tohoku University, Sendai, 980-8579 Japan

QC-09. Magnetization alignments in Co₂MnSi/Cr/Co₂MnSi trilayers

W. Kakeno¹, T. Kida¹, S. Honda¹, J. Inoue¹, and H. Itoh²

¹Department of Applied Physics, Nagoya University, Nagoya, 464-8603, Japan, ²Department of Pure and Applied Physics, Kansai University, Suita, 564-8680, Japan

QC-10. CPP spin-valves using heat-resistant NiAl layers

N. Hase^{1,2}, T. M. Nakatani^{1,2}, B. S. D. Ch. S. Varaprasad^{1,2}, T. Furubayashi², H. Sukegawa², S. Kasai², Y. K. Takahashi² and K. Hono^{1,2}

¹Graduate School of Pure and Applied Science, University of Tsukuba, Tsukuba, Japan, ²National Institute for Materials Science, Tsukuba, Japan

QC-11. First-principles study for the electrical conduction property in Co-based Heusler alloys

Y. Kota and A. Sakuma

Department of Applied Physics, Tohoku University, Sendai, Japan

QC-12. A first-principles calculation on interface resistance of Co₂MnSi/X(001) junctions (X=Au, Ag, Al, Cr, V)

K. Futastukawa, Y. Miura, K. Abe, and M. Shirai

Research Institute of Electrical Communication, Tohoku University, 2-1-1 Katahira, Aoba ward, 980-8577 Sendai, Japan

QC-13. Preparation of highly-oriented Co₂MnSi films on a non-monocrystalline substrate using a titanium-nitride buffer layer

A. Sugihara^{1,2}, K. Yakushiji¹, S. Yuasa¹, Y. Sakuraba², K. Takanashi²

¹AIST, 1-1-1 Umezono, Tsukuba 305-8568, Japan, ²IMR, Tohoku University, 2-1-1 Katahira, Sendai 980-8577, Japan

July 14, Wednesday	13:30~14:30	Sakura / Poster
Session QD SPINTRONICS VI		

Chair: Takeshi Seki

QD-01. Reduction of L₂ ordering temperature for Fe₂(Mn,Cr)Si alloy films by VHF plasma irradiation

S.Yoshimura¹, H. Kobayashi¹, G. Egawa¹, H. Saito¹, J. Bai²

¹Faculty of Engineering & Resource Science, Akita University, Akita, 010-8502, Japan, ²Research Institute of Magnetic Materials, Lanzhou University, Lanzhou, 730000, China

QD-02. The Curie temperatures and order-disorder transition temperatures of Co₂(Ti_{1-x}Mn_x)Z (Z=Al,Ga) Heusler alloys

A. Okubo¹, R. Umetsu², K. Ishida¹ and R. Kainuma¹

¹Department of Materials Science, Graduate School of Engineering, Tohoku University, 980-8579 Sendai, Japan, ²Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, 980-8577 Sendai, Japan

QD-03. Fabrication of MnAl ferromagnetic thin films with perpendicular anisotropy

M. Hosoda¹, M. Oogane¹, H. Naganuma¹, T. Miyazaki², Y. Ando¹

¹Department of Applied physics, Graduate School of Engineering, Tohoku University, Aoba-yama 6-6-05, Sendai 980-8579, Japan, ²WPI Advanced Institute for Materials Research, Tohoku University, Katahira 2-1-1, Sendai 980-8577, Japan

QD-04. Influence of Au insertion layer on perpendicular exchange bias in Au/Co/Cr₂O₃ film

S. Kawahara, H. Noutomi, Y. Shiratsuchi and R. Nakatani

Department of Materials Science and Engineering, Graduate School of Engineering, Osaka University, 2-1 Yamadaoka, Suita, Osaka 5650871, Japan

QD -05. Interlayer exchange coupling in FeB/Ru/FeB trilayers

T. Saruya, H. Kubota, S. Yakata, K. Noma, T. Seki, K. Yakushiji, A. Fukushima, S. Yuasa, and K. Ando
National Institute of Advanced Industrial Science and Technology (AIST), 1-1-1 Umezono, Tsukuba, Japan

QD -06. Strong perpendicular magnetic anisotropy in thick CoFeB films sandwiched by Pd and MgO layers

J. H. Jung, S. H. Lim, and S. -R. Lee
Department of Materials Science and Engineering, Korea University, Seoul 136-713, Korea

QD -07. Fe₄₀Pt₄₀B₂₀ electrode for perpendicular magnetic tunnel junctions

G. -M. Choi¹, B. -C. Min¹, and K. -H. Shin¹
¹Korea Institute of Science and Technology, Seoul 136-791, Korea

QD -08. Spin Wave Stiffness Constants of Co-based Heusler Alloys

R. Y. Umetsu¹, A. Fujita², T. Kanomata³, K. Ishida² and R. Kainuma²
¹Institute for Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai 980-8577, Japan, ²Department of Materials Science, Graduate School of Engineering, Tohoku University, Sendai 980-8579, Japan, ³Faculty of Engineering, Tohoku Gakuin University, Tagajo 985-8537, Japan

QD -09. Influence of Composition on Structure and Magnetic Properties of Mn-Ga Alloy Films

F. Wu¹, S. Mizukami¹, D. Watanabe¹, E. P. Sajitha¹, H. Naganuma², M. Oogane², Y. Ando², T. Miyazaki¹
¹WPI-AIMR, Tohoku Univ. 2-1-1, Katahira, Aoba-ku, Sendai, Japan, ²Department of Applied Physics, Graduate School of Engineering, Tohoku Univ. Aobayama-05, Sendai, Japan

QD -10. Magnetic anisotropy of L1₀-ordered alloy FeNi: A first-principles study

Y. Kuwahara, Y. Miura, K. Abe, M. Shirai
Research Institute of Electrical Communication, Tohoku University, Sendai, Japan

QD -11. Microscopic magnetic moment of L1₀-FeNi observed by photoelectron emission microscopy (PEEM)

M. Kotsugi¹, M. Mizuguchi², T. Ohkouchi¹, T. Kojima², K. Takanashi², Y. Watanabe¹
¹Spring-8/JASRI, 1-1-1, Koto, Say, Hyogo, 679-5198, Japan, ²Tohoku Univ., 2-1-1, Katahira, Aoba-ku, Sendai 980-8577, Japan

QD -12. Control of magnetic anisotropy field of (001) oriented L1₀-Fe(Pd_xPt_{1-x}) films for MRAM application

S. Omiya¹, S. Yoshimura¹, G. Egawa¹, H. Saito¹, J. Bai²
¹Faculty of Engineering & Resource Science, Akita University, Akita, 010-8502, Japan, ²Research Institute of Magnetic Materials, Lanzhou University, Lanzhou, 730000, China

QD -13. Preparation by flash-evaporating technique and properties of Co-M (M = Ag, Cu, Al) granular magnetic thin films

N. A. Tuan¹, N. T. Anh¹, N. A. Tue², P. L. Minh³
¹International Training Institute for Materials Science (ITIMS), Hanoi University of Technology (HUT); 1, Dai Co Viet Rd., Hai Ba Trung Dist., Hanoi, Vietnam, ²Institute of Engineering Physics (IEP), Hanoi University of Technology (HUT); 1, Dai Co Viet Rd., Hai Ba Trung Dist., Hanoi, Vietnam, ³Department of Medicine-Physics (DMP), Hanoi Medical University (HMU); 1, Ton That Tung Rd., Hai Ba Trung Dist., Hanoi, Vietnam

July 14, Wednesday

13:30~14:30

Sakura / Poster

Session QE
MULTI-FUNCTIONAL MAGNETIC MATERIALS I

Chair: Hiroshi Naganuma

QE-01. Enhancement of magnetoelectric effect in Metglas/piezoelectric laminate composites

D. T. Huong Giang, N. X. Toan, N. V. Duc and N. H. Duc

Micro and Nano Laboratory, College of Technology, Vietnam National University, Hanoi, Vietnam

QE-02. Effect of magnetoelastic coupling in ferromagnetic/PMN-PT heterostructure

J. -H. Kim, B. -K. Jang, and S. -C. Shin

Department of Physics and Center for Nanospinics of spintronics Materials, Korea Advanced Institute of Science and Technology, Daejeon 305-701, Korea

QE-03. $\text{Bi}_{0.75}\text{Ba}_{0.25}\text{FeO}_3/\text{Ba}_{0.7}\text{Sr}_{0.3}\text{TiO}_3$ bilayered structures for multiferroic tunnel junctions

S. Tachiki, K. Yoshimoto, S. Kobayashi, Y. Takeda, K. Ueda, and H. Asano

Graduate School of Engineering, Nagoya-Univ., Furo-cho, Chikusa-ku, Nagoya, 464-8603, Japan

QE-04. Neutron and Mössbauer studies of $\text{LuFe}_{2+x}\text{O}_4$

S. B. Kim¹, I. J. Park¹, B. S. Son², and C. S. Kim¹

¹Department of Physics, Kookmin University, 136-702 Seoul, Korea, ²HANARO Center, Korea Atomic Energy Research Inst., 305-600 Deajeon, Korea

QE-05. Structural and magnetic properties of Co-doped YMn_2O_5 multiferroic oxides

S. H. Liu¹, X. Qi², and J. C. A. Huang¹

¹Department of Physics, National Cheng Kung University, Tainan 701, Taiwan, Republic of China,

²Department of Materials Science and Engineering, National Cheng Kung University, Tainan 701, Taiwan, Republic of China

QE-06. The Linearity of Giant Hall Resistance of $\text{Fe/Pt}[\text{CoFe/Pt}]_n/\text{Fe/Pt}$ Magnetic Multilayers

M. F. Liu, X. C. Song, L. R. Zhang, J. M. Bai, F. L. Wei

Key Laboratory for Magnetism and Magnetic Materials of the Ministry of Education, Research Institute of Magnetic Materials, Lanzhou University, Lanzhou, 730000, P.R. China

QE-07. Surface Plasmon Resonance in Co/Cu Sputtering films

Y. Ashizawa¹, T. Nawata², S. Shinohara², and K. Nakagawa¹

¹College of Science and Technology, Nihon University, 7-24-1 Narashino-dai, Funabashi, 274-8501 Chiba,

Japan, ²Graduate School of Science and Technology, Nihon University, 7-24-1, Narashino-dai Funabashi, 274-8501 Chiba, Japan

QE-08. Valence state of Fe and magnetic properties in $\text{SrFe}_{1-x}\text{M}_x\text{O}_{3-d}$ (M=Sc, Sn) cubic perovskites

Y. Rizki¹, J. M. Le Breton¹, Y. Bréard², A. Maignan²

¹Groupe de Physique des Matériaux, UMR CNRS 6634, Université de Rouen, 76801 Saint Etienne du Rouvray, France, ²CRISMAT, UMR 6508 CNRS ENSICAEN, 14050 Caen, France

QE-09. Synthesize and research $\text{Fe}_3\text{O}_4@\text{Au}$ core – shell nanostructure, potentially applications in biomedicine.

H. H. Tran¹, K. V. Le¹, H. P. Le¹, N. L. Tran¹, D. L. Bui¹, Q. H. Bui¹, N. B. Nguyen¹, Q. V. Phan², and T. K. Truong¹

¹Ho Chi Minh City Institute of Physics, 01 Mac Dinh Chi str, Distr 01, Ho Chi Minh City, VietNam, ²University of Can Tho, Can Tho City, VietNam

QE-10. Magnetocaloric effect in melt-spun $\text{Ni}_{50-x}\text{Mn}_{35}\text{Co}_x\text{In}_{15}$ ribbons

W. Guan, B. Gao, Q. R. Liu, S. Yang, X. P. Song

MOE Key Laboratory for Nonequilibrium Synthesis and Modulation of Condensed Matter & State Key Laboratory for Mechanical Behaviour of Materials, Xi'an Jiaotong University, Xi'an 710049, China

QE-11. Inverse Magnetocaloric Effect In Ni-Mn-Sn Melt Spun RibbonsB. D. Ingale¹, S. I. Patil¹ and S. Ram²¹Advanced Materials Processing Laboratory, Department of Physics, University of Pune, 411 007, India,²Materials Science Centre, Indian Institute of Technology - Kharagpur, Kharagpur 721 302, India**QE-12. Magnetic properties of Cu-substituted Ni - Mn - Ga ferromagnetic shape memory alloys**K. Endo¹, N. Kudo¹, T. Kanomata¹, H. Nishihara², T. Shishido³, M. Nagasako⁴, R. Y. Umetsu⁴, R. Kainuma⁴ and M. Kataoka⁵¹Faculty of Engineering, Tohoku Gakuin University, Tagajo 985-8537, Japan, ²Faculty of Science and Technology, Ryukoku University, Otsu 520-2194, Japan, ³Institute for Materials Research, Tohoku University, Sendai 980-8577, Japan, ⁴Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai 980-8577, Japan, ⁵Department of Basic Sciences, Faculty of Science and Engineering, Ishinomaki Senshu University, Ishinomaki 986-8580, Japan**QE-13. Heat Capacity of $\text{Ni}_{50}\text{Mn}_{37}(\text{In}_{0.2}\text{Sn}_{0.8})_{13}$ Alloy**S. M. Podgornykh¹, E. G. Gerasimov¹, N. V. Mushnikov¹, T. Kanomata²¹Institute of Metal Physics, Ural Division of RAS, Ekaterinburg, 620041, Russia, ²Department of Applied Physics, Tohoku Gakuin University, Tagajo, Miyagi 985, Japan**QE-14. Magnetocaloric effect of the Gd-LRE-Al-(Co, Fe) (LRE=La, Ce, Pr, Nd) glassy ribbons in the intermediate temperature**Y. K. Fang^{1,2}, C. H. Lai¹, C. C. Hsieh¹, X. G. Zhao³, H. W. Chang⁴, W. C. Chang¹ and W. Li²¹Department of Physics, National Chung Cheng University, Chia-Yi, Taiwan, ²Division of Functional Materials Research, CISRI, Beijing, 100081 China, ³Shenyang National Laboratory for Materials Science, Institute of Metal Research, and International Centre for Materials Physics, CAS, Shenyang 110016, China, ⁴Department of Physics, Tunghai University, Taichung, Taiwan.

July 14, Wednesday	13:30~14:30	Sakura / Poster
Session QF		
SENSOR, RF AND POWER APPLICATIONS		

Chair: Kenji Nakamura

QF-01. Evaluation of the complex permeability behaviours of magnetic nanorod filled in compositesB. Nam¹, S. K. Lee², J. Kim³ and K. H. Kim¹¹Dept. of Physics, Yeungnam University, Gyeongsan, 712-749, Korea, ²Korea Institute of Materials Science, Changwon, 641-010, Korea, ³Dept. of Material Engineering, Hanyang University, Ansan, 426-791, Korea**QF-02. Optical absorption and magnetic anisotropy of epitaxial Au nanostructures on Si(100)**

M. H. Wu, S. F. Yeh, C. I. Lin, Z. Y. Yu, G. H. Chen, and Y. L. Huang

Department of Physics, National Dong Hwa University, Hualien 97401, Taiwan

QF-03. Evaluations of the multilayer chip inductor with air gapM. Kim¹, J. Kim¹, B. Nam¹, S. G. Cho², J. Kim², K. H. Kim¹¹Dept. of Physics, Yeungnam University, Gyeongsan, 712-749, Korea, ²Dept. of Material Engineering, Hanyang University, Ansan, 426-791, Korea

QF-04. Magnetic Field Sensitivity of Ring Type AMR Sensor in Exchange Biased F/AF BilayersD. Y. Kim¹, C. G. Kim², T. Q. Hung², S. S. Yoon¹¹Department of Physics, Andong National University, Andong, 760-749, Korea, ²Department of Materials Science and Engineering, Chungnam National University, Daejeon, 305-764, Korea**QF-05. Scanning system using thin film sensor for measuring magnetic field distribution**S. Yabukami¹, K. Kojima¹, T. Ozawa², N. Kobayashi³, T. Nakai⁴, K. I. Arai³, K. Kato¹¹Tohoku-Gakuin University, Tagajo, 985-8537, Miyagi, Japan, ²Sendai National College of Technology, Natori, 981-1239, Miyagi, Japan, ³Research Institute for Electric and Magnetic materials, Sendai, 982-0807, Japan, ⁴Industrial Technology Institute, Miyagi Prefectural Government, Sendai, 981-3206, Miyagi, Japan**QF-06. Fabrication of micro-patterned magnetoimpedance sensitive ribbon for micromagnetic devices**A. -T. Le¹, N. V. Quy⁴, P. D. Tam¹, N. Q. Hoa², M. -H. Phan³, N. V. Hieu⁴¹Department of Nanoscience and Nanotechnology, Hanoi Advanced School of Science and Technology (HAST), 40 Ta Quang Buu street, Hanoi, Vietnam, ²Center for Materials Science, Vietnam National University, Hanoi, Vietnam, ³Department of Physics, University of South Florida, Tampa, FL 33620, USA, ⁴International Training Institute of Materials Science (ITIMS), Hanoi University of Technology, Vietnam**QF-07. Repeatable Shape Memory Effect and Mechanical Resonance of TiNiCu Alloy Coated Magnetic Ribbons**O. Ishii¹, Y. Miyahara¹, S. Kambe¹, N. Kutsuzawa¹, A. Ishida²¹Yamagata University, Yonezawa, Yamagata 992-8510, Japan, ²National Institute for Materials Science, Tsukuba, Ibaraki 305-0047, Japan**QF-08. Detection signal dependency of the metallic crack width by inductive planar magnetic field sensor**

