ACTIVITY REPORT ON NEUTRON SCATTERING RESEARCH: EXPERIMENTAL REPORTS

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Neutron Science Laboratory
Institute for Solid State Physics
The University of Tokyo

PREFACE

This is the 25th issue of the “Activity Report on Neutron Scattering Research” which describes the experiments performed under the General-User Program of Neutron Science Laboratory, Institute for Solid State Physics, The University of Tokyo. The General-User Program is conducted with 12 university-owned spectrometers installed at the research reactor JRR-3 of Japan Atomic Energy Agency (JAEA) in Tokai. The Activity Report was first issued in 1994 (vol. 1) as a booklet form, and lasted until 2008 (vol. 15). Since 2007 (vol. 14), the activity report has been issued as a digital form, i.e., a compact disk or web file.

However, due to the Great East Japan Earthquake, JRR-3 has not been operated since 2011. Tentatively, the General-User Program runs a program that supports neutron scattering users to conduct their experiments at overseas facilities. 30 scientists have conducted their experiments during the fiscal year of 2019, FY2019. The current issue is a collection of experimental reports in JFY2019 and a list of publication of those researches during the period from April 2010 through August 2020. We are expecting resume operation of JRR-3 in February 2021.

The General-User Program is supported by Nuclear Professional School, The University of Tokyo which is a university representative to interface with JAEA. We thank both Nuclear Professional School Center and JAEA for their strong support. The present volume cannot be issued without the devoted contribution from users, contact persons and editors.

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Structures and Excitations

Crystal structure analysis of high temperature neutron diffraction data of Zn containing oxide-ion conductors

Kotaro Fujii, Hiroaki Tejima, Wenrui Zhang, Yuta Yasui, Masatomo Yashima
Tokyo Institute of Technology

Oxide-ion conductors, which include pure ionic conductors and mixed oxide-ion and electronic conductors, attract significant interest because of their varied uses in oxygen separation membranes and cathodes for solid-oxide fuel cells (SOFCs). The oxide-ion conductivity is strongly dependent on the crystal structure. At present, several structures, such as fluorites, perovskites, K_2NiF_4, mellilites, and apatites, are known to show high oxide-ion conductivities. For further developments, it is necessary to find new structure families of oxide-ion conductors. According to such background, we are exploring new structure family of oxide-ion conductors. For example, we previously discovered new structural families of oxide-ion conductors $BaNdInO_4$, $Ca_{0.8}Y_{2.4}Sn_{0.8}O_6$, $Ca_3Ga_4O_9$, and $BaHo_2ZnO_5$. Recently, we found a new structure family of oxide-ion conductor, which containing zinc (Zn) as an essential element. In order to understand the mechanism of oxide-ion conduction, it is necessary to precisely determine the crystal structure (particularly position, occupancy factor, and anisotropic displacement parameters of oxygens) at high-temperature because oxide-ion conductors are generally used at high-temperature. In the present study, we investigated the crystal structure of this new Zn-containing oxide-ion conductor at high temperature using high resolution neutron powder diffractometer Echidna installed at the research reactor OPAL, ACNS, ANSTO. The material was prepared by the solid-state reaction. Sintered pellets of the reaction products were introduced into a vanadium can and used for the neutron diffraction experiment. The measurements were carried out from room temperature to high temperature (1100 °C). Each measurement took about 3 hours. The reflection positions were shifted toward low angle by heating, which suggests the lattice parameters were expand by heating (see figure). Structural analyses are now undergoing by Rietveld method using the program Z-code. Our structure analysis reveal the present material contains positional disorder for the oxygen atoms, which has not been reported in the previous studies. This result indicate the neutron diffraction study is very important to lead the precise and correct atomic position and displacement parameters of oxygen atoms.

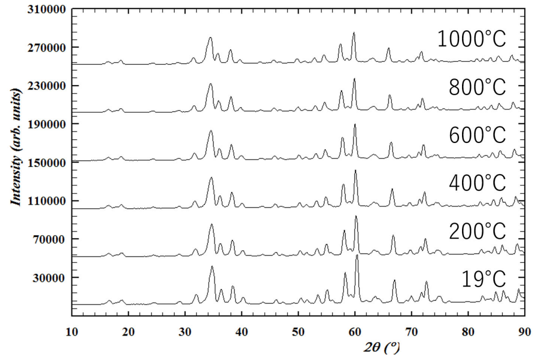

Fig. 1.

Structure analysis of novel oxide-ion conductors from neutron powder diffraction data

K. Fujii[A], Y. Yasui[A], H. Tejima[A], T. Murakami[A], M. Yashima[A]
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Oxide-ion conductors, which include pure ionic conductors and mixed oxide-ion and electronic conductors, attract significant interest because of their varied uses in oxygen separation membranes and cathodes for solid-oxide fuel cells (SOFCs). The oxide-ion conductivity is strongly dependent on the crystal structure. At present, several structures, such as fluorites, perovskites, K_2NiF_4, mellilites, and apatites, are known to show high oxide-ion conductivities. For further developments, it is necessary to find new structure families of oxide-ion conductors. According to such background, we are exploring new structure family of oxide-ion conductors. For example, we previously discovered new structural families of oxide-ion conductors $BaNdInO_4$,[1] $Ca_{0.8}Y_{2.4}Sn_{0.8}O_6$,[2] $BaHo_2ZnO_5$, [3] and $Ca_3Ga_4O_9$. [4] Recently, we found several new oxide-ion conductors. In order to understand the mechanism of oxide-ion conduction, it is necessary to precisely determine the crystal structure (particularly position, occupancy factor, and anisotropic displacement parameters of oxygens) at high-temperature because oxide-ion conductors are generally used at high-temperature. In the present study, we investigated the crystal structure of these new oxide-ion conductors using high resolution neutron powder diffractometer Echidna installed at the research reactor OPAL, ACNS, ANSTO.

Constant-wavelength neutron powder diffraction data of the prepared samples were measured at 24°C and high temperature (200, 400, 600, and 800 °C). The measurement conditions were wavelength: 1.622652(14) Å step interval: 0.125° in 2θ / step. For the high-temperature measurements, the samples were heated with a vacuum furnace at 10^{-4} Pa during the neutron-diffraction measurements.

We are now analyzing the neutron diffraction data by Rietveld method. Fig. 1(a) shows the preliminary obtained Rietveld plot of the new oxide-ion conductor containing Ba, Ca, Mn, and O. Basically good fitting was obtained but still containing bad fitting for some reflections. To improve the fitting, we are now trying to make better structure model for this compound.

