

## SCIENTIFIC PROGRAM

24 August, Monday

..... **Room A** .....

### Opening address 9:00-9:10

H.Fujimori, Chairman of Organizing Committee

### Spin dependent transport I 9:15-10:15

( † invited talk)

24aA1-1† Spin-dependent Tunneling in Planar Magnetic Tunnel Junctions.  
S.S.P.Parkin: IBM Almaden Research Center, USA

24aA1-2 The Annealing Effect of Spin-Valve-Like Ferromagnetic Tunnel Junction.  
H.Kikuchi, M.Sato and K.Kobayashi: Fujitsu Laboratories Ltd., Japan

24aA1-3 Temperature and Applied Voltage Dependence of Magnetoresistance Ratio in Ferromagnet/Al Oxide/Ferromagnet Junctions.  
N.Tezuka and T.Miyazaki: Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan

### Spin dependent transport II 10:30-12:00

24aA2-1† Spin Tunneling in Conventional and Half-Metallic Systems.  
A.Bratkovsky: Hewlett-Packard Laboratories, USA

24aA2-2 Tunnel Conductance in Strong Disordered Limit.  
H.Itoh, J.Inoue\*, S.Maekawa\*\* and P.Bruno\*\*\*: Department of Quantum Engineering, Nagoya University, Japan, \*Department of Applied Physics, Nagoya University, Japan, \*\*Institute for Materials Research, Tohoku University, Japan, \*\*\*Institut d'Electronique Fondamentale, Université Paris-Sud, France

24aA2-3 Bias Voltage Dependence of Tunneling Magnetoresistance and Annealing Effect in Spin Dependent Tunnel Junctions.  
J.J.Sun, R.C.Sousa, T.T.P.Galvao, V.Souares and P.P.Freitas: INESC, Portugal

24aA2-4 XPS Studies of Spin Dependent Tunneling Junctions.  
M.Sharma, S.X.Wang and J.H.Nickel\*:

Department of Electrical Engineering, Stanford University, USA, \*Hewlett-Packard Laboratories, USA

24aA2-5 Magnetic Properties and Magnetoresistance of Evaporated Fe-Si Films.  
N.Ihara, S.Narushima, T.Homma, K.Mochiduki, T.Saito, K.Shinagawa and T.Tsushima: Department of Physics, Faculty of Science, Toho University, Japan

### Spin dependent transport III 13:30-15:15

24pA1-1† Enhanced Magnetoresistance in Ferromagnetic Granular Systems with Coulomb Blockade.  
S.Takahashi and S.Maekawa: Institute for Materials Research, Tohoku University, Japan

24pA1-2 Tunnel-Type Giant Magnetoresistance and Coulomb Blockade in Insulating Granular Systems.  
S.Mitani, K.Takanashi, K.Yakushiji, S.Ohnuma\* and H.Fujimori: Institute for Materials Research, Tohoku University, Japan, \*The Research Institute for Electric and Magnetic Materials, Japan

24pA1-3 Transport Properties in Co-Al-O and Fe-Al-O Granular Systems.  
H.Sato, Y.Kobayashi, K.Hashimoto, Y.Aoki, H.Sugawara, S.Mitani\*, H.Fujimori\* and S.Ohnuma\*\*: Department of Physics, Tokyo Metropolitan University, Japan, \*Institute for Materials Research, Tohoku University, Japan, \*\*The Research Institute for Electric and Magnetic Materials, Japan

24pA1-4 Tunnel Magnetoresistance through Hard Magnetic Nano Particles.  
Y.Saito and K.Inomata: Advanced Research Lab., Toshiba Corp., Japan

24pA1-5 Magnetic Properties and TMR of Fe/MgF<sub>2</sub> Granular Multilayered Thin Films.  
M.Nishikawa, K.Ono, J.Umehara, C.Yasui and E.Kita: Institute of Applied Physics, University of Tsukuba, Japan

24pA1-6 Magnetoresistance and Hall Effect in Granular Co<sub>x</sub>(CuO)<sub>1-x</sub> and Co<sub>x</sub>(Al<sub>2</sub>O<sub>3</sub>)<sub>1-x</sub> Alloys.  
A.Granovsky, H.Khan\*, M.Prudnikova, V.Prudnikov and V.Kovalev: Department of Physics, Moscow Lomonosov University, Russia, \*Forschungsinstitut für Edelmetalle und Metallchemie, Germany

### Spin dependent transport IV 15:30-17:15

24pA2-1 Scattering of Conduction Electrons by Ferromagnetic Domain Walls.  
M.Yamanaka and T.Koma\*: Department of Applied Physics, University of Tokyo, Japan,

- \*Department of Physics, Gakushuin University, Japan
- 24pA2-2 Preparation of Magnetic Thin Film with In-Plane Periodicity on Micro-Wired Substrate.  
M.Doi, K.Hasegawa and M.Matsui: Department of Materials Science and Engineering, Nagoya University, Japan
- 24pA2-3 Anomalous Magnetic and Transport Properties in  $Ce_2Fe_{17}$  and  $Lu_2Fe_{17}$ .  
H.Fujii, H.Fukuda, Y.Janssen\*, T.Ekino and Y.Morii\*\*: Faculty of Integrated Arts and Sciences, Hiroshima University, Japan, \*Van der Waals-Zeeman Institute, University of Amsterdam, the Netherlands, \*\*Japan Atomic Energy Research Institute, Japan
- 24pA2-4 Strain Effect in  $La_{1-x}Ca_xMnO_3$  Thin Films.  
J.Hayakawa, H.Asano and M.Matsui: Department of Materials Science and Engineering, Nagoya University, Japan
- 24pA2-5 Anisotropic Strains and Magnetoresistance of  $La_{0.7}Ca_{0.3}MnO_3$ .  
Y.H.Jeong, T.Y.Koo, S.H.Park and K.-B.Lee: Department of Physics, Pohang University of Science and Technology, Korea
- 24pA2-6 Charge Ordering in Half-Doped Manganese Oxides: Electronic and Magnetic Structures.  
B.I.Min and J.D.Lee\*: Department of Physics, Pohang University of Science and Technology, Korea, \*Max-Planck-Institute für Festkörperforschung, Germany
- 24pA2-7 Influence of Equilibrium and Nonequilibrium (Photoinduced) Charge Carriers on the Curie Temperature of Ga-Doped Ferromagnetic Semiconductor  $CdCr_2Se_4$ .  
G.I.Vinogradova, V.G.Veselago, L.V. Ansina, M.V.Glushkov, T.K.Menshchikova\* and G.F.Gubskaya\*: General Physics Institute of the Russian Academy of Sciences, Russia, \*Institute of General and Nonorganic Chemistry of the Russian Academy of Sciences, Russia

**Recording Media 17:30-18:30**

- 24pA3-1 Large Area Laser Ablation of Strontium Ferrite Films.  
B.R.Acharya, Y.Itoh and T.Suzuki: Information Storage Materials Laboratory, Toyota Technological Institute, Japan
- 24pA3-2 Effect of Magnetic Coupling between Grains on Noise of Longitudinal CoCrPt/Cr Thin Film Media.  
R.Mukai, W.Yamagishi and M.Oshiki: Magnetic Disks Laboratory, Fujitsu Laboratories Ltd., Japan

- 24pA3-3 Effect of Pt on the Intergranular Exchange Coupling in CoCrTaPt Thin Film Media Prepared under Ultra Clean Sputtering Process.  
M.Takahashi, H.Hara\*, A.Kikuchi\*\* and H.Shoji: Dept. of Electronics Engng., Tohoku University, Japan \*Teijin Ltd., Japan, \*\*Fujitsu Limited, Japan
- 24pA3-4 Effect of Magnetron Flux Strength on Properties of CoCrPtTa Thin Film Media for In-Line DC Sputtering.  
J.P.Wang, H.L.Wong, L.Lu, L.P.Tan, Y.F.T.Liew and T.S.Low: Data Storage Institute, Singapore

**Memorial session 20:00-21:20**

*for the late Prof. Minoru Takahashi*

- Memorial talks 20:00-20:30  
Henryk Lachowicz (Poland)  
Terunobu Miyazaki (Japan)
- Giant Moment or Not:  $\gamma$ - $Fe_{16}N_2$  20:30-20:55  
- From Discovery to Present -  
Migaku Takahashi (Japan)
- Spin-Polarized Tunnel  
Magnetoresistive Effect 20:55-21:20  
Jagadeesh S. Moodera (USA)

..... **Room B** .....

**Soft magnetic materials I 9:15-10:15**

- 24aB1-1† Development of Amorphous and Nanocrystalline Materials in China.  
S.X.Zhou and J.Y.Li: The National Amorphous & Nanocrystalline Alloy Engineering Research Center, China
- 24aB1-2 High Temperature  $\mu_{ac}$  Behaviors of and FeCuNbSiB Alloy.  
M.S.Leu and T.S.Chin: Department of Materials Science & Engineering, National Tsing Hua University, Taiwan
- 24aB1-3 Bulk Fe-Co-Ni-Zr-Nb-B Amorphous Materials.  
H.Chiriac and N.Lupu: National Institute of R&D for Technical Physics, Romania

**Soft magnetic materials II 10:30-12:00**

- 24aB2-1† Soft Magnetic Properties of Co-Cr-O Granular Films.  
T.Morikawa, M.Suzuki and Y.Tagu: Toyota Central R & D Labs., Inc., Japan
- 24aB2-2 Anisotropy Field and Electrical Resistivity in Magnetically Soft Co-Pd-Si-O Thin Films  
S.Ohnuma, N.Kobayashi, T.Masumoto, S.Mitani\*

- and H.Fujimori\*: The Research Institute for Electric and Magnetic Materials, Japan, \*Institute for Materials Research, Tohoku University, Japan
- 24aB2-3 Thermal Evolution of Hyperfine Fields in Fe-Zr-Si-B Nanocrystalline Alloy.  
A.Slawska-Waniewska, J.M.Greneche\* and A.Inoue\*\*: Institute of Physics, Polish Academy of Sciences, Poland, \*Laboratoire de Physique, UPRESA CNRS 6087, Université du Maine, France, \*\*Institute for Materials Research, Tohoku University, Japan
- 24aB2-4 Influence of Quench Rate on the Surface Crystallization and the Magnetic Properties of Fe-Based Amorphous Alloy Ribbons with Al and Ti as Impurities.  
H.Sawairi, M.Fujikura\* and T.Sato: Faculty of Engineering, Tokyo Institute of Technology, Japan, \*Nippon Steel Corporation, Japan
- 24aB2-5 Loss and Permeability of Partially Crystallized Amorphous Cores under DC-Biased Field.  
H.Fukunaga, H.Ikezoe and M.Nakano: Faculty of Engineering, Nagasaki University, Japan

### Intrinsic magnetic properties I

#### (Alloys & compounds)

13:30-15:15

- 24pB1-1† Basic Understanding of the Relations between Invar, Anti-Invar and Martensite in Fe-based Alloys.  
E.F.Wassermann, M.Acet, W.Pepperhoff and P.Entel: Experimentelle und Theoretische Tieftemperaturphysik und SFB 166, Gerhard-Mercator-Universität, Germany
- 24pB1-2 Magnetization Process in Mechanically Alloyed Fe-Ni Invar.  
S.Wei, K.Hayashi and F.Ono: Department of Physics, Okayama University, Japan
- 24pB1-3 High-Temperature Magnetostriction of Fe-Co Alloys.  
C.D.Graham, Jr. and B.E.Lorenz\*: Dept. of Materials Science, Univ. of Pennsylvania, USA \*Widener University, School of Engineering, USA
- 24pB1-4 Magnetic Anisotropy in  $\text{Sm}_2\text{Fe}_{17-x}\text{M}_x$  (M=Al, Ga) .  
T.Tsushima, T.Urakabe, T.Saito and K.Shinagawa: Department of Physics, Faculty of Science, Toho University, Japan
- 24pB1-5 Crystalline Field Effects in Magnetic Compounds  $\text{RNi}$  (R: Y, Lu, Dy, Ho, Er and Tm) .  
I.Umehara, Y.Adachi, M.Endo, S.Fujimori, A.Matsuda, Y.Isikawa\* and K.Sato: Division of Physics, Faculty of Engineering, Yokohama National University, Japan, \*Department of

Physics, Faculty of Science, Toyama University, Japan

#### 24pB1-6 Giant Magnetic Anisotropy in $\text{Sm}_2\text{Fe}_{17}$ Induced by Nitrogenation.

H.Fujii, K.Koyama\*, K.Tatami, S.Mitsudo\*\* and M.Motokawa\*\*: Faculty of Integrated Arts and Sciences, Hiroshima University, Japan, \*Institute for Solid State Physics, University of Tokyo, Japan, \*\*Institute for Materials Research, Tohoku University, Japan

### Hard Magnets I

15:30-17:15

- 24pB2-1† Effects of Exchange Coupling in Bulk Amorphous Nd-Fe-Al-Based Hard Magnets.  
K.V.Rao, R.Ortega\*, V.Madurga\* and A.Inoue\*\*: Dept. of Condensed Matter Physics, Royal Institute of Technology, Sweden, \*Universidad Publica de Navarra, Spain, \*\*Institute for Materials Research, Tohoku University, Japan
- 24pB2-2† General Trend and Raw Materials Supply of Global Magnet Industries.  
Y.Luo: China

### Exchange coupling

17:30-18:30

- 24pB3-1† The Role of Interfaces in Interlayer Exchange Coupling.  
B.Heinrich, M.Kowalewski and J.F.Cochran: Physics Department, Simon Fraser University, Canada
- 24pB3-2† The Indirect Exchange Coupling between Fe-and Tb-Layers, Separated by Non Magnetic Interlayers.  
R.Scherschlicht and H.Hoffmann: Universität Regensburg, Inst. für Experimentelle u. Angewandte Physik, Germany
- 24pB3-3 Lightscattering from Spinwaves in  $(\text{Fe}_k/\text{Au}_l)_n$ -Fine Layered Structures.  
P.Grünberg: FZ-Jülich-IFF, Germany
- 24pB3-4 Magnetization Reversal in Epitaxial NiFe/FeRh-Ir (001) Exchange Coupled Films.  
M.Nyvtl, T.Katayama, S.Yuasa and Y.Suzuki\*: Electrotechnical Laboratory, Japan, \*JRCAT-NAIR, Japan
- 24pB3-5 The Crystal Orientation Dependence of Exchange Biasing Properties for IrMn Antiferromagnetic Films.  
M.Yoshikawa, H.N.Fuke, K.Saito, H.Iwasaki and M.Sahashi: Materials and Devices Research Laboratories, Research and Development Center, Toshiba Corporation, Japan

..... **Poster Session** .....