J. Lee, Y. -j. Cha, B. Nam, K. H. Kim

Department of Physics, Yeungnam University, Gyeongsan, 712-749, Korea

QF-09. Orthogonal fluxgate sensor fabricated with ferrite coreS. Choi¹, H. Kim², Y. H. Kim³, C. S. Yang⁴, and K. H. Shin¹¹School of Electronics and Information Communication Engineering, Kyungsoo University, Pusan, Korea, ²LIGNEX1 Co., Yong-In R&D Center, Yong-In, Korea, ³Department of Electrical Engineering, Pukyong National University, Pusan, Korea, ⁴Agency for defense development, Jinhae, Korea**QF-10. Observation of the field induced reverse transformation for a NiCoMnIn film by the high field X-ray diffraction measurements at high temperature**Y. Mitsui¹, K. Koyama², M. Ohtsuka³, R. Y. Umetsu³, R. Kainuma³, and K. Watanabe¹¹High Field Laboratory for Superconducting Materials, IMR, Tohoku University, Sendai, 980-8577, Japan, ²Graduate School of Science and Engineering, Kagoshima University, Kagoshima, 890-0065, Japan, ³Institute for Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, 980-8571, Japan**QF-11. Magnetic Investigation of the Effect of Ion Energy on the Irradiated Amorphous Ribbon using Signal Processing Techniques**H. Song¹, D. -g. Park¹¹Korea Atomic Energy Research Institute, Daejeon, Korea**QF-12. Manufacturing MgO Coated Fe Powder Compressed Cores**P. Jang¹, G. Choi²¹Division of Information Technology, Cheongju University, Cheongju, 360-764, Korea, ²R&D Center, Changsung Corp., Namdong Industrial Area, Incheon 405-100, Korea

QF-13. Effect of Variable Electrical Conductivity on Magneto-Convection inside an EnclosureM. Pirmohammadi¹, M. Ghassemi²¹Research Management of R & D Deputy, Mapna Group, Tehran, Iran, ²Mechanical Engineering Department, K.N Toosi University of Technology, Tehran, Iran**QF-14. Design of Rotor Shape to Reduce Torque Ripple in IPM Motors**C. -C. Hwang¹, C. -M. Chang², P. -L. Li², C. -T. Liu³¹Dept. of EE, Feng Chia University, Taichung 407, Taiwan, ²Ph.D. Program in ECE, Feng Chia University, Taichung 407, Taiwan, ³Dept. of EE, National Sun Yat-sen University, Kaohsiung 804, Taiwan**QF-15. Optimal Design of a Direct Driven Slotless Tubular Linear Generator for Renewable Energy Extraction**C. -T. Liu¹, H. -N. Lin¹, H. -C. Yeh¹, C. -M. Lin¹, and C. -C. Hwang²¹Dept. of Electrical Eng., National Sun Yat-Sen University, Kaohsiung 80424, Taiwan, ²Dept. of Electrical Eng., Feng Chia University, Taichung 40724, Taiwan**QF-16. Optimal Design of an IPM Motor Using Taguchi and Rosenbrock's Methods**C. -C. Hwang¹, P. -L. Li², C. -M. Chang², C. -T. Liu³¹Dept. of EE, Feng Chia University, Taichung 407, Taiwan, ²Ph.D. Program in ECE, Feng Chia University, Taichung 407, Taiwan, ³Dept. of EE, National Sun Yat-sen University, Kaohsiung 804, Taiwan**QF-17. Centrifugal Force Based Magnetic Micro-Pump Driven by Rotating Magnetic Fields**S. H. Kim¹, S. Hashi¹, K. Ishiyama¹¹Research Institute of Electrical Communication, Tohoku University, 2-1-1 Katahira, Aoba-ku, Sendai 980-8577, Japan**QF-18. Reluctance Network Analysis of a Linear Parametric Induction Motor**

K. Tajima

Dept. of Electrical and Electronics Eng., Akita Univ., 010-8502 Akita, Japan

QF-19. Design and performance assessment of active magnetic bearing for flywheel energy storage systemJ. -P. Lee¹, S. -C. Han¹, Y. -H. Han¹, B. -C. Park¹, and T. -H. Sung²¹Korea Electric Power Research Institute, Daejeon, Korea, ²Hanyang University, Seoul, Korea

July 14, Wednesday

13:30~14:30

Sakura / Poster

Session QG

MATERIALS FOR BIO/MEDICAL AND NEW APPLICATIONS

Chair: Kwang-Ho Shin

QG-01. Applicability of radioactive ^{99m}Tc-O₄⁻ magnetic fluid to nuclear medicineJ. -H. Kim¹, S. -M. Kim², K. -H. Kim², C. - O. Kim¹¹Research Center for Advanced Magnetic Materials, Chungnam National University, Daejeon 305-764, Korea, ²Dept. of Nuclear Medicine, Chungnam National University Hospital, Daejeon 301-721, Korea**QG-02. "On-off" Switchable Surface with Self-Heating System Using Thermo-Responsive Polymer and Inductive Heating for Separation of Bioactive Compounds**H. Yagi^{1,2}, M. Ebara², K. Yamamoto¹, T. Aoyagi^{1,2,3}¹Graduate School of Science and Engineering, Kagoshima University, 1-21-40, Korimoto, Kagoshima 890-0065, Japan, ²Biomaterials Center, National Institute for Materials Science, 1-1 Namiki, Tsukuba, Ibaraki 305-0044, Japan, ³Graduate School of Pure and Applied Science, University of Tsukuba, 1-1-1 Tenodai, Tsukuba, Ibaraki 305-8571, Japan

QG-03. Self-heating Properties of Magnetic Nanoparticles Measured by Using Large Excitation Coil

S. Hatsugai, K. Ueda, H. Kobayashi, A. Tomitaka, T. Yamada and Y. Takemura

*Division of Electrical and computer Engineering, Yokohama National University, Yokohama-City, 240-8501, Kanagawa, Japan***QG-04. Self-heating evaluation and magnetic property of different size magnetic nanoparticles**K. Ueda¹, H. Kobayashi¹, S. Hatsugai¹, A. Tomitaka¹, T. Yamada¹, M. Jeun², S. Bae², and Y. Takemura¹¹*Yokohama National University, Yokohama-City, 240-8501, Kanagawa, Japan,* ²*National University of Singapore, Singapore***QG-05. Magnetic accumulation of magnetic nanoparticles in microfluidic channel for drug delivery system**

K. Ohsawa, H. Hirata, Y. Kitamoto

*Department of Innovative and Engineered Materials, Tokyo Institute of Technology, Yokohama, 226-8502, Japan***QG-06. Immobilizing of HPV-18 antibodies and E Coli O157: H7 on magnetic nanoparticles Fe₃O₄ with SiO₂ Coating for early diagnosis of cervical cancer and Diarrhea**H. H. Tran^{1,3}, V. T. N. Phan², T. K. Truong¹, H. P. Le¹, K. V. Le¹, Q. H. Bui¹, V. H. Bui², D. L. Bui¹, N. B. Nguyen¹, A. K. H. Le², and Q. H. ThiVu⁴¹*Ho Chi Minh City Institute of Physics, 01 Mac Dinh Chi St, 01 Dist, Ho Chi Minh City, Vietnam,* ²*Can Tho University, Can Tho City, Vietnam,* ³*Ho Chi Minh City University of Technology, 144/24 Dien Bien Phu St, Binh Thanh Dist, Ho Chi Minh City, Vietnam,* ⁴*Pasteur Institute Ho Chi Minh City, 167 Pasteur Street, 8 Ward, 3 District, Ho Chi Minh City***QG-07. Analytical method for artifact-metric authentication system using magnetically labeled pattern**

T. Yajima, S. Sonoda, T. Yamada, T. Matsumoto and Y. Takemura

*Yokohama National University, Yokohama, 240-8501, Japan***QG-08. AC magnetic properties of magnetic fluids for magnetic hyperthermia**

S. Matsushita, Y. Kitamoto

*Department of Innovative and Engineered Materials, Tokyo Institute of Technology, Midori-ku, Yokohama, 226-8502, Japan***QG-09. Effect of nitrogen contents on the high-frequency characteristics and magnetic properties of FeHfN films**Y. -M. Kuo¹, J. -G. Duh¹¹*Department of Material Science and Engineering, National Tsing Hua University, Hsinchu 30013, Taiwan***QG-10. A Study on Electrical and Magnetic Characterization of Co₈₇Zr₅Nb₈ Films for High-Q On-chip Inductors**M. S. Hadi¹, K. Kakushima², P. Ahmet¹, K. Tsutsui², A. Nishiyama², N. Sugii², K. Natori¹, T. Hattori¹, Y. Kitamoto², and H. Iwai¹¹*Frontier Research Center, Tokyo Institute of Technology, Yokohama 226-8502, Japan,* ²*Interdisciplinary Graduate School of Science and Engineering, Tokyo Institute of Technology, Yokohama 226-8502, Japan***QG-11. Chemical synthesis of gold coated FePt nanoparticles with hydrophilic chains**D. H. Wei¹, P. H. Chen¹, Y. D. Yao², D. S. Hung³, J. W. Wang⁴, and C. S. Ho⁴¹*Department of Mechanical Engineering, National Taipei University of Technology, Taipei 106, Taiwan,* ²*Institute of Applied Science and Engineering, Fu Jen University, Taipei 242, Taiwan,* ³*Department of Information and Telecommunications Engineering, Ming Chuan University, Taiwan,* ⁴*Department of Chemical Engineering, Tunghai University, Taichung 407, Taiwan*

QG-12. Changes in Electrical and Magnetic Properties of Electroplated Cu-Ni Thin Film by an Organic Additive

D. Keum, Y. Ryu, and K. Hong

*Department of Physics, Chungnam National University, 220 Gung-dong, Yuseong-gu, Daejeon, 305-764, Korea***QG-13. Surface Analysis of Ion Irradiated Amorphous Ribbon by GIXD and NEXAFS**D. G. Park¹, C. S. Angani^{1,2}, G. D. Kim¹, C. G. Kim², Y. M. Cheong¹¹*Nuclear Material research Division, Korea Atomic Energy Research Institute, Daejeon, South Korea, ²Dept. of Material science Engineering, Chungnam National University, Daejeon, South Korea***QG-14. Magnetic properties of maghemite-multiwalled carbon nanotubes nanocomposites**

T. Kanazawa, J. Okumura, X. Liu, A. Morisako

*Department of Information Engineering, Shinshu University, 4-17-1 Wakasato, Nagano, Japan***QG-15. A New Manufacturing Method for Fe-Si Magnetic Powders Using Modified Pack-Cementation Process**J. Y. Byun¹, J. W. Kim¹, and P. Jang²¹*Korea Inst. of Sci. & Tech., #39-1 Haweolgok-dong Sungbuk-gu, SEOUL 136-791, Korea, ²Division of Information Tech., Cheongju University, Cheongju 360-764, Korea***QG-16. Change of magnetic properties of Ni²⁺ integrated PfV by reduction of Ni²⁺ ions**K. Tachibori¹, F. Nishiura¹, A. Higashiura², Y. Shiratsuchi¹, A. Nakagawa², R. Nakatani¹, T. Tsukihara², and M. Yamamoto¹¹*Grad. Sch. of Eng., Osaka Univ., 2-1 Yamadaoka Suita, Osaka 565-0871, Japan, ²Inst. for Protein Research, 3-2 Yamadaoka, Suita, Osaka 565-0871, Japan***QG-17. Effects of annealing on the magnetic dead layer thickness of CoFeB in unit structures relevant to a MgO-based magnetic tunnel junction**

S. Y. Jang, S. H. Lim, and S. -R. Lee

*Department of Materials Science and Engineering, Korea University, Seoul 136-713, Korea***QG-18. Magnetomechanical damping and domain structure in (Fe₈₃Ga₁₇)_{97.25}Cr₂B_{0.75} alloy**

M. Fang, J. Zhu

State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, Beijing 100083, P. R. China

July 14, Wednesday

14:30~16:00

Tachibana / Oral

Session CX
STRUCTURED MATERIALS III*Chair: Andrew Pratt, Seiji Mitani*

14:30

CX-01*(Invited) Antiferromagnetic coupling between α -Fe and spinel ferrite (001) films with and without MgO spacers

H. Yanagihara, Y. Toyoda, and E. Kita

Institute of Applied Physics, University of Tsukuba, Tsukuba, 305-8573, Ibaraki, Japan

15:00

CX-02. Interlayer coupling in tunnel junctions with perpendicular magnetic anisotropy

L. E. Nistor, B. Rodmacq, S. Auffret, A. Schuhl, M. Chshiev and B. Dieny
 SPINTEC, UMR-8191, CEA-INAC/ CNRS/UJF-Grenoble 1/Grenoble-INP, 17 Avenue des Martyrs, 38054
 GRENOBLE Cédex 9, France

15:15

CX-03. Exchange Anisotropy Strength of γ -Mn-Ir / (Fe-Co, Co-Ni, Ni-Fe) bilayers with ultra-thin antiferromagnetic layer

H. Takahashi, M. Tsunoda, and M. Takahashi
 Department of Electronic Engineering, Tohoku University, Aobayama 6-6-05, Sendai 980-8579, Japan

15:30

CX-04. Compositional Dependence of KAF in IrMn Thin Films

N. P. Aley¹, J. Agnew², B. Lafferty², and K. O'Grady
¹Department of Physics, The University of York, York, YO10 5DD, UK, ²Seagate Technology N. Ireland, Springtown, Derry, N. Ireland, UK

15:45

CX-05. Effect of a nano CoO capping layer on the magnetization reversal and interlayer coupling in the Co/Pt/Co trilayer with perpendicular anisotropy

Z. Y. Liu, L. Lei, F. S. Wen, B. Xu, D. L. Yu, J. L. He, Y. J. Tian
 State Key Lab of Metastable Materials Science & Technology, Yanshan University, Qinhuangdao 066004, China

Coffee Break 16:00-16:15

July 14, Wednesday	16:15~17:30	Tachibana / Oral
Session CX STRUCTURED MATERIALS IV		

Chair: Andrew Pratt, Seiji Mitani

16:15

CX-06*(Invited) Tuning perpendicular magnetic anisotropy by applied voltage in a ferromagnetic/piezoelectric stack

N. Lei, P. Lecoeur, D. Ravelosona and C. Chappert
 Institut d'Electronique Fondamentale, UMR CNRS 8622, Université Paris Sud, 91405 Orsay Cedex, France

16:45

CX-07. Structure related oxidation efficiency and magnetic properties of Fe/Pt(111)

J. S. Tsay and H. C. Jhang
 Department of Physics, National Taiwan Normal University, Taipei 116, Taiwan

17:00

CX-08. Polarization Oscillation of Surface Magneto-optic Faraday Effect on Co/ZnO and CoNx/ZnO Semiconductor Surfaces

C. -W. Su¹, S. -C. Chang¹, Y. -C. Chang¹
¹Department of Applied Physics, National Chiayi University, Chiayi 60004, Taiwan

17:15

CX-09. Hysteresis Loop Design by Geometry of Garnet Film Element with Single Domain Wall

V. Skidanov, P. Vetoshko, A. Stempkovskiy
 Institute for Design Problems in Microelectronics RAS, 124681 Moscow, Russia

July 14, Wednesday	14:30~16:00	Hagi / Oral
Session CY MAGNETIC IMAGING AND NOVEL INSTRUMENTATIONS I		

Chair: Wulf Wulfhekel, Kanta Ono

14:30

CY-01*(Invited) STM applications for spintronics: beyond magnetic imaging

W. Wulfhekel

Physikalisches Institut & Center for Functional Nanostructures (CFN), Karlsruhe Institute of Technology (KIT), 76131 Karlsruhe, Germany

15:00

CY-02. STM study of FePt(001) film

T. Kawagoe¹, M. Mizuguchi², S. Mitani³ and K. Takanashi²

¹Division of Natural Science, Osaka Kyoiku University, Osaka 582-8582, Japan, ²Institute for Materials Research, Tohoku University, Sendai 980-8577, Japan, ³National Institute for Material Science, Tsukuba 305-0047, Japan

15:15

CY-03. MFM Observation of Neodymium Magnets for Electric Automobile with Ultra High Coercivity Probe in Vacuum Environment

T. Yamaoka¹, H. Tsujikawa¹, R. Hirose¹, H. Kawamura² and A. Ito²

¹SII NanoTechnology Inc., 2-15-5 Shintomi, Chuo-ku, Tokyo 104-0041, Japan, ²Nitto Optical Co., Ltd., Nitto Bldg. 1-14-18 Kudankita, Chiyoda-ku, Tokyo 102-0073, Japan

15:30

CY-04. Second harmonic generation scanning microscopy of Co-embedded multiferroic BiFeO₃ films

J. -W. Jeong¹, J. -H. Park, J. -W. Kim, K. -D. Lee, S. -H. Kim and S. -C. Shin

Department of Physics and Center for Nanospinics of spintronics Materials, Korea Advanced Institute of Science and Technology, Daejeon 305-701, Korea

15:45

CY-05. Direct Measurement for Electric Resistance of Ferromagnetic Metal-Nanocontact in Oxide Layer

M. Sahashi, Y. Watanabe, S. Kawasaki, K. Miyake

Graduate School of Engineering, TOHOKU University, Sendai, 980-8579 Japan

Coffee Break 16:00-16:15

July 14, Wednesday	16:15~17:30	Hagi / Oral
Session CY MAGNETIC IMAGING AND NOVEL INSTRUMENTATIONS II		

Chair: Wulf Wulfhekel, Kanta Ono

16:15

CY-06*(Invited) Sub-nm Resolution Depth Profiling of the Magnetic Structure of Thin Films by the Depth-Resolved X-ray Magnetic Circular Dichroism Technique

K. Amemiya^{1, 2}

¹*Institute of Materials Structure Science, High Energy Accelerator Research Organization, Tsukuba-City, 305-0801 Ibaraki, Japan,* ²*JST-CREST*

16:45

CY-07. A New Polarized Neutron Reflectometer at Materials and Life Science Facility of J-PARC as a Nondestructive Tool for Studies on the Magnetic Thin Films

M. Takeda^{1,2,3}, D. Yamazaki^{1,2}, K. Soyama^{1,2}, R. Maruyama², T. Hirano⁴

¹*Quantum Beam Science Directorate, Japan Atomic Energy Agency, Tokai, 319-1195 Ibaraki, Japan,*

²*J-PARC Center, Tokai, 319-1195 Ibaraki, Japan,* ³*New Industry Creation Hatchery Center, Tohoku University, Sendai, 980-8579 Miyagi, Japan,* ⁴*Hitachi Research Laboratory, Hitachi Ltd., Hitachii, 319-1292 Ibaraki, Japan*