Fig. 1(b) shows neutron diffraction patterns of Ba-Ho-Zn containing new oxide-ion conductor taken at 24, 200, 400, 600, and 800°C. With increasing temperature, lattice volume expansions were observed as the peak position shifts toward lower angle. The data analysis is in progress.

[1] K. Fujii et al., Chem. Mater. 26, 2488 (2014).

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[3] K. Nakamura et al., J. Ceram. Soc. JPN. 126, 929 (2018).

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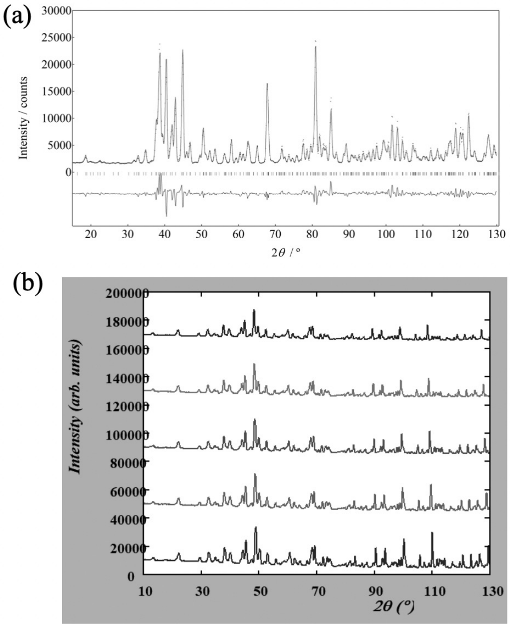

Fig. 1. (a) Rietveld plot of the new oxide-ion conductor containing Ba, Ca, Mn, and O. (b) Neutron diffraction patterns of Ba-Ho-Zn containing new oxide-ion conductor taken at 24, 200, 400, 600, and 800°C (from bottom to top).

Dynamics of hydrogen atoms in PdPt nanoparticles

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[A]*ISSP-NSL, Univ. of Tokyo,* [B]*Kyoto Univ.,* [C]*ACNS, ANSTO*

The nanometer-sized metals attract much attention since their physical and chemical properties are substantially different from those of bulk metals. Kobayashi et al. found that the phase-separated nanoparticles of Pd-core and Pt-shell are mixed to be solid solution alloy by repeating hydrogen absorption/desorption processes at 373 K [1]. Our neutron powder diffraction (NPD) measurements for solid solution Pd0.8Pt0.2D0.36 nanoparticles revealed that D atoms are located at the interstitial octahedral (O) and tetrahedral (T) sites of an fcc lattice, as schematically shown in the inset of Fig. 1 [2]. Interestingly, 47% of D atoms occupy the T sites even at 300 K, which is larger than that for $PdD_{0.36}$ nanoparticles (31%). This means that the hydrogen absorption sites (T-sites) are more stabilized by the insertion of Pt atoms, although single Pt metal does not absorb hydrogen. In this study, we have investigated the diffusion dynamics of hydrogen atoms in solid solution $Pd_{0.8}Pt_{0.2}$ nanoparticles by means of quasielastic neutron scattering (QENS).

The mean diameter of $Pd_{0.8}Pt_{0.2}$ nanoparticles was determined to be 5.0 nm from TEM images. The nanoparticles are covered by protection polymer, polyvinylpyrrolidone (PVP), to avoid the adhesion between the nanoparticles. The total amount of sample with PVP was 766 mg. The hydrogenation was carried out at 100 kPa and 21°C for 1 day. The hydrogen concentration ($x = 0.47$) was determined from the reduction in H_2 pressure of the gas handling system. The QENS experiments were performed on Pelican and Emu spectrometers at ACNS, ANSTO. Using these instruments, we have investigated the relaxation phenomena in time range from 1 ps to 5 ns.

Figure 1 shows the Arrhenius plot of the relaxation times (τ) for $Pd_{0.8}Pt_{0.2}H_{0.47}$ nanoparticles obtained by Emu (▲) and Pelican (●). We also plot the data for $PdH_{0.47}$ nanoparticles (▽) obtained in our previous QENS experiments [3]. There are two relaxation processes in both $Pd_{0.8}Pt_{0.2}H_{0.47}$ and $PdH_{0.47}$ nanoparticles. From our previous results [2,3], we assign the slow and fast relaxation processes to the hydrogen motions in the interior and subsurface regions of nanoparticle, respectively. In the slow relaxation process, the τ and the activation energy of $Pd_{0.8}Pt_{0.2}H_{0.47}$ nanoparticles are smaller than those for $PdH_{0.47}$ nanoparticles. Interestingly, the fast relaxation time for $Pd_{0.8}Pt_{0.2}H_{0.47}$ nanoparticles is almost temperature independent below 250 K, suggesting tunneling processes. Thus, the substitution of Pt atoms in a Pd fcc lattice deforms the potential energy surfaces and enhances the diffusion of hydrogen atoms.

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[2] H. Akiba et al., JPCC 123, 9471 (2019).
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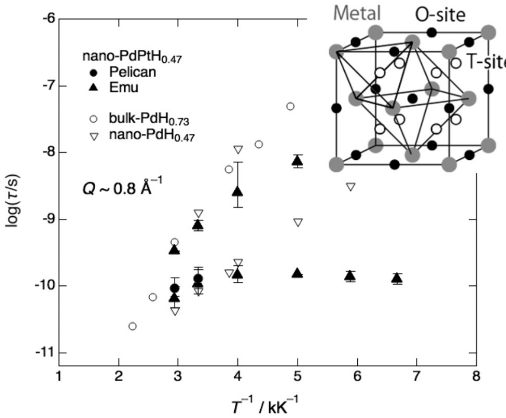

Fig. 1. Arrhenius plot of the relaxation times for $Pd_{0.8}Pt_{0.2}H_{0.47}$ and $PdH_{0.47}$ nanoparticles.