**Hard magnets, Exchange coupling and others**

**10:00-12:00**

- 24aP1-1 Micromagnetic Calculation of Nd<sub>2</sub>Fe<sub>14</sub>B/Fe/Nd<sub>2</sub>Fe<sub>14</sub>B Sandwich Thin Film. Y.Gao, J.Zhu and Y.Weng: Advanced Materials Institute, Central Iron & Steel Research Inst., China
- 24aP1-2 The Magnetic Interaction in Nanocrystalline Alloy Nd<sub>4</sub>Fe<sub>77</sub>Co<sub>3</sub>B<sub>16</sub>. Y.Gao, J.Zhu, Y.Weng, E.B.Park\* and C.J.Yang\*: Advanced Materials Institute, Central Iron & Steel Research Inst., China, \*Electromagnetic Materials Lab., Research Institute of Industrial Science and Technology, Korea
- 24aP1-3 Improvement of Coercivity and Microstructure of Nd<sub>14.73</sub>Fe<sub>78.67</sub>B<sub>6.60</sub> Melt-Spun Ribbons by Addition of Zn. K.S.Lee, M.Tosa, J.C.Ro\* and S.J.Suh\*: National Research Institute for Metals, Japan, \*Department of Metal Engineering, Sungkyunkwan University, Korea
- 24aP1-4 Injection Molded Dielectromagnets with Zero Value Temperature Coefficient of Coercivity. B.Slusarek, D.Bialo\*, J.Gromek and T.Kulesza\*: Tele and Radio Research Institute, Poland, \*Technical University of Warsaw, Poland
- 24aP1-5 The Magnetic Properties and Molecular Field Analysis of (Ce, Nd)<sub>2</sub>(Fe, Si, Mn)<sub>17</sub> Compounds. S.Zhou, X.Gao\*, M.Zhang, X.Cai\*, L.Liang\* and R.Wang: University of Science & Technology Beijing, China, \*Shanghai Iron & Steel Research Institute, China
- 24aP1-6 Influence of V Additions on the Structure and Magnetic Properties of Sm<sub>2</sub>(Fe, Al, V)<sub>17</sub>C<sub>1.5</sub> Alloys. W.Tang, Z.Q.Jin, J.H.Yin, J.R.Zhang, S.L.Tang, Y.W.Du, Z.Yang\* and F.L.Wei\*: Department of Physics, Nanjing University, China, \*Magnetics Laboratory, Lanzhou University, State Education Commission, China
- 24aP1-7 Temperature Properties of Sm<sub>1-x</sub>HRE<sub>x</sub>TM<sub>7.4</sub>. J.Wang and M.Zhang: Southwest Institute of Applied Magnetics, China
- 24aP1-8 Preparation and Magnetic Properties of High-Coercivity SmCo/Cr Films. G.Yan, X.H.Liu, L.Y.Cui, Y.G.Wang, S.X.Zhou, W.Zheng\*, A.L.Wang\* and J.C.Chen\*: R&D Department, National Amorphous and Nanocrystalline Alloy Engineering Research Center, Central Iron and Steel Research Institute, China, \*Department of Physics, Capital Normal University, China
- 24aP1-9 Phase Changes of Zr Added Sm-Fe-V Alloys around the Compound Sm<sub>3</sub>(Fe, V)<sub>29</sub>. S.Sugimoto, H.Nakamura, D.Book, T.Kagotani, M.Okada and M.Homma: Dept. of Materials Science, Graduate School of Engineering, Tohoku University, Japan
- 24aP1-10 Structure and Magnetic Properties of Melt-Spun PrFe<sub>10</sub>Mo<sub>2</sub>N<sub>x</sub> Compounds. Z.Q.Jin, W.Tang, J.R.Zhang, L.Y.Lu, S.L.Tang and Y.W.Du: Department of Physics, Nanjing University, China
- 24aP1-11 Magnetic Hardening of Mechanically Alloyed NdFe<sub>12-x</sub>Mo<sub>x</sub>N (1 x 2). S.L.Tang, X.M.Jin\*, B.W.Wang\*, G.S.Li\*, B.Z.Ding\*, S.Y.Zhang and Y.W.Du: Department of Physics, Nanjing University, China, \*Institute of Metal Research, Chinese Academy of Sciences, China
- 24aP1-12 Mössbauer Studies of Melt-Spun Nd-Fe-Ti-Mo-N Alloy. C.S.Kim, S.Y.An, S.W.Lee\*, Y.B.Kim and C.S.Kim\*\*: Department of Physics, Kookmin University, Korea, \*School of Electrical and Electronics Engineering, Chungbuk National University, Korea, \*\*Korea Research Institute of Standards Science, Korea
- 24aP1-13 Thermo-Magnetization of HDDR Processed (Pr<sub>1-x</sub>Nd<sub>x</sub>)<sub>13</sub>Fe<sub>81</sub>B<sub>6</sub> Alloy. W.Pan, L.Y.Cui, Z.H.Guo and W.Li: Advanced Materials Institute, Central Iron & Steel Research Institute, China
- 24aP1-14 Magnetic Properties of HDDR Powders from the Precursor by Atomization. X.M.Li, W.Pan and W.Li: Advanced Materials Institute, Central Iron & Steel Research Institute, China
- 24aP1-15 Effect of Homogenization on Microstructure and Properties of NdFeB Bonded Magnets by HDDR. B.Chen and A.Jing: Southwest Institute of Applied Magnetics, China
- 24aP1-16 Magnetization Process in the Hybrid Magnet Mixed with RE Lean Neo and Sr Ferrite. Q.L.Zhou, J.S.Xing and L.Jang: Central Iron & Steel Research Institute, China
- 24aP1-17 Magnetic Properties and Exchange Interactions through Antiferromagnetic/Ferromagnetic Interfaces in NiCoO/Permalloy/MgO Trilayers. D.V.Dimitrov, C.Prados, G.C.Hadjipanayis and J.Q.Xiao: Department of Physics & Astronomy, University of Delaware, USA

- 24aP1-18 Dependence of Magnetic Properties on Antiferromagnetic Layer in Exchange-Coupled Bilayer.  
J.C.Ro, D.H.Lee, S.J.Suh, D.H.Yoon and G.S.Park\*: Department of Metallurgical Engineering, Sung Kyun Kwan University, Korea, \*Samsung Advanced Institute of Technology, Korea
- 24aP1-19 Exchange Anisotropy and Interlayer Exchange Coupling in fcc-NiMn/Permalloy Multilayers.  
N.Nakayama, Y.Hasuo, M.Okahara, T.Mizota and Y.Ueda\*: Faculty of Engineering, Yamaguchi University, Japan, \*ISSP, The University of Tokyo, Japan
- 24aP1-20 Effect of Antiferromagnetic Grain Size on Exchange Anisotropy in Ni-Fe/25 at % Ni-Mn Films.  
M.Tsunoda and M. Takahashi: Dept. of Electronics Engng., Graduate School of Engineering, Tohoku University, Japan
- 24aP1-21 Temperature Dependence of the Magnetization Reversal of Permalloy/Copper Multilayers with Antiferromagnetic Coupling.  
F.Stobiecki, T.Lucinski, C.Loch\*, J.Dubowik, B.Szymanski, M.Urbaniak and K.Röll\*: Institute of Molecular Physics, Polish Academy of Sciences, Poland, \*FB Physik, Universität Kassel, Germany
- 24aP1-22 Spin Flip Behavior of Co(1120)/Cr(100) Multilayer.  
K.Sugimoto, Y.Kamada, H.Asano and M.Matsui: Dept. of Mat. Sci. and Engin., Nagoya Univ., Japan
- 24aP1-23 Magnetostriction of Exchange Coupled PdCo/Fe Bilayers.  
H.Saito, H.Kon and S.Ishio: Department of Materials Engineering and Applied Chemistry, Akita University, Japan
- 24aP1-24 Two-Cluster Model for Amorphous Fe-Cr-Zr Alloys.  
Z.Huang, H.Lai, H.Cai and H.Cai: Department of Physics, Fujian Normal University, China
- 24aP1-25 Annealing Effect of Magnetic Properties in  $\text{Co}_{100-x}\text{Nb}_x$  Thin Films.  
H.K.Yu, J.S.Baek, Y.Y.Kim\*, W.Y.Lim, S.C.Yu\* and S.H.Lee\*\*: Dept. of Phys., Korea Univ., Korea, \*\*Dept. of Phys., Chungbuk Nat'l Univ., Korea, \*\*\*Dept. of Phys., Chongju Univ., Korea
- 24aP1-26 Ferromagnetic Resonance Studies of Video Tapes.  
O.Kohmoto, T.Tsuda, H.Kitamura, T.Hanafusa and Y.Nakagawa: Department of Physics, Okayama University, Japan
- 24aP1-27 Magnetic Properties of CoPtC Granular Films and Their Dependence on the Annealing Temperature.  
J.-J.Delaunay, T.Hayashi and S.Hirono: NTT Integrated Information & Energy Systems Laboratories, Japan
- 24aP1-28 Statistical Analysis of MFM Images.  
I.Takekuma, M.Kumagai, M.Yasui\*, Y.Okumura\*, M.Akita\*, M.Maeda\*, K.Sueoka\*\*\*, M.Haseyama and K.Mukasa\*\*\*\*: Graduate School of Engineering, Hokkaido University, Japan, \*KUBOTA Corporation Technology Development Laboratory, Japan, \*\*\*JST. PREST, \*\*\*\*JST. CREST
- 24aP1-29 Demagnetizing Factor of Powder Samples in Measurement of Vibrating Sample Magnetometer.  
L.Y.Cui and S.X.Zhou: Advanced Materials Institute, Central Iron & Steel Research Institute, China
- 24aP1-30 Quantum Method for Calculating the Coercivity of Transitional Magnetic Material.  
L.Zhou, Q.Sun, J.-T.Wang, J.-Z.Yu and Y.Kawazoe: Institute for Materials Research, Tohoku University, Japan
- 24aP1-31 Structure and Magnetic Properties of Nd-Fe-B Films.  
N.Mizutani, T.Okuda, A.Nakanishi\*, J.Nishiyama, M.Motokawa\*\*, Z.Wang\*\*, N.Adachi and H.Ohsato: Nagoya Institute of Technology, Japan, \*Sumitomo Special Metals Co., Ltd., Japan, \*\*Institute for Materials Research, Tohoku Univ., Japan
- 24aP1-32 Magnetic Studies on FeMn/Co(Ni)/Cu/Co(Ni) Spin Valves.  
C.Y.Huang, J.G.Lin, D.R.Huang\* and C.A.Chang\*: Center for Condensed Matter Sciences, National Taiwan University, Taiwan, \*Industrial Technology Research Institute, Taiwan
- 24aP1-33 Magnetism and Noble Quanta-Electromagnetic Structure of Nature as Disclosed by the Unified Frame for Physics.  
S.Iida: Professor Emeritus, University of Tokyo, Japan
- Magnetization process, Novel magnetic phenomena, Novel scientific inst. & processing**  
**13:30-15:30**
- 24pP1-1 Short Amorphous Micro-Wires:Magnetic Properties and Structure.  
N.Perov, A.Radkovskaya, N.Usov\* and L.Zakharchenko: Physical Department, Moscow State University, Russia, \*Troitsk Institute for Innovation and Fusion Research, Russia
- 24pP1-2 Magneto-Optical Investigation of Near-Surface Micromagnetic Structure of FeNbCuSiB Alloys.  
E.E.Shalyguina, N.I.Tsidaeva and L.M.Bekoeva:

- Department of Physics, Moscow State University, Russia
- 24pP1-3 The Large Gyromagnetic Effect in FeSiB Amorphous Wires.  
H.Chiriac, C.S.Marinescu and T.-A.Ovári: National Institute of R&D for Technical Physics, Romania
- 24pP1-4 Magnetic Properties and Magnetoimpedance Effect in  $TM_{70}Cr_5Si_{10}B_{15}$  (TM= Fe, Co, Ni) Alloys.  
Y.-K.Kim, T.-K.Kim, H.Lee\*, Y.-K.Kim\*\*, S.-C.Yu\*\* and W.-N.Myung\*\*\*: Division of Material Sci., Chungnam Nat'l. Univ., Korea, \*Dept. of Phys. Education, Kongju Nat'l. Univ., Korea, \*\*Dept. of Phys., Chungbuk Nat'l. Univ., Korea, \*\*\*Dept. of Phys., Chonnam Nat'l. Univ., Korea
- 24pP1-5 Analysis of Eddy Current Loss and Magnetization Process in Mn-Zn Ferrites for Power Supplies.  
S.Yamada and E.Otsuki: Materials Development Laboratory, Tokin Corporation, Japan
- 24pP1-6 Thermomagnetization Curves and Atomic Short-Range Order for NiMn Alloys.  
T.Miyanaga, T.Okazaki, Y.Aono, S.Ikeda and H.Kon: Faculty of Science and Technology, Hirosaki University, Japan
- 24pP1-7 Magnetic Microstructure in FePt (001) Films with Ultrahigh Coercivity.  
T.Goto, Y.Ide, K.Watanabe and H.Yoshida\*: Faculty of Engineering, Tohoku Gakuin University, Japan, \*IMR, Tohoku University, Japan
- 24pP1-8 Properties of Ion Beam Mixed Co/Pt Multilayered Films.  
G.S.Chang, K.H.Chae, C.N.Whang and Y.P.Lee\*: Dept. of Physics, ASSRC, Yonsei University, Korea, \*Dept. of Physics, Sunmoon University, Korea
- 24pP1-9 Micromagnetic Structure of Ferromagnetic/ Nonmagnetic Multilayer Films with Perpendicular Anisotropy.  
S.Hamada, N.Hosoito, T.Ono\* and T.Shinjo: Institute for Chemical Research (ICR), Kyoto University, Japan, \*Faculty of Science and Technology, Keio University, Japan
- 24pP1-10 The Effects of Biquadratic Exchange Coupling and Temperature on Magnetization Process and GMR in Multilayered Films.  
Z.Huang, H.Lai, H.Cai and H.Cai: Physics Department, Fujian Normal University, China
- 24pP1-11 The Phase Diagram and Dynamic's Model of Thin Magnetic Film.  
Z.Huang, H.Cai, H.Lai and H.Cai: Physics Department, Fujian Normal University, China
- 24pP1-12 Magnetic Properties of Co Particles Alternately Electro-Deposited into Micropores of Alumite.  
 M.Iida, L.Ling, Y.Hata, S.Kitahata\* and E.Kita: Institute of Applied Physics, University of Tsukuba, Japan, \*Tsukuba Research Laboratory, Hitachi Maxell, Japan
- 24pP1-13 Magnetic Domain Structure of Micron-Size Co Line Arrays.  
Y.Nozaki, T.Ono\*, H.Miyajima\* and K.Matsuyama: Department of Electronic Device Engineering, Kyusyu University, Japan, \*Faculty of Science and Technology, Keio University, Japan
- 24pP1-14 Dynamics of Magnetic Domains in Current-Carrying Magnetic Superconductors.  
Y.Enomoto: Department of Environmental Technology, Nagoya Institute of Technology, Japan
- 24pP1-15 Field Characteristics of Axial-Field Motor and 8-Pole Impulsed Magnetizing Fixture for the Rotor Magnet using 2-D Model.  
P.-S.Kim and Y.Kim\*: Dept. of Automotive Eng., Daerim College of Tech., Korea, \*Dept. of Electrical Eng., Dongguk Univ., Korea
- 24pP1-16 Self-Organized Magnetic Recording System.  
M.Ishihara, H.Mizuseki, K.Ohno and Y.Kawazoe: Institute for Materials Research, Tohoku University, Japan
- 24pP1-17 Molecular-Beam Epitaxy of MnAs on Patterned GaAs Substrates.  
Y.Morishita, Y.Sugawara, M.Kato and K.Sato: Faculty of Technology, Tokyo University of Agriculture and Technology, Japan
- 24pP1-18 Epitaxial Growth of MnSb on Single Crystalline Ferrite Substrates.  
T.Ikeda, H.Fujioka, K.Ono, M.Oshima, H.Akinaga\*, M.Yoshimoto\*\*, H.Maruta\*\*, H.Koinuma\*\* and Y.Watanabe\*\*\*: Department of Applied Chemistry, Graduate School of Engineering, University of Tokyo, Japan, \*Joint Research Center for Atom Technology (JRCAT), Japan, \*\*Materials and Structures Laboratory, T.I.T., Japan, \*\*\*NTT Labs, Japan
- 24pP1-19 Formation of Low-Dimensional Structures of Manganese Pnictides.  
K.Ono, M.Mizuguchi, T.Uragami, H.Fujioka, M.Oshima, M.Tanaka, H.Akinaga\* and Y.Watanabe\*\*: Department of Applied Chemistry, Graduate School of Engineering, University of Tokyo, Japan, \*Joint Research Center for Atom Technology (JRCAT), Japan, \*\*NTT Labs, Japan
- 24pP1-20 Formation of MnAs Dots on S-Passivated GaAs (100) Substrates.  
M.Mizuguchi, T.Uragami, T.Mano, K.Ono, H.Fujioka, M.Oshima, M.Tanaka and

- Y.Watanabe\*: Department of Applied Chemistry, Graduate School of Engineering, University of Tokyo, Japan, \*NTT Labs, Japan
- 24pP1-21 Growth of MnAs on S- and Se-Passivated GaAs Substrates.  
T.Uragami, M.Mizuguchi, K.Ono, H.Fujioka, M.Oshima, M.Tanaka and Y.Watanabe\*: Department of Applied Chemistry, Graduate School of Engineering, University of Tokyo, Japan, \*NTT Labs, Japan
- 24pP1-22 Magnetic Properties of Ferromagnetic-Superconducting Hybrid Films.  
K.Motohashi, T.Hinoue, T.Ono and H.Miyajima: Department of Physics, Faculty of Science and Technology, Keio University, Japan
- 24pP1-23 Study of Quantum Well States in Ultrathin Overlayer Films by Magnetization-Induced Second Harmonic Generation.  
A.Kirilyuk and Th.Rasing: Research Institute for Materials, University of Nijmegen, the Netherlands
- 24pP1-24 Structure and Magnetism of Small Fe Clusters.  
A.Taneda, K.Esfarjani, M.Sakurai, K.Sumiyama and Y.Kawazoe: Institute for Materials Research, Tohoku University, Japan
- 24pP1-25 Fabrication of Highly Oriented Fe Nanocrystals.  
B.Bian, K.Sato, T.Ohkubo, Y.Hirotsu and A.Makino\*: The Institute of Scientific and Industrial Research, Osaka University, Japan, \*Central Research Laboratory, Alps Electric Co., Ltd., Japan
- 24pP1-26 Preparation of Magnetic Nanostructures by Vacuum Evaporation with Creeping Substrate.  
M.Nawate and S.Honda\*: Cooperative Research Center, Shimane University, Japan, \*Department of Physical Electronics, Hiroshima University, Japan
- 24pP1-27 Spin-Valves Deposited with Ultra-Clean Sputtering Process.  
K.Hayashi, M.Nakada, A.Kamijo\*, J.Fujikata and K.Yamada: Functional Devices Res. Labs., NEC Corp., Japan, \*Fundamental Res. Labs., NEC Corp., Japan
- 24pP1-28 Effect of Film Thickness on Magnetic Properties and Microstructure for CoCrTa Media Fabricated under the Ultra Clean Sputtering Process.  
M.Takahashi, A.Kikuchi\*, N.Iwata and H.Shoji: Dept. of Electronics Engng., Tohoku University, Japan, \*Fujitsu Limited, Japan
- 24pP1-29 Application of a Retarding-Type Mott Analyzer to Observation of Magnetic Domains.  
Y.Kuraoka, K.Sueoka, T.Iwata\*, K.Mukasa\*\*\*\*, R.Aihara\*\* and K.Hayakawa\*\*\*, \*\*\*\*: Graduate School of Engineering, Hokkaido University, Japan, \*Hokkaido Tokai University, Japan, \*\*Eiko Engineering Co., Ltd., Japan, \*\*\*Catalysis Research Center, Hokkaido University, Japan, \*\*\*\*Japan Science and Technology Corporation, Core Research for Evolution Science and Technology
- 24pP1-30 Theoretical Study of Exchange Force between Magnetic Films.  
K.Nakamura, T.Oguchi\*, H.Hasegawa\*\*, K.Sueoka\*\*\*, K.Hayakawa and K.Mukasa\*\*\*, \*\*\*\*: Catalysis Research Center, Hokkaido University, Japan, \*Dept. of Materials Science, Hiroshima Univ., Japan, \*\*Dept. of Physics, Tokyo Gakugei Univ., Japan, \*\*\*Graduate School of Engineering, Hokkaido Univ., Japan, \*\*\*\*CREST, JST
- 24pP1-31 Exact Parameter Estimation of Impulse Magnetizer Considering Contact Resistance.  
P.-S.Kim: Dept. of Automotive Eng., Daerim College of Tech., Korea
- 24pP1-32 Giant Strain by Magnetically Induced Phase Transformation in Rapidly Solidified, Melt-Spun Shape Memory Fe-Pd Alloy.  
Y.Furuya, N.Hagood\*, H.Kimura\*\* and T.Watanabe\*\*\*: Department of Materials Processing, Graduate School of Engineering, Tohoku University, Japan, \*Active Materials and Structures Laboratory (AMSL), Massachusetts Institute of Technology (MIT), USA, \*\*Institute for Materials Research, Tohoku University, Japan, \*\*\*Machine Intelligence, Faculty of Engineering, Tohoku University, Japan
- 24pP1-33 Perpendicular Magnetic Anisotropy of MBE-Grown NM/Co/NM Sandwiches (NM= Au, Pt, Rh and Cu) .  
S.Oikawa, S.Iwata, A.Shibata and S.Tsunashima: Dept. of Electronics, Nagoya University, Japan
- Soft magnetic materials & Magneto-optics**  
**16:30-18:30**
- 24pP2-1 Magnetic Anisotropy of FeTaN Films Bias-Sputtered on Sloping Surfaces.  
J.Hong and S.X.Wang: Dept. of Materials Science and Eng., Stanford University, USA
- 24pP2-2 Soft Magnetic and Structural Properties of As-Sputtered Fe-M-O (M= Hf, Al) Films.  
J.Y.Park, J.Kim\*, K.Y.Kim, S.H.Han and H.J.Kim: Thin Film Technology Research Center, Korea Institute of Science and Technology, Korea, \*Dept. of Metallurgical and Material Science, Hanyang University, Korea
- 24pP2-3 Fabrication and Soft Magnetic Properties of (Fe, Co)-Mg-O Nano-Granular Thin Films with High

- Electrical Resistivity .  
H.J.Lee, S.Mitani, T.Shima and H.Fujimori:  
 Institute for Materials Research, Tohoku  
 University, Japan
- 24pP2-4 Reactive Ion Etching Characteristics of Permalloy  
 Thin Films.  
S.D.Kim\*, J.J.Lee\*, S.H.Lim and H.J.Kim: Thin  
 Film Technology Research Center, Korea Institute  
 of Science and Technology, Korea, \*Dept. of  
 Metallurgical Engineering, Seoul National  
 University, Korea
- 24pP2-5 Effects of Ion Beam Etching on the Magnetic  
 Properties of Permalloy Thin Films.  
S.D.Kim\*, J.J.Lee\*, S.H.Lim and H.J.Kim: Thin  
 Film Technology Research Center, Korea Institute  
 of Science and Technology, Korea, \*Dept. of  
 Metallurgical Engineering, Seoul National  
 University, Korea
- 24pP2-6 New Designed Spiral Type Thin Film Inductor.  
H.J.Ryu, J.J.Lee, J.Kim\*, S.H.Han\*\* and  
H.J.Kim\*\* : Dept. of Metallurgical Eng., Seoul  
 National University, Korea, \*Dept. of Metallurgy  
 and Mat. Sci., Hanyang University, Korea, \*\*Thin  
 Film Technology Research Center, Korea Institute  
 of Science and Technology, Korea
- 24pP2-7 3D Simulation of Thin Film Inductor Using  
 Permalloy as a Conductor.  
H.J.Ryu, J.J.Lee, J.Kim\*, S.H.Han\*\* and  
H.J.Kim\*\* : Dept. of Metallurgical Eng., Seoul  
 National University, Korea, \*Dept. of Metallurgy  
 and Material Science, Hanyang University, Korea,  
 \*\*Thin Film Technology Research Center, Korea  
 Institute of Science and Technology, Korea
- 24pP2-8 Giant Magneto-Impedance in Nanocrystalline  
 $\text{Fe}_{96-x}\text{Zr}_x\text{B}_4$  ( $x=7$  and  $10$ ) Alloy Ribbons.  
 Z.C.Lu, D.R.Li\* and S.X.Zhou: R&D Department,  
 National Amorphous and Nanocrystalline Alloy  
 Engineering Research Center, Central Iron and  
 Steel Research Institute, China, \*Department of  
 Physics, Northeastern University, China
- 24pP2-9 Giant Magneto-Impedance Effect of  
 $\text{Fe}_{79.5}\text{P}_{12}\text{C}_6\text{Cu}_{0.5}\text{Mo}_{0.5}\text{Si}_{1.5}$  Nanocrystalline Alloy.  
 X.Y.Wang, S.X.Zhou and W.Z.Chen: National  
 Amorphous and Nanocrystalline Alloy Engineering  
 Research Center, Central Iron and Steel Research  
 Institute, China
- 24pP2-10 In-Situ TEM Observation of  $\text{Fe}_{80}\text{P}_{12}\text{C}_6\text{Mo}_{0.5}\text{Si}_{1.5}$   
 Amorphous Alloy.  
 X.Y.Wang, S.X.Zhou and W.Z.Chen: National  
 Amorphous and Nanocrystalline Alloy Engineering  
 Research Center, Central Iron and Steel Research  
 Institute, China
- 24pP2-11 Influence of Copper on the Crystallization of Fe-P-  
 C-Mo-Si Amorphous Alloys.  
 X.Y.Wang, S.X.Zhou and W.Z.Chen: National  
 Amorphous and Nanocrystalline Alloy Engineering  
 Research Center, Central Iron and Steel Research  
 Institute, China
- 24pP2-12 Structure and Magnetic Properties of  
 $\text{Fe}_{79.5}\text{P}_{12}\text{C}_6\text{Cu}_{0.5}\text{Mo}_{0.5}\text{Si}_{1.5}$  Nanocrystalline Alloy.  
 X.Y.Wang, S.X.Zhou and W.Z.Chen: National  
 Amorphous and Nanocrystalline Alloy Engineering  
 Research Center, Central Iron and Steel Research  
 Institute, China
- 24pP2-13 Super-Paramagnetic Behavior of  
 $\text{Fe}_{79.5}\text{P}_{12}\text{C}_6\text{Cu}_{0.5}\text{Mo}_{0.5}\text{Si}_{1.5}$  Nanocrystalline Alloy.  
 X.Y.Wang, S.X.Zhou and W.Z.Chen: National  
 Amorphous and Nanocrystalline Alloy Engineering  
 Research Center, Central Iron and Steel Research  
 Institute, China
- 24pP2-14 Application of Nanocrystalline Cores in Integrated  
 Service Digital Networks.  
 W.Z.Chen and S.X.Zhou: National Amorphous and  
 Nanocrystalline Alloy Engineering Research  
 Center, Central Iron and Steel Research Institute,  
 China
- 24pP2-15 Exothermal Characteristics of Large Sized  
 Nanocrystalline Core During Annealing Process.  
B.Quan, Y.Xu and Y.Chu: Central Iron & Steel  
 Research Institute, China
- 24pP2-16 Large Power Inverter Cores Using Nanocrystalline  
 Alloys.  
L.Wang: The National Amorphous and  
 Nanocrystalline Alloy Engineering Research  
 Center, Central Iron and Steel Research Institute,  
 China
- 24pP2-17 Mössbauer Spectra of FeCuMoSiB Alloy.  
 Z.H.Li, J.H.Zhu and S.X.Zhou: National  
 Amorphous and Nanocrystalline Alloy Engineering  
 Research Center, Central Iron and Steel Research  
 Institute, China
- 24pP2-18 Magnetothermal Analysis of Fe-Cu-Nb-V-Si-B  
 Alloy.  
 Z.Wang, K.He\* and L.Zhang\*\*: Institute of  
 Materials Physics, Tianjin Institute of Technology,  
 China, \*Department of Materials Science and Eng.,  
 Northeastern University, China, \*\*Shanghai Iron  
 and Steel Research Institute, China
- 24pP2-19 Temperature Dependence of Permeability for  
 $\text{Fe}_{72.7}\text{Cu}_1\text{Nb}_2\text{V}_{1.8}\text{Si}_{13.5}\text{B}_9$  Nanocrystalline Alloy.  
 Z.Wang, K.He\*, J.Jin\*, Y.Zhang\* and L.Zhang\*\*:  
 Institute of Materials Physics, Tianjin Institute of  
 Technology, China, \*Department of Materials  
 Science and Eng., Northeastern University, China,  
 \*\*Shanghai Iron and Steel Research Institute,  
 China