17:00

CY-08. Advanced electron microscopy studies of magnetic semiconductors

A. Kovács¹, T. Kasama¹, R. E. Dunin-Borkowski¹, B. Faina², T. Li², A. Navarro-Quezada², M. Godlewski³, E. Guziewicz³, M. Lukasiewicz³ and T. Dietl^{3, 4}

¹*Center for Electron Nanoscopy, Technical University of Denmark, Kgs. Lyngby 2800, Denmark,* ²*Institute for Semiconductor and Solid State Physics, Johannes Kepler University, A-4040 Linz, Austria,* ³*Institute of Physics, Polish Academy of Sciences, al. Lotników 32/46, 02-668 Warsaw, Poland,* ⁴*Institute of Theoretical Physics, University of Warsaw, PL-00-681 Warszawa, Poland*

17:15

CY-09. High Field Differential Thermal Analysis for MnBi in fields up to 26 T

Y. Mitsui¹, K. Koyama², Y. Ikehara¹, and K. Watanabe¹

¹*High Field Laboratory for Superconducting Materials, IMR, Tohoku University, Sendai, 980-8577, Japan,*

²*Graduate School of Science and Engineering, Kagoshima University, Kagoshima, 890-0065, Japan*

July 15, Thursday	9:00~10:30	Tachibana / Oral
Session DX MATERIALS FOR NOVEL APPLICATIONS I		

Chair: Ki Hyeon Kim, Fumihiro Sato

9:00

DX-01*(Invited) Rare-Earth Free Permanent Magnet Reluctance Generator with High Power and Efficiency

K. Nakamura¹, J. Yoshida¹, O. Ichinokura¹

¹Graduate School of Engineering, Tohoku University, 6-6-05 Aoba Aramaki Aoba-ku, Sendai, Japan

9:30

DX-02. Development of a Switched Reluctance Motor made of Permendur

Y. Hasegawa¹, K. Nakamura¹, O. Ichinokura¹

¹Graduate School of Engineering, Tohoku University, 6-6-05 Aoba Aramaki Aoba-ku, Sendai, Japan

9:45

DX-03*(Invited) Evaluation of micro magnetostrictive actuator using Galfenol under tensile stress

T. Ueno, H. Miura, S. Yamada

University of Kanazawa, Kanazawa-City, Ishikawa, Japan

10:15

DX-04. Magnetocaloric effect in (Tb, Dy, R) (Co, Fe)₂ (R = Ho, Er) multicomponent compounds

I. S. Tereshina^{1,2}, G. A. Politova^{1,2}, E. A. Tereshina³, S. A. Nikitin⁴, G. S. Burkhanov¹, O. D. Chistyakov¹

¹Baikov Institute of Metallurgy and Materials Science RAS, Moscow 119991, Russia, ²International Laboratory of High Magnetic Fields and Low Temperatures, Wroclaw 53-421, Poland, ³Institute of Physics ASCR, Prague 18221, Czech Republic, ⁴Lomonosov Moscow State University, Moscow 119991, Russia

Coffee Break 10:30-10:45

July 15, Thursday	10:45~12:30	Tachibana / Oral
Session DX MATERIALS FOR NOVEL APPLICATIONS II		

Chair: Ki Hyeon Kim, Fumihiro Sato

10:45

DX-05*(Invited) Magnetic-Field Tunable Transmittance in a Ferrofluid-Filled SiN Photonic Crystal Slab

H. -M. Lee, G. -H. Chen, J. -C. Wu

Department of Physics, National Changhua University of Education, Changhua 500, Taiwan

11:15

DX-06. Synthesis and characterization of Magnetic-Optical Fe@Au Core-Shell Nanoparticles

M. Alagiri, C. Muthamizhchelvan and S. Ponnusamy

Center for Material science and Nano devices, Department of Physics, SRM University, Kattankulathur, Kancheepuram (Dt)-603203, Tamil Nadu, India

11:30

DX-07. The magnetic properties of FeHfN/NiZn ferrite bilayers

Z. -S. Wang, Y. -M. Kuo, Y. -T. Lai and J. -G. Duh

Department of Material Science and Engineering, National Tsing Hua University, Hsinchu 30013, Taiwan

11:45

DX-08. Fabrication and application of a wireless inductance-capacitance coupling microsensor with electroplated high permeability material NiFeY. -H. Chen¹, H. -C. Chang², C. -C. Lai², I. -N. Chang¹¹*The Graduate Institute of Electrical and Communications Engineering, Ph. D. Program, Feng-Chia University, Taichung 40724, Taiwan, ROC*, ²*Department of Automatic Control Engineering, Feng-Chia University, Taichung 40724, Taiwan, ROC*

12:00

DX-09. Effect of magnetic nanoparticles of Fe in magnetic rubberY. R. Uhm¹, J. Kim¹, J. Jung¹, S. Lee¹, S. Lee¹, C. K Rhee¹, C. S. Kim²¹*Nuclear Materials Research Division, Korea Atomic Energy Research Institute (KAERI), Daejeon, 305-353 Korea*, ²*Nano-electro Physics, Kookmin University, Seoul 136-702, Korea*

12:15

DX-10. Influence of magnet arrays on the electrodeposition of copper and cobalt.

P. Dunne, L. Mazza, J. M. D. Coey

School of Physics & CRANN, Trinity College Dublin, Ireland

Lunch 12:30-13:30

July 15, Thursday	9:00~10:30	Hagi / Oral
Session DY MAGNETIC STORAGE I		

Chair: Chih-Huang Lai, Masaaki Futamoto

9:00

DY-01*(Invited) Bit patterned media with ridge-and-groove servo pattern consisting of self-assembled dots

A. Kikitsu, Y. Kamata, N. Kihara, S. Morita, K. Kimura and H. Izumi

Corp. R&D Center, Toshiba Corp., Kawasaki-City, 212-8582 Kanagawa, Japan

9:30

DY-02*(Invited) Micromagnetic Study on Microwave-Assisted Magnetic Recording in Perpendicular Medium with Intergrain Exchange CouplingY. Nozaki¹, A. Kato¹, K. Noda¹, Y. Kanai², T. Tanaka¹, K. Matsuyama¹¹*ISEE, Kyushu University, Motoooka 744, Nishi-ku, Fukuoka 819-039, Japan*, ²*Department of Information and Electronics Engineering, Niigata Institute of Technology, Kashiwazaki, 945-1195, Japan*

10:00

DY-03. MR ratio and RA design of CPP-MR film for 2.5-5Tb/in² read sensors

M. Takagishi, H. Iwasaki, K. Yamada, H. N. Fuke, S. Hashimoto

Research and Development Center, Toshiba Corp

10:15

DY-04. High-Data-Transfer-Rate Read Heads Composed of Spin-Torque Oscillatoes

K. Mizushima, K. Kudo, T. Nagasawa, R. Sato

Corporate Research & Development Center, Toshiba Corporation, 1 Komukai-Toshiba-cho, Saiwai-ku, Kawasaki-shi, 212-8582, Japan

Coffee Break 10:30-10:45

July 15, Thursday

10:45~12:30

Hagi / Oral

Session DY
MAGNETIC STORAGE II*Chair: Chih-Huang Lai, Masaaki Futamoto*

10:45

DY-05*(Invited) Directly Probing Magnetization Reversal of Exchange Coupled Composite Media by XMCDH. -C. Hou¹, C. -H. Lai¹, H. -J. Lin² and F. -H. Chang²¹*Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, 30013, Taiwan,*²*National Synchrotron Radiation Research Center, Hsinchu, 30076, Taiwan*

11:15

DY-06. Enhanced Magnetic Properties of Self-Assembled FePt Nanoparticles with Ag Shell

D. Wang, L. Y. Lu, X. G. Xu, Q. Zhan, J. Miao, Y. Jiang

School of Materials Science and Engineering, University of Science and Technology Beijing, Beijing 100083, China

11:30

DY-07. L₁₀-Ordered FePtAgC Granular Film for Perpendicular Magnetic Recording Media

L. Zhang, Y. K. Takahashi, and K. Hono

National Institute for Materials Science, 1-2-1 Sengen, Tsukuba 305-0047, Japan

11:45

DY-08. Effect of Addition of MgO and SiO₂ on L₁₁ Ordering of CoPt Thin FilmsC. -F. Huang¹, A. -C. Sun¹, F. -T. Yuan², J. -H. Hsu³¹*Department of Chemical Engineering & Materials Science, Yuan Ze University, Chung-Li, 32003, Taiwan,*²*Institute of Physics, Academia Sinica, Nankang, Taipei, 116, Taiwan,* ³*Institute of Applied Physics & Center for Nanostaorge Research, National Taiwan Univiersity, Taipei, 106, Taiwan*

12:00

DY-09. Switching Field Reduction in FePt/FeRh/FeCo Exchange Spring Trilayers

T. J. Zhou, Z. M. Yuan, and B. Liu

*Data Storage Institute, A*STAR (Agency for Science, Technology and Research), 5 Engineering Drive 1 (off Kent Ridge Crescent, NUS), Singapore 117608*

12:15

DY-10. Simulation of position sensitivity of the anomalous Hall effect on a single magnetic dotJ. de Vries¹, M. Delalande¹, L. Abelman¹, M. Alexandrou², F. Schedin², P. Nutter², E. Hill², T. Thomson²¹*Mesa+ Research institute, University of Twente, 7500 AE Enschede, NL,* ²*Centre for Mesoscience and Nanotechnology, University of Manchester, Manchester, M13 9PL, England*

July 15, Thursday

13:30~14:30

Sakura / Poster

Session RA
ELECTRONIC STRUCTURE AND COOPERATIVE PHENOMENA I

Chair: Osamu Kitakami

RA-01. Morphotropic phase boundary in ferromagnets – a way leading to large magnetostriction

S. Yang^{1, 2}, H. Bao^{1, 2}, C. Zhou^{1, 2}, Y. Wang^{1, 2}, X. Ren², Y. Matsushita³, Y. Katsuya³, M. Tanaka³, K. Kobayashi³, X. Song¹, J. Gao⁴

¹Multi-disciplinary Materials Research Center, State Key Laboratory for Mechanical Behaviour of Materials & MOE Key Laboratory for Nonequilibrium Synthesis and Modulation of Condensed Matter, Xi'an Jiaotong University, Xi'an 710049, China, ²Ferroic Physics Group, National Institute for Materials Science, Tsukuba 305-0047, Ibaraki, Japan, ³National Institute for Materials Science, Beamline BL15XU, Spring-8, 1-1-1 Kohto, Sayo-cho, Hyogo 679-5148, Japan, ⁴Key Lab of Electromagnetic Processing of Material, Northeastern University, 3-11 Wenhua Road, Shenyang 110004, China

RA -02. Advances in Long-Range Corrected Hybrid Density Functionals

J. -D. Chai^{1, 2, 3}, M. Head-Gordon^{1, 2}

¹Department of Chemistry, University of California, Berkeley, Berkeley, CA 94720, USA, ²Chemical Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, CA 94720, USA, ³Department of Physics, National Taiwan University, Taipei 10617, Taiwan

RA -03. First-principles calculation of the thermoelectric power of ferromagnets

K. Yanagimura, Y. Kota and A. Sakuma

Department of Applied Physics, Tohoku University, Sendai, Japan

RA -04. Mean Field Study of the Antiferromagnetism and Superconductivity in an Electron-doped Two-Dimensional t-U-V Model

K. -K. Voo

Department of Communication Engineering, Oriental Institute of Technology, Banqiao City, Taipei County 22061, Taiwan

RA -05. Room temperature ferromagnetism coexisting with spin dimerization in dodecylamine-intercalated vanadium oxide nanosheets

H. Kweon, K. W. Lee, and C. E. Lee

Department of Physics and Institute for Nano Science, Korea University, Seoul 136-713, Korea

RA -06. Control of magnetism in Pd thin films by electric field

S. Aihara¹, T. Sato¹

¹Department of Applied Physics and Physico-Informatics, Faculty of Science and Technology, Keio University, 3-14-1, Hiyoshi, Yokohama, 223-8522, Japan

RA -07. The manifestation of magnetic properties on proton irradiated langasite structure

S. W. Hyun, S. J. Kim, C. S. Kim

Department of Physics, Kookmin University, JeungNeung-Dong, 136-702 Seoul, Korea

RA -08. The Modified Ferromagnetic Property of Mn₂Ga₅ film Stabilized on GaSb (111) Substrate

W. Feng, D. V. Thiet, D. D. Dung, Y. Shin, and S. Cho

Department of Physics, University of Ulsan, Ulsan 680-749, Republic of Korea

RA -09. Magnetic properties of Si/MnSi_{1.7} multilayered films

Y. Fujita, E. Ohta

*Department of Applied Physics and Physico-Informatics, Keio University, 3-14-1 Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan***RA -10. Transition from weak ferromagnetism to strong paramagnetism in Zn_{1-x}Cr_xO (0 ≤ x ≤ 0.097) thin films**

S. -S. Li and Y. -M. Hu

*Department of Applied Physics, National University of Kaohsiung, Kaohsiung 811, Taiwan, R.O.C.***RA -11. Transport and magnetic properties of ferromagnetic Co-Al-O and Fe-Al-O granular films**S. Nakamura^{1,4}, T. Iwashita¹, T. Nojima^{1,4}, A. Yoshihara², S. Ohnuma³, H. Fujimori³¹*Institute for Materials Research, Tohoku University, Sendai 980-8577, Japan,* ²*Department of Basic Science, Ishinomaki Senshu University, Ishinomaki 986-8580, Japan,* ³*Research Institute for Electric and Magnetic Materials, Sendai 982-0807, Japan,* ⁴*Center for Low Temperature Science, Tohoku University, Sendai 980-8577, Japan***RA -12. One-Particle Density of Laughlin States at Finite N**O. Ciftja^{1,2}¹*Department of Physics, Prairie View A&M University, Prairie View, Texas 77446, USA,* ²*Kavli Institute for Theoretical Physics, University of California, Santa Barbara, California 93106, USA***RA -13. Hall Effect in Nb Thin Films with Channeled Pinning Potential Landscapes**Y. H. Chen¹, M. W. Yang¹, T. C. Wu², R. Cao¹, T. J. Yang³, J. C. Wu¹, L. Horng¹¹*Department of Physics, National Changhua University of Education, Changhua 500, Taiwan,* ²*Department of Electrical Engineering, Nation Formosa University, Yunlin 63201, Taiwan,* ³*Department of Electrical Engineering, Chung Hua University, Hsinchu 300, Taiwan***RA -14. Inverse GMR effect in Co/Ag/Co trilayer thin films**N. A. Tuan¹, P. L. Minh²¹*International Training Institute for Materials Science (ITIMS), Hanoi University of Technology (HUT); 1, Dai Co Viet Road, Hai Ba Trung District, Hanoi, Vietnam,* ²*Department of Medicine-Physics (DMP), Hanoi Medical University (HMU); 1, Ton That Tung Rd., Hai Ba Trung Dist., Hanoi, Vietnam*

July 15, Thursday

13:30~14:30

Sakura / Poster

Session RB

ELECTRONIC STRUCTURE AND COOPERATIVE PHENOMENA II

*Chair: Alessio Filippetti***RB-01. Experimental evidences of Fermi surface nesting in self-doped manganites**

F. N. Bukhanko

*Donetsk Phys. & Techn. Institute NASU, Donetsk, 83114, Ukraine***RB-02. Preparation and Magnetic BiFeO₃ and Mn-doped BiFeO₃ Nanoparticles**P. Thongbai¹, S. Hunpratub¹, R. Yimnirun², S. Maensiri¹¹*Small & Strong Material Group (SSMG), Department of Physics, Faculty of Science, Khon Kaen University, Khon Kaen, 40002 Thailand,* ²*School of Physics, Institute of Science, Suranaree University of Technology, Nakhonratchasima, 30000, Thailand*

RB-03. Electrospinning and magnetic properties of $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ nanostructures

R. Yensano, S. Maensiri

Integrated Nanotechnology Research Center, KhonKaen University, and Department of Physics, Faculty of Science, Khon Kaen University, Khon Kaen, 40002, Thailand

RB-04. Synthesis and Magnetoresistance Properties of the $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ Films Prepared by a Novel Sol-Gel Method

Y. -H. Chang¹, T. -Y. Chang², W. -D. Yang², S. -H. Huang¹, L. -P. Yang³

¹Department of Materials Science and Engineering, National Cheng-Kung University, Taiwan 700, Taiwan, ROC, ²Department of Chemical Engineering, National Kaohsiung University of Applied Sciences, Kaohsiung 80807, Taiwan, ROC, ³Department of Electrical Engineering, National Taiwan University, Taipei, 106, Taiwan, Roc

RB-05. Magnetic and magnetotransport properties of $(1-x)\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3 - x\text{La}_2\text{O}_3$ composites

H. -J. Kim¹ and S. -I. Yoo¹

Department of Materials Science and Engineering, Research institute of advanced material (RIAM), Seoul National University, Seoul 151-744, Korea

RB-06. The investigation of magnetic properties on stannite by Mössbauer spectroscopy

I. J. Park, I. B. Shim, C. S. Kim

Department of Physics, Kookmin University, Jeongneung-dong, Seongbuk-gu, 136-702 Seoul, Korea

RB-07. Glass Behavior of LuFe_2O_4 studied by Magnetization Measurements

A. Chen, R. Rajagukguk, J. Kim, C. U. Jung, C. L. Liu, B. W. Lee

Department of Physics, Hankuk University of Foreign Studies, Yongin, Kyunggi, 499-791, Korea

RB-08. Tuning of T_c and H_c by using epitaxial strain in SrRuO_3 thin films

B. W. Lee¹, F. Kurnia¹, C. U. Jung¹

¹Department of Physics, Hankuk University of Foreign Studies, Yongin 449-791, Korea

RB-09. Mössbauer study of magnetic anomaly and crystallographic distortion in spinel FeCr_2O_4