Magnetism

Neutron diffraction study on structural and magnetic properties of the tetragonal Mn3+xGe1-x

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(A)Tohoku Gakuin Univ. (B)IMR, Tohoku Univ. (C)ANSTO (D)Univ. Sydney

Ferrimagnetic Mn3Ga and Mn3Ge with a tetragonal structure are expected to be candidates for novel spintronics and permanent magnet materials [1]. The compounds undergo a structural phase transition accompanied by a magnetic transition from the ferrimagnetic tetragonal phase to a paramagnetic hexagonal high temperature phase. It is known that the offstoichiometric composition is required to obtain the single phase of the tetragonal phase. Recently, we have found that thermal stability of the tetragonal phase in Mn3Ge is expanded by introducing excess Mn. Furthermore, as the result of the enhancement on the thermal stability, we observed that an intrinsic magnetic transition from ferrimagnetic to paramagnetic phases in the tetragonal phase occurs at 860 K. Although the magnetic transition temperature is robust against the introduction of the excess Mn, the magnetization decreases with increasing Mn content. These results clearly indicate that the excess Mn strongly affects the structural and magnetic properties of the tetragonal manganese-germanium compound. A previous report of neutron diffraction experiments suggests that the excess Mn is located at the Ge site [2]. However, the magnitude of magnetic moment is estimated to be 4 - 7 Bohr magneton, which is too large value for magnetic moment. The results obtained from accurate measurement and analysis would lead to further experimental and theoretical investigation and understanding of correlations between the electronic properties and the structural and magnetic properties. In this study, to directly observe the structural phase transition, we have performed neutron diffraction experiments for Mn3+xGe1-x at ECHIDNA in Australian Nuclear Science and Technology Organisation. As shown in the Figure, neutron diffraction pattern of Mn3.03Ge0.97 clearly changes in the vicinity of 858 K, indicating that the tetragonal D022 structure transforms to the hexagonal D019 structure. In case of Mn3.09Ge0.91, the structural phase transition occurs in the vicinity of 928 K, which is higher temperature than that in Mn3.03Ge0.97. These results directly prove that thermal stability of D022 structure in Mn-Ge is expanded by introducing small amount of excess Mn.

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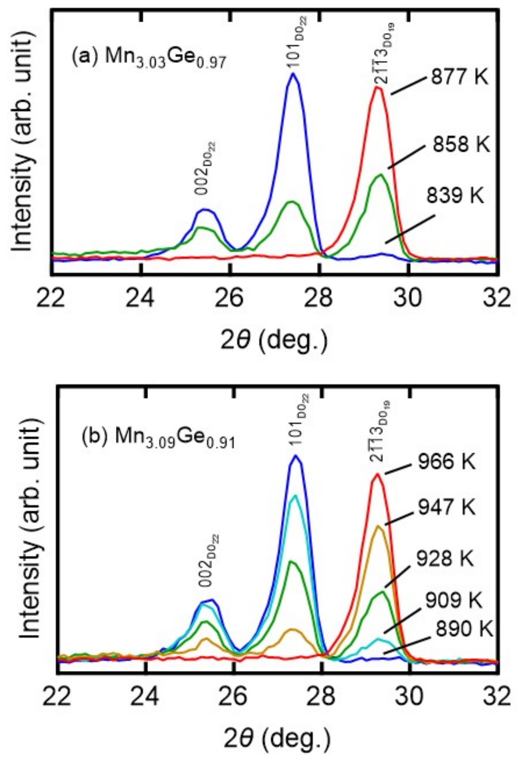

Fig. 1. Neutron diffraction patterns of (a)Mn3.03Ge0.97 and (b)Mn3.09Ge0.91

Crystalline electric field level scheme of the $CeTe_3$

D. Ueta[A], R. Kobayashi[B], S. Yano[C], Y. Okada[A]
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What is the ground state of this system when rare-earth atoms, the $4f$-electrons which capture partly itinerant characteristics, occupy a geometrically frustrated site? This fundamental question in condensed matter physics has attracted considerable attention from scientists. However, the experimental elucidation of this question is difficult because there are no samples that satisfy such a situation. In general, the $4f$-electron has large and anisotropic angular momentum and inhibits the realization of an Ising-like structure, which is required for a spin-frustrated system.

RTe$_3$ (R: rare-earth elements) is composed of a square net Te layer with high mobility and a blocking layer with R-originated $4f$-electrons. A particularly interesting case is R = Ce, since the f-electron exists closer to Fermi energy E_F. According to previous research, the electronic specific coefficient of $CeTe_3$ is larger than that of the La system, suggesting that f-electrons are itinerant. On the other hand, in the isostructural $CeTe_2Se$ in which the doped Se atoms enter the blocking layer selectively, there are no dramatic changes in the magnetic transition temperature towards the QCP. However, from the magnetization measurements of the previous study, in the magnetic ordered state the magnetic moment of the Ce atom lies in the ac-plane (in-plane) on $CeTe_3$ but along the b-axis (out of plane) on $CeTe_2Se$. These results sugget that the ground state is qualitatively different due to the influence of the CEF effect by anion doping.

In order to determine the crystalline electric field (CEF) level scheme in $CeTe_3$, we performed inelastic neutron scattering (INS) experiments using SIKA at the Australian Nuclear Science and Technology Organisation. A single crystalline sample of $CeTe_3$ was grown by a flux method in the Okinawa Institute of Science and Technology Graduate University. Many single crystalline samples totaling about 20 g were enclosed in a copper cell and cooled to 2.7 K.

We have succeeded in observing clear CEF excitations at approximately 10 and 22 meV as shown in Fig. 1(a). Furthermore, we also observed an additional peak at around 0.6 meV due to spin-wave excitation, and this excitation vanishes above the transition temperature (T_{N1} = 3 K) as shown in Fig. 1(b). From previous studies of the magnetic susceptibility, a CEF level scheme with a ground state of $\Gamma_7^{(2)}$ was suggested. These CEF parameters give rise to energy-level splitting from the ground state of 11.2 and 19.8 meV, which are roughly consistent with our INS measurements. However, from an analysis of INS and magnetic susceptibility data with a CEF model calculation, we found that the ground state of $CeTe_3$ is $\Gamma_7^{(1)}$.

Travel expenses were supported by the General User Program for Neutron Scattering Experiments, the Institute for Solid State Physics, The University of Tokyo (proposal no. 19902), and JRR-3 of the Japan Atomic Energy Agency, Tokai, Japan.