- 24pP2-20 Magnetic Relaxations in Amorphous and Nanocrystalline Fe-Based Alloys. J.Zbrozarczyk, H.Fukunaga\*, W.Ciurzynska, J.Olszewski, B.Wyslocki, M.Hasiak and A.Blachowicz: Institute of Physics, Technical University of Czestochowa, Poland, \*Faculty of Engineering, Nagasaki University, Japan
- 24pP2-21 Preannealing Effect and Soft Magnetic Properties of the Nanocrystalline  $Fe_{74}Cu_1Nb_3Si_{12}B_{10}$  Alloy. W.Ciurzynska, H.Fukunaga\*, K.Narita\*\*, J.Zbrozarczyk, J.Olszewski, B.Wyslocki, A.Blachowicz and M.Hasiak: Institute of Physics, Technical University of Czestochowa, Poland, \*Faculty of Engineering, Nagasaki University, Japan, \*\*Faculty of Engineering, Kyusyu University, Japan
- 24pP2-22 A New Amorphous FeNiCrSiB Alloy with High Permeability after Air Annealing. G.D.Liu, L.D.Ding and S.X.Zhou: National Amorphous and Nanocrystalline Alloy Engineering Research Center, Central Iron and Steel Research Institute, China
- 24pP2-23 The Low Temperature Dependence of Magnetization and AC Susceptibility of Amorphous  $Fe_{84-x}Nb_7B_{8+x}Cu_1$  Alloys. K.S.Kim, S.C.Yu, W.Y.Lim\* and K.V.Rao\*\*: Dept. of Physics, Chungbuk National University, Korea, \*Dept. of Phys., Korea Univ., Korea, \*\*Dept. of Cond. Matter Phys., Royal Inst. of Tech., Sweden
- 24pP2-24 Magnetic Properties and Ferrimagnetic Resonance in Polycrystalline  $Y_{3-x}Ca_xFe_{5-x}Zr_xO_{12}$ . Y.Y.Song, S.G.Min, S.C.Yu and W.T.Kim\*: Dept. of Physics, Chungbuk National University, Korea, \*Dept. of Phys., Chongju Univ., Korea
- 24pP2-25 An Oscillatory Behavior of Magneto-Optical Kerr Effect in Fe-Sandwiched Au-Wedge Layer. T.Katayama, S.Yuasa, Y.Suzuki\*, T.Yori\*\* and M.Nyvtl: Electrotechnical Laboratory, Japan, \*JRCAT-NAIR, Japan, \*\*College of Sci. and Technology, Nihon Univ., Japan
- 24pP2-26 Magneto-Optical Effects in bcc-Fe Ultrathin Films. Y.Suzuki\*\*, T.Katayama\*, W.Geerts\*, P.Bruno\*\*\*, S.Yuasa\* and T.Yori\*: \*Electrotechnical Laboratory, Japan, \*\*JRCAT, National Institute for Advanced Interdisciplinary Research, Japan, \*\*\*Institut d'Electronique Fondamentale, CNRS URA 22, Université Paris-Sud, France,
- 24pP2-27 Dielectric Tensor and Magneto-Optical Effect for MnSbM (M= Au, Pd, Pt) Films Consist of MnSb and MMnSb Phases. W.B.Shu, S.Saito, H.Shoji and M.Takahashi: Dept. of Electronics Engng., Tohoku University, Japan
- 24pP2-28 Influence of Microstructures on Magneto-Optical Kerr Effect for MnSbPt Films (Effect of Precipitated and Recrystallized PtMnSb Phase). H.Shoji, M.Watanabe, S.Saito and M.Takahashi: Dept. of Electronics Engng., Tohoku University, Japan
- 24pP2-29 Model of Photoinduced Disaccommodation in Oxygen-Deficient Yttrium Iron Garnet. K.Hisatake, I.Matsubara, K.Maeda, T.Miyazaki\*, S.Kainuma\*\* and H.Watanabe\*\*\*: Department of Physics, Kanagawa Dental College, Japan, \*Department of Applied Physics, Tohoku University, Japan, \*\*Department of Electrical Engineering, Ashikaga Institute of Technology, Japan, \*\*\*Advanced Semiconductor Devices Research Laboratories, Toshiba Corporation, Japan
- 24pP2-30 Radiation Intensity Influence on Faraday Effect in the Magnetic Semiconductor  $CdCr_2Se_4$ . L.L.Golik and Z.E.Kunkova: IRE, Russian Academy of Sciences, Russia
- 24pP2-31 The Influence of Temperature on the Coercivity and Kerr Rotation for MnBiRE (RE=Ce, Pr, Nd and Sm) Thin Films. T.Ma and S.Zhang\*: Dept. of Physics, Beijing Institute of Light Industry, China, \*Beijing Guan Wei Co., China
- 24pP2-32 Doping Effect of PtCu/Co and PtAl/Co Multilayers. Z.H.Guo, J.Li\*, Y.J.Wang\* and W.Li: Central Iron & Steel Research Institute, China, \*Institute of Physics, Academia Sinica, China
- 24pP2-33 Structural Transition in Co/Ti and Co/Zr Multilayered Films. Y.P.Lee, G.M.Lee, K.W.Kim, Y.V.Kudryavtsev\* and L.Smardz\*\*: Dept. of Physics, Sunmoon University, Korea, \*Institute of Metal Physics, Ukraine, \*\*Institute of Molecular Physics, Poland
- 24pP2-34 Magneto-Optical Spectra of Ferromagnetic Composites in the Symmetrised Maxwell-Garnett Approximation. A.Granovsky, M.Kuzmichov and J.P.Clerc\*: Department of Physics, Moscow Lomonosov University, Russia, \*Universite de Provence, Centre de St-Jerome, France

**25 August, Tuesday**

Materials Lab., Research Institute of Industrial Science &amp; Technology (RIST), Korea

 ..... **Room A** .....

**Hard magnets II 9:00-10:15**

- 25aA1-1† High Coercive Force Fe/Nd<sub>2</sub>Fe<sub>14</sub>B-type Nanocomposites.  
W.C.Chang, D.Y.Chiou, S.H.Wu, B.M.Ma\* and C.O.Bounds\*: Department of Physics, National Chung Cheng University, Taiwan, \*Rhodia Inc., Rare Earths and Gallium, USA
- 25aA1-2 Enhanced Exchange Coupling of Nd<sub>2</sub>Fe<sub>14</sub>B/Fe<sub>3</sub>B Magnet via Magnetic Field Treatment.  
C.J.Yang and E.B.Park: Electromagnetic Materials Lab., Research Institute of Industrial Science & Technology (RIST), Korea
- 25aA1-3 Structure of Nd<sub>2</sub>Fe<sub>14</sub>B/Fe Resulting from Reaction of Nd<sub>2</sub>Fe<sub>17</sub> and B.  
T.Nomura, K.Ohashi and Y.Tawara: Magnetic Materials R&D Center, Shin-Etsu Chemical Co., Ltd., Japan
- 25aA1-4 Exchange-Coupled Hybrid Magnet Formed with SmCo<sub>5</sub> and Sm(Co, Fe)<sub>4</sub>B Compounds.  
H.Ido and R.Takaya: Department of Applied Physics, Tohoku Gakuin University, Japan

**Hard magnets III 10:30-12:00**

- 25aA2-1† Exchange-Coupled Nanocomposite Magnets.  
G.C.Hadjipanayis and Zhongmin Chen: Department of Physics and Astronomy, University of Delaware, USA
- 25aA2-2 High Temperature  $\mu_{ac}$  Behaviors of Fe-Nd-B Nanocomposite Alloys.  
T.S.Chin and J.S.Fang: Department of Materials Science & Engineering, Tsing Hua University, Taiwan
- 25aA2-3 Magnetic Annealing on Nd-Fe-B Based Melt-Spun Ribbons.  
H.Chiriac and M.Marinescu: National Institute of R&D for Technical Physics, Romania
- 25aA2-4 The Enhancement of Coercivity in Nd-Fe-B Thin Films by the Modification of C-axis Aligned Columnar Structure.  
T.Shima, A.Kamegawa and H.Fujimori: Institute for Materials Research, Tohoku University, Japan
- 25aA2-5 Magnetic Properties of NdFeB Thin Films Synthesized via Laser Ablation Processing.  
 S.W.Kim, J.S.Kang and C.J.Yang: Electromagnetic

**Hard magnets IV 13:30-15:15**

- 25pA1-1† Magnetic Interaction in Novel R<sub>3</sub>(Fe, T)<sub>29</sub> Compounds.  
E.M.Yang, J.Wang, X.Han and H.Pan: State Key Laboratory for Magnetism, Institute of Physics, Chinese Academy of Sciences, China
- 25pA1-2 Crystallographic and Magnetic Properties of R<sub>3</sub>Fe<sub>29-x</sub>T<sub>x</sub> and Their Nitrides, Carbides and Hydrides.  
X.F.Han, L.Y.Lin, T.Miyazaki\*, E.Baggio-Saitovitch\*\*, F.M.Yang\*\*\*, H.G.Pan\*\*\*\*, R.G.Xu\*\*\*\* and X.H.Wang\*\*\*\*: Institute of Semiconductors, Chinese Academy of Sciences, China, \*Department of Applied Physics, Faculty of Engineering, Tohoku University, Japan, \*\*Centro Brasileiro de Pesquisas Fisicas, Rua Dr.Xavier Sigaud, BRASIL, \*\*\*Institute of Physics, Chinese Academy of Sciences, China \*\*\*\*Material Department of Zhejiang University, China
- 25pA1-3 Nanostructural NdFe<sub>10.5</sub>Mo<sub>1.5</sub>N<sub>x</sub> Compounds Prepared by Mechanical Alloying.  
 M.Zhou, S.Zhang and T.Zuo: College of Materials Science and Engineering, China
- 25pA1-4 Effects of Silicon and Carbon Addition on Magnetic Properties of Fe<sub>2</sub>-W Type Hexagonal Ferrite.  
K.Unno, H.Takamura, A.Kamegawa, M.Homma and M.Okada: Department of Materials Science, Graduate School of Engineering, Tohoku University, Japan
- 25pA1-5 Preparation of Dy and Mn Nanoparticles.  
J.A.Christodoulides, N.B.Shevchenko and G.C.Hadjipanayis: Department of Physics & Astronomy, University of Delaware, USA
- 25pA1-6 Measuring Method for Magnetic Properties of Permanent Magnets Using Pulsed Magnetic Fields.  
S.Kato and G.Kido: National Research Institute for Metals, Japan

**Hard magnets V 15:30-17:30**

- 25pA2-1† Enhancement of the Anisotropy of Nd-Fe-B Powders by Varying the HDDR Conditions.  
H.Nakamura, K.Kato, D.Book, S.Sugimoto, M.Okada and M.Homma: Dept. of Materials Science, Graduate School of Engineering, Tohoku University, Japan
- 25pA2-2 NdDyFeBZr - HDDR Processing.  
P.J.McGuinness, I.Skulj, T.Porenta and S.Kobe: Institut "Jozef Stefan", Slovenia