W. Kim¹, B. W. Lee², and C. S. Kim¹

¹Department of Physics, Kookmin University, Seoul 136-702, Korea, ²Department of Physics, Hankuk University of Foreign Studies, Yongin, Kyungki 449-791, Korea

RB-10. The disorder effect on the magnetic behavior of $\text{Ce}_3\text{Al}_{11}$ Alloy

C. R. Wang, Y. J. Zung and Y. L. Jhan

Department of Physics, Tunghai University, Taichung, Taiwan, R.O.C

RB-11. Transport Properties of Heusler Compound $\text{Ru}_{2-x}\text{Fe}_x\text{CrSi}$ under Pressure

M. Ito¹, T. Hisamatsu¹, S. Nakashima¹, I. Shigeta¹, K. Matsubayashi², Y. Uwatoko² and M. Hiroi¹

¹Graduate School of Science and Engineering, Kagoshima University, Korimoto 1-21-35, Kagoshima 890-0065, Japan, ²Institute for Solid State Physics, The University of Tokyo, Kashiwanoha, Kashiwa, Chiba 277-8581, Japan

RB-12. Synthesis of $\gamma\text{'-Fe}_4\text{N}$ particles by two-step nitridation and the thermal activating processes

M. Minagawa¹, H. Yanagihara¹, E. Kita¹, and M. Kishimoto¹

¹Institute of Applied Physics, University of Tsukuba, 305-8573 Ibaraki, Japan

RB-13. Magnetic Anisotropy in Ni-Fe-Ga-Co and Co-Ni-(Al, Ga) Ferromagnetic Shape Memory Alloys

H. Morito¹, K. Oikawa², A. Fujita², K. Fukamichi¹, R. Kainuma², K. Ishida²

¹Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Katahira 2-1-1, Sendai

980-8577, Japan, ²Department of Materials Science, Graduate School of Engineering, Tohoku University, Aoba-yama 6-6-02, Sendai 980-8579, Japan

RB-14. Effect of Al substitution on the phase transitions of the shape memory alloy Ni₂MnGa

C. S. Lue¹, Y. K. Kuo²

¹Department of Physics, National Cheng Kung University, Tainan 70101, Taiwan, ²Department of Physics, National Dong Hwa University, Hualien 97401, Taiwan

RB-15. Electron correlation effects in substituted and hydrogenated 2-17 compounds: Magnetization and specific heat study

E.A. Tereshina^{1,2}, A.V. Andreev², K. Watanabe², K. Koyama³

¹Institute for Materials Research, Tohoku University, Sendai 980-8577, Japan, ²Institute of Physics of the Academy of Sciences, Prague 18221, Czech Republic, ³Graduate School of Science and Engineering, Kagoshima University, Kagoshima 980-0065, Japan

RB-16. Large Isotropic Volume Change due to Thermal-induced First-order Transition in La_{1-z}Pr_z(Fe_{0.88}Si_{0.12})₁₃

S. Fujieda¹, A. Fujita², K. Fukamichi¹

¹Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Katahira 2-1-1, Sendai 980-8577, Japan, ²Department of Materials Science, Graduate School of Engineering, Tohoku University, Aoba-yama 02, Sendai 980-8579, Japan

RB-17. Pressure effect on the Curie temperature of La(Fe_{0.88}Si_{0.12-y}Al_y)₁₃

H. Yako¹, S. Fujieda², A. Fujita¹ and K. Fukamichi²

¹Department of Material Science, Graduate school of Engineering, Tohoku University, Sendai, 980-8579, Japan

²Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Sendai, 980-8577, Japan

RB-18. Increase of T_c in nanostructured UFe_{2+x}

L. Havela¹, K. Miliyanchuk¹, A. Adamska¹, A. P. Gonçalves², J. C. Waerenborgh², L. C. J. Pereira², J. Pešička¹, T. Gouder³, N. -T. H. Kim-Ngan⁴ A. G. Balogh⁵

¹Charles University, Ke Karlovu 5, 2116 Prague 2, Czech Republic, ²Instituto Tecnológico e Nuclear/CFMC, P-2686-953 Sacavém, Portugal, ³European Commission, Joint Research Centre, ITU Karlsruhe, Germany, ⁴Institute of Physics, Pedagogical University, 30-084 Kraków, Poland, ⁵Institute of Materials Science, Technische Universität Darmstadt, Germany

RB-19. Electrical and Magnetic Properties of the Ni Based Ternary Compounds R₂NiGe₃ (R = Rare Earth Ions)

J. W. Chen, S. Y. Guan, C. H. Wang

Department of Physics, National Taiwan University, Taipei, Taiwan, R. O. C.

July 15, Thursday

13:30~14:30

Sakura / Poster

Session RC
HARD MAGNETIC MATERIALS IV

Chair: Satoshi Hirosawa

RC-01. Co/Fe interdiffusion in high energy ball milled Sm-Co/Fe nanostructured alloys

J. M. Le Breton¹, R. Lardé¹, D. Givord², O. Isnard², V. Pop³, I. Chicinas⁴

¹Groupe de Physique des Matériaux, UMR CNRS 6634, Université de Rouen, 76801 Saint Etienne du Rouvray, France, ²Institut Néel, CNRS, Université J. Fourier, BP 166, 38042 Grenoble, France, ³Faculty of Physics, Babes-Bolyai University, 400084 Cluj-Napoca, Romania, ⁴Materials Science and Technology Dept., Technical University of Cluj-Napoca, 400641 Cluj-Napoca, Romania

RC-02. High performance Sm-Fe-N magnets prepared by compression shearing method

T.Saito

*Department of Mechanical Science and Engineering, Chiba Institute of Technology, 2-17-1 Tsudanuma, Narashino, Chiba, Japan***RC-03. Structure and magnetic properties for SmCo/Cu/Fe thin films**

H. Abe, T. Shima

*Faculty of Engineering, Tohoku Gakuin University, 985-8537 Tagajo, Japan***RC-04. Investigation on microchemistry dependent coercivity variation in $\text{Sm}(\text{Co}_{0.74}\text{Fe}_{0.1}\text{Cu}_{0.12}\text{Zr}_{0.04})_{7.4}$ magnet**R. Gopalan¹, Y. M. Chen¹, T. Ohkubo¹, K. Hono¹, X. Y. Xiong² and O. Gutfleisch³¹National Institute for Materials Science, 1-2-1, Sengen, Tsukuba, Japan ²Monash Centre for Electron Microscopy, and Department of Materials Engineering, Monash University, Clayton, Victoria 3800, Australia ³IFW Dresden, D-01171 Dresden, Germany**RC-05. Magnetic microstructures of rare earth Co-based permanent magnets**Y. K. Fang¹, Z. H. Guo¹, M. G. Zhu¹, W. Li¹, B. S. Han²¹Division of Functional Materials Research, CISRI, Beijing, 100081 China, ²State Key Laboratory of Magnetism, Institute of Physics and the Center for Condensed Matter Physics, Chinese Academy of Sciences, Beijing 100190 China**RC-06. The effect of demagnetizing loop squareness on high temperature magnetic properties of $\text{Sm}(\text{Co}_{\text{bal}}\text{Fe}_{0.1}\text{Cu}_{0.1}\text{Zr}_{0.033})_7$ permanent magnets**M. Faisal¹, C. Jiang²¹Department of Material Science and Engineering, Beihang University, Beijing, China, ²Department of Material Science and Engineering, Beihang University, Beijing, China**RC-07. Improvement in magnetic properties of anisotropic Nd-Fe-B(Ga) thick films**K. Terada¹, S. Tsutsumi¹, T. Yanai¹, M. Nakano¹, F. Yamashita², H. Fukunaga¹¹Faculty of Engineering, Nagasaki Univ., Nagasaki, 852-8521, Japan, ²Rotary Component Tech., Div., Minebea Co., Ltd., Shizuoka 437-1193, Japan**RC-08. Effect of Substrate Temperature during Deposition of Nd overlayer on the Coercivity in Nd-Fe-B Thick Films**S. Igarashi¹, K. Koike¹, T. Miyazaki², Y. Mizuno¹, D. Ogawa², T. Akiya³, H. Kimura⁴, Y. Adachi¹ and H. Kato^{1,3}¹Graduate School of Science and Engineering, Yamagata University, Yonezawa, 992-8510 Yamagata, Japan, ²Graduate School of Engineering, Tohoku University, Sendai, 980-8579, Japan, ³NICHE, Tohoku University, Sendai, 980-8579, Japan, ⁴IMR, Tohoku University, Sendai, 980-8577, Japan**RC-09. Enhanced coercivity in Al_2O_3 (a-plane)/Mo/Nd-Fe-B/Nd/Mo thin films**K. Koike¹, D. Ogawa², T. Kusano¹, T. Miyazaki², T. Akiya³, Y. Adachi¹ and H. Kato^{1,3}¹Graduate School of Science and Engineering, Yamagata University, Yonezawa, 992-8519 Yamagata, Japan, ²Graduate School of Engineering, Tohoku University, Sendai, 980-8579 Miyagi, Japan, ³NICHE, Tohoku University, Sendai, 980-8579 Miyagi, Japan**RC-10. Phase Change of Nd Oxide Phase in Nd Thin Films**M. Matsuura¹, A. Sai¹, R. Goto², N. Tezuka¹ and S. Sugimoto^{1,2}¹Department of Material Science, Graduate School of Engineering, Tohoku University, Aoba, Aramaki, Aoba-ku, Sendai, 980-8579, Japan, ²New Industry Creation Hatchery Center (NICHe), Tohoku University, Aoba, Aramaki, Aoba-ku, Sendai, 980-8579, Japan.

RC-11. Magnetic properties of Nd-Fe-B thin films with Nd-Fe-Cu cap layers

Y. Mishina, N. Oka, H. Nakada and T. Shima

*Faculty of Engineering, Tohoku Gakuin University, Tagajo, 985-8537, Japan***RC-12. Magnetic properties of Nd-Fe-B circular dot arrays by EB lithography**

T. Ohtsuki, H. Iwama, S. Kuwano, Y. Mishina, T. Shima

*Faculty of Engineering Tohoku Gakuin University, Tagajo 985-8537, Japan***RC-13. Magnetic domain structure of Nd-Fe-B thin films with different preparation conditions**

K. Sato, Y. Mishina, T. Ohtsuki, T. Shima

Faculty of Engineering, Tohoku Gakuin University, Tagajo 985-8537, Japan

July 15, Thursday	13:30~14:30	Sakura / Poster
Session RD HARD MAGNETIC MATERIALS V		

*Chair: Arata Tsukamoto***RD-01. Investigation of the exchange spring behavior in the ferrite nanocomposite**

D. Roy and P. S. A. Kumar

*Department of Physics, Indian Institute of Science, Bangalore -12, India***RD-02. Self-propagating combustion synthesis of $\text{BaFe}_{10}\text{Al}_2\text{O}_{19}$ and $\text{Fe-FeAl}_2\text{O}_4$ nanocomposite magnet**

K. W. Jeon, K. W. Moon, M. Kang, J. M. Cheon, J. Kim

*Metallurgy and Materials Engineering, Hanyang University, Ansan 426-791, Korea***RD-03. Research progress on special purpose permanent magnetic materials and preparation technology**

W. Li, M. Zhu, Z. Guo, D. Zhou, T. Liu

*Division of Functional Materials, Central Iron & Steel Research Institute, Beijing 100081, China***RD-04. The distribution function of magnetism along with times of the metal permanent magnet**

M. Zhu, W. Li, D. Zhou, Z. Guo

*Division of Functional Material, Central Iron & Steel Research Institute, Beijing 100081, China***RD-05. Effect of structural transition on the temperature-dependent magnetic properties of epitaxial FePd alloy nanoparticles**H. Naganuma^{1,2}, K. Sato^{1,3}, and Y. Hirotsu^{1,4}¹*The Institute of Scientific and Industrial Research, Osaka University, Ibaraki-city, Osaka 567-0047, Japan,*²*Department of Applied Physics, Graduate School of Engineering, Tohoku University, Sendai-city, Miyagi 980-8579, Japan* ³*Institute for Materials Research, Tohoku University, Sendai-city, Miyagi 980-8577, Japan,*⁴*R&D Institute of Metals and Composites for Future Industries (RIMCOF), Osaka University Laboratory, Ibaraki, Osaka 567-0047, Japan***RD-06. CoPt Thin Films with Nano-Island Structure for Ultra-High Density Magnetic Recording Media**C. L. Shen¹, P. C. Kuo¹, G. P. Lin¹, Y. S. Li¹, K. T. Huang¹, and S. C. Chen²¹*Institute of Materials Science and Engineering, National Taiwan University, Taipei 10617, Taiwan,*²*Department of Materials Engineering, Ming Chi University of Technology, Taipei 243, Taiwan*

RD-07. Preparation and magnetic properties of fcc Co₃Pt nanowire arrays

D. Zhou, M. G. Zhu, Z. H. Guo, T. Liu, W. Li

*Division of Functional Materials, Central Iron & Steel Research Institute, Beijing 100081, China***RD-08. Magnetic properties of FePt thin films with multilayered structure**

S. Matsumoto, T. Shima

*Faculty of Engineering, Tohoku Gakuin University, Tagajo 985-8537, Japan***RD-09. Magnetic domain observation of FePt/(Cu, Au)/FePt thin films**

H. Iwama, S. Matsumoto, K. Sato, T. Shima

*Faculty of Engineering, Tohoku Gakuin University, Tagajo 985-8537, Japan***RD-10. Structure and magnetic properties of annealed FePt/Ag multilayer films**H. Xiang¹, W. Lu², Y. P. Zheng¹, D. M. Jiang¹, G. Q. Li¹, H. Saito³, S. Ishio³¹*School of Physics, Southwest University, Chongqing, 400715, China,* ²*School of Material, Tongji University, Shanghai, 200092, China,* ³*Venture Business Laboratory, Akita University, Akita, 010-8502, Japan***RD-11. Microstructure and magnetic properties of Fe_xPt_{100-x} alloy thin films**H. Xiang¹, W. Lu², D. M. Jiang¹, G. Q. Li¹, H. Saito³, S. Ishio³¹*School of Physics, Southwest University, Chongqing, 400715, China,* ²*School of Material, Tongji University, Shanghai, 200092, China,* ³*Venture Business Laboratory, Akita University, Akita, 010-8502, Japan***RD-12. Magnetic Properties and Microstructure of Perpendicular Exchange Coupled Fe/FePt Film**

J. L. Tsai, H. T. Tzeng, B. F. Liu

*Department of Materials Science and Engineering, National Chung Hsing University, Taichung, Taiwan***RD-13. Effect of Fe capping layer on the FePt nano-island film**G. P. Lin¹, P. C. Kuo¹, C. L. Shen¹, S. C. Chen² and K. T. Huang¹¹*Institute of Materials Science and Engineering, National Taiwan University, Taipei 10617, Taiwan,*²*Department of Materials Engineering, MingChi University of Technology, Taipei 243, Taiwan***RD-14. Effects of Ta spacer layers on the thermal stability, microstructures and magnetic properties of FePt films on Si(100)**S. Y. Chen¹, Y. D. Yao², J. M. Wu¹¹*Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu 300, Taiwan,*²*Institute of Applied Science and Engineering, Fu Jen University, Taipei 242, Taiwan*

July 15, Thursday

13:30~14:30

Sakura / Poster

Session RE
SPINTRONICS VII

Chair: Yuya Sakuraba

RE-01. Anomalous Nernst effect in FePt thin filmsS. Ohata¹, M. Mizuguchi¹, K. Uchida¹, E. Saitoh^{1,2}, K. Takanashi¹¹*Institute for Materials Research, Tohoku University, Sendai 980-8577,* ²*PRESTO, Japan Science and Technology Agency, Sanbancho, Tokyo 102-0075, Japan***RE-02. Spin-Seebeck effect in Ni_{1-x}Fe_x/Pt metallic junctions**T. Ota¹, K. Uchida¹, E. Saitoh^{1,2,3}¹*Institute for Materials Research, Tohoku University, 980-8577 Sendai, Japan,* ²*Department of Applied*

Physics and Physico-Informatics, Keio University, 223-8522, Yokohama, Japan, ³PRESTO, Japan Science and Technology Agency, Sanbancho, 102-0075 Tokyo, Japan

RE-03. Investigation of spin Seebeck effect in half-metallic full-Heusler alloy Co₂MnSi

S. Bosu, Y. Sakuraba, K. Saito, K. Uchida, T. Ota, E. Saitoh and K. Takanashi
Institute for Materials Research, Tohoku University, Sendai, Japan

RE-04. Spin Seebeck Effects in Ferromagnetic Films

K. Uchida¹, E. Saitoh^{1,2}

¹*Institute for Materials Research, Tohoku University, Sendai 980-8577, Japan, ²PRESTO, Japan Science and Technology Agency, Sanbancho, Tokyo 102-0075, Japan*

RE-05. Measurement of spin penetration depth in various ferromagnetic materials by spin-pumping effect

T. Tamagawa¹, T. Taniguchi^{2,3}, S. Yakata³, H. Imamura³, H. Naganuma¹, M. Oogane¹, Y. Ando¹

¹*Tohoku University, Sendai, Japan, ²University of Tsukuba, Tsukuba, Japan, ³AIST, Tsukuba, Japan,*

RE-06. Spin current generation and detection in Ni_{1-x}Fe_x/Pt thin film systems

T. Yoshino¹, K. Ando¹, K. Harii¹, Y. Kajiwara¹, H. Nakayama¹, and E. Saitoh^{1,2}

¹*Institute for Materials Research, Tohoku University, Sendai, 980-8577, Japan, ²PRESTO, Japan Science and Technology Agency, Sanbancho, Tokyo, 102-0075, Japan*

RE-07. Spin current study of spin glass AgMn using spin pumping effect

R. Iguchi¹, K. Ando², E. Saitoh^{2,3}, T. Sato¹

¹*Faculty of Science and Technology, Keio University, Yokohama 223-8522, Japan, ²Institute for Materials Research, Tohoku University, Sendai 980-8577, Japan, ³PRESTO, Japan Science and Technology Agency, Sanbancho, Tokyo 102-0075, Japan*

RE-08. Microwave power dependence of inverse spin-Hall effect induced by spin pumping in metallic-multilayer films

K. Harii¹, K. Ando¹, Y. Kajiwara¹, H. Nakayama¹, E. Saitoh^{1,2}

¹*Institute for Materials Research, Tohoku University, 980-8577 Sendai, Japan, ²PRESTO, Japan Science and Technology Agency, 102-0075, Tokyo, Japan*

RE-09. Inverse spin-Hall effect induced by spin pumping in different thickness metallic films

H. Nakayama¹, K. Ando¹, K. Harii¹, T. Yoshino¹, Y. Kajiwara¹, and E. Saitoh^{1,2}

¹*Institute for Materials Research, Tohoku University, Sendai 980-8577, Japan, ²PRESTO, Japan Science and Technology Agency, Sanbancho, Tokyo 102-0075, Japan*

RE-10. Spin pumping and spin-transfer torque in magnetic insulator/metal interface.

