

センターからのお知らせ

2015 年度共同利用成果

<SQUID 磁化測定装置 (青葉山) >

- M. Gueltig, H. Ossmer, M. Ohtsuka, H. Miki, K. Tsuchiya, T. Takagi, M. Kohl, “Thermomagnetic actuation by low hysteresis metamagnetic Ni-Co-Mn-In films”, *Materials Today: Proceedings* 2S (2015) S883-S886.
- N. Kimura, N. Kabeya, H. Aoki, K. Ohya, M. Maeda, H. Fujii, M. Kogure, T. Asai, T. Komatsubara, T. Yamamura, I. Satoh, “Quantum critical point and unusual phase diagram in the itinerant-electron metamagnet UCoAl”, *Phys. Rev. B* 92 (2015) 035106.
- N. Kimura, N. Kabeya, K. Saitoh, K. Satoh, H. Ogi, K. Ohsaki, H. Aoki, “Type II/1 superconductivity with extremely high H_{c3} in noncentrosymmetric LaRhSi₃”, *J. Phys. Soc. Jpn.* 85 (2016) 024715.
- S. Nakamura, S. Toyoshima, N. Kabeya, K. Katoh, T. Nojima, and A. Ochiai, “Low-temperature properties of the $S = 1/2$ spin system Yb₃Ru₄Al₁₂ with a distorted kagome lattice structure”, *Phys. Rev. B* 91 (2015) 214426.

<SQUID 磁化測定装置 (片平) >

- D. X. Li, Y. Homma, F. Honda, T. Yamamura and D. Aoki, “Low Temperature Spin-Glass Behavior in Nonmagnetic Atom Disorder Compound Pr₂CuIn₃”, *Physics Procedia* 75 (2015) 703-710.
- D. X. Li, Y. Homma, F. Honda, T. Yamamura and D. Aoki, “Large Magnetocaloric Effect and Magnetic Properties in ErCoAl”, *Physics Procedia* 75 (2015) 1300-1305.
- Y. Sekine, W. Kosaka, H. Kano, C. Dou, T. Yokoyama, H. Miyasaka, “trans-Heteroleptic carboxylate-bridged paddlewheel diruthenium(II,II) complexes with 2,6-bis(trifluoromethyl)benzoate ligands”, *Dalton Trans* 45 (2016) 7427-7434.
- K. Taniguchi, K. Narushima, J. Mahin, W. Kosaka, H. Miyasaka, “Construction of an Artificial Ferrimagnetic Lattice by Li-Ion Insertion into a Neutral Donor/Acceptor Metal-Organic Framework”, *Angew. Chem. Int. Ed.* 55 (2016) 5238-5242.

- K. Minakuchi, R. Y. Umetsu, K. Kobayashi, K. Ishida, R. Kainuma, “Phase equilibria and magnetic properties of Heusler-type ordered phases in the Co-Mn-Ga ternary system”, *J. Alloys Compds.* **645** (2015) 577-585.
- R. Y. Umetsu, T. Kanomata “Spin stiffness constant of half-metallic ferrimagnet in Mn-based Heusler alloys”, *Physics Procedia*, **75** (2015) 890-897.
- R. Y. Umetsu, “Magnetic properties and phase stability of Half-metal-type ferromagnetic Co-based Heusler alloys”, *SJWS, Journal of the Society of Japanese Women Scientists (Invited)*, **15** (2015) 1-8.
- 梅津理恵、許 晶、伊東 航、鹿又 武、貝沼亮介、「Ni 基メタ磁性形状記憶合金の磁氣的性質」, *まてりあ* 第 54 卷 第 3 号 (2015) 98 - 104.
- S. Kang, H. Zheng, T. Liu, K. Hamachi, S. Kanegawa, K. Sugimoto, Y. Shiota, S. Hayami, M. Mito, T. Nakamura, M. Nakano, M. L. Baker, H. Nojiri, K. Yoshizawa, C. Duan, O. Sato, “A Ferromagnetically Coupled Fe₄₂ Cyanide-Bridged Nanocage”, *Nat. Commun.* **6** (2015) 5955.
- M. L. Baker, T. Tanaka, R. Murakami, S. Ohira-Kawamura, K. Nakajima, T. Ishida, H. Nojiri, “Relationship between Torsion and Anisotropic Exchange Coupling in a Tb^{III}-Radical-Based Single-Molecule Magnet”, *Inorg. Chem.* **54** (2015) 5732–5738.
- R. Y. Umetsu, X. Xu, R. Kainuma, “NiMn-based metamagnetic shape memory alloys”, *SCRIPTA MATERIALIA* **116** (2016) 1-6.
- X. Xu, T. Kanomata, M. Hayasaka, R. Umino, K. Endo, H. Nishihara, Y. Adachi, R. Kainuma, K. R. A. Ziebeck, “Magnetic properties of Mn₂PdSn and Mn₂PdIn”, *J. Magn. Magn. Mat.* **401** (2016) 618-624.
- J. A. Monroe, J. E. Raymond, X. Xu, M. Nagasako, R. Kainuma, Y. I. Chumlyakov, R. Arroyave, I. Karaman, “Multiple ferroic glasses via ordering”, *Acta Mater.* **101** (2015)107-115.
- X. Xu, T. Omori, M. Nagasako, T. Kanomata, R. Kainuma, “Sign reversal of transformation entropy change in Co₂Cr(Ga,Si) shape memory alloys” *Appl. Phys. Lett.*