- 25pA2-3 Thermomagnetic Characteristics of the  $\text{Sm}_2\text{Fe}_{17}\text{N}_x$  Material Produced by a Combination of HDDR Process and Nitrogenation.  
H.W.Kwon: Department of Materials Science and Engineering, Pukyong National University, Korea
- 25pA2-4 The Effect of Co on HDDR Phenomena in the  $\text{Sm}_3(\text{Fe}, \text{V})_{29}$  Compound.  
D.Book, K.Kato, H.Nakamura, S.Sugimoto, T.Kagotani, M.Okada and M.Homma: Dept. of Materials Science, Graduate School of Engineering, Tohoku University, Japan
- 25pA2-5 Fabrication and Magnetic Properties of Exchange-Coupled Nd-Fe-B/Fe Nanocomposite Thin Films.  
M.Ishizone, H.Kato, T.Miyazaki, M.Shindo and A.Sakuma\*: Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan, \*Hitachi Metals, Ltd., Japan
- 25pA2-6 Temperature Characteristics of Rare Earth Permanent Magnets.  
W.Li: Central Iron & Steel Research Institute, China
- 25pA2-7 Magnetic Properties of Nanocomposite  $\text{Nd}_x\text{Fe}_{95-1.5x}\text{Co}_4\text{Nb}_1\text{B}_{.5x}$  ( $x=8-12$ ) Ribbons.  
Y.Z.Wang\*, \*\*\*, J.F.Hu\*\*, Z.Y.Zhang\*, H.W.Zhang\*, B.G.Shen\* and B.P.Hu\*\*\*: \*Magnetism Laboratory, Institute of Physics, Chinese Academy of Sciences, China, \*\*Department of Physics, Shandong University, China, \*\*\*San Huan Research Laboratory, Chinese Academy of Sciences, China
- 25aB1-4 Nonlinear Susceptibility of Interacting Superparamagnetic Particles in Granular Fe-MgF<sub>2</sub> Films.  
T.Furubayashi and I.Nakatani: National Research Institute for Metals, Japan
- 25aB1-5 Magneto-optical Investigation of Au/Cu-Wedge/NiFe/Au (001) Sandwiches.  
E.E.Shalyguina, N.I.Tsidaeva, I.A.Pogrebnya, A.Marty\* and B.Gilles\*: Department of Physics, Moscow State University, Russia, \*CEA. DRFMC. CENG / SP2M / PM, France

**Magneto-optics I****10:45-12:00**

- 25aB2-1† Nonlinear Optics of Magnetic Crystals.  
A.Kirilyuk, R.V.Pisarev\*, V.N.Gridnev\*, V.V.Pavlov\* and Th.Rasing: Research Institute for Materials, University of Nijmegen, the Netherlands, \*A.F.Ioffe Physical-Technical Institute, Russia
- 25aB2-2 Nonlinear Magneto-Optical Effect in Fe/Au Superlattices.  
K.Sato, S.Mitani\*, K.Takanashi\*, H.Fujimori\*, A.Kirilyuk\*\*, A.Petukhov\*\* and Th.Rasing\*\*: Faculty of Technology, Tokyo University of Agriculture and Technology, Japan, \*Institute for Materials Research, Tohoku University, Japan, \*\*Research Institute for Materials, University of Nijmegen, the Netherlands
- 25aB2-3 First -Principles Investigation of Magneto-Optical Effect.  
H.Miyazawa and T.Oguchi: Department of Materials Science, Hiroshima University, Japan
- 25aB2-4 Optical and Magneto-Optical Spectra of Insulating Granular System Co-Al-O.  
E.Gan'shina, R.Kumartova, A.Bogorodizky, M.Kuzmichew and S.Ohnuma\*: Physics Department, Moscow Lomonosov University, Russia, \*The Research Institute for Electric and Magnetic Materials, Japan

..... **Room B** .....

**Novel magnetic phenomena 9:00-10:30**

- 25aB1-1† Arrays of Interacting Magnetic Dots and Wires: Static and Dynamic Properties.  
B.Hillebrands: Fachbereich Physik, Universität Kaiserslautern, Germany
- 25aB1-2 Magnetization Reversal Study in Submicron Magnetic Wire by GMR Effect.  
T.Ono, H.Miyajima, K.Shigeto\* and T.Shinjo\*: Faculty of Science and Technology, Keio University, Japan, \*Institute for Chemical Research, Kyoto University, Japan
- 25aB1-3 Ferromagnetism in Hubbard Models for Quantum Atomic Wires.  
M.Ichimura, K.Kusakabe\*, S.Watanabe\*\* and T.Onogi: Advanced Research Laboratory, Hitachi Ltd., Japan, \*Institute for Solid State Physics, University of Tokyo, Japan, \*\*Department of Materials Science, University of Tokyo, Japan

**Magneto-optics II****13:30-15:15**

- 25pB1-1† Soft X-ray Magnetic Circular Dichroism in  $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$  and  $\text{SrFe}_{1-x}\text{Co}_x\text{O}_3$ .  
T.Koide, T.Shidara, H.Miyauchi\*, N.Nakajima, H.Fukutani\*, A.Fujimori\*\*, S.Kawasaki\*\*\*, M.Takano\*\*\* and Y.Takeda\*\*\*\*: Photon Factory, Institute of Materials Structure Science, High Energy Accelerator Research Organization, Japan, \*Institute of Physics, University of Tsukuba, Japan, \*\*Department of Physics, University of Tokyo, Japan, \*\*\*Institute for Chemical Research, Kyoto University, Japan, \*\*\*\*Department of

- Chemistry, Faculty of Engineering, Mie University, Japan
- 25pB1-2 Infrared Magneto-optical Studies of a  $\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_3$  Half-metallic Ferromagnet. A.V.Boris, N.N.Kovaleva, A.V.Bazhenov, P.J.M.van Bentum\*, Th.Rasing\*, S-W.Cheong\*\*, A.V.Samoilov\*\*\* and N.C.Yeh\*\*\*: Institute of Solid State Physics, Russian Academy of Sciences, Russia, \*Research Institute for Materials, University of Nijmegen, the Netherlands, \*\*Bell Laboratories, Lucent Technologies, USA, \*\*\*Department of Physics, California Institute of Technology, USA
- 25pB1-3 Enlarged MO Signal by Magnetic Domain Expansion Readout (MAMMOS). H.Awano, H.Ido, H.Shirai, M.Yoshihiro, K.Shimazaki and N.Ohta: Recording Media Research Lab., Hitachi Maxell Ltd., Japan
- 25pB1-4 The New MSR Method for Read Only Memory Disks. M.Birukawa, N.Miyatake\* and T.Suzuki: Information Storage Materials Laboratory, Toyota Technological Institute, Japan, \*Matsushita Elec. Ind. Co., Ltd., Japan
- 25pB1-5 Kerr Rotation Constants in Nd-Co and Ho-Co Films. Y.Akita, W.Issiki, R.Uno, F.Terada and S.Uchiyama: Aichi Institute of Technology, Japan
- 25pB1-6 Enhancement of Magneto-optical Effects through NdCo and Pt in TbFeCo. Y.Itoh and T.Suzuki: Information Storage Materials Laboratory, Toyota Technological Institute, Japan
- Novel scientific inst. & processing 15:30-17:30**
- 25pB2-1† Scanning Near-Field Optical Microscopy. V.Kottler, N.Essaidi\*, Y.Chen\* and C.Chappert: Institut d'Electronique Fondamentale, Université Paris-Sud, CNRS URA 22, France, \*Laboratoire de Microstructures et Microélectronique, CNRS Bagneux, France
- 25pB2-2 Magneto-Optical Imaging by Scanning Near-Field Optical Microscope Using Polarization Modulation Technique. T.Ishibashi, T.Yoshida, J.Yamamoto, K.Sato, Y.Mitsuoka\* and K.Nakajima\*: Faculty of Technology, Tokyo University of Agriculture and Technology, Japan, \*Technology Center, Seiko Instruments Inc., Japan
- 25pB2-3 Nonlinear Magneto-Optical Microscopy. V.Kirilyuk, A.Kirilyuk and Th.Rasing: Research Institute for Materials, University of Nijmegen, the Netherlands
- 25pB2-4 Nondestructive Cross Evaluations of Iron-Based Material by Magnetic Sensors and by Laser Speckle Interferometry. K.Yamada, S.Shoji, Y.Tanaka, Y.Uno, H.Takeda, S.Toyooka, Suprapedi, M.Uesaka\*, K.Miya\*, Y.Isobe\*\* and K.Ara\*\*\*: Faculty of Engineering, Saitama University, Japan, \*Nuclear Engineering Res. Laboratory of University of Tokyo, Japan, \*\*Nuclear Fuel Ind., Japan, \*\*\*Japan Atomic Energy Res.Inst., Japan
- 25pB2-5 Spin-polarized Tunneling with GaAs Spin Probes. K.Sueoka\* \*\*, A.Subagyo\*\*, K.Mukasa\*\*,\* and K.Hayakawa\*\*\*: \*\*PRESTO, JST, \*\*Graduate School of Engineering, Hokkaido University, Japan, \*\*\*CREST, JST, \*\*\*\*Catalysis Research Center, Hokkaido University, Japan
- 25pB2-6 Theoretical Study on Spin Polarization of III-V Compound Tips. M.Sawamura\* \*\*, T.Maruyama\*\*\* and K.Mukasa\* \*\*: \*CREST/JST Spin Investigation Team, Japan, \*\*Faculty of Engineering, Hokkaido University, Japan, \*\*\*Hokkaido Tokai University, Japan
- 25pB2-7 Spin Resolved SXAPS for Ni. J.Fujii, Y.Suzuki and T.Mizoguchi: Faculty of Science, Gakushuin University, Japan
- ..... **Poster Session** .....
- Intrinsic magnetic properties 10:00-12:00**
- 25aP1-1 Magnetic Property of  $\text{Ni}_2\text{MnGa}$ . M.Matsumoto, T.Kanomata\*, T.Kaneko\*\*, T.Takagi\*\*\* and J.Tani\*\*\*: Institute for Advanced Materials Processing, Tohoku University, Japan, \*Faculty of Engineering, Tohoku Gakuin University, Japan, \*\*Institute for Materials Research, Tohoku University, Japan, \*\*\*Institute of Fluid Science, Tohoku University, Japan
- 25aP1-2 NMR Study of  $^{55}\text{Mn}$  and  $^{59}\text{Co}$  in  $\text{MnCoGe}$ . T.Kanomata, H.Ishigaki, K.Sato, M.Sato\*, T.Shinohara\*\*, F.Wagatsuma\*\* and T.Kaneko\*\*: Faculty of Engineering, Tohoku Gakuin University, Japan, \*Department of Physics, Tohoku University, Japan, \*\*Institute for Materials Research, Tohoku University, Japan
- 25aP1-3 Magnetic Phase Transition of  $\text{Mn}_{3-x}\text{Fe}_x\text{GaC}$  ( $x \approx 0.10$ ). T.Harada, T.Kanomata, H.Yoshida\* and T.Kaneko\*: Faculty of Engineering, Tohoku Gakuin University, Japan, \*Institute for Materials Research, Tohoku University, Japan

- 25aP1-4 Magnetic Phase Transition of  $\text{FeRh}_{1-x}\text{Pd}_x$  Alloys under High Magnetic Fields.  
H.Yuasa, K.Takizawa, H.Miyajima, T.Ono, S.Hane\*, H.Mitamura\* and T.Goto\*: Department of Physics, Faculty of Science and Technology, Keio University, Japan, \*Institute for Solid State Physics, University of Tokyo, Japan
- 25aP1-5 Anisotropic Magnetoresistance in Fe-Co-Ni Ternary Alloys.  
S.Ishio, H.Haga, S.Shindo and H.Saito: Department of Materials Engineering and Applied Chemistry, Akita University, Japan
- 25aP1-6 de Haas van Alphen Effect in CrP.  
T.Nozue, H.Kobayashi, H.Yamagami, T.Suzuki and T.Kamimura: Physics Department, Faculty of Science, Tohoku University, Japan
- 25aP1-7 NMR of  $^{31}\text{P}$  in CrRuP.  
H.Nishihara, K.Sato\*, N.Suzuki\*, T.Kanomata\*, G.J.Strijkers\*\*, W.J.M.de Jonge\*\*, F.Wagatsuma\*\*\* and T.Shinohara\*\*\*: Faculty of Science and Technology, Ryukoku University, Japan, \*Faculty of Engineering, Tohoku Gakuin University, Japan, \*\*Dept. of Physics, Eindhoven Univ. of Tech., the Netherlands, \*\*\*Institute for Materials Research, Tohoku University, Japan
- 25aP1-8 Magnetization Measurements of Itinerant Electron Metamagnet  $\text{TiBe}_2$  at Low Temperatures down to 0.5 K.  
H.Mitamura, M.Takahashi, K.Takizawa, T.Goto, K.Yoshimura\*, M.Kurasawa\* and K.Kosuge\*: ISSP, University of Tokyo, Japan, \*Faculty of Science, Kyoto University, Japan
- 25aP1-9 Peculiar Magnetic Properties of Ordered Alloys  $(\text{Fe}_{1-x}\text{Cu}_x)_2\text{Pt}_{76}$ .  
H.Yoshida, T.Kaneko, H.Fujimori, S.Abe and K.Takanashi: Institute for Materials Research, Tohoku University, Japan
- 25aP1-10 Pressure Effect on Itinerant-Electron Ferromagnetic Properties of  $\text{Lu}(\text{Co}_{0.90}\text{Al}_{0.10})_2$  Laves Phase Intermetallic Compound.  
T.Yokoyama, H.Saito, K.Fukamichi, K.Kamishima\*, H.Mitamura\* and T.Goto\*: Department of Materials Science, Graduate School of Engineering, Tohoku University, Japan, \*Institute for Solid State Physics, The University of Tokyo, Japan
- 25aP1-11 Effect of Hydrogen Absorption on the Magnetic Properties of Itinerant-Electron Metamagnetic Compounds  $\text{Y}(\text{Co}_{1-x}\text{Al}_x)_2$ .  
N.V.Mushnikov, T.Goto, V.S.Gaviko\*, A.V.Ilyushenko\* and N.K.Zajkov\*: Institute for Solid State Physics, Tokyo University, Japan, \*Institute of Metal Physics, Russia
- 25aP1-12 Effect of Pressure on the Spontaneous Magnetostriction of  $\text{ErCo}_2$ .  
T.Kagayama, G.Oomi and K.Fukamichi\*: Department of Mechanical Engineering and Materials Science, Faculty of Engineering, Kumamoto University, Japan, \*Department of Materials Science, Tohoku University, Japan
- 25aP1-13 Magnetoelastic Lattice Distortion in the Spin-Reorientation Region of  $\text{Tb}_x\text{Dy}_{1-x}\text{Fe}_2$ .  
V.S.Gaviko, N.V.Mushnikov\* and A.V.Korolyov: Institute of Metal Physics, Russia, \*Institute for Solid State Physics, University of Tokyo, Japan
- 25aP1-14 Low Temperature Magnetic Transition of  $\text{Y}(\text{Fe}, \text{Mo})_{12}$  Alloys.  
Y.Z.Wang, J.F.Hu\*, C.P.Yang and B.P.Hu\*\*: Institute of Physics, Chinese Academy of Sciences, China, \*Department of Physics, Shandong University, China, \*\*San Huan Research Laboratory, Chinese Academy of Sciences, China
- 25aP1-15 Thermal Expansion Measurements on Rhombohedral  $\text{Y}_2\text{Fe}_{17}$  and  $\text{Y}_2\text{Fe}_{17}\text{N}_{3.1}$ .  
K.Koyama, H.Fujii\*, Y.Makihara\*, T.Kajitani\*\*\*, Y.Morii\*\*\*\* and M.Akayama\*: Institute for Solid State Physics, University of Tokyo, Japan, \*Faculty of Integrated Art & Sciences, Hiroshima University, Japan, \*\*Physics Department, Kyushu Kyoritsu University, Japan, \*\*\*Faculty of Technology, Tohoku University, Japan, \*\*\*\*Advanced Science Research Center, Japan Atomic Energy Research Institute, Japan
- 25aP1-16 Effects of Co on Magnetic Properties of  $\text{YFe}_{11}\text{Ti}$  Compounds.  
J.L.Wang, B.Fuquan and F.M.Yang: State Key Lab. of Magnetism, Institute of Physics, Chinese Academy of Sciences, China
- 25aP1-17 Magnetic Properties of  $\text{Ce}_2\text{Fe}_{17}$  under High Pressure and High Magnetic Fields.  
K.Koyama, T.Goto, H.Fujii\*, H.Fukuda\* and Y.Janssen\*\*: Institute for Solid State Physics, University of Tokyo, Japan, \*Faculty of Integrated Arts & Sciences, Hiroshima University, Japan, \*\*Van der Waals-Zeeman Institute, University of Amsterdam, the Netherlands
- 25aP1-18 Thermal Expansion and Magnetostriction in  $\text{CeRh}_2\text{Si}_2$  under High Pressure.  
F.Honda, T.Kagayama, G.Oomi and E.V.Sampathkumaran\*: Department of Mechanical Engineering and Materials Science, Faculty of Engineering, Kumamoto University, Japan, \*Tata Institute of Fundamental Research, India
- 25aP1-19 Structures and Magnetic Properties of  $\text{La}(\text{Co}_{1-x}\text{Mn}_x)_{13}$  Alloys.  
K.Asada, A.Fujita\*, S.G.Kim\* and K.Fukamichi\*: Miyagi National College of Technology, Japan,