Y. Kajiwara¹, K. Harii¹, E. Saitoh^{1,2}

¹*Institute for Materials Research, Tohoku University, 980-8577 Sendai, Japa, ²PRESTO, Japan Science and Technology Agency, 102-0075, Tokyo, Japan*

RE-11. Influence of metallic dopant on spin Hall effect in Au

I. Sugai¹, S. Mitani² and K. Takanashi¹

¹*Institute for Materials Research, Tohoku University, Sendai, 980-8577, Japan, ²National Institute for Materials Science, Tsukuba, 305-0047, Japan*

RE-12. Oscillatory depinning behavior of field-induced domain wall motion under transverse magnetic fields

S. -M. Ahn, K. -W. Moon, and S. -B. Choe

Department of Physics, Seoul National University, Seoul, 151-747, Republic of Korea

RE-13. Nanotesla field detection using domain-wall displacing type GMR sensorG. A. Wang¹, S. Nakashima¹, S. Arai¹, T. Kato¹, S. Iwata¹¹Dept. of Quantum Engineering, Nagoya University, Nagoya, Aichi, Japan**RE-14. Domain wall depinning field modification in magnetic nanowire with magnetic dots**

M. Kusakawa, H. Nomura, and R. Nakatani

Department of Materials Science and Engineering, Graduate School of Engineering, Osaka University

RE-15. Current-Driven Domain Wall Creep in Pt/Co/Pt NanowireJ. -C. Lee^{1,2}, K. -J. Kim¹, J. Ryu³, K. -W. Moon¹, S. -J. Yun¹, G. -H. Gim¹, K. -S. Lee¹, K. -H. Shin², H. -W. Lee³, S. -B. Choe¹¹Center for Subwavelength Optics and Department of Physics, Seoul National University, Seoul 151-742, Republic of Korea, ²Center for Spintronics Research, Korea Institute of Science and Technology, Seoul 136-791, Republic of Korea, ³PCTP and Department of Physics, Pohang University of Science and Technology, Pohang, Kyungbuk 790-784, Republic of Korea**RE-16. Controlled multiple magnetic domain walls motion in Pt/Co/Pt nanotrack**K. -J. Kim¹, J. -C. Lee^{1,2}, S. -J. Yun¹, G. -H. Gim¹, K. -S. Lee¹, K. -H. Shin², S. -B. Choe¹¹Center for Subwavelength Optics and Department of Physics, Seoul National University, Seoul 151-742, Republic of Korea, ²Center for Spintronics Research, Korea Institute of Science and Technology, Seoul 136-791, Republic of Korea**RE-17. Current-induced domain wall motion in Co/Ni nano-wires with different Co and Ni thickness**K. Ueda¹, T. Koyama¹, G. Yamada¹, D. Chiba¹, H. Tanigawa^{1,2}, S. Fukami², T. Suzuki², N. Ohshima², N. Ishiwata², Y. Nakatani³ and T. Ono¹¹Institute for Chemical Research, Kyoto University, Gokasho, Uji, Kyoto 611-0011, Japan, ²Device Platforms Research Laboratories, NEC Corporation, 1120 Shimokuzawa, Sagami-hara, Kanagawa 229-1198, Japan, ³University of Electro-communications, Chofu, Tokyo 182-8585, Japan

July 15, Thursday	13:30~14:30	Sakura / Poster
Session RF SPINTRONICS VIII		

Chair: Yukiko Takahashi

RF-01. Control of domain-wall depinning field with different nucleation pad geometry

S. -M. Ahn, K. -W. Moon, and S. -B. Choe

Department of Physics, Seoul National University, Seoul, 151-747, Republic of Korea

RF-02. Chirality-controlled domain wall pinning in the ferromagnetic nanowire with asymmetric pad

S. -M. Ahn, K. -W. Moon, and S. -B. Choe

Department of Physics, Seoul National University, Seoul, 151-747, Republic of Korea

RF-03. Electrical detection of a magnetic vortex chirality

K. Tanabe, D. Chiba and T. Ono

Institute for Chemical Research, Kyoto Univ., Uji, 611-0011, Japan.

RF-04. Electric-Field Effect on Magnetic Anisotropy in the Thin Films: A First-Principles Study

M. Tsujikawa¹, T. Haraguchi¹, T. Oda², Y. Miura³, M. Shirai³

¹Graduate School of Natural Science and Technology, Kanazawa University, Kanazawa, 920-1192, Japan,

²Institute of Science and Engineering, Kanazawa University, Kanazawa, 920-1192, Japan, ³Research Institute of Electrical Communication, Tohoku University, Sendai 980-8578, Japan

RF-05. Asteroid curve of magnetic logic gate

H. Nomura, M. Kusukawa, Y. Imanaga and R. Nakatani

Department of Materials Science and Engineering, Graduate School of Engineering, Osaka University

RF-06. Experimental optimization of external clock-field for magnetic logic gate

M. Komura, M. Kusukawa, Y. Imanaga, H. Nomura, and R. Nakatani

Department of Materials Science and Engineering, Graduate School of Engineering, Osaka University

RF-07. Invariant form of the spin transfer switching condition

I. Sodemann¹, Y. B. Bazaliy²

¹University of Texas at Austin, Austin, TX, USA, ²University of South Carolina, Columbia SC, USA, ³Institute of Magnetism, NASU, Kyiv, Ukraine

RF-08. RF Auto-Oscillation in Antiferromagnetically-Coupled Layers by Spin-Transfer Torque

T. Seki, H. Tomita, M. Shiraishi, T. Shinjo, and Y. Suzuki

Graduate School of Engineering Science, Osaka Univ., Toyonaka, 560-8531 Japan

RF-09. Detection of high-order standing spin wave modes through the homodyne method

K. Motoi¹, A. Yamaguchi^{1,2}, H. Miyajima¹, T. Uchiyama³, and Y. Utsumi⁴

¹Department of Physics, Keio University, Hiyoshi, Yokohama 223-8522, Japan, ²PRESTO, JST, Honcho, Kawaguchi, Saitama, 332-0012, Japan, ³Department of Electrical Engineering and Computer, Nagoya University, Chikusa, Nagoya, 464-8603, Japan, ⁴Laboratory of Advanced Science and Technology for Industry, University of Hyogo, Koto, Ako, Hyogo, 678-1205, Japan

RF-10. Translocation and detection of magnetic labels using magnetic fluidics integrated with magnetoresistance sensors

S. Anandakumar, V. Sudha Rani, S. J. Oh, B. L. Sinha, C. G. Kim

Department of Materials Science and Engineering, Chungnam National University, Daejeon 305-764, South Korea.

RF-11. Theoretical study of the spin polarization measurement using non-contant Andreev reflection

H. Ohtori^{1,2}, H. Imamura²

¹Institute of Applied Physics, University of Tsukuba, Tsukuba, Japan, ²Nanotechnology Research Institute, AIST, Tsukuba, Japan

RF-12. Spin accumulation and mistracking effects on the magnetoresistance of a ferromagnetic nano-contact

H. Imamura and J. Sato

Nanotechnology Research Institute, AIST, Tsukuba 305-8568, Japan

RF-13. Finite size effects on the quantum spin Hall state

Y. Ohyama, H. Tsuchiura and A. Sakuma

Department of Applied Physics, Tohoku University, 6-6-05 Aoba, Aoba-ku, Sendai 980-8579, Japan

RF-14. Conductance in disordered graphene junctions

T. Hiraiwa¹, A. Yamamura¹, S. Honda¹, J. Inoue¹, and H. Itoh^{2,3}

¹Department of Applied Physics, Nagoya University, Nagoya 464-8603, Japan, ²Department of Pure and Applied Physics, Kansai University, Suita 564-8680, Japan, ³Japan Science and Technology Agency,

CREST, Tokyo 102-0075, Japan

RF-15. Magneto-transport in Single Crystalline Bismuth Thin Films

S. Xiao, D. Wei, and X. Jin

Surface Physics Laboratory, Fudan University, Shanghai 200433, China

RF-16. Enhancement of anisotropic magnetoresistance in MgO –based ferromagnetic films

C. Y. Wang¹, Y. F. Hsiao², C. H. Huang¹, J. C. Wu¹, L. Horng¹

¹Department of physics and Taiwan SPIN Research Center, National Changhua University of Education, Changhua 500, Taiwan, ²Institute of photonics, National Changhua University of Education, Changhua 500, Taiwan

July 15, Thursday	13:30~14:30	Sakura / Poster
Session RG		
MAGNETIC IMAGING AND NOVEL INSTRUMENTATIONS III		

Chair: Takeshi Kawagoe

RG-01. Analysis of Magnetic Minor Hysteresis Loops in Thermally Aged and Cold-rolled Fe-Cu Alloys

F. Takahashi, S. Kobayashi, T. Murakami, S. Takahashi, Y. Kamada, and H. Kikuchi

NDE&Science Research Center, Iwate University, Morioka 020-8551, Japan

RG-02. Differential Pulsed Eddy Current Probe to Detect the Wall Thinning in an Insulated Stainless Steel Pipe

C. S. Angani^{1,2}, D. G. Park¹, C. G. Kim², G. D. Kim¹, Y. M. Cheong¹

¹Nuclear Materials Research Division, Korea Atomic Energy Research Institute, Daejeon, South Korea

²Dept. of Materials Science and engineering, Chungnam National University, Daejeon, South Korea

RG-03. Magnetoacoustic Emission Characteristics on Cold Rolled Low Carbon Steel

H. Kikuchi, T. Fujiwara, K. Matsumura, K. Ara, Y. Kamada and S. Kobayashi

NDE-SRC, Faculty of Engineering, Iwate University, 4-3-5 Morioka, Japan

RG-04. High-resolution magnetic force microscopy by a high-coercivity tip with single-side FePt coating

G. Egawa¹, S. Yoshimura¹, T. Miyazawa¹, Z. Li¹, H. Saito¹, G. Li²

¹Faculty of Engineering & Resource Science, Akita University, Akita, 010-8502, Japan, ²School of Physical Science and Technology, South Western University, Chongqing, 400715, China

RG-05. High resolution frequency-modulated magnetic force microscopy with a resolution less than 10 nm utilizing a laser Doppler vibrometer (LDV)

K. Hatakeyama, W. Lu, R. Ito, G. Egawa, S. Yoshimura, H. Saito

Center for Geo-environment Science, Faculty of Engineering and Resource Science, Akita University, Akita, 010-8502, Japan

RG-06. Simultaneous MFM imaging of perpendicular and in-plane magnetic field gradient on La_{0.7}Sr_{0.3}MnO₃ granular film with in-plane magnetization

Z. Li¹, G. Egawa¹, S. Yoshimura¹, H. Saito¹, G. Li², H. Asano³

¹Faculty of Engineering & Resource Science, Akita University, Akita, 010-8502, Japan, ²School of Physical Science and Technology, South Western University, Chongqing, 400715, China, ³Graduate School of Engineering, Nagoya University, Nagoya, 464-8603, Japan

July 15, Thursday	14:00~16:30	Tachibana / Oral
Session EX SPINTRONICS IX		

Chair: Kyung Jin Lee, Teruo Ono

14:30

EX-01*(Invited) Large spin-asymmetric interface scattering and magnetoresistance in Co₂MnSi/Ag/Co₂MnSi CPP-GMR devices

Y. Sakuraba, K. Izumi, S. Bosu, K. Saito, and K. Takanashi

Institute for Materials Research (IMR), Tohoku University, 2-1-1 Katahira, Sendai 980-8577, Japan

15:00

EX-02*(Invited) Spin Torque Microwave Oscillation on Spin-valve Elements with Ferromagnetic Nano-contacts

M. Doi¹, H. Suzuki¹, H. Endo¹, T. Nakamura¹, T. Tanaka¹, H. N. Fuke², S. Hashimoto², H. Iwasaki², and M. Sahashi¹

¹Graduate School of Engineering, Tohoku University, Sendai, Japan, ²Corporate Research & Development Center, Toshiba Corporation

15:30

EX-03. Electrodeposited spin transfer nano-oscillators

M. Darques¹, A. Dussaux², J. De la Torre Medina¹, S. Matéfi¹, M. Matéfi¹, J. Grollier², A. Khvalkovskiy^{2,3}, K. Bouzehouane², S. Fusil², V. Cros², L. Piroux¹

¹Institute of Condensed Matter and Nanosciences, Université catholique de Louvain, Louvain-la-Neuve, Belgium, ²Unité mixte de physique CNRS/Thales and Université Paris sud 11, Palaiseau, France, ³A. M. Prokhorov, General Physics Institute of RAS, Moscow, Russia; Istituto P.M., Torino, Italy

15:45

EX-04. Experimental investigation of spin motive forces induced by a gyration motion of a magnetic vortex core

D. Chiba¹, K. Tanabe¹, S. Kasai^{1,2}, J. Ohe³, H. Kohn⁴, S. E. Barnes⁵, S. Maekawa³ & T. Ono¹

¹Institute for Chemical Research, Kyoto Univ., Uji, 611-0011, Japan, ²National Institute for Material Science, Tsukuba, 305-0047, Japan ³Institute of material research, Tohoku Univ., Sendai, 980-8577, Japan

⁴Graduate School of Engineering Science, Osaka Univ., Toyonaka, 560-8531, Japan, ⁵Physics Department, Univ. of Miami, Coral Gables, Florida 33124,

16:00

EX-05. Optimum condition for spin-current generation from magnetization precession in thin film systems

K. Ando¹, T. Yoshino¹, K. Harii¹, H. Nakayama¹, and E. Saitoh^{1,2}

¹Institute for Materials Research, Tohoku University, Sendai 980-8577, Japan, ²PRESTO, Japan Science and Technology Agency, Sanbancho, Tokyo 102-0075, Japan

16:15

EX-06. Demonstration of Persistent Currents in Nanorings in a Non-Uniform Field

A. Hirohata^{1,2}, I. Sugai³, M. Mizuguchi³, K. Takanashi³ and S. N. Holmes⁴

¹Department of Electronics, The University of York, York YO10 5DD, U.K., ²PRESTO, Japan Science and Technology, Kawaguchi 332-0012, Japan, ³Institute for Materials Research, Tohoku University, Sendai 980-8577, Japan, ⁴Toshiba Research Europe Limited, Cambridge CB4 0GZ, U.K.

Coffee Break 16:30-16:45

July 15, Thursday	16:45~18:00	Tachibana / Oral
Session EX SPINTRONICS X		

Chair: Kyung Jin Lee, Teruo Ono

16:45

EX-07*(Invited) Giant electroresistance and electrical control of spin-polarization with ferroelectric tunnel barriers

M. Bibes

Unité Mixte de Physique CNRS/Thales, 91767 Palaiseau, France

17:15

EX-08*(Invited) Electric-Field Effect on the Magnetic Anisotropy of the Ferromagnetic/Dielectric Films: A First-Principles Study

T. Oda

Institute of Science and Engineering, Kanazawa University, Kanazawa, 920-1192, Japan

17:45

EX-09. Toward electric field control of magnetization in a metallic nanostructure

A. Bernard-Mantel¹, A. Dobrynin¹, L. Cagnon¹, O. Fruchart¹, D. Givord¹, A. Marty², P. Warin², L. Vila², P. Seneor³, K. Bouzehouane³, S. Fusil³, C. Deranlot³, F. Petroff³

¹Institut Néel, CNRS & Université Joseph Fourier, BP 166, 25 Avenue des Martyrs, 38042 GRENOBLE Cedex 9, France, ²CEA, INAC, SP2M & Université Joseph Fourier, 17 rue des martyrs, F-38054 Grenoble, France, ³Unité Mixte de Physique CNRS/Thales, 1 av. Fresnel, 91767 Palaiseau & Université Paris-Sud 11, 91405 Orsay, France

July 15, Thursday	14:30~16:00	Hagi / Oral
Session EY MULTI-FUNCTIONAL MAGNETIC MATERIALS II		

Chair: Takeshi Kato, Asaya Fujita

14:30

EY-01*(Invited) Giant Negative Magnetoresistance in Molecule-based Coexisting Systems of Magnetism and Conductivity

M. M. Matsushita

Department of Chemistry, Nagoya University, Furo-cho, Chikusa-ku, Nagoya, Aichi 464-8602, JAPAN

15:00

EY-02. Magnetic properties and magnetocaloric effect in LaFe_{11.5}Si_{1.5-x}Ga_x melt-spun ribbons

B. Gao¹, W. Guan¹, S. Yang¹, X. P. Song¹, F. X. Hu², J. R. Sun², B. G. Shen²

¹MOE Key Laboratory for Nonequilibrium Synthesis and Modulation of Condensed Matter & State Key Laboratory for Mechanical Behaviour of Materials, Xi'an Jiaotong University, Xi'an 710049, China, ²State Key Laboratory of Magnetism, Institute of Physics, Chinese Academy of Sciences, Beijing 10080, China

15:15

EY-03. Modulated martensite and inverse magnetocaloric effect in Ni-Mn and Ni-Fe based Heusler alloys

R. Gopalan, S.V. Karthik, T. Furubayashi and K. Hono

National Institute for Materials Science, 1-2-1 Sengen, Tsukuba, Japan

15:30

EY-04. Magnetic refrigerants with first order transition: contribution to error estimates

M. Balli, O. Sari

University of Applied Sciences of Western Switzerland, Institute of Thermal Sciences and Engineering, CH-1401 Yverdon-les-Bains, Switzerland

15:45

EY-05. Anomalous Magneto-Transport in $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ /n-type Si Nanotips Hetero-junctions

C. W. Chong^{1,2}, Daniel Hsu³, W.C. Chen⁴, J. G. Lin³, L. C. Chen³, K. H. Chen^{3,4}, Y. F. Chen¹

¹Dept. of Physics, National Taiwan University, Taipei, Taiwan, ²Nano Science and Technology Program, Taiwan International Graduate Program, Academia Sinica, Taipei, Taiwan, ³Ctr. for Condens. Matter Sciences, National Taiwan University, Taipei, Taiwan, ⁴Inst. of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan

Coffee Break 16:00-16:15

July 15, Thursday

16:15~18:00

Hagi / Oral

Session EY

MULTI-FUNCTIONAL MAGNETIC MATERIALS III

Chair: Takeshi Kato, Asaya Fujita

16:15

EY-06*(Invited) Enhanced Faraday rotation in composite films with magnetic garnet and periodically arranged Au particles fabricated by electron beam lithography

H. Uchida¹, Y. Mizutani², A. V. Baryshev² and M. Inoue²

¹Tohoku Institute of Technology, 35-1 Yagiyama-Kasumi, Taihaku, Sendai, Miyagi 982-8577, Japan,

²Toyohashi University of Technology, 1-1 Tempaku, Toyohashi, Aichi 441-8580, Japan

16:45

EY-07. Plamson enhanced Faraday ellipticity in nanodisk array

G. X. Du¹, T. Mori², S. Saito¹, H. Fukuda², and M. Takahashi¹

¹Tohoku University, ²Ricoh Co., Ltd.