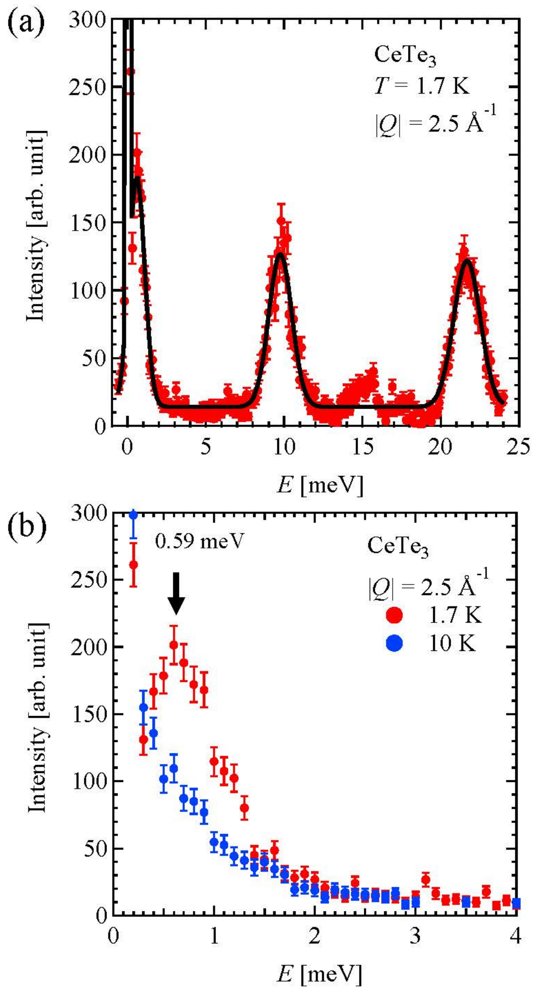

Fig. 1. Inelastic neutron scattering spectra of $CeTe_3$.

Field-induced magnetic order of magnetoplumbite-type cobalt oxide SrCo12O19

Shinichiro Asai, Hodaka Kikuchi, Yuma Iwasaki, Takatsugu Masuda
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Various physical properties of cobalt oxides have been intensively investigated, which comes from the variety of the electronic states for Co ions. 2+, 3+, and 4+ are stable for the valence of Co ions in oxides. Additionally, the Co3+ ions surrounded by oxygen ions octahedrally can take two different electronic configurations, high-spin state (S = 2) and low-spin state (S = 0).

SrCo12O19 has the magnetoplumbite-type crystal structure as shown in Fig. 1(a) [1]. It consists of the alternate stacking of the SrCo6O11-type blocks and Co3O4-type blocks. From the bond-valence sums, the valences of the Co ions in Co(3) and Co(4) sites are predicted to be 3+ and 2+, respectively [1]. On analogy of SrCo6O11 [2], the Ising-like character is expected for the spins of the Co(3) ions. The uniaxial colossal magnetoresistance was observed in the insulating phase [3]. Ishiwata et al. suggests that the origin of the magnetoresistance is that the charge order in the conduction paths is destabilized by the applied field, and that the uniaxial character of the magnetoresistance is related to the Ising-spins located on Co(3) sites [3]. The magnetic susceptibility has a sharp increase in the case that the magnetic field is perpendicular to the crystallographic c axis at 80 K, which suggests the magnetic long-range order [3].We performed a neutron diffraction experiment at powder diffractometer WOMBAT installed in ANSTO to identify the magnetic state of SrCo12O19. Magnetic peaks indicating the magnetic propagation vector to be (0, 0, 0) were observed below 80 K. The antiferromagnetic order where the ordered moments are located on Co(4) sites reproduces the magnetic peak profile. The interesting point is that the Co(3) ions still have no ordered moments at zero field. In SrCo6O11, the Ising spins are not ordered at zero field, and the ferrimagnetic structure is realized as the field-induced state [4]. The magnetization-field curve of SrCo12O19 at 2 K has the metamagnetic-like anomaly similar with that of SrCo6O11, which indicates that the field-induced states are realized.

Neutron diffraction experiment was performed on High-Intensity Powder Diffractometer WOMBAT installed at ANSTO. 0.9 g of the polycrystalline sample was used. We used the magnet for applying magnetic field. We measured the neutron diffraction patterns at 2 K under the magnetic field of 0, 2, 4, 6, 7, 8, and 9 T. We further measured the pattern at 100 K without the magnetic field in order to obtain the nuclear peak profile for the subtraction.

Neutron diffraction profiles at 2 K under several magnetic fields are shown in Fig. 1(b). The profile at 100 K under zero field is subtracted from these profiles as the background intensities. Five magnetic peaks indexed by (004), (101), (103), (104), (105) were observed at zero field. In addition, the (102) magnetic peak was induced by the magnetic field. Its intensity increases with increasing magnetic field up to 9 T. Meanwhile, the intensity of the (101) peaks decreases a little with increasing magnetic field. It indicates that new magnetic phase with the propagation vector of (0, 0, 0) is induced. The magnetic structure analysis is in progress. [1] S. Ishiwata et al., J. Solid State Chem. 181, 1273 (2008). [2] S. Ishiwata et al., Phys. Rev. Lett. 98, 217201 (2007). [3] S. Ishiwata et al., Phys. Rev. B 83, 020401 (2011). [4]. T. Saito et al., J. Mag. Mag. Mater. 310, 1584 (2007).

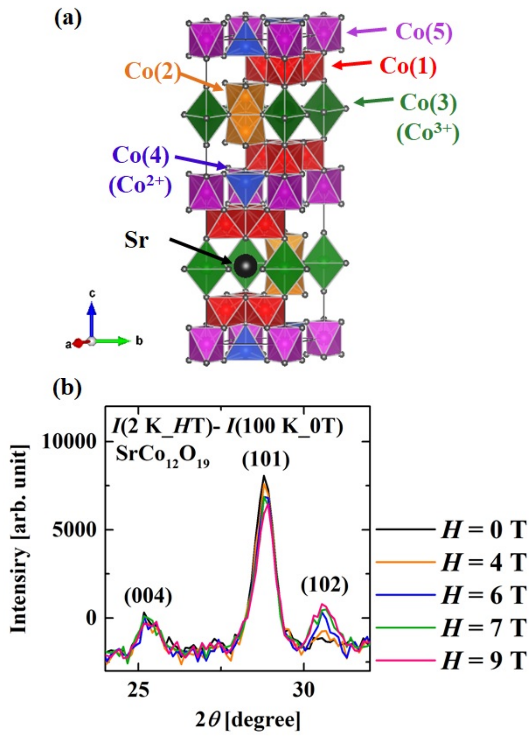

Fig. 1. (a) Crystal structure of SrCo12O19. (b) Neutron diffraction profiles at 2 K under several magnetic fields. The profile at 100 K under zero field is subtracted from the profiles as the background intensities.