- \*Department of Materials Science, Graduate School of Engineering, Tohoku University, Japan
- 25aP1-20 Magnetic and Electrical Properties of  $Ce_{1-x}La_xPb_2$  Heavy Fermion Compounds.  
R.Yamauchi and K.Fukamichi: Department of Materials Science, Graduate School of Engineering, Tohoku University, Japan
- 25aP1-21 Magnetic Properties and Specific Heat of  $Ce_5Pb_3$  Compounds.  
K.Sasao, R.Yamauchi and K.Fukamichi: Department of Materials Science, Graduate School of Engineering, Tohoku University, Japan
- 25aP1-22 Itinerant-Electron Antiferromagnetic - Ferromagnetic Transition in  $La(Fe_{0.875}Al_{0.125})_{13}$  Intermetallic Compound.  
Y.Akamatsu, A.Fujita and K.Fukamichi: Department of Materials Science, Graduate School of Engineering, Tohoku University, Japan
- 25aP1-23 Magnetic and Transport Properties of  $La_{1-x}Gd_xMn_2Ge_2$ .  
T.Fujiwara, H.Fujii and T.Shigeoka\*: Faculty of Arts and Sciences, Hiroshima University, Japan, \*Faculty of Science, Yamaguchi University, Japan
- 25aP1-24 Structural and Magnetic Properties of R-Co-Al Compounds with  $TbCu_7$  Structure (R=Y, Sm and Gd).  
B.Fuquan, J.L.Wang and F.M.Yang: State Key Lab. of Magnetism, Institute of Physics, Chinese Academy of Sciences, China
- 25aP1-25 Investigation of Magnetic Properties of  $SmFe_{12-x}Nb_x$  Compounds.  
B.Fuquan, J.L.Wang and F.M.Yang: State Key Lab. of Magnetism, Institute of Physics, Chinese Academy of Sciences, China
- 25aP1-26 Spin Reorientation and Magnetocrystalline Anisotropy of  $(Nd_{1-x}RE_x)_2Fe_{14}B$  (RE=Y, Pr).  
Y.B.Kim, M.J.Kim\*, Jin Han-min\*\* and T.K.Kim\*: Korea Research Institute of Standards and Science, Korea, \*Chungnam National University, Korea, \*\*Jilin University, China
- 25aP1-27 Transition from Band Metamagnetism to Ferromagnetism in  $UCoAl_{1-x}Ga_x$ .  
M.Tomida, A.V.Andreev\*, Y.Shiokawa, Y.Homma, V.Sečovský\*\* and I.K.Kozlovskaya\*: Institute for Materials Research, Tohoku University, Japan, \*Institute of Physics, Academy of Sciences, Czech Republic, \*\*Charles University, Czech Republic
- 25aP1-28 Re-Entrant Spin Glass Behavior in  $U_2NiSi_3$ .  
A.Kimura, D.X.Li, Y.Shiokawa, Y.Homma, A.Donni\* and T.Suzuki\*: Oarai Facility, Institute for Materials Research, Tohoku University, Japan, \*Department of Physics, Tohoku University, Japan
- 25aP1-29 Soft X-ray Magnetic Circular Dichroism in 3d Transition-Metal Chalcogenides.  
H.Miyauchi, T.Koide\*, T.Shidara\*, N.Nakajima\*, H.Fukutani, A.Fujimori\*\*, T.Miyadai\*\*\* and T.Kamimura\*\*\*\*: Institute of Physics, University of Tsukuba, Japan, \*Photon Factory, Institute of Materials Structure Science, High Energy Accelerator Research Organization, Japan, \*\*Department of Physics, University of Tokyo, Japan, \*\*\*Dohto University, Junior College Division, Japan, \*\*\*\*Department of Physics, Tohoku University, Japan
- 25aP1-30 Peculiar Decay of Thermoremanent Magnetization observed in Fe Doped  $Cd_{0.62}Mn_{0.38}Te$ .  
T.Itoh and T.Sato: Faculty of Science and Technology, Keio University, Japan
- 25aP1-31 Magnetically Ordered Phases in Triangular-Lattice Antiferromagnetic Mixed Crystals  $CsNi_{1-x}M_xCl_3$  (M= Fe, Mn).  
J.Takeuchi, N.Katayama, K.Miyoshi, K.Fujiwara and Y.Yamada: Department of Material Science, Shimane University, Japan
- 25aP1-32 Magnetic Properties of Iron Nitride Foils Prepared by a Nitrogen Plasma Irradiation.  
K.Niizuma and Y.Utsushikawa: College of Industrial Technology, Nihon University, Japan
- 25aP1-33 Magnetoresistance in  $Nd_{0.7}(Sr_{0.3-x}Ca_x)MnO_3$ .  
J.G.Lin, C.Y.Huang, R.S.Liu\*, C.B.Wu\*, Y.S.Wang\*\* and W.N.Kan\*\*: Center for Condensed Matter Sciences, National Taiwan University, Taiwan, \*Department of Chemistry, National Taiwan University, Taiwan, \*\*Texas Center for Superconductivity, University of Houston, USA
- 25aP1-34 Electron Spin Resonance Study on CMR Oxides.  
R.Gundakaram, J.G.Lin and C.Y.Huang: Center for Condensed Matter Sciences, National Taiwan University, Taiwan
- Intrinsic magnetic properties 14:00-16:00**
- 25pP1-1 Magnetostatic Critical Point Phenomena of Fe Ferromagnet.  
T.Tanaka, T.Nishikawa and K.Miyatani: Department of Materials Science and Engineering, Ehime University, Japan
- 25pP1-2 Electronic Structures of s, p- and 3d-Element Impurities in Ferromagnetic Fe.  
J.H.Park and B.I.Min: Department of Physics, Pohang University of Science and Technology, Korea
- 25pP1-3 Effect of Pressure on the Thermal Expansion of Antiferromagnet, -Manganese.  
T.Kagayama and G.Oomi: Department of

- Mechanical Engineering and Materials Science, Faculty of Engineering, Kumamoto University, Japan
- 25pP1-4 Magnetic Properties of  $\text{LuVO}_3$ .  
Y. Kimishima, K. Shimizu, T. Mizuno and Y. Ichiyanagi: Department of Physics, Faculty of Engineering, Yokohama National University, Japan
- 25pP1-5 Magnetic Phase Transitions in  $\text{YVO}_3$  Studied by the Nonlinear Susceptibility.  
H. Kobayashi, K. Sakashita, T. Kamimura, H. Kawanaka\* and Y. Nishihara\*\* \*: Department of Physics, Tohoku University, Japan, \*\*Electrotechnical Laboratory, Japan, \*\*\*Faculty of Science, Ibaragi University, Japan
- 25pP1-6 Thermodynamic Characterization of the Phase Diagram of  $\text{La}_{1-x}\text{Ca}_x\text{MnO}_3$ .  
S.H. Park, I.K. Moon, Y.H. Jeong, K.B. Lee and T.W. Noh\*: Department of Physics, Pohang University of Science and Technology, Korea, \*Department of Physics, Seoul National University, Korea
- 25pP1-7 Magnetization and Magnetic Phases in Metallic and Semiconducting  $\text{Ho}_x\text{Ca}_{1-x}\text{MnO}_3$ .  
H. Schmid, T. Zeiske, K. Knorr and W. Prandl: Institute for Crystallographie, University of Tuebingen, Germany
- 25pP1-8 withdrawn
- 25pP1-9 A New Type of Magnet Based on Jahn-Teller Effect -a case for Cu-ferrite-.  
T. Ito, T. Sato\* and K. Haneda: Dept. of Electronics Materials, Ishinomaki Senshu University, Japan, \*Faculty of Engineering, Tokyo Engineering University, Japan
- 25pP1-10 Iron State in Ferromagnetic  $\text{Sr}_2\text{FeRuO}_6$ .  
H. Kawanaka\*, S. Toyama\* \*\*, T. Minawa\* \*\*, H. Bando\* and Y. Nishihara\* \*\*: \*Electrotechnical Laboratory, Japan, \*\*Faculty of Science, Ibaraki University, Japan
- 25pP1-11 Magnetovolume Effect of  $\text{SrRuO}_3$ .  
T. Kanomata, N. Suzuki, H. Yoshida\*, T. Kaneko\*, H. Fujimori\*, K. Kamishima\*\*, T. Goto\*\*, H. Kawanaka\*\*\* and Y. Nishihara\*\*\*\*: Faculty of Engineering, Tohoku Gakuin University, Japan, \*Institute for Materials Research, Tohoku University, Japan, \*\*Institute for Solid State Physics, University of Tokyo, Japan, \*\*\*Electrotechnical Laboratory, Japan, \*\*\*\*Faculty of Science, Ibaraki University, Japan
- 25pP1-12 Crystallization and Mössbauer Studies of Garnet  $\text{Y}_{3-x}\text{La}_x\text{Fe}_3\text{O}_{12}$  ( $x=0.0, 0.25, 0.75, 1.0$ ).
- C.S. Kim, Y.R. Uhm and J.G. Lee\*: Department of Physics, Kookmin University, Korea, \*Department of Physics, Kunkuk University, Korea
- 25pP1-13 Relaxation Phenomena in Spin-Glass  $\text{Y}_{20}(\text{Mn}_{1-x}\text{Fe}_x)_{80}$  Amorphous Alloys.  
M. Ohta, A. Fujita, K. Fukamichi, Y. Obi\* and H. Fujimori\*: Department of Materials Science, Graduate School of Engineering, Tohoku University, Japan, \*Institute for Materials Research, Tohoku University, Japan
- 25pP1-14 Linear and Nonlinear Susceptibilities of Amorphous Fe-RE-Zr (RE= Dy, Ho, Er) Alloys.  
K. Miyoshi, G. Ishikawa, K. Saeki, K. Fujiwara and J. Takeuchi: Department of Material Science, Shimane University, Japan
- 25pP1-15 Approach to Magnetic Saturation of Amorphous  $\text{Gd}_{80}\text{Si}_{12}\text{B}_8$ .  
I. Nakai, M. Kurisu\* and S. Ishio\*\*: Department of Electrical and Electronic Engineering, Tottori University, Japan, \*Japan Advanced Institute of Science and Technology, Japan, \*\*Department of Materials Science, Akita University, Japan
- 25pP1-16 Magnetic Properties of Amorphous Spin Glass  $\text{Gd}_{22}\text{Y}_{46}\text{Cu}_{32}$ .  
I. Nakai: Department of Electrical and Electronic Engineering, Tottori University, Japan
- 25pP1-17 Spin Glass Characteristics of Pseudo-binary Amorphous Alloys  $\text{Mn}_{80}(\text{Y}_{20-x}\text{Sc}_x)$ .  
Y. Obi, S. Murayama\*, A. Azuma\* and H. Fujimori: Institute for Materials Research, Tohoku University, Japan, \*Muroran Institute of Technology, Japan
- 25pP1-18 Spin Freezing and Random Anisotropy in Tb-Fe-Si Amorphous Alloys.  
K. Yamada, K. Shoji\*, A. Fujita\*\* and K. Fukamichi\*\*: Dept. of Electrical Engineering, Hakodate National College of Technology, Japan, \*Institute for Materials Research, Tohoku University, Japan, \*\*Dpt. of Materials Science, Graduate School of Engineering, Tohoku Univ., Japan
- 25pP1-19 Giant Magnetostrictive Nanocrystalline  $\text{DyFe}_2$  Bulk Composites.  
S.H. Lim, S.Y. Kang, S.R. Kim, J.K. Park, J.T. Nam\* and D. Son\*: Thin Film Technology Research Center, Korea Inst. of Sci. and Tech., Korea, \*Dept. of Physics, Hannam University, Korea
- 25pP1-20 Superparamagnetism of Isolated Ferromagnetic Nanoparticles.  
H. Mamiya and I. Nakatani: National Research Institute for Metals, Japan
- 25pP1-21 The Structure of Spin Vortexes in Ultra-Thin Ferromagnetic Films.