17:00

EY-08. Magnetodielectric effect associated with a normal ferrimagnetic transition ---possible compatibility between ferromagnetism and ferroelectricity

H. Bao^{1,2}, S. Yang², D. Xue^{1,2}, C. Zhou² and X. Ren^{1,2},

¹Ferroic Physics Group, National Institute for Materials Science, Tsukuba, 305-0047, Ibaraki, Japan,

²Multi-disciplinary Materials Research Center, State Key Laboratory for Mechanical Behavior of Materials, Xi'an Jiaotong University, Xi'an 710049, China;

17:15

EY-09. Electric Field Driven Switching of Magnetic Domain Structures in Fe dots/BaTiO₃ Heterostructures

T. Taniyama¹, R. Kakinuma¹, T. Naito¹, D. Fu², M. Itoh¹

¹Materials and Structures Laboratory, Tokyo Institute of Technology, Yokohama 226-8503, Japan, ²Division of Global Research Leaders, Shizuoka University, Hamamatsu 432-8561, Japan

17:30

EY-10. Optical and Magnetic Properties of CuO - CuFe₂O₄ nanocomposites

M.M. Rashad¹, D. A. Rayan¹, A. A. Ramadan²

¹Central Metallurgical Research & Development Institute, P.O. Box: 87 Helwan, 11421, Egypt, ²Physics Department, Faculty of sciences, Helwan University

17:45

EY-11. Phase diagram of a novel multiferroic FeTe₂O₅Br system

M. Pregelj¹, O. Zaharko², A. Zorko¹, Z. Kutnjak¹, M. Jagodič³, Z. Jagličić³, P. Jeglič¹, H. Bereger⁴ and D. Arčon^{1,5}

¹Jožef Stefan Institute, Jamova 39, 1000 Ljubljana, Slovenia ²Laboratory for Neutron Scattering, ETHZ & PSI, CH-5232 Villigen, Switzerland, ³Institute of Mathematics, Physics and Mechanics, Jadranska 19, 1000 Ljubljana, Slovenia ⁴Institute of Physics of Complex Matter, EPFL, 1015 Lausanne, Switzerland ⁵University of Ljubljana, Faculty of mathematics and physics, Jadranska 19, 1000 Ljubljana, Slovenia

July 16, Friday	9:00~10:30	Tachibana / Oral
Session FX HARD MAGNETIC MATERIALS VI		

Chair: Nora Dempsey, Shunji Ishio

9:00

FX-01*(Invited) Solvent-dispersible $L1_0$ -FePt nanoparticles: Synthesis, surface functionalization and possible applications

S. Yamamoto¹, Y. Tamada², T. Ono² and M. Takano¹,

¹Institute for Integrated Cell-Material Sciences, Kyoto University, Yoshida-Ushinomiya-cho, Sakyo-ku, Kyoto, 606-8501 Japan, ²Institute for Chemical Research, Kyoto University, Gokasyo, Uji, Kyoto, 611-0011, Japan

9:30

FX-02. Continuity of perpendicular FePt film with a compositional gradient design

X. J. Mo¹, H. Xiang¹, W. Lu², Y. P. Zheng¹, G. Q. Li¹, H. Saito³, S. Ishio³, D. M. Jiang¹, X. W. Tan¹, Y. Q. Lin¹

¹School of Physics, Southwest University, Chongqing, 400715, China, ²School of Material, Tongji University, Shanghai, 200092, China, ³Venture Business Laboratory, Akita University, Akita, 010-8502, Japan

9:45

FX-03. Modified Process for High-Performance Anisotropic $Sm_2Fe_{17}N_3$ Magnet Powder

T. Ishikawa, K. Yokosawa, K. Watanabe and K. Ohmori

Ichikawa Research Laboratory, Sumitomo Metal Mining Co., Ltd., 3-18-5, Nakakokubun, Ichikawa, Chiba, 272-8588, Japan

10:00

FX-04. Magnetic Properties of 2-17 type $Sm_{1-x}Tm_x(Co_{bal}Fe_{0.1}Cu_{0.1}Zr_{0.033})_{6.8}$ permanent magnets ($x = 0$ to 10 %)

M. Faisal¹, C. Jiang²

¹Department of Material Science and Engineering, Beihang University, Beijing, China, ²Department of Material Science and Engineering, Beihang University, Beijing, China

10:15

FX-05. Magnetism of nanocrystalline Co-ferrite particles

P. Dunne¹, M. Venkatesan¹, L. Monzon¹, R. Tekoru², Y. K. Gun'ko², J. M. D. Coey¹

¹School of Physics & CRANN, Trinity College Dublin, Ireland, ²School of Chemistry, Trinity College Dublin, Ireland

Coffee Break 10:30-10:45

July 16, Friday	10:45~12:30	Tachibana / Oral
Session FX SOFT MAGNETIC MATERIALS III		

Chair: Nora Dempsey, Shunji Ishio

10:45

FX-06*(Invited) Recent Progress in High Bs Fe-based Nanocrystalline Soft Magnetic Alloys

M. Ohta, Y. Yoshizawa

Hitachi Metals Ltd., 2-15-17 Egawa, Shimamoto 961-0013, Osaka, Japan

11:15

FX-07*(Invited) Reduction of core loss for Fe-Si powder core

S. Takemoto, T. Saito

R & D center, Daido Steel, 2-30, Daido-cho, Nagoya, Japan

11:45

FX-08. Structural Anisotropy of Ferromagnetic Amorphous and Nanocrystalline Alloys Induced by Stress AnnealingM. Ohnuma¹, G. Herzer², C. Polak², S. Koppoju¹¹National Institute for Materials Science, 305-0047 Tsukuba, Japan, ²Vacuumschmelze GmbH & Co. KG, D-63450 Hanau, Germany

12:00

FX-09. Micro-magnetic simulation of random magnetic anisotropy model; effects of the structural dimensionS. Sato¹, S. J. Lee¹, C. Mitsumata², H. Yanagihara¹ and E. Kita¹¹Institute of Applied Physics, Tsukuba Univ., Tsukuba, Ibaraki 305-8573, Japan, ²Production System Laboratory, Hitachi Metals, Ltd., 6010 Mikajiri, Kumagaya 360-0843 Japan

12:15

FX-10. High Microwave Magnetic Permeability of Composites with Submicron Iron Flakes

M. Abshinova, S. Matitsine, L. Liu, C. R. Deng, L. B. Kong

Temasek Laboratories, National University in Singapore,

Lunch 12:30-13:30

July 16, Friday

9:00~10:45

Hagi / Oral

Session FY
STRUCTURED MATERIALS V*Chair: CheolGi Kim, Hideto Yanagihara*

9:00

FY-01*(Invited) Tuning the Magnetic Phases of $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ by Digital Synthesis

T. S. Santos

Center for Nanoscale Materials, Argonne National Laboratory, Argonne, IL USA

9:30

FY-02*(Invited) Remanent spin-polarization enhancement of hydrogen-terminated $\text{Fe}_3\text{O}_4(001)$ A. Pratt^{1,2}, M. Kurahashi¹, X. Sun^{1,3}, and Y. Yamauchi¹¹National Institute for Materials Science, 1-2-1 Sengen, Tsukuba, Japan, ²York Institute for Materials Research, Department of Physics, York, U.K., ³University of Science and Technology of China, Hefei, China

10:00

FY-03. Exchange Coupling Enhancement in FePtC Nano-composite Thin Films Induced by TiO_2 Doping

K. M. Cher, T. J. Zhou, B. C. Lim, P. W. Lwin, J. F. Hu, and B. Liu

*Data Storage Institute, A*STAR (Agency for Science, Technology and Research), 5 Engineering Drive 1 (off Kent Ridge Crescent, NUS), Singapore 117608*

10:15

FY-04. Temperature Dependence of Self-Organized FePd Nanostructures Manufactured by SputteringM. Kamiko¹, J. -W. Koo², J. -M. Kim², J. -G. Ha²¹Institute of Industrial Science, The University of Tokyo, 4-6-1 Komaba, Meguro-ku, Tokyo 153-8505, Japan,²Department of Electronic Materials Engineering, Kwangwoon University, 447-1, Wolgye-Dong, Nowon-Gu, Seoul 139-701, Korea

10:30

FY-05. Magnetic, structural and morphological studies of hexagonal-like Cobalt nanoplates

M. Alagiri, C. Muthamizhchelvan and S. Ponnusamy

Center for Material science and Nano devices, Department of Physics, SRM University, Kattankulathur, Kancheepuram (Dt)-603203, Tamil Nadu, India.

Coffee Break 10:45-11:00

July 16, Friday

11:00~12:30

Hagi / Oral

Session FY
STRUCTURED MATERIALS V

Chair: CheolGi Kim, Hideto Yanagihara

11:00

FY-06*(Invited) A laser-assisted tomographic atom probe investigation of magnetic FePt nanoclustersE. Folcke¹, R. Lardé¹, J. M. Le Breton¹, J. Shield², X. Rui², M. Patterson³¹Groupe de Physique des Matériaux, UMR CNRS 6634, Université de Rouen, 76801 Saint Etienne du Rouvray, France, ²Department of Mechanical Engineering, Nebraska Center for Materials and Nanoscience, University of Nebraska, N104 WSEC, Lincoln, NE 68588, USA, ³Department of Physics, University of Wisconsin-Stout, Menomonie, WI 54751, USA

11:30

FY-07. Microstructure of hcp-Ni(1-100)/bcc-Cr(211) Bi-layer Film Grown on MgO(110) Substrate

M. Ohtake, Y. Sato, J. Higuchi, M. Futamoto

Faculty of Science and Engineering, Chuo University, 112-8551 Tokyo, Japan

11:45

FY-08. Coverage Dependence of Magnetic Domain Structure and Magnetic Anisotropy in Supported Fe Nanoparticles on Al₂O₃/NiAl(100)W. -C. Lin¹, C. B. Wu², P. J. Hsu², H. Y. Yen², Z. Gai³, L. Gao³, J. Shen³, and M. -T. Lin^{2,4}¹Department of Physics, National Taiwan Normal University, 11677 Taipei, Taiwan, ²Department of Physics, National Taiwan University, 10617 Taipei, Taiwan, ³Center for Nanophase Materials Science Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee 37831, USA and Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee 37831, USA, ⁴Institute of Atomic and Molecular Sciences, Academia Sinica, 10617 Taipei, Taiwan.

12:00

FY-09. Magnetic behavior of nanodisks with an exchange coupling between cobalt layersA. V. Ognev¹, M. E. Stebliy¹, A. S. Samardak¹, A. Nogaret², L. A. Chebotkevich¹¹Laboratory of thin film technologies, FENU, Vladivostok, 690950, Russia, ²Department of Physics, University of Bath, Bath, BA2 7AY, UK

12:15

FY-10. Magnetization reversal of nanodots with different magnetic anisotropy and magnetostatic energyY. P. Ivanov^{1,2}, K. V. Nefedev¹, A. I. Iljin¹, E. V. Pustovalov¹, L. A. Chebotkevich^{1,2}¹Far Eastern National University, 690950 Vladivostok, Russia, ²Institute of automatic and control processes FEB RUS, 690950 Vladivostok, Russia

Lunch 12:30-13:30

July 16, Friday

13:30~14:30

Sakura / Poster

Session SA
SPINTRONICS XI

Chair: Makoto Kohda

SA-01. Magnetic anisotropy and magnetization reversal of single domain (Ga, Mn)As dotH. Kimura¹, Y. Kitamoto¹, H. Munekata²¹Department of Innovative and Engineered Materials, Tokyo Institute of Technology, 4259 Nagatsuta Midori-ku, Yokohama 226-8502, Japan, ²Imaging Science and Engineering Laboratory, Tokyo Institute of Technology, 4259 Nagatsuta Midori-ku, Yokohama 226-8503, Japan**SA-02. Manipulation of electrical and ferromagnetic properties of photo-sensitized GaMnAs**L. Herrera Diez¹, M. Konuma¹, J. Honolka¹, K. Kern¹, F. Arciprete², E. Placidi², A. W. Rushforth³, R. P. Campion³, B. L. Gallagher³¹Max-Planck-Institut für Festkörperforschung, Heisenbergstrasse 1, 70569, Stuttgart, Germany, ²Dipartimento di Fisica, Università di Roma "Tor Vergata", and CNR-INFM, Via della Ricerca Scientifica 1, I-00133 Rome, Italy, ³School of Physics and Astronomy, University of Nottingham, University Park, Nottingham NG7 2RD, United Kingdom**SA-03. Magnetization reversal in (Ga, Mn)As by using spin-orbit interaction effective magnetic field**

M. Endo, F. Matsukura, H. Ohno

Laboratory for Nanoelectronics and Spintronics, Research Institute of Electrical Communication, Tohoku University, Katahira 2-1-1, Aoba-ku, Sendai 980-8577, Japan

SA-04. Structural, optical, and magnetic properties of Ho-implanted GaN thin filmsF. -Y. Lo¹, J. - Y. Guo², V. Ney³, A. Ney³, C. -T. Su⁴, M. -Y. Chern⁴, A. Melnikov⁵, S. Pezzagna⁵, D. Reuter⁵, and A. D. Wieck⁵¹Department of Physics, National Taiwan Normal University, 88, Sec. 4, Ting-Chou Rd., Taipei City 11677, Taiwan, ²Department of Physics, National Dong Hwa University, Sec. 2, Da-Hsueh Rd., Hualien 97401, Taiwan, ³Experimentalphysik, Universität Duisburg-Essen, Lotharstr. 1, 47048 Duisburg, Germany, ⁴Department of Physics, National Taiwan University, 1, Sec. 4, Roosevelt Rd., Taipei City 10617, Taiwan, ⁵Lehrstuhl für Angewandte Festkörperphysik, Ruhr-Universität Bochum, Universitätsstr. 150, 44780 Bochum, Germany**SA-05. (Al, N)-Codoped p-Type ZnCoO Diluted Magnetic Semiconductor Thin Film**Y. Lee¹, J. -C Lee¹, J. -F Min¹, C. -W Su², J. -S Lee³¹Department of Physics, National Cheng Kung University, 70101 Tainan, Taiwan, ²Department of Applied Physcs, National Chiayi University, 60004 Chiayi, Taiwan, ³Department of Applied Physics, National Ping Tung University of Education, 900 Pingtung, Taiwan**SA-06. Antiferromagnetism in (Mn, Al)-codoped ZnO diluted magnetic semiconductor: An electron paramagnetic resonance study**

J. K. Park, K. W. Lee, and C. E. Lee

Department of Physics and Institute for Nano Science, Korea University, Seoul 136-713, Republic of Korea

SA-07. Electron mediated/enhanced ferromagnetism in a hydrogen-annealed Mn: Ge magnetic semiconductor

D. D. Dung, W. S. Yun, W. Feng, S. C. Hong, Y. Hwang, S. Cho

Department of Physics, University of Ulsan, Ulsan 680-749, Republic of Korea

SA-08. Half-metallicity at the interfaces of Heusler alloy and Group IV semiconductors; first-principles study

M. Kim¹, H. Lim¹ and J. I. Lee²

¹*Division of Energy System Research, Ajou University, Suwon, 443-749 Korea,* ²*Dept of Physics, Inha University, Incheon, 402-752 Korea*

SA-09. Magnetic and Magnetotransport Properties of Co-doped Amorphous Carbon

H. S. Hsu¹, W. T. Liao¹, K. H. Kao¹, Z. Y. Zhang¹, S. J. Sun², H. Chou³, H. C. Su⁴, C. H. Lee⁵, and J. C. A. Huang⁶

¹*Department of Applied Physics, National Pingtung University of Education,* ²*Department of Applied Physics, National Kaoshiung University,* ³*Department of Physics, National Sun Yat-sen University,* ⁴*Industrial Application Office, National Synchrotron Radiation Research,* ⁵*Department of Engineering and System Science, National Tsing-Hua University,* ⁶*Department of Physics, National Cheng Kung University*

SA-10. Fe-doped In₂O₃ heteroepitaxial films

Y. Chen, M. Tang, M. Li, S. Yan, G. Liu and L. Mei

School of Physics, Shandong University, Jinan, Shandong 250100, China

SA-11. Structural and magnetic properties of Ni doped CuAlO₂ diluted magnetic oxides

