

## センターからのお知らせ

### 2019 年度共同利用成果

#### <SQUID 磁化測定装置（青葉山）>

- T.Aoyama, K.Emi, C.Tabata, Y. Nambu, H. Nakao, T. Yamauchi, and K. Ohgushi, “Semimetallic State in  $\text{La}_3\text{Ir}_3\text{O}_{11}$  with the  $\text{KSbO}_3$  Structure”, J. Phys. Soc. Jpn. **88**, 093706 (2019).
- T. Aoyama, S. Imaizumi, T. Togashi, Y. Sato, K. Hashizume, Y. Nambu, Y. Hirata, M. Matsubara, and K. Ohgushi, “Polar state induced by block-type lattice distortions in  $\text{BaFe}_2\text{Se}_3$  with quasi-one-dimensional ladder structure”, Phys. Rev. B **99**, 241109 (2019).
- Y. Imai, K. Konno, Y. Hasegawa, T. Aoyama, and K. Ohgushi, “Hydrated lithium intercalation into the Kitaev spin liquid candidate material  $\alpha\text{-RuCl}_3$ ”, Phys. Rev. B **99**, 245141 (2019).
- R. Sei, H. Kawasoko, K. Matsumoto, M. Arimitsu, K. Terakado, D. Oka, S. Fukuda, N. Kimura, H. Kasai, E. Nishibori, K. Ohoyama, A.Hoshikawa, T. Ishigaki, T. Hasegawa, and T. Fukumura, “Tetragonality induced superconductivity in anti- $\text{ThCr}_2\text{Si}_2$ -type  $\text{RE}_2\text{O}_2\text{Bi}$  ( $\text{RE}$  = rare earth) with Bi square net”, Dalton Trans. 49, 2020, 3321–3325.
- H. Kawasoko, K. Ohoyama, R. Sei, K. Matsumoto, D. Oka, A. Hoshikawa, T. Ishigaki, and T. Fukumura, “Investigation of magnetism and magnetic structure of anti- $\text{ThCr}_2\text{Si}_2$ -type  $\text{Tb}_2\text{O}_2\text{Bi}$  by magnetization and neutron diffraction measurements” AIP Adv. 9, 2019, 115301.
- K. Kaminaga, D. Oka, H. Oka, and T. Fukumura, “Heteroepitaxy of Rock-salt Superconductor/Ferromagnet Thin Film:  $\text{LaO}/\text{EuO}$ ”, Chem. Lett. 48, 2019, 1244–1247.
- D.Saito, K. Kaminaga, D.Oka, and T.Fukumura, “Itinerant ferromagnetism in rocksalt  $\text{NdO}$  epitaxial thin films”, Phys. Rev. Mater. 3, 064407 (2019).

#### <トッピング式希釈冷凍機（青葉山）>

- R.Sei, H.Kawasoko, K. Matsumoto, M.Arimitsu, K.Terakado, D.Oka, S.Fukuda, N. Kimura, H.Kasai, E.Nishibori, K.Ohoyama, A.Hoshikawa, T.Ishigaki, T.Hasegawa, and T. Fukumura, “Tetragonality induced superconductivity in anti- $\text{ThCr}_2\text{Si}_2$ -type  $\text{RE}_2\text{O}_2\text{Bi}$  ( $\text{RE}$  = rare earth) with Bi square net”, Dalton Trans. 49, 2020, 3321–3325.