- R.Nakane\*, E.Hirota\*\*, M.Sawamura\* \*\*, S.Chikazumi\*\*,\*\*\* and K.Mukasa\* \*\*: \*Faculty of Engineering, Hokkaido University, Japan, \*\*CREST/JST Spin Investigation Team, Japan, \*\*\*Professor Emeritus, University of Tokyo, Japan
- 25pP1-22 Epitaxy and Magnetism of 3d Metals and Alloys on GaAs(001) .  
X.Jin: Department of Physics, Fudan University, China
- 25pP1-23 The Magnetism and Electronic Structures of Rh Monolayer.  
L.H.Cho, K.S.Yoon and J.I.Lee: Department of Physics, Inha University, Korea
- 25pP1-24 The Possible Metastable States in Fe<sub>3</sub> and Fe<sub>3</sub>Rh Clusters.  
Q.Sun, Q.Wang, L.Zhou, Z.Zen, J.Z.Yu and Y.Kawazoe: Institute for Materials Research, Tohoku University, Japan
- 25pP1-25 Magnetic Properties of Carbon Fine Particles Prepared in He Plasma.  
S.Akutsu and Y.Utsushikawa\*: Graduate course of Nihon University, Japan, \*Dept. of Elec. Eng., College of Industrial Tech., Nihon University, Japan
- 25pP1-26 Synthesis, Characterization and Magnetic Properties of Fe-N and Fe-C-N Ultrafine Particles.  
X.Q.Zhao, W.Li and X.M.Li: Advanced Materials Institute, Central Iron & Steel Research Institute, China
- 25pP1-27 Analyses on Perpendicular Magnetic Anisotropy of Fe-Cr-N Nanocrystalline Films.  
D.L.Peng, K.Sumiyama, Z.J.Wang, H.Onodera and K.Suzuki: Institute for Materials Research, Tohoku University, Japan
- 25pP1-28 Giant Magnetic Hardening in Co-based Metallic Glass.  
H.K.Lachowicz, L.Malkinski, R.Zuberek and T.Kulik\*: Institute of Physics, Polish Academy of Sciences, Poland, \*Department of Materials Science & Engineering, Warsaw University of Technology, Poland
- 25pP1-29 Cooling Treatment Effects on Soft Magnetic Amorphous Alloys Properties.  
S.G.Zaichenko, N.S.Perov\*, E.A.Gan'shina\*, S.N.Sazonova\*, V.M.Kachalov and E.V.Kim\*: Institute of Metal Physics, Russia, \*Physical Department, Moscow State University, Russia
- 25pP1-30 Synthesis and Magnetic Properties of Fe-N Film Grown by Reactive Vapor Deposition.  
N.Adachi, K.Terada and T.Okuda: Department of Materials Science and Engineering, Nagoya Institute of Technology, Japan
- 25pP1-31 Scaling Law Approach to the Interface Roughness Dependence of the Magnetism of Metallic Multilayers.  
G.Eilers and K.Mukasa\*: CAEST, JST, Hokkaido University, Japan, \*Graduate School of Engineering, Hokkaido University, Japan
- 25pP1-32 Magnetization Structure of Fe/Gd Multilayers Determined by X-ray Scattering.  
N.Ishimatsu, N.Hosoi\*, H.Hashizume and G.Srajer\*\*: Materials and Structure Laboratory, Tokyo Institute of Technology, Japan, \*Institute of Chemical Research, Kyoto University, Japan, \*\*Advanced Photon Source, Argonne National Laboratory, USA
- 25pP1-33 Structure and Magnetic Properties of [Au/Ni/Ag] and [Ag/Ni/Au] Superlattices.  
Y.Kamada, H.Kasai, T.Kingetsu\* and M.Yamamoto: Department of Materials Science and Engineering, Osaka University, Japan, \*Advanced Materials Research Laboratories, Nisshin Steel Co., Ltd., Japan
- 25pP1-34 In-plane Magnetic Anisotropy of Fe/Au Superlattices.  
Z.J.Wang, S.Mitsudo, K.Takanashi, K.Himi, S.Mitani, H.Fujimori, K.Watanabe and M.Motokawa: Institute for Materials Research, Tohoku University, Japan
- 25pP1-35 Structural Characterization by X-ray Diffraction for Fe/Au Superlattices.  
K.Himi, K.Takanashi, S.Mitani and H.Fujimori: Institute for Materials Research, Tohoku University, Japan



26 August, Wednesday
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..... **Room A** .....

**Spin dependent transport V 9:00-10:45**

- 26aA1-1 † III-V Based Ferromagnetic Semiconductors.  
H.Ohno: Research Institute of Electrical Communication, Tohoku University, Japan
- 26aA1-2 The Thickness Dependence of (GaMn)As Layers.  
T.Hayashi\*, K.Takahashi\*, H.Shimizu\*,  
M.Tanaka\*\*, \* and T.Nishinaga\*: \*Department of Electronic Engineering, The University of Tokyo, Japan, \*\*PRESTO(sakigake-21), Japan Science & Technology Corporation, Japan
- 26aA1-3 Time Dependent Resistivity in Multilayer.  
M.Ghafari, R.Gomez-Escoto, B.Stahl and H.Hahn: Darmstadt University of Technology, Materials Science Department, Thin Film Division, Germany
- 26aA1-4 Microwave Current-Perpendicular-to-Plane Giant Magnetoresistance of Non-Collinear Fe/Cr Superlattices.  
V.V.Ustinov, A.B.Rinkevich and L.N.Romashev: Institute of Metal Physics, Ural Division of the Russian Academy of Sciences, Russia
- 26aA1-5 Magneto-Impedance Effect in Amorphous and Nanocrystalline Glass-Covered Wires.  
H.Chiriac, T.-A.Ovári and C.S.Marinescu: National Institute of R&D for Technical Physics, Romania
- 26aA1-6 Giant Magneto-Impedance in Nanocrystalline Fe<sub>89</sub>Zr<sub>7</sub>B<sub>4</sub> Alloy Ribbons.  
Z.Xianyu, D.R.Li, Z.C.Lu and G.Q.Li: Department of Physics, Northeastern University, China

**Intrinsic magnetic properties II (Superlattices & Monolayers) 11:00-12:00**

- 26aA2-1 Synthesis and the Magnetism of the Metal Halide-Based Organic/Inorganic Layered Perovskite.  
Y.Ando, E.Shikoh and T.Miyazaki: Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan
- 26aA2-2 Growth and Magnetism of Ru Films on Graphite.  
C.Binns\*, S.H.Baker\*, K.W.Edmonds\*,  
P.Krüger\*\*, J.C.Parlebas\*\* and C.Demangeat\*\*:  
\*Department of Physics and Astronomy, University of Leicester, UK, \*\*IPCMS-GEMM, UMR 46 CNRS, France
- 26aA2-3 In-Situ Observation of Epitaxial Growth of [Au/Co/Cu] and [Cu/Co/Au] Superlattices and

their Magnetic Properties.  
Y.Kamada, Y.Hitomi, T.Kingetsu\* and  
M.Yamamoto: Department of Materials Science and Engineering, Osaka University, Japan,  
\*Advanced Materials Research Laboratories, Nisshin Steel Co. Ltd., Japan

- 26aA2-4 Magnetic Critical Behavior of -Fe/Cu Multilayer.  
Y.Yamada, B.Sadeh, C.Lee, M.Doï and M.Matsui: Dept. of Mat. Sci. and Engin., Nagoya Univ., Japan

**Intrinsic magnetic properties III (Superlattices & Monolayers) 13:30-15:15**

- 26pA1-1 † Local and Quantum Well Effects in Interfacial Magnetocrystalline Anisotropy.  
M.Cinal and D.M.Edwards\*: Institute of Physical Chemistry of PAS, Poland, \*Department of Mathematics, Imperial College, UK
- 26pA1-2 Magnetic Anisotropy, Magnetometry and Domains for fcc Co/Cu/Ni/Cu/Si(001) .  
G.Lauhoff, J.Lee, W.Y.Lee, J.A.C.Bland, S.Langridge\* and J.Penfold\*: Cavendish Laboratory, University of Cambridge, UK, \*Rutherford Appleton Laboratory, UK
- 26pA1-3 Oscillatory Magnetic Anisotropies in Fe/Au Superlattices.  
K.Takanashi, S.Mitani, K.Himi and H.Fujimori: Institute for Materials Research, Tohoku University, Japan
- 26pA1-4 First-Principles Calculation of the Structural and Magnetic Properties of (Cr, Mn, Fe)/Ag Monatomic Multilayers.  
J.T.Wang, Z.Q.Li and Y.Kawazoe: Institute for Materials Research, Tohoku University, Japan
- 26pA1-5 The Giant Perpendicular Magnetic Anisotropy in Co<sub>3</sub>Pt Alloy Thin Films.  
Y.Yamada and T.Suzuki: Information Storage Materials Laboratory, Toyota Technological Institute, Japan
- 26pA1-6 Magnetic Anisotropy, Interfacial Hybridization, and Orbital Magnetic Moment in Metallic Magnetic Multilayers.  
N.Nakajima, T.Koide, T.Shidara, H.Miyauchi\*, H.Fukutani\*, A.Fujimori\*\*, K.Iio\*\*\*, T.Katayama\*\*\*\* and Y.Suzuki\*\*\*\*\*: Photon Factory, Institute of Materials Structure Science, High Energy Accelerator Research Organization, Japan, \*Institute of Physics, University of Tsukuba, Japan, \*\*Department of Physics, University of Tokyo, Japan, \*\*\*Department of Physics, Tokyo Institute of Technology, Japan, \*\*\*\*Electrotechnical Laboratory, Japan

..... **Room B** .....

**Magnetization process I 9:00-10:15**

- 26aB1-1<sup>†</sup> Microwave Magnetic Envelope Solitons in Thin Ferrite Films.  
C.E.Patton, P.Kabos, H.Xia, P.A.Kolodin, H.Y.Zhang, R.Staudinger, B.A.Kalinikos\* and N.G.Kovshikov\*: Department of Physics, Colorado State University, USA, \*St. Petersburg Electrotechnical University, Russia
- 26aB1-2 Effect of Substitutional Elements on the Natural Resonance Frequency of Barium M-Type Ferrite.  
S.Sugimoto, K.Okayama, H.Ota\*, M.Kimura\*, Y.Yoshida\*, H.Nakamura, D.Book, T.Kagotani and M.Homma: Dept. of Materials Science, Graduate School of Engineering, Tohoku University, Japan, \*EMC lab. Co., Ltd., Japan
- 26aB1-3 The Effective Field in Uniaxial Ferromagnetic Films.  
H.Hoffmann: Universität Regensburg, Institut für Experimentelle u. Angewandte Physik, Germany
- 26aB1-4 Magneto-Static Properties of GMI-Materials.  
N.S.Perov\*, A.B.Granovsky\*, S.N.Sazonova\*, A.L.Dyachkov\*\* and M.Sedova\*\*: \*Physical Department, Moscow State University, Russia, \*\*Scientific Center for Applied Problems in Electrodynamics, IHT RAS, Russia

**Magnetization process II 10:30-11:30**

- 26aB2-1 Some Detailed Exchange Coupled Interaction in Nanocomposite Nd<sub>2</sub>Fe<sub>14</sub>B/Fe<sub>3</sub>B/ -Fe Magnets.  
Y.Gao\*, J.Zhu\*, Y.Weng\*, E.B.Park and C.J.Yang: Electromagnetic Materials Lab., Research Institute of Industrial Science & Technology (RIST), Korea, \*Advanced Materials Institute, General Iron & Steel Research Institute Beijing 100081, China
- 26aB2-2 Hysteresis Loops and Demagnetization Process for Nanocrystalline Nd<sub>13</sub>Fe<sub>77</sub>B<sub>10</sub> Magnet at Various Temperatures.  
H.M.Jin\*,\*\* and Y.B.Kim\*: \*Korea Research Institute of Standards and Science, Korea, \*\*Department of Physics, Jilin University, China
- 26aB2-3 Magnetism and Nano-Cluster in Inhomogeneous Phase of Ni<sub>3</sub>Mn Alloy.  
T.Okazaki, T.Miyanaga, Y.Kondo, Y.Aono and M.Homma\*: Faculty of Science and Technology, Hirosaki University, Japan, \*Faculty of Engineering, Tohoku University, Japan
- 26aB2-4 Magnetic Properties of Ni<sub>2+x</sub>Mn<sub>1-x</sub>Ga (shape memory alloys).  
N.Perov\*, A.Vasilev\*, M.Matsumoto\*\*,

T.Takagi\*\*\* and J.Tani\*\*\*: \*Physical Department, Moscow State University, Russia, \*\*Institute for Advanced Materials Processing, Tohoku University, Japan, \*\*\*Institute of Fluid Science, Tohoku University, Japan

**Intrinsic magnetic properties IV (Anisotropy & Magnetostriction) 13:30-15:15**

- 26pB1-1<sup>†</sup> Effects of B on the Magnetic and Magnetostrictive Properties of Amorphous Tb-Fe Thin Films.  
S.H.Lim, Y.S.Choi\*, S.H.Han, H.J.Kim, T.Shima\*\* and H.Fujimori\*\*: Thin Film Technology Research Center, Korea Inst. of Sci. and Tech., Korea, \*R & D Division, Hankook Core Co., Ltd., Korea, \*\*Magnetic Materials Lab., IMR, Tohoku University, Japan
- 26pB1-2 Effect of Hydrostatic Pressure on the Giant Magnetostriction of Tb<sub>0.3</sub>Dy<sub>0.7</sub>Fe<sub>1.9</sub>.  
G.Oomi, T.Kagayama, T.Nagano, H.Harada and T.Kondo\*: Department of Mechanical Engineering and Materials Science, Faculty of Engineering, Kumamoto University, Japan, \*Mechanical Engineering Laboratory, Japan
- 26pB1-3 Spin-Reorientation and Magnetostriction in Highly Oriented (Er<sub>1-x</sub>Tb<sub>x</sub>)<sub>2</sub>Fe<sub>14</sub>B.  
H.Kato, T.Ishizaki, F.Sato and T.Miyazaki: Department of Applied Physics, Graduate School of Engineering, Tohoku University, Japan
- 26pB1-4 Present Understanding of the Nature of Stress-Anneal- Induced Anisotropy in FINEMET-type Magnets.  
H.K.Lachowicz: Institute of Physics, Polish Academy of Sciences, Poland
- 26pB1-5 Microstructural Effects of Magnetic Properties of FeCo-Based Soft Magnetic Alloys.  
R.H.Yu, S.Basu, Y.F.Li, B.E.Lorenz\*, W.Yelon\*\* and J.Q.Xiao: Department of Physics and Astronomy, University of Delaware, USA, \*Widener University, School of Engineering, USA, \*\*University of Missouri Research Reactor, USA
- 26pB1-6 Soft Magnetic Properties of Laminated Fe<sub>97</sub>Al<sub>3</sub>-N/Ni<sub>81</sub>Fe<sub>19</sub> Films for Advanced Thin Film Heads.  
W.Maass, B.Ocker, H.Rohrmann and R.Mattheis\*: Balzers Process Systems, Germany, \*IPHT, Germany

..... **Poster Session** .....