S. H. Chiu and J. C. A. Huang

Department of physics, National Cheng Kung University, Tainan, 701, Taiwan

SA-12. Epitaxial growth of ferromagnetic Fe₄N thin films on SrTiO₃(001) substrates by molecular beam epitaxy

K. Ito, G. H. Lee, and T. Suemasu

Institute of Applied Physics, University of Tsukuba, Tsukuba, Ibaraki 305-8573, Japan

SA-13. Ultrathin NiFe₂O₄ films for spin-filter junctions

T. Nagahama^{1,2}, A. Sugihara³, S. Yuasa¹

¹*National Institute of Advanced Industrial Science and Technology (AIST), Umezono 1-1-1, Tsukuba, 305-8568 Japan,* ²*PRESTO-JST, 5-3 Chiyoda-ku, Tokyo, Japan,* ³*Institute for Materials Research, Tohoku University, Katahira 2-1-1, Aoba-ku, Sendai 980-8577, Japan*

SA-14. Fabrication and characterization of Fe₃O₄ thin films

S. Tsunegi, M. Oogane, H. Naganuma, Y. Ando

Department of Applied Physic, Graduate School of Engineering, Tohoku University, Sendai 980-8579, Japan

SA-15. Spin Filtering Effect at Fe₃O₄/Modulation Doped GaAs Interfaces

Y. Shirahata¹, E. Wada¹, M. Itoh¹, T. Taniyama^{1,2}

¹*Materials and Structures Laboratory, Tokyo Institute of Technology, 4259 Nagatsuta, Midori-ku, Yokohama 226-8503, Japan,* ²*PRESTO, Japan Science and Technology Agency (JST), 4-1-8 Honcho, Kawaguchi, Saitama 332-0012, Japan*

July 16, Friday

13:30~14:30

Sakura / Poster

Session SB
SPINTRONICS XII

Chair: Taro Nagahama

SB-01. Electronic structure of spinel ferrite $\text{Fe}_{3-\delta}\text{O}_4$ H. Itoh¹, N. Suzuki¹, S. Honda², J. Inoue², H. Yanagihara³, E. Kita³¹Department of Pure and Applied Physics, Kansai University, Suita 564-8680, Japan, ²Department of Applied Physics, Nagoya University, Nagoya 464-8603, Japan, ³Institute of Applied Physics, University of Tsukuba, Tsukuba 305-8573, Japan**SB-02. (100)MgO/Fe bilayers for epitaxial growth of Fe_3O_4 films**

M. L. Wang, S. Nakagawa

Department of Physical Electronics, Tokyo Institute of Technology, 2-12-1O-okayama, Meguro, Tokyo 152-8552, Japan

SB-03. Oxygen vacancy dependent magnetism of CeO_2 nanoparticles prepared by thermal decomposition methodS. -Y. Chen¹, Y. -H. Lu¹, T. -W. Huang², D. -C. Yan³, C. -L. Dong⁴¹Department of Polymer Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan, ²Institute of Physics, Academia Sinica, Taipei, Taiwan, ³Department of Physics, National Tsing Hua University, Hsinchu, Taiwan, ⁴National Synchrotron Radiation Research Center, Hsinchu, Taiwan**SB-04. $\text{CaF}_2/\text{Fe}_3\text{Si}$ heterostructures resonant tunneling diodes on Si(111) by selected-area molecular beam epitaxy**K. M. Sadakuni¹, M. Suzuno¹, K. Harada¹, H. Akinaga², and T. Suemasu¹¹Institute of Applied Physics, University of Tsukuba, Ibaraki 305-8573, Japan, ²Nanodevice Innovation Research Center, AIST, Ibaraki 305-8569, Japan**SB-05. Electrical transport and magnetoresistance properties of $0.99\text{La}_{0.7}(\text{Ca}_x\text{Sr}_{1-x})_{0.3}\text{MnO}_3/0.01\text{CuZnFe}_4\text{O}_4$ composites**

J. L. Bian, S. S. Byeon, Y. J. Seo, G. W. Kim, C. H. Sung, S. Kumar, C. G. Lee and B. H. Koo

School of Nano & Advanced Materials Engineering, Changwon National University, Changwon, Korea

SB-06. The Magneto-Transport and Low-Field Magnetoresistance in $(\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3)_{1-x}/(\text{CuFe}_2\text{O}_4)_x$ Composite System

Y. J. Seo, G. W. Kim, C. H. Sung, M. S. Anwar, C. G. Lee and B. H. Koo

School of Nano & Advanced Materials Engineering, Changwon National University, Changwon, Korea

SB-07. Carrier doping effects in the antiferromagnetic double perovskite $\text{Sr}_{2-x}\text{La}_x\text{VMoO}_6$

T. Hohjo, H. Matsushima, H. Gotoh, Y. Takeda, K. Ueda, H. Asano

Graduate School of Engineering, Nagoya-Univ., Furo-cho, Chikusa-ku, Nagoya, 464-8603, Japan

SB-08. Critical Behaviour of Self-Doped $\text{La}_{0.9}\text{MnO}_3$ Manganite under Hydrostatic PressureS. V. Trukhanov¹, A. V. Trukhanov¹, T. N. Tarasenko², A. I. Tovstolytkin³¹Scientific-Practical Materials Research Centre of NASB, 220072 Minsk, Belarus, ²O.O. Galkin Institute of Physics and Engineering, 83114 Donetsk, Ukraine, ³Institute of Magnetism, 03142 Kyiv, Ukraine**SB-09. Cubic phase stabilization in SrRuO_3 thin films**

M. Bohra, C. P. Wu, H. J. Yeh, Y. H. Tai, Y. H. Cheng, C. C. Peng and H. Chou

Department of Physics and Center for Nanoscience and Nanotechnology, National Sun Yat-sen University, Kaohsiung, Taiwan 804, ROC

SB-10. Structure and spin state in $\text{Nd}_{0.35}\text{Sr}_{0.65}\text{MnO}_3$ J. W. Lin^{1, 2}, D. Hsu¹, Y. H. Tsai¹, C. C. Yang³, C. S. Lue², J. G. Lin¹¹Center for Condensed Matter Sciences, National Taiwan University, Taipei, Taiwan 106, R.O.C.,²Department of Physics, National Cheng Kung University, Tainan, Taiwan 701, R.O.C., ³Department of Physics, Chung Yuan Christian University, Chung Li, Taiwan 32023, R.O.C.**SB-11. Possible Charge Density Wave in Multiferroic $\text{Ho}_{0.8}\text{La}_{0.2}\text{Mn}_2\text{O}_5$** H. Chou¹, C. P. Wu¹, C. C. Yu¹, W. H. Lee² and J. -J. Lee³¹Department of Physics, National Sun Yat-sen University, Kaohsiung, Taiwan, ²Department of Physics,National Central University, Zhongli City, Taoyuan, Taiwan, ³National Synchrotron Radiation Research Center, Taiwan**SB-12. Electroresistance and magnetoresistance effects in undoped PbPdO_2 thin film**S. M. Choo¹, K. J. Lee¹, S. M. Park¹, Y. H. Jo², G. S. Park¹, S. I. Lee¹, M. H. Jung¹¹Department of Physics, Sogang University, Seoul, 121-742, Korea, ²Nano Materials Research Team, Korea Basic Science Institute, Daejeon, 305-333, Korea**SB-13. Spin flip of a single magnetic impurity in Rashba two-dimensional Landauer setup**Y. - H. Su¹, C. -R. Chang^{1, 2}¹Department of Physics, National Taiwan University, Taipei 10617, Taiwan, ²Center for Quantum Science and Engineering (CQSE), National Taiwan University, Taipei 10617, Taiwan**SB-14. Upstanding spin polarization in the Landauer setup with applied ac biases**C. -L. Chen¹, Y. -H. Su¹, C. -R. Chang^{1, 2}¹Center for Quantum Science and Engineering (CQSE), National Taiwan University, Taipei 10617, Taiwan,²Department of Physics, National Taiwan University, Taipei 10617, Taiwan**SB-15. Geometrical effect on the spin transport through a Rashba-Dresselhaus superlattice**J. -S. Wu¹, T. -C. Cheng¹, C. -R. Chang^{1, 2}¹Department of Physics, National Taiwan University, Taipei 10617, Taiwan, ²Center for Quantum Science and Engineering (CQSE), National Taiwan University, Taipei 10617, Taiwan

July 16, Friday

13:30~14:30

Sakura / Poster

Session SC
SPIN DYNAMICS III

Chair: Shigemi Mizukami

SC-01. Synthesis and Properties in La-Manganite / BaTiO_3 composites

G. W. Kim, C. H. Sung, Y. J. Seo, J. L. Bian, C. G. Lee and B. H. Koo

School of Nano & Advanced Materials Engineering, Changwon National University, Changwon, Korea

SC-02. Ultrafast demagnetization in Ni: Calculations of the Elliot-Yafet type spin relaxationK. Carva^{1, 2}, P. M. Oppeneer¹¹Department of Physics and Materials Science, Uppsala University, Box 530, SE-75121 Uppsala, Sweden,²Department of Condensed Matter Physics, Charles University, Ke Karlovu 5, CZ-12116 Prague 2, Czech Republic**SC-03. Microscopic theory on the Gilbert damping due to spin pumping effects in the magnetic multi-layer system**

N. Umetsu, D. Miura and A. Sakuma

Department of Applied Physics, Tohoku University, Sendai, Japan

SC-04. Spin and Charge Currents in Magnetic Multi Layers in the Presence of Both Electric Field and Spin Dynamics

D. Miura and A. Sakuma

Department of Applied Physics, Tohoku University, Sendai, Japan

SC-05. Spin-current Generation via Spatially Modulated Magnetization Precession

K. Sasage¹, Y. Yamane¹, K. Harii¹, K. Ando¹ and E. Saitoh^{1,2}

¹*Institute for Materials Research, Tohoku University, Sendai 980-8577, Japan, ²PRESTO, Japan Science and Technology Agency, Sanbancho, Tokyo 102-0075, Japan*

SC-06. Spin excitations in multilayered rectangular nanodots studied by conventional and micro-focused Brillouin light scattering

M. Madami¹, G. Carlotti¹, G. Gubbiotti¹, F. Scarponi¹, S. Tacchi¹, T. Ono²

¹*CNISM, Unità di Perugia – Dip. di Fisica, Via A. Pascoli, I-06123 Perugia, Italy, ²Institute for Chemical Research, Kyoto University, Uji, Kyoto 611-0011, Japan*

SC-07. Evolution of non-stationary hysteresis states

I. Klik¹, C. -R. Chang¹

¹*Department of Physics, National Taiwan University, Taipei 106, Taiwan*

SC-08. Flipping Vortex Cores in Bilayer Dots by In-Plane Pulsed Magnetic Fields

J. -S. Yang¹, C. -M. Lee², C. -R. Chang³

¹*Institute of Optoelectronic Sciences, Nat'l Taiwan Ocean Univ., Keelung, Taiwan, ²Graduate school of materials Science, National Yunlin Univ. of Science & Technology, Yunlin, Taiwan, ³Department of Physics, National Taiwan University, Taipei, Taiwan*

SC-09. Switching Behavior of FePt Nanograins at Elevated Temperatures

J. -S. Yang¹, C. -M. Lee², C. -R. Chang³

¹*Institute of Optoelectronic Sciences, Nat'l Taiwan Ocean Univ., Keelung, Taiwan, ²Graduate school of materials Science, National Yunlin Univ. of Science & Technology, Yunlin, Taiwan, ³Department of Physics, National Taiwan University, Taipei, Taiwan*

SC-10. Magnetization reversal of single Co/Pd dot by nanosecond pulse fields

Y. Suyama, Y. Murayama, N. Kikuchi, S. Okamoto, and O. Kitakami

IMRAM, Tohoku University, 980-8577 Sendai, Japan

SC-11. Controllable Chirality Switching of a Moving Domain Wall by Oblique Magnetic Field

So. -M. Seo¹, K. -J. Lee¹, S. -W. Jung², H. -W. Lee²

¹*Department of Materials Science and Engineering, Korea University, Seoul 136-701, Republic of Korea, ²PCTP and Department of Physics, Pohang University of Science and Technology, Pohang, Kyungbuk 790-784, Republic of Korea*

SC-12. Magnetization switching through soliton in an inhomogeneous ferromagnet under the influence of electromagnetic wave

S. Perumal and K. Louis

Department of Physics, Periyar University, Salem-636 011, India

July 16, Friday

13:30~14:30

Sakura / Poster

Session SD
SPIN DYNAMICS IV

Chair: Kousaku Miyake

SD-01. Exchange Bias in Point Contacts to Ferromagnetic Films Pinned by Antiferromagnetic
I. K. Yanson¹, Yu. G. Naidyuk¹, O. P. Balkashin¹, V. V. Fisun¹, L. Yu. Triputen¹, S. Andersson², V. Korenivski², Yu. I. Yanson³, H. Zabel³

¹B. Verkin Institute for Low Temperature Physics and Engineering, NASU, Kharkiv, Ukraine, ²Nanostructure Physics, Royal Institute of Technology, Stockholm, Sweden, ³Lehrstuhl für Experimentalphysik/Festkörperphysik, Ruhr-Universität Bochum, Bochum, Germany

SD-02. RF emission property of CPP-GMR device with a bottom free layer and a top pin layer

Y. Kawada¹, H. Naganuma¹, M. Oogane¹, S. Mizukami², T. Miyazaki², Y. Ando¹

¹Department of Applied Physics, Graduate School of Engineering, Tohoku University, Aoba-yama 6-6-05, Sendai 980-8579, Japan, ²WPI Advanced Institute for Materials Research, Tohoku University, Katahira 2-1-1, Sendai 980-8577, Japan

SD-03. Micromagnetic Simulation for Spin-transfer Switching with a Tilted Spin Polarizer

C. -M. Lee^{1,2}, J. -S. Yang³, T. -h. Wu^{1,2,4}

¹Taiwan SPIN Research Center, National Yunlin University of Science and Technology, Douliou, 64002, Taiwan, ²Graduate School of Materials Science, National Yunlin University of Science and Technology, Douliou, 64002, Taiwan, ³Institute of Optoelectronic Sciences, Nat'l Taiwan Ocean Univ., Keelung, Taiwan, ⁴Graduate School of Information Technology, Overseas Chinese University, Taichung 407, Taiwan

SD-04. Spin Wave Motion of Magnetic Domain Wall in the Presence of Current

M. Jamali¹, H. Yang¹, and K. -J. Lee²

¹Department of Electrical and Computer Engineering, National University of Singapore, Singapore, ²Department of Materials Science and Engineering, Korea University, Seoul, Korea

SD-05. Effect of perpendicular STT on current- induced magnetization dynamics in MTJ

S. -W. Lee, K. -J. Lee

Department of Materials Science and Engineering, Korea University, Seoul 136-701, Korea

SD-06. Influence of spin-transfer torque on ferromagnetic resonance of domain wall in ferromagnetic nanowires

J. Yoon¹, C. -Y. You¹, Y. Jo², S. -Y. Park², M. -H. Jung³

¹Department of Physics, Inha University, Incheon, 402-751, Korea, ²Division of Materials Science, KBSI, Daejeon 305-333, Korea, ³Department of Physics, Sogang University, Seoul, 121-742, Korea

SD-07. Current-Induced Switching in Perpendicular Spin Valves Involving Domain Wall Motion

W. Kim, S. -W. Lee, K. -J. Lee

Department of Materials Science and Engineering, Korea University, Seoul 136-713, Korea

SD-08. Composition control for reducing magnetization reversal time in ferrimagnetic GdFeCo

T. Sato¹, S. Toriumi¹, A. Tsukamoto^{1,2}, A. Itoh¹

¹College of Science and Technology, Nihon University, 7-24-1 Narashinodai Funabashi, 274-8501 Chiba, Japan, ²PRESTO, Japan Science and Technology Agency, 4-1-8 Honcho Kawaguchi, 332-0012 Saitama, Japan

SD-09. Observation of Ultrafast Magnetization Dynamics of Co/Ni Multilayers with Perpendicular Anisotropy

H. Song¹, K. -D. Lee¹, J. -W. Sohn¹, J. -W. Kim¹, J. -W. Jeong¹, S. S. P. Parkin² and S. -C. Shin¹

¹Department of Physics and CNSM, KAIST, Daejeon, 305-701, Republic of Korea, ²IBM Research Division, Almaden Research Center, San Jose, California 95120

SD-10. Ultrafast magnetization dynamics of Co/Pd multilayer systems with different cap layers

J. -W. Sohn¹, K. -D. Lee¹, H. -S. Song¹, S. -O. Kim², J. -W. Kim¹, and S. -C. Shin¹

¹Department of Physics and Center for Nanospinics of spintronics Materials, Korea Advanced Institute of Science and Technology, Daejeon 305-701, Korea, ²Department of Materials Science and Engineering, Korea Advanced Institute of Science and Technology, Daejeon 305-701, Korea

SD-11. Ultrafast Spin Dynamics in Strain-Induced CoPd Alloy Thin Film

J. W. Kim, J. H. Kim, K. D. Lee, J. W. Jeong, H. S. Song, J. W. Son, and S. -C. Shin

Department of Physics and Center for Nanospinics of Spintronic Materials, Korea Advanced Institute of Science and Technology, Daejeon 305-701, South Korea

SD-12. Effect of Coercivity on Ultrafast Demagnetization of FePt films

K. -D. Lee, J. -W. Kim, H. -S. Song, H. -S. Ko, J. -W. Jeong, and S. -C. Shin

Department of Physics and Center for Nanospinics of Spintronic Materials, Korea Advanced Institute of Science and Technology (KAIST), Daejeon 305-701, Korea

SD-13. All-optical detection of magnetization dynamics in perpendicularly magnetized CoCrPt alloy films

S. Mizukami¹, D. Watanabe¹, F. Wu¹, M. Oogane², H. Naganuma², Y. Ando², and T. Miyazaki¹

¹WPI-AIMR, Tohoku University, Katahira 2-1-1, 980-8577 Sendai, Japan, ²Department of Applied Physics, Graduates School of Engineering, Tohoku University, Aoba 6-6-05, 980-8579 Sendai, Japan