<SQUID 磁化測定装置 (片平) >

- X. Xu, T. Kanomata, N. Yamazaki, H. Nishihara, M. Nagasako, Y. Adachi, T. Sakon, R. Kainuma, "Magnetic and martensitic transformation properties under ambient and hydrostatic pressures of  $\text{Ni}_{50}\text{Mn}_{25.2}\text{Fe}_{2.8}\text{Ga}_{22}$  ferromagnetic shape memory alloy". *Journal of Alloys and Compounds* **785**, 484–490 (2019).
- T. Ito, Y. Kimura, X. Xu, K. Han, R. Y. Umetsu, T. Omori, R. Kainuma, "Martensitic transformation and shape memory effect in  $\text{Pd}_{50}\text{Mn}_{50-x}\text{Ga}_x$  alloys". *Journal of Alloys and Compounds* **805**, 379–387 (2019).
- X. Xu, H. Okada, Y. Chieda, N. Aizawa, D. Takase, H. Nishihara, T. Sakon, K. Han, Ito A., Y. Adachi, T. Kihara, R. Kainuma, T. Kanomata, "Magnetoresistance and thermal transformation arrest in  $\text{Pd}_2\text{Mn}_{1.4}\text{Sn}_{0.6}$  Heusler alloys". *Materials* **12**, 1–13(2019).
- H. Jiang, S. Yang, C. Wang, Y. Zhang, X. Xu, Y. Chen, T. Omori, R. Kainuma, X. Liu, "Martensitic transformation and shape memory effects in Co-V-Al alloys at high temperatures". *Journal of Alloys and Compounds* **786**, 648–654 (2019).
- K. Sambe, N. Hoshino, T. Takeda, T. Nakamura, T. Akutagawa, M. Structural, of Electrically Conducting TCNQ Salts Using  $\text{Na}^+$ (crown ether) Supramolecular Cation, *Cryst. Growth Des.* **20**, 3625-3634 (2020).
- K. Miura, K. Fujiwara, J. Shiogai, T. Nojima, and A. Tsukazaki, "Electrical detection of the antiferromagnetic transition in  $\text{MnTiO}_3$  ultrathin films by spin Hall magnetoresistance", *Journal of Applied Physics* **127**, 103903-1–5 (2020).
- T. Harada, K. Sugawara, K. Fujiwara, M. Kitamura, S. Ito, T. Nojima, K. Horiba, H. Kumigashira, T. Takahashi, T. Sato, and A. Tsukazaki, "Anomalous Hall effect at the spontaneously electron-doped polar surface of  $\text{PdCoO}_2$  ultrathin films", *Physical Review Research* **2**, 013282-1–6 (2020).
- J. Chen, Y. Sekine, A. Okazawa, H. Sato, W. Kosaka, and H. Miyasaka, "Chameleonic layered metal-organic frameworks with variable charge-ordered states triggered by temperature and guest molecules", *Chem. Sci.*, **11**, 3610-3618 (2020).
- T. Aoyama, S. Imaizumi, T. Togashi, Y. Sato, K. Hashizume, Y. Nambu, Y. Hirata, M. Matsubara, and K. Ohgushi, "Polar state induced by block-type lattice distortions in  $\text{BaFe}_2\text{Se}_3$  with quasi-one-dimensional ladder structure" *Phys. Rev. B* **99**, 241109 (2019).
- T. Aoyama, K. Emi, C. Tabata, Y. Nambu, H. Nakao, T. Yamauchi, and K. Ohgushi, "A Semimetallic State in  $\text{La}_3\text{Ir}_3\text{O}_{11}$  with the  $\text{KSbO}_3$  Structure" *J. Phys. Soc. Jpn.* **88**, 093706 (2019).

- T. Sasaki, T. Kato, J. Fukushima, Y. Hayashi, and H. Takizawa, “High-pressure synthesis and crystal structure of a novel intermetallic compound Mn(Al,Ge)<sub>5</sub>”, *Journal of Alloys and Compounds*, **806**, 58-62, (2019).

<走査 SQUID 顕微鏡 (片平) >

- N. Kokubo, S. Okayasu, and T. Nojima, “Finite-size effect of critical penetration of Pearl vortices in narrow superconducting flat rings”*J. Appl. Phys.* **125**, 223906-1-6 (2019).

<X 線回折装置 >

- N. Jiang, Y. Nii, H. Arisawa, E. Saitoh, Y. Onose, “Electric current control of spin helicity in an itinerant helimagnet”, *Nature Commun.* **11**, 1601 (2020).
- Y. Hirokane, Y. Nii, Y. Tomioka, and Y. Onose, “Phononic thermal Hall effect in diluted terbium oxides”, *Phys. Rev. B* **99**, 134419 (2019).