**Spin dependent transport**

**10:00-12:00**

- 26aP1-1 Magnetoimpedance Effects in Nanocrystalline  $\text{Fe}_{84}\text{Zr}_7\text{B}_8\text{Cu}_1$  Alloy.  
H.Lee, T.-K.Kim\*, Y.-K.Kim\*, S.-C.Yu\*\* and K.-S.Kim\*\*\*: Dept. of Phys. Education, Kongju Nat'l. Univ., Korea, \*Division of Material Sci., Chungnam Nat'l. Univ., Korea, \*\*Dept. of Phys, Chungbuk Nat'l. Univ., Korea
- 26aP1-2 The Magnetoresistant Behaviour of  $\text{Ni}_{85}\text{Fe}_{15}$  Alloy Film Implanted by  $\text{Co}^+$ .  
G.Q.Li, S.Z.Sun, D.R.Li and Z.Xianyu: Department of Physics, Northeastern University, China
- 26aP1-3 The Investigation on Anisotropic Magnetoresistance Effect in Amorphous and Nanocrystalline.  
D.R.Li, Z.C.Lu, G.Q.Li and Z.Xianyu: Department of Physics, Northeastern University, China
- 26aP1-4 Gap Measurements of the Giant-Magnetoresistance Compound  $\text{Ce}_2\text{Fe}_{17}$ .  
T.Ekino, H.Umeda, H.Fukuda, Y.Janssen\* and H.Fujii: Faculty of Integrated Arts & Sciences, Hiroshima University, Japan, \*Van der Waals-Zeeman Institute, University of Amsterdam, the Netherlands
- 26aP1-5 Molecular-Beam Epitaxy of AlGaMnAs Diluted Magnetic Semiconductor.  
Y.Morishita, A.Tsuboi, H.Suzuki and K.Sato: Faculty of Technology, Tokyo University of Agriculture and Technology, Japan
- 26aP1-6 Control of Magnetic Properties of III-V Based Ferromagnetic Semiconductor ( $\text{Ga}_{1-x}\text{Mn}_x$ )As.  
H.Shimizu\*, T.Hayashi\*, T.Nishinaga\* and M.Tanaka\* \*\*: \*Department of Electronic Engineering, The University of Tokyo, Japan, \*\*PRESTO(sakigake-21), Japan Science & Technology Corporation, Japan
- 26aP1-7 Transport Properties of Resonant Tunneling Structure Using Ferromagnetic Semiconductor (Ga, Mn)As.  
N.Akiba, A.Shen, K.Ohtani, F.Matsukura, Y.Ohno and H.Ohno: Research Institute of Electrical Communication, Tohoku University, Japan
- 26aP1-8 Magnetotransport Properties of (Ga, Mn)As/(Al, Ga)As/(Ga, Mn)As Trilayer Structures.  
F.Matsukura, N.Akiba, A.Shen, Y.Ohno, A.Oiwa\*, S.Katsumoto\*, Y.Iye\* and H.Ohno: Research Institute of Electrical Communication, Tohoku University, Japan, \*Inst. for Solid State Phys., University of Tokyo, Japan
- 26aP1-9 Magnetic and Structural Transitions in  $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$  Perovskites.  
A.A.Mukhin, V.Yu.Ivanov, V.D.Travkin, S.P.Lebedev, A.Pimenov\*, A.Loidl\* and A.M.Balbashov\*\*: General Physics Institute of the Russian Acad. Sci., Russia, \*Experimentalphysik V, Universitat Augsburg, Germany, \*\*Moscow Power Engineering Institute, Russia
- 26aP1-10 Magnetic Properties and Colossal Magnetoresistance of  $\text{La}_{0.67}\text{Ca}_{0.33}\text{Mn}_{0.99}\text{Fe}_{0.01}\text{O}_3$  Materials.  
C.S.Kim, S.I.Park and Y.J.Oh\*: Department of Physics, Kookmin University, Korea, \*Division of Ceramics, KIST, Korea
- 26aP1-11 Magnetic Properties and GMR Effect in Nonequilibrium Co-Cu Alloys Produced by Mechanical Alloying.  
S.Ikeda, W.Takakura, S.Chikazawa and Y.Ueda: Dept. of Electrical and Electronic Engng., Muroran Institute of Technology, Japan
- 26aP1-12 Effect of Pressure on the Giant Magnetoresistance of Co/Cu with Different Cu-layer Thickness.  
T.Sakai\*, H.Miyagawa\*, G.Oomi\*\*, K.Takanashi\*\*\*, K.Saito\*\*\* and H.Fujimori\*\*\*: \*Ariake National College of Technology, Japan, \*\*Department of Mechanical Engineering and Materials Science, Faculty of Engineering, Kumamoto University, Japan, \*\*\*Institute for Materials Research, Tohoku University, Japan
- 26aP1-13 Effect of Residual Water on Giant Magnetoresistance in Co/Cu Superlattices.  
T.Shiga, M.Suzuki, Y.Tagu and K.Mukasa\*: Special Research Lab., TOYOTA Central R&D Labs., Inc., Japan, \*Graduate School of Engineering, Hokkaido University, and CREST "Spin Investigation team", JST, Japan
- 26aP1-14 Effect of Composition near the Layer Boundary on GMR for Co/Cu, Ag Multilayers Electrodeposited by Pulse Method.  
Y.Ueda, T.Houga, A.Yamada and H.Zaman: Dept. of Electrical and Electronic Engng., Muroran Institute of Technology, Japan
- 26aP1-15 High Sensitive Co/Cu/Co Sandwiches with Ni Buffer Layer.  
H.L.Shen, T.Li, Q.W.Shen, G.X.Li, S.C.Zou and K.Tsukamoto\*: State Key Laboratory of Functional Materials for Informatics, Shanghai Institute of Metallurgy, Chinese Academy of Sciences, China, \*Electrotechnical Laboratory, Japan
- 26aP1-16 GMR Effect in Sputtered Permalloy/Cu Multilayers.  
T.Lucinski\*\*, F.Stobiecki\*, D.Elefant\*\*, D.Eckert\*\* and G.Reiss\*\*: \*Institute of Molecular

- Physics, Polish Academy of Sciences, Poland,  
\*\*Institute of Solid State and Materials Research,  
Germany
- 26aP1-17 GMR from RKKY Coupling and Spin Fluctuation  
in Multilayered Films.  
Z.Huang, H.Cai, H.Lai and H.Cai: Physics  
Department, Fujian Normal University, China
- 26aP1-18 Exchange Coupling and Structure of NiO/CoFeB  
Films.  
M.Jimbo, J.Kurita, K.Sakakibara and T.Shigeoka:  
Daido Institute of Technology, Japan
- 26aP1-19 Large MR Ratios in  $\text{-Fe}_2\text{O}_3/\text{Co}/\text{Cu}/\text{Co}/\text{Cu}/\text{Co}/$   
 $\text{-Fe}_2\text{O}_3$  Specular Reflective Multilayer Films.  
Y.Sugita, Y.Kawawake, M.Satomi and  
H.Sakakima: Central Research Laboratories,  
Matsushita Electric Industrial Co., Ltd., Japan
- 26aP1-20 Influence Factors on Properties of Spin Valve  
NiO/Co/Cu/Co/NiFe.  
Z.Y.Lee, J.J.Qiu, G.Q.Lin, Z.L.Peng, Y.S.Hu,  
X.J.Liu and D.D.Wu: Department of Solid State  
Electronics, Huazhong University of Science and  
Technology, China
- 26aP1-21 Microstructure and Thermal Stability of Spin-valve  
Films Prepared by Ultra-High-Vacuum Deposition  
System.  
A.Tanaka, Y.Shimizu, H.Kishi, K.Nagasaka and  
M.Oshiki\*: Magnetic Disks Lab., Fujitsu Ltd.,  
Japan, Magnetic Disk Lab., Fujitsu Laboratories  
Ltd., Japan
- 26aP1-22 Positive Magnetoresistance due to Twisted  
Magnetic Structures in NiFe/CoSm Exchange-  
Spring Bilayers.  
T.Nagahama, K.Mibu, T.Ono\* and T.Shinjo:  
Institute for Chemical Research, Kyoto University,  
Japan, \*Faculty of Science & Technology, Keio  
University, Japan
- 26aP1-23 Structure and Magnetic Properties in Co/Ge  
Superlattice.  
Y.Endo, N.Kikuchi, O.Kitakami and Y.Shimada:  
Research Institute for Scientific Measurements,  
Tohoku University, Japan
- 26aP1-24 Temperature and Bias Dependence of the TMR.  
Y.Utsumi, Y.Shimizu and H.Miyazaki: Dept. of  
Appl. Phys., Tohoku Univ., Japan
- 26aP1-25 Effect of Impurities on Tunnel Conductance in  
Finite Voltage and Temperature.  
S.Nonoyama, H.Itoh\*, A.Oguri\*\*, J.Inoue\*\*\* and  
P.Bruno\*\*\*\*: Department Crystalline Materials  
Science, Nagoya University, Japan, \*Department  
of Quantum Engineering, Nagoya University,  
Japan, \*\*Department of Material Science, Faculty  
of Science, Osaka City University, Japan,  
\*\*\*Department of Applied Physics, Nagoya  
University, Japan, \*\*\*\*Institut d'Electronique  
Fondamentale, Université Paris-Sud., France
- 26aP1-26 Magnetoresistance of (Fe, Co)/Si/(Fe, Co)  
Tunneling Junction.  
Y.W.Lee, K.M.Bae, B.C.Woo, H.J.Kim and  
Y.E.Ihm: School of Materials Engineering,  
Chungnam National University, Korea
- 26aP1-27 Magnetoresistance of (Fe, Co)/Ge/(Fe, Co)  
Tunneling Junction.  
H.Lee, M.J.Park, B.C.Woo, H.J.Kim and Y.E.Ihm:  
School of Materials Engineering, Chungnam  
National University, Korea
- 26aP1-28 Analysis of the Interlayer in Al/Al<sub>2</sub>O<sub>3</sub>/Co/Al  
Junctions by Inelastic-Electron-Tunneling-  
Spectroscopy.  
J.Murai, Y.Ando and T.Miyazaki: Department of  
Applied Physics, Graduate School of Engineering,  
Tohoku University, Japan
- 26aP1-29 Magnetoresistance of Single and Double Tunnel  
Junctions Formed by Direct Sputtering Using  
Al<sub>2</sub>O<sub>3</sub> Target.  
H.Kubota, T.Watabe, Y.Fukumoto and  
T.Miyazaki: Department of Applied Physics,  
Graduate School of Engineering, Tohoku  
University, Japan
- 26aP1-30 Fabrication Process and Magnetoresistance of  
Small Magnetic Tunnel Junctions.  
H.Kubota, S.Otsuka and T.Miyazaki: Department  
of Applied Physics, Graduate School of  
Engineering, Tohoku University, Japan
- 26aP1-31 Influence of Interlayer Thickness on  
Magnetoresistive Effect of Ferromagnetic  
Tunneling Junction.  
Y.Ando, M.Yokota and T.Miyazaki: Department  
of Applied Physics, Graduate School of  
Engineering, Tohoku University, Japan
- 26aP1-32 Preparation of Tunneling Junctions by Ion Beam  
Sputtering.  
H.Yamanaka, K.Saito\*, K.Takanashi\* and  
H.Fujimori\*: Read-Rite SMI Co., Japan, \*Institute  
for Materials Research, Tohoku University, Japan
- 26aP1-33 Tunnel-Type Magnetoresistance in Metal-  
Nonmetal Granular Films Prepared by Tandem  
Deposition Method.  
N.Kobayashi, S.Ohnuma, T.Masumoto and  
H.Fujimori\*: The Research Institute for Electric  
and Magnetic Materials, Japan, \*Institute for  
Materials Research, Tohoku University, Japan
- 26aP1-34 Annealing Effect on Giant Magnetoresistance and  
Microstructure in Co-Al-O Granular Films.  
J.G.Ha, K.Takanashi\*, S.Mitani\*, K.Yakushiji\*  
and H.Fujimori\*: Dept. of Electronic Materials  
Engineering, Kwangwoon University, Korea,

\*Institute for Materials Research, Tohoku  
University, Japan

26aP1-35 STM Observation of Metal-Nonmetal Granular  
Thin Films.

J.Chiba, S.Mitani, K.Takanashi and H.Fujimori:  
Institute for Materials Research, Tohoku  
University, Japan

26aP1-36 Bias Voltage Dependence of GMR in Insulating  
Granular Thin Films.

K.Yakushiji, S.Mitani, K.Takanashi and  
H.Fujimori: Institute for Materials Research,  
Tohoku University, Japan