Neutron powder diffraction study on the Au-Ga-Tb quasicrystal approximant

T. J. Sato, A. Ishikawa[1], S. Yoshida[1], Chin-Wei Wang[2,3], and R. Tamura[1]
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Quasicrystal is a substance with long-range quasiperiodic atomic arrangement, nonetheless, with the rotational symmetry that is prohibited in the periodic crystals, such as the five-fold symmetry. The quasicrystal is, therefore, different from periodic crystals and random glasses, and now is regarded as the third form of solids. There is a class of crystals, called "approximants", in which the high-symmetry (such as icosahedral) atomic clusters, identical to those in the quasicrystals, form periodic array, and thus being approximation of the quasicrystalline structure. Recently, for the first time we have determined magnetic structure of the antiferromagnetic 1/1 Au-Al-Tb approximant using ECHIDNA [1], which turns out to be a very intriguing non-collinear and non-coplanar whirling order. We also have performed single crystal neutron diffraction on the macroscopically ferromagnetic quasicrystal approximant Au-Si-Tb [2]. Together with the crystalline-electric-field anisotropy estimated from inelastic neutron scattering spectra, we also proposed nontrivial noncollinear and noncoplanar magnetic structure quite similar to that observed in the Au-Al-Tb. In this work, to accumulate knowledge on the magnetic ordering in the quasicrystal approximants, powder neutron diffraction was performed on the Au-Ga-Tb 1/1 approximant.

A polycrystalline alloy of the Au-Ga-Tb 1/1 approximant was prepared by arc melting with high purity Au, Ga and Tb elements with proper heat treatment to obtain single phase specimen. The neutron powder diffraction experiment has been performed using the high-resolution powder diffractometer ECHIDNA installed at the OPAL reactor, Australian Nuclear Science and Technology Organisation [3]. For most of the magnetic diffraction measurement, neutrons with $\lambda = 2.4395$ Å was selected using the Ge 311 reflections, whereas for the structure analysis, to obtain reflections in a wide Q-range, we select $\lambda = 1.622$ Å using the Ge 335 reflections. The sample was set in the $\phi 6$ mm vanadium sample can, and then set to the cold head of the closed cycle ^{4}He refrigerator with the base temperature 3.5 K.

Figure shows the overall diffractograms at the base temperature ($\simeq$ 3.5 K) and the paramagnetic temperature $T = 20$ K. One can clearly see the development of sharp magnetic reflections at the base temperature. They are the clear indication of magnetic long-range order in this 1/1 approximant. The magnetic structure analysis using the representation analysis is now under way.

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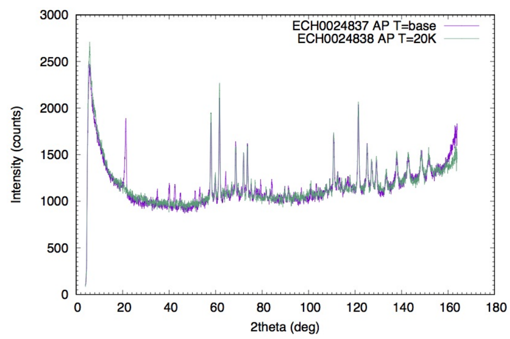

Fig. 1. Neutron diffraction patterns obtained in at the base temperature ($\simeq$ 3.5 K) and the paramagnetic temperature $T = 20$ K at ECHIDNA.

Phase diagram of the moving magnetic skyrmion lattice with plastic deformation in MnSi under high electric current

D. Okuyama[1], S. Aji[1], N. Booth[2], E. Gilbert[2], M. Bleuel[3], Q. Ye[3], A. Kikkawa[4], Y. Taguchi[4], Y. Tokura[4,5], Y. Nambu[6], and T. J. Sato[1]

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A magnetic skyrmion is formed by a swirling spin texture. Such a swirling structure is characterized by a discrete topological number, called as skyrmion number. In the prototypical chiral magnet MnSi, magnetic skyrmions condense into triangular-lattice, observed as six-fold magnetic Bragg reflections in small-angle neutron scattering (SANS) [1]. In metallic skyrmion compounds, there is important characteristic, i.e., its surprisingly large coupling with the electric current flow. The electric current density required to realize the skyrmion lattice motion in chiral magnet MnSi is considerably small as $j_t \sim 1$ MA/m^2 [2]. Hence, the magnetic skyrmion in MnSi attracts growing attention recently, and is under intense scrutiny for elucidating its dynamical behavior under electric current. We performed SANS experiment in chiral magnet MnSi with suppressing thermal gradient as much as experimentally achievable. SANS experiments were carried out at NG7 in NIST and at QUOKKA in ANSTO. A direct electric current or an alternative electric current with square wave form was applied along the [0 0 1] direction. The sample mount was attached to the sample stick, and was installed in the horizontal field magnet with the magnetic field applied along [1 -1 0] parallel to the incident neutron beam. We observed the six-hold magnetic skyrmion reflections in the skyrmion phase under the electric current density $j = 0$. In the previous experiments, we found a spatially inhomogeneous counterrotating behavior of the magnetic skyrmion reflections measured at left-edge and right-edge above the threshold current density j_t [3]. The rotation direction of the magnetic skyrmion reflections can be inverted by the inversion of the electric current direction. In this time, we performed SANS experiment on the left-edge and right-edge of the MnSi sample under an alternative electric current flow to investigate a rotational dynamics of the magnetic skyrmion lattice. The size of the neutron illumination area is approximately 0.2 mm (width) × 1.0 mm (height). At the alternative electric current desnsity $j_{ac} > j_t$, the rotational motion of the magnetic skyrmion reflections follows an obvious alternative electric current frequency dependence. By the fitting of a naive Debye relaxation type function, we estimated the relaxation time t_r. In the frequency region of the alternative electric current below $1/t_r$, the rotational direction of the magnetic skyrmion reflections follows the inversion of the alternative electric current direction. In stark contrast, the magnetic skyrmion reflections do not respond when the frequency of the alternative electric current is higher than $1/t_r$. These results indicate that magnetic skyrmion lattices under current flow experience significant friction near the sample edges, and the rotational motion of the magnetic skyrmion reflections shows Debye type relaxation under the alternative electric current. Such a dynamics information of the magnetic skyrmion lattice being important factors that must be considered for the anticipated skyrmion-based applications in chiral magnets at the nanoscale. In summary, we have used SANS to study skyrmion-lattice motion in chiral magnet MnSi under an alternative electric current flow. The frequency dependence of the rotation motion of the magnetic skyrmion reflections was measured under an alternative electric current density $j_{ac} > j_t \sim 1$ MA/m^2.