July 16, Friday

13:30~14:30

Sakura / Poster

Session SE
SPIN DYNAMICS V

Chair: Yukio Nozaki

SE-01. Exact solution for the activation energy of two coupled magnetic particles

A. -V. Plamadă, D. Cimpoesu, and A. Stancu

Department of Physics, "Al. I. Cuza" University, Iasi 700506, Romania

SE-02. Investigation of stripe domain structure drift phenomenon in Ferritegarnet crystal plates

L. Pamyatnykh, M. Lysov, G. Shmatov, S. Pamyatnykh, G. Kandaurova

Ural State University, Yekaterinburg, 620083, Russia

SE-03. Optimization of Planar Multibit Magnetic Tags for Suspension Based Magnetic Assay

V. -T. Son¹, T. Q. Hung¹, C. G. Kim¹, J. -R. Jeong¹

¹Department of Materials Science and Engineering and School of Green Energy Technology, Chungnam National University, Daejeon 305-704, Korea

SE-04. Fabrication of Ferromagnetic Nanoring Array using Capillary Force Lithography

B. - G. Jeon¹, V. -T. Son¹, S. Y. Lee², S. -M. Yang², S. Kim³, C. G. Kim¹, J. -R. Jeong¹

¹Department of Materials Science and Engineering and School of Green Energy Technology, Chungnam National University, Daejeon 305-704, Korea, ²Department of Chemical and Biomolecular Engineering, KAIST, Daejeon 305-701, Korea, ³Nanomechanical System Research Center, Korea Institute of Machinery and Materials, Daejeon 305-343, Korea

SE-05. Effects of the shape-anisotropy on the Walker breakdown field and the maximum domain wall velocity field of the domain wall motionW. -Y. Kim¹, S. -W. Jung², H. -W. Lee², and K. -J. Lee¹¹Department of Materials Science and Engineering, Korea University, Seoul, 136-713, Republic of Korea,²Department of Physics Pohang University of Science & Technology (POSTECH), Pohang, 790-784, Republic of Korea**SE-06. Magnetic Domain wall velocity at much higher fields than the Walker field**K. Kondou¹, Y. Nakatani², N. Ohshima³, D. Chiba¹, S. Kasai^{1,4}, K. Kobayashi¹, and T. Ono¹¹Institute for Chemical Research, Kyoto University, Gokasyo, Uji, Kyoto 611-0011, Japan, ²Department ofComputer Science, University of Electro-Communications, Chofu, Tokyo 182-8585, Japan, ³Device

Platforms Research Laboratories, NEC Corporation, 1120 Shimokuzawa, Sagamihara, Kanagawa

229-1198, Japan, ⁴Magnetic materials centre, National Institute for Material Science, Sengen 1-2-1,

Tsukuba, Ibaragi, 305-0047, Japan

SE-07. Spin wave modes and spin wave propagation toward magnonic crystalsL. Bai¹, M. Kohda^{1,2}, and J. Nitta¹¹Department of Materials Science, Tohoku University, Sendai, Japan, ²PRESTO, Japan Science and

Technology Agency, Saitama, Japan

SE-08. Field-driven domain-wall movements in asymmetric nanorings

X. H. Wang, I. Purnama, S. Goolaup and W.S. Lew

School of Physical and Mathematical Science, Nanyang Technological University, 21 Nanyang Link,

Singapore, 637371

SE-09. Dependence of Pinning on Domain Wall Chirality

S. Goolaup, S. C. Low and W. S. Lew

School of Physical and Mathematical Sciences, Nanyang Technological University, 21 Nanyang Link,

Singapore 637371

SE-10. Magnetic Vortex Motion: From the linear regime up to Vortex-core switchingA. Drews^{1,2}, B. Krüger³, M. Bolte^{1,2}, G. Meier¹, D. P. F. Möller²¹Institut für Angewandte Physik und Zentrum für Mikrostrukturforschung, Universität Hamburg, Hamburg,Germany, ²Arbeitsbereich Technische Informatiksysteme, Universität Hamburg, Hamburg, Germany, ³I.

Institut für Theoretische Physik, Universität Hamburg, Hamburg, Germany

SE-11. Current-Induced Domain Wall Motion in TbFeCo with Perpendicular Magnetic Anisotropy

H. Nakamura, S. Li, X. Liu, A. Morisako

Department of Information Engineering, Shinshu-University Wakasato 4-17-1, Nagano, Japan

SE-12. Calculation of the magnetization oscillation frequency in a nanostructured synthetic ferrimagnet under inclined magnetic fields

J. H. Jo, J. M. Lee, S. H. Lim

Department of Materials Science and Engineering, Korea University, Seoul 136-713, Korea

July 16, Friday

13:30~14:30

Sakura / Poster

Session SF
MAGNETIC STORAGE III

Chair: Shigeki Nakagawa

SF-01. Magnetic Properties and Microstructure of Garnular FePt-Ag₂Te Films

J. L. Tsai, H. T. Tzeng, B. F. Liu

Department of Materials Science and Engineering, National Chung Hsing University, Taichung, Taiwan

SF-02. The effects of ion-beam bombardment and annealing on the microstructure and magnetism of FePt/TiO₂ thin films

K. -W. Lin¹, Y. -J. Wu¹, A. -C. Sun^{2,3}, J. -H. Hsu³ and T. Suzuki⁴

¹Department of MSE, National Chung Hsing University, Taichung, Taiwan, ²Department of Chemical and Materials Science, Yuan-Tzi University, Taiwan ³Department of Physics, National Taiwan University, Taipei, Taiwan, ⁴ISML, Toyota Technological Institute, Nagoya, Japan

SF-03. L₁₀ FePt thin film with [001] crystalline growth fabricated by SiO₂ addition and RTA process

S. Ishio¹, T. Narisawa¹, T. Hasegawa¹ and H. Yamane²

¹Akita University, Akita 010-8502, Japan, ²Research Institute of Advanced Technology, Akita 010-1623, Japan

SF-04. Effect of annealing on coercivity and microstructure of FePt films by rapid thermal annealing technique

S. C. Chen¹, T. H. Sun¹, C. L. Chang¹, C. L. Shen², G. P. Lin², K. T. Huang², S. L. Ou², P. C. Kuo²

¹Department of Materials Engineering, Ming Chi University of Technology, Taipei 243, Taiwan, ²Institute of Materials Science and Engineering, National Taiwan University, Taipei 106, Taiwan

SF-05. Magnetic Anisotropy of L₁₁-type Co-Pt-M (M: Ni, Fe, Cr, Mn, Pd) Ordered Alloy Perpendicular Films

H. Kataoka^{1,2}, T. Shimatsu¹, S. Okamoto³, O. Kitakami³, and H. Aoi¹

¹RIEC, Tohoku University, Sendai, 980-8577, Japan, ²Fuji Electric Holdings Co., Ltd, Minami-Alps, Yamanashi, 400-0222 Japan, ³IMRAM, Tohoku University, Sendai, 980-8577, Japan

SF-06. Magnetic Isolation for Hf-capped CoPtCr-SiO₂ Perpendicular Media by Post-annealing

S. Hinata, S. Saito, M. Takahashi

Department of Electronic Engineering, Tohoku University, 6-6-05, Aoba, Aramaki, Aoba-ku, Sendai, Miyagi, 980-8579, Japan

SF-07. Effect of Deposition under Low-Ar-Gas-Pressure on Microstructure in Co-Si-O Granular Film

S. Sasaki¹, S. Saito² and M. Takahashi²

¹Ichinoseki National College of Technology, Ichinoseki, Iwate, Japan, ²Dept. of Electronic Engng., Grad. School of Engng. Tohoku Univ., Sendai, Japan

SF-08. Grain growth of Ru interlayer on Ni-W seed layer

T. Ueno¹, M. Fujimoto¹, S. Saito², S. Ishibashi², N. Itagaki², M. Takahashi²

¹Hitachi Metals, Ltd., Yasugi, 692-8601 Shimane, Japan, ²Tohoku University, Sendai, 980-8579 Miyagi, Japan

SF-09. Titanium (Ti) added Soft Magnetic Underlayer for Perpendicular Magnetic Recording Media

J. Fukuoka, T. Ueno

Hitachi Metals, Ltd., Yasugi, 692-8601 Shimane, Japan

SF-10. Synthetic-Antiferromagnetic Coupling in Subnano-Crystalline FeCoB/Rh/FeCoB Films

W. X. Xia, K. Inoue, S. Saito, and M. Takahashi

Tohoku University, Sendai, 980-8579 Sendai, Japan

SF-11. Fabrication of notches compositionally modulated NiFe nanowires

H. F. Liew, S. C. Low and W. S. Lew

*School of Physical & Mathematical Sciences, Nanyang Technological University 21 Nanyang Link, Singapore 637371***SF-12. Manipulation of Magnetic Anisotropy in Magnetic Nanodots and nanowires**

Z. -h. Cheng

*State Key Laboratory of Magnetism and Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences, Beijing 100080, China***SF-13. Pillar Size/Shape Influence on Damping Constant in Field Generating Layer of STO for MAMR Writing Head**

S. M. Noh, D. Monma, K. Miyake, M. Doi, M. Sahashi

Graduate School of Engineering, Tohoku University, Sendai, Japan

July 16, Friday

13:30~14:30

Sakura / Poster

Session SG
MAGNETIC STORAGE IV*Chair: Masaaki Doi***SG-01. Analytical Model for Estimating Track Density Limit Due to Signal-to-Noise Ratio**

K. Miura, E. Yamamoto, H. Aoi, H. Muraoka

*RIEC, Tohoku University, Sendai, 980-8577 Miyagi, Japan***SG-02. Spin-Stand Tests of Shingled Writing Focusing on Erase Band Width**

K. Miura, E. Yamamoto, H. Aoi, H. Muraoka

*RIEC, Tohoku University, Sendai, 980-8577 Miyagi, Japan***SG-03. MFM analysis of magnetic inhomogeneity in recorded area for perpendicular magnetic recording media by simultaneous imaging of perpendicular and in-plane magnetic field gradient**S. Yoshimura¹, G. Egawa¹, T. Miyazawa¹, H. Saito¹, G. Q. Li²¹*Faculty of Engineering & Resource Science, Akita University, Akita, 010-8502, Japan,* ²*School of Physical Science and Technology, South Western University, Chongqing, 400715, China***SG-04. Fabrication of L₁₀-FePt Dot Arrays for Bit Patterned Media Using Electron Beam Lithography**Y. Kondo¹, S. Takahashi², T. Chiba¹, K. Taguchi¹, M. Suzuki³, N. Kawamura³, J. Ariake¹, S. Ishio²¹*Akita Research and Development Center, Akita, 010-1623 Akita, Japan,* ²*Akita University, Akita, 010-8502 Akita, Japan,* ³*Japan Synchrotron Radiation Research Institute, Sayo, 679-5198 Hyogo, Japan***SG-05. Nucleation Size of hcp-CoPt Nano-Dot Arrays**T. Shimatsu¹, K. Mitsuzuka¹, N. Kikuchi², O. Kitakami², and H. Aoi¹¹*RIEC, Tohoku University, Sendai, 980-8577, Japan,* ²*IMRAM, Tohoku University, Sendai, 980-8577, Japan***SG-06. Modification of Magnetic Properties of MnBi Films by Kr⁺ Ion Irradiation**

S. Jyo, R. Kanbara, T. Kato, S. Iwata, S. Tsunashima

*Graduate School of Engineering, Nagoya University, Furo-cho, Chikusa-ku, Nagoya, 464-8603 Aichi, Japan***SG-07. Thermal fluctuations in a perpendicular recording media -New methodology**H. Mamiya¹, H. Hagiya^{2,3}, Y. Oba¹, M. Ohnuma¹, T. Oku², J. Suzuki², M. Yokoyama³, H. Awano⁴, T. Koda⁴¹*Quantum Beam Center, National Institute for Materials Science, Tsukuba 305-0047, Ibaraki, Japan,*

²Quantum Beam Science Directorate, Japan Atomic Energy Agency, Tokai 319-1184, Ibaraki, Japan,

³Department of Materials and Biological Sciences, Ibaraki University, Mito 310-8512, Ibaraki, Japan,

⁴Hitachi Maxell, Ltd, Ohyamazaki 618-8525, Kyoto, Japan

SG-08. Quantitative Evaluation of Interlayer Ferromagnetic Coupling between Granular and Cap Layers for Perpendicular Recording Media

K. K. Tham, S. Saito, N. Itagaki, S. Hinata, D. Hasegawa and M. Takahashi

Department of Electronics Engineering, Graduate School of Engineering, Tohoku University, 6-6-05, Aoba, Aramaki, Aoba-ku, Sendai 980-8579, Japan

SG-09. Evaluation of Interlayer Exchange Coupling in the stacked perpendicular recording media by the LLG calculation fitting of Ferromagnetic resonance spectra

D. Hasegawa¹, S. Hinata², S. Saito², and M. Takahashi²

¹Waseda Institute for Advanced study, Waseda University, 3-4-1, Okubo, Shinjyuku-ku, 169-8555 Tokyo, Japan, ²Department of Electronics Engineering, Graduate School of Engineering, Tohoku University, 6-6-05, Aoba, Aramaki, Aoba-ku, Sendai 980-8579, Japan

SG-10. Influence of Intergranular Exchange Coupling on Reversal Domain Size for Stacked Perpendicular Recording Media – LLG calculation –

D. Hasegawa¹, K. K. Tham², S. Saito², and M. Takahashi²

¹Waseda Institute for Advanced study, Waseda University, 3-4-1, Okubo, Shinjyuku-ku, 169-8555 Tokyo, Japan, ²Department of Electronics Engineering, Graduate School of Engineering, Tohoku University, 6-6-05, Aoba, Aramaki, Aoba-ku, Sendai 980-8579, Japan

SG-11. Oscillation Feature of FGL Using Negative Perpendicular Anisotropic Material for MAMR

M. Igarashi, Y. Suzuki and Y. Sato

Central Research Laboratory, Hitachi, Ltd., 1-280, Higashi-Koigakubo, Kokubunji, Tokyo

SG-12. Calculation of the thermal stability factor of exchange-coupled trilayers with parallel or anti-parallel magnetization alignment

S. G. Lee and S. H. Lim

Department of Materials Science and Engineering, Korea University, Seoul 136-713, Korea

SG-13. Dependence of MAMR on damping constant for ECC nano-pillar

N. Narita, T. Tanaka, K. Noda, Y. Nozaki and K. Matsuyama

ISEE, Kyushu University, Motooka 744, Nishi-ku, Fukuoka, 819-0395, Japan

July 16, Friday

14:30~16:30

Tachibana / Oral

**Session GX
SPINTRONICS XIII**

Chair: Kyung-Ho Shin, Chiharu Mitsumata

14:30

GX-01*(Invited) Gate modulation of spin precession in a semiconductor channel

H. C. Koo¹, J. H. Kwon¹, J. Eom², J. Chang¹, and S. H. Han¹

¹Nano Convergence Device Center, Korea Institute of Science and Technology, Seoul, 136-791, Korea,

²Department of Physics, Sejong University, Seoul, 143-747, Korea

15:00

GX-02*(Invited) Unveiling the Mystery of In-plane Uniaxial Magnetic Anisotropy of Fe on GaAs (001)

X. Jin

Physics Department, Fudan University, Shanghai 200433, China

15:30

GX-03*(Invited) Magnetic Microfluidics for Ultrasensitive Biochips

S. Anandakumar, C. G. Kim

Department of Materials Science and Engineering, Chungnam National University, Daejeon-305-764, South Korea

16:00

GX-04*(Invited) Spin dynamics in ferromagnetic nano-scaled dots

M. Mizuguchi, K. Takanashi

Institute for Materials Research, Tohoku University, 980-8577 Sendai, Japan

July 16, Friday	14:30~16:15	Hagi / Oral
Session GY		
STRONGLY CORRELATED MATERIALS AND PHASE TRANSITIONS II		

Chair: Takeshi Kanomata, Kazushi Ishiyama

14:30

GY-01*(Invited) Monte Carlo simulations of magnetocaloric effect in Heusler Ni-Mn-X (X=Ga, In) alloysV. D. Buchelnikov¹, V. V. Sokolovskiy¹, S. V. Taskaev¹, V. V. Khovaylo², P. Entel³*¹Chelyabinsk State University, 454001 Chelyabinsk, Russia, ²National University of Science and Technology "MISIS", 119049, Moscow, Russia, ³University of Duisburg-Essen, 47048 Duisburg, Germany*

15:00

GY-02*(Invited) Change of electronic states and magnetic free energy in $\text{La}_{1-z}\text{Ce}_z(\text{Fe}_{0.88}\text{Si}_{0.12})_{13}$ magnetic refrigerantsA. Fujita¹, S. Fujieda², K. Fukamichi²*¹Department of Materials Science, Graduate School of Engineering, Tohoku University, Aoba-yama 02, Sendai 980-8579, Japan, ²Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Katahira 2-1-1, Sendai 980-8577, Japan*

15:30

GY-03*(Invited) Magnetic Vortices Destroy Cancer CellsD. -H. Kim¹, E. A. Rozhkova², I. Ulasov³, M. S. Lesniak³, T. Rajh², S. D. Bader^{1,2} & V. Novosad¹*¹Materials Science Division, Argonne National Laboratory, Argonne, IL, USA, ²Center for Nanoscale Materials, National Laboratory, Argonne, IL, USA ³The University of Chicago Pritzker School of Medicine, Chicago, USA*

16:00

GY-04*(Invited) Magnetocaloric materials for magnetic hypothermiaE. V. Zatssepina¹, A. M. Tishin¹, P. W. Egolf²*¹M.V. Lomonosov Moscow State University, Moscow 119992, Russia, ²University of Applied Sciences of Western Switzerland, Institute of Thermal Sciences and Engineering, Yverdon-les-Bains, CH-1401 Switzerland*

July 16, Friday

16:30~17:00

Tachibana

CLOSING REMARK

Chair: Koki Takanashi

Closing remark

M. Takahashi

Chairman of ISAMMA 2010

Announcement of the 3rd ISAMMA

Chairman of the 3rd ISAMMA