107 (2015) 181904.

- K. Kubota, M. Koshimizu, H. Saito, K. Asai, “Fabrication of self-organized, two-dimensional diluted magnetic semiconductors based on organic-inorganic layered perovskite-type compounds”, *Bull. Chem. Soc. Jpn.* 88 (2015) 1567.
- H. Goto, J. Fukushima and H. Takizawa, “Control of Magnetic Properties of NiMn_2O_4 by a Microwave Magnetic Field under Air”, *Materials* 9 (2016) 169-178.
- 中谷昌史, 「酸化鉄ナノ粒子を出発物質とした鉄基機能性材料創製」, *Colloid & Interface Communication*, 40, 25-27 (2015).
- K. Takahashi, N. Hoshino, T. Takeda, K. Satomi, Y. Suzuki, S. Noro, T. Nakamura, J. Kawamata, T. Akutagawa, ”The crystal design of polar one-dimensional hydrogen-bonded copper coordination complexes”, *Dalton Trans.*45 (2016), 3398-3406.
- K. Takahashi, N. Hoshino, T. Takeda, S. Noro, T. Nakamura, S. Takeda, T. Akutagawa, “Structural Flexibilities and Gas Adsorption Properties of One-Dimensional Copper(II) Polymers with Paddle-Wheel Units by Modification of Benzoate Ligands”, *Inorg. Chem.* 54 (2015) 9423-9431.
- Y. Onuki, S. Fujieda, R. Ukai, S. Sato, M. Sato, K. Kajiwara, S. Suzuki, “Local stress development in polycrystalline Fe-17mol%Ga alloy under tensile loading - In situ measurement using synchrotron X-ray micro-beam”, *J. Alloys Compd.* 653 (2015) 195-201.
- S. Fujieda, R. Ukai, Y. Onuki, S. Suzuki and T. Fukuda, “Influence of Co substitution on magnetostriction and on Young’s modulus of Fe-Ga alloy single crystal”, *AIP Conf. Proc.* 1649 (2015) 27-31.
- R. H. Zadik, Y. Takabayashi, G. Klupp, R. H. Colman, A. Y. Ganin, A. Potočnik, P. Jeglič, D. Arčon, P. Matus, K. Kamarás, Y. Kasahara, Y. Iwasa, A. N. Fitch, Y. Ohishi, G. Garbarino, K. Kato, M. J. Rosseinsky, K. Prassides, “Optimized unconventional superconductivity in a molecular Jahn-Teller metal”, *Science Advances* 1 (2015) e1500059.

- S. Nakamura, S. Toyoshima, N. Kabeya, K. Katoh, T. Nojima, and A. Ochiai, “Low-temperature properties of the $S = 1/2$ spin system $\text{Yb}_3\text{Ru}_4\text{Al}_{12}$ with a distorted kagome lattice structure”, Phys. Rev. B 91 (2015) 214426.

< 走査型 SQUID 顕微鏡 (片平) >

- N. Kokubo, H. Miyahara, S. Okayasu, T. Nojima, “Commensurate and incommensurate vortex states confined in mesoscopic triangles of weak pinning superconducting thin films”, J. Phys. Soc. Jpn. 84 (2015) 043704.