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Spin excitations in the skyrmion lattice phase of $MnSi_{1-x}Ge_x$

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MnSi is the chiral magnetic compound and attracts renewed interest because of the discovery of the skyrmion-lattice structure under finite magnetic field [1]. The magnetic skyrmion is a topological spin texture made of swirling magnetic moments. Recently, the spin excitations so called 'magnon' in such spin texture was studied theoretically and was found that topological nature of skyrmion will give non-trivial topological number (Chern number) for each magnon bands, resulting in the formation of the topological magnon band [2]. Here, we study such a topological magnon bands experimentally in MnSi and Ge-doped MnSi. Single crystal samples of MnSi (18 grams) and $MnSi_{0.98}Ge_{0.02}$ (15.5 grams) were used in the experiments. The single crystals were grown using Bridgmann furnace with temperature and transport speed of 1573 K and 4 mm/hour, respectively. We performed elastic and inelastic neutron experiments using SIKA spectrometer in ANSTO. For the neutron experiment, the samples were mounted in the aluminum plate and aligned with 110 and 001 in the scattering plane. This configuration will set 110 as the magnetic field direction. The samples were placed in the cryostat equipped with a vertical superconducting magnet. Pyrolytic graphite PG 002 reflections were used for monochromator and analyzer. The collimation settings were Open-20'-20'-60' with vertically focusing monochrome tor mode. The final neutron energy was fixed to 2.75 meV.

The magnetic modulation vector Q of MnSi and $MnSi_{0.98}Ge_{0.02}$ were obtained as 0.035 and 0.046 Å from elastic scattering measurement. The inelastic scattering experiment was carried out by setting the temperature of 28.6 K (MnSi) and 30.5 K ($MnSi_{0.98}Ge_{0.02}$) and magnetic field of 0.2 T for both samples judging from the optimum intensity of the magnetic field scan in the skyrmion lattice phase by the elastic experiment. The low-energy magnetic excitation modes were observed at several Q points. Fig. 1(a) is a representative result of low-energy magnetic excitations observed at M point for both samples. Excitation spectra for $MnSi_{0.98}Ge_{0.02}$ are weaker and broader. Excitation spectra also get weaker at higher Q-positions (Fig 1(b)). We confirmed that this excitation is intrinsic in the skyrmion-lattice phase, by comparing it to the excitation spectra both in the fully-polarized and helical phases.

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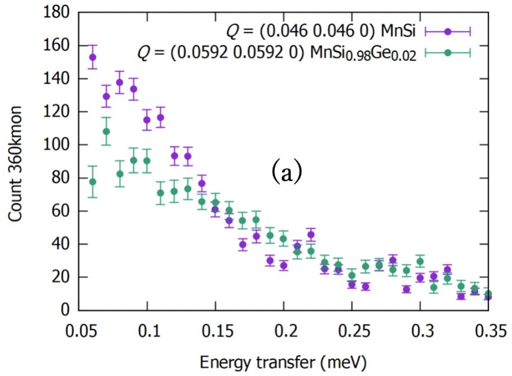

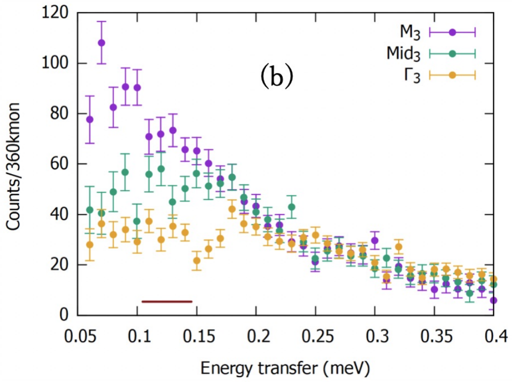

Fig. 1. (a) The observed low-energy magnetic excitations at M point for MnSi and $MnSi_{0.98}Ge_{0.02}$, and (b) Q-position dependence of inelastic spectra for $MnSi_{0.98}Ge_{0.02}$.

Magnetic correlation at Wannier point in isosceles-triangular lattice Ising magnet $CoNb_2O_6$

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Recently, we have studied an isosceles triangular lattice Ising magnet $CoNb_2O_6$ along the context that if the ratio of exchange interactions defined as $\gamma = J_1$ (along the base direction) $/J_2$ (along the equilateral direction) can be controlled via anisotropic deformation of isosceles triangular lattice (ITL) by uniaxial pressure, variety of interesting magnetic features intrinsic to γ would be observed [1]. Actually along this context, we succeeded in crossing the Wannier point ($\gamma = 1$) by applying the c axis-uniaxial pressure $p \parallel c$ up to 1 GPa, as is in the experimental reports of No.1802 and No.1841. As a continuation of the proposal, using the two-axis diffractometer E4 installed at the Berlin Neutron Scattering Center in the Helmholtz Centre Berlin for Materials and Energy, we tried to provide access to Wannier point by applying the b axis uniaxial pressure $p \parallel b$ up to 1GPa, because almost flat diffraction profile in $(0k0)$ scan can be seen at $p \parallel b \sim 0.6$ GPa ($\gamma \sim 1$) and suggests good "spot" as is in the experimental reports of No.1913.

As shown in Fig.1, switching from AF-II magnetic ordering to AF-I magnetic ordering at $p \parallel b \sim 0.6$ GPa is not sharp but rather broad in contrast to that at $p \parallel c \sim 0.8$ GPa. At the same time, with increasing the b axis uniaxial pressure $p \parallel b$, AF-II-2(+) magnetic ordering start to appear, and shows its maximum at $p \parallel b \sim 350$ MPa, and decreases in synchronized with AF-II magnetic ordering. Taking into account that AF-II-2(+) magnetic structure with doubling along both the a and the b directions is stabilized under unequal coupling constants J_2 along equilateral direction of ITL, unfortunately, the b axis-uniaxial pressure produced by our transverse-pressure device in present measurement seems to be in-homogenous and to deviate from the b-axis direction so as to break the equality in J_2 along equilateral direction of ITL.

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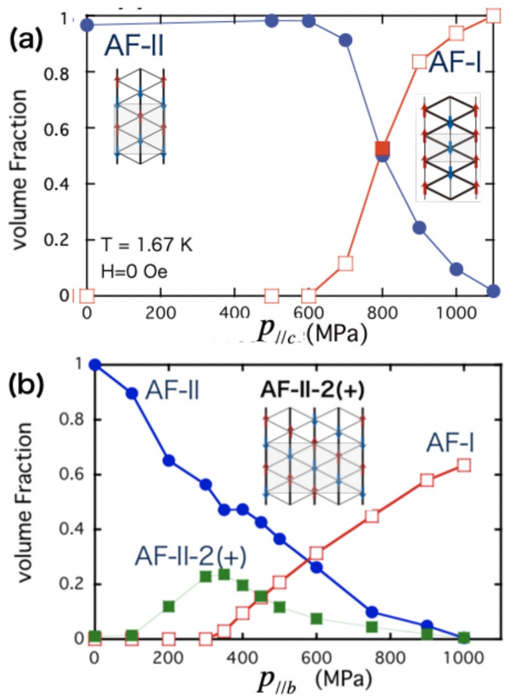

Fig. 1. (a) The c-axis pressure dependence of volume fraction of AF-I, AF-II magnetic orderings, (b) the b-axis pressure dependence of volume fraction of AF-I, AF-II and AF-II-2(+) magnetic orderings.

Magnon polaron induced longevity of the magnon lifetime

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Magnon (spin wave) and phonon (sound wave) are collective excitations of ordered magnetic moments and lattice vibrations, respectively. When the sound wave travels in a magnet, local distortions exert torques on the magnetic order through the magneto-elastic coupling. Propagating magnons affect the lattice dynamics, vice versa. The coupling between spin and sound waves has thus been intensively studied in the last half-century. Nowadays they are known to hybridize at (anti-)crossing points of their dispersion relations [1], forming coherently mixed quasiparticles "magnon polarons," when the lifetime of quasiparticles is well-defined compared to the magnitude of the anticrossing gap.

Although hybridized magnon-phonon states (or magnon polaron) were predicted a long time ago [1], their effects on magnon spin transport have been elucidated quite recently in yttrium iron garnet ($Y_3Fe_5O_{12}$: YIG) by the spin Seebeck effect (SSE) observations. The measurement was made through the generation of a spin current with a temperature gradient in YIG [2,3]. Reference [2] showed that the hybridization of magnon and phonon could lead to resonant enhancement of the SSE signal. The enhancement emerges by the magnetic field application, where the acoustic phonon dispersion becomes tangential to the magnon one. The result in Ref. [2] is indeed well explained in terms of the longevity of phonon than magnon; owing to the phononic constituent of magnon polarons, the condition makes magnon-polaron lifetime longer than pure magnon lifetime, leading to the enhanced spin current by the hybridization [2]. This lifetime enhancement of magnon through magnon polaron hybridization is indeed observed by our recent neutron scattering experiment. Here we would like to clarify such an enhancement of the magnon lifetime using polarized neutrons.

In the polarized neutron scattering experiment on the cold neutron triple-axis spectrometer V2 FLEXX at Helmholtz Zentrum Berlin, Germany, we used a single crystal (mass $\sim$ 8 g) of YIG with a horizontal scattering zone $[HHL]$. We chose the P_x polarization (neutron polarization parallel to the momentum transfer) and recorded all the four channels such as σ^{++}, σ^{+-}, σ^{-+} and σ^{--} with applying horizontal magnetic fields. First, the (220) Bragg reflection was confirmed by the diffraction mode. Phonon and magnon dispersion relations were already known from our previous experiment [4], we then planned to collect energy scans at several displaced positions from (220) for both longitudinal and transverse directions. All the measurements were performed at temperature 100 K, and as a function of fields up to 3 T. We successfully observed magnon lifetime enhancement at 2.5 T that is consistent with the peak formation of the SSE signal from YIG. Detailed analysis including polarization correction and Eckold-Sobolev-type resolution convolution, are now underway.

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in press.

Electric field effect on the magnon dispersion in α-$Cu_2V_2O_7$

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The recent inelastic neutron scattering study on the noncentrosymmetric antiferromagnet α-$Cu_2V_2O_7$ revealed unusual magnon band splitting resulting from symmetry breaking [1]. The magnon band splitting splitting is due to the Dzyaloshinskii-Moriya (DM) interaction, and introduces the difference in the phase velocity of the counterrotating modes. For linearly polarized magnons, the difference of the phase velocity results in the rotation of the polarization direction. This effect is analogous to the optical rotation in noncentrosymmetric medias and may be used in future spintronics device.

Under the application of external electric field (E) in insulating polar compounds, the cations and anions may be moved in opposite directions. This way, the DM interaction may be enhanced through the strengthened symmetry breaking. This would lead to the putative electric-field-induced magnonic Faraday effect [2]. Therefore, in this experiment, we study the effect of E on the magnon dispersion of α-$Cu_2V_2O_7$ at SIKA in Australian Nuclear Science and Technology Organization.

In the experiment, we applied E along the crystallographic a- and c-axis of α-$Cu_2V_2O_7$. The figure shows the magnon dispersion of α-$Cu_2V_2O_7$ around 020 reflection (a) under zero E and (b) $E \sim 14.3$ kV/cm along the crystallographic c-axis, at the base temperature ($\sim$ 3K) collected with fixed final energy at 5 meV. We could not observe the change in the magnon dispersion due to E. For the application of E along the crystallographic a-axis, we were unable to confirm the change of the dispersion due to electrical discharge.

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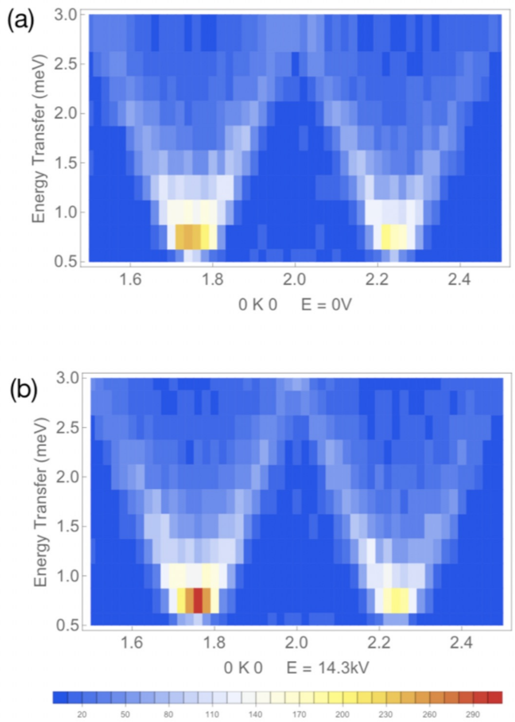

Fig. 1. Magnon dispersion of α-$Cu_2V_2O_7$ around 020 reflection under (a) zero E and (b) $E \sim 14.3$ kV/cm applied along crystallographic c-axis.

Strongly Correlated Electron System

Study of 2D Heavy Fermion Compounds $Ce(Te_{1-x}Se_x)_3$

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Orthorhombic $CeTe_3$-type (space group *C*2*cm*) $CeTe_3$ may be the best sample to study 2D quantum critical phenomena in heavy fermion system. Rare-earth tritelluride $CeTe_3$, which belongs to the family of quasi-2D compounds RTe3 (where *R* = Y, La-Sm, Gd-Tm), has highly 2D crystal structure; *R*Te-slabs and two square Te-sheets are stacked along the b-axis[1,2]. RTe-slabs contribute to magnetism[1,3] and square Te-sheets induce 2D conducting bands, which give strongly anisotropic transport properties[2]. First-principles band-structure calculations revealed that the Fermi surface consists of inner and outer square sheets, large regions of which are nested by a single incommensurate wave-vector corresponding to the observed lattice-modulation[4,5]. Because of the characteristic quasi-2D nature of the Te sheet, the charge density wave (CDW) is formed with an extremely large gap of the order of 100 meV [6-9]. Bulk measurement studies using specific heat, electrical resistivity, and magnetic susceptibility clarified that $CeTe_3$ show successive antiferromagnetic(AFM) transition at T_{N1} = 3.1 K and T_{N2} = 1.3 K with electrical specific heat coefficient $\gamma = 0.9$ J/molK^2, which indicates that $CeTe_3$ forms heavy quasiparticles at low temperature although the ground state is still AFM order[10]. Very recently, our group has succeeded in growing single crystals of $Ce(Te_{1-x}Se_x)_3$ system and has studied x dependence of physical properties. T_{N1} and T_{N2} decrease with the increase of x and both disappear around x = 0.1. In addition, the γ value increases with the increase of x. These results indicate that the chemical pressure effect coming from Se substitution suppresses magnetic order and enhances Kondo effect due to the increase of c-f hybridization. The x = 0.1 sample may realize 2D quantum criticality at low temperature. Despite the extensive studies, there is no information about magnetic structure of $CeTe_3$ and its Se-substitution system. The determination of magnetic structure is necessary to understand 2D quantum criticality in the system. Additionally, the relation between CDW and AFM transition is also important to unveil how fermiology connects magnetism in the system. Therefore, the aim of this proposal is to determine magnetic structures in two different AFM phase (L-phase: $T < T_{N2}$, I-phase: $T_{N2} < T < T_{N1}$) and clarify how these AFM transition affect CDW phase. We also expect to detect diffuse scattering parallel to *b*-axis. The anomaly at T_{N1} in the specific heat measurements looks very broad, which implies the existence of 2D-like AFM order in I-phase.

Neutron scattering is suitable to study the structure of both CDW and AFM order in the same reciprocal lattice unit. Previous electron and neutron studies implied the existence of the nuclear propagation vector $k_0 = (0.71, 0, 0)$ and two different magnetic propagation vectors; one is $k_1 = (0.5, 0, 0.4)$, the other one is $k_2 = (0.18, 0, 0.68)$ [11]. However, observed magnetic peaks were not many. It is difficult to determine these magnetic structures from these peaks only.

In this experiment, we focused on $CeTe_3$ single crystal samples because of the machine time limitation. We have performed the experiments using the WOMBAT diffractometer at the OPAL reactor in ANSTO. The experiments used thermal neutron with a 1.54 Å and 2.95 Å wavelengths, which were monochromatized by a vertically focusing Ge-115 monochromator. The scattering planes of $CeTe_3$ single crystals were set on the *h*0*l* scattering plane, where magnetic peaks were observed in a previous study[11]. A dilution refrigerator was used to cool the samples, and the measurements were made in the temperature range of 50 mK   8.5 K.

Figure 1 shows the contour map of nuclear Bragg intensity in the h0l scattering plane at T = 8.5 K. All the observed nuclear scattering peaks can be explained by the space group of *Cmcm* and the lattice parameter of $CeTe_3$ consistently. Additionally, satellite nuclear peaks associated with the CDW order were also observed at the locations reported by ARPES measurements, which are in good agreement with the results of previous studies. Figure 2 (a,b,c,d) show contour plots of the Bragg scattering at 50 mK, and 1.5 K. Figure 2 (e,f) shows One-dimensional plots of the contour map integrated into Q direction. In the previous study, magnetic scattering peaks were observed in the region indicated by the blue dotted square in figure 2 (a,b). In the present study, however, no magnetic scattering peak was observed in this region. On the other hand, a ring-shaped weak Bragg scattering signal was observed in the low-Q region, as shown in figure 2 (c,d,e,f). This ring-shaped anomaly disappears above the antiferromagnetic transition temperature. Therefore, it is unlikely to be caused by polycrystalline impurities. We are planning to perform a follow-up experiment to investigate this ring-shaped anomaly with another spectrometer in the future.

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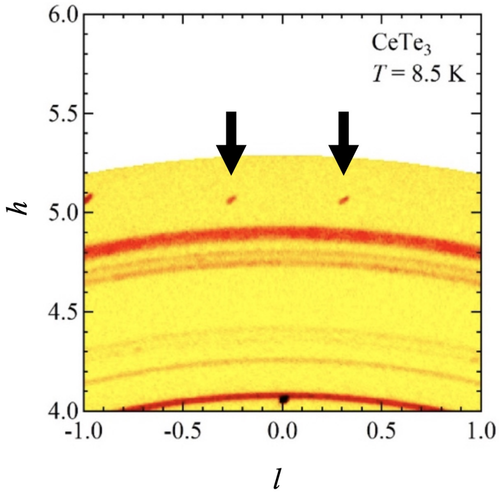

Fig. 1. Contour plot of the nuclear Bragg intensity in the (h, 0, l) scattering plane at T = 8.5 K. The black arrows indicate the satellite peaks coming from CDW order. These results are in good agreement with the results of the ARPES measurements.

Glasses and Liquids

Dynamics of super-high entropy liquids alkylated perfluorobenzenes

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The fusion (melting) temperature $T_{\rm fus}$ of molecules usually depend on molecular mass M; the larger M is, the higher $T_{\rm fus}$ becomes. For example, $T_{\rm fus}$ of benzene (C_6H_6, M = 78) is 279 K while that of biphenyl (C_6H_5-C_6H_5, $M = 154$) is 342 K. This is because the intermolecular van der Waals interaction is larger in the crystalline phase with denser molecular packing than that in the liquid phase with coarser packing. Recently, Nakanishi group in NIMS found that large molecules, 2,5-C_6C_{10}-tetraphenylporphyrin (2,5-C_6C_{10}-TPP) [1] and C_8C_{12}-perfluoro-benzene (C_8C_{12}-PFB), exist in liquid states at room temperature. It is quite interesting that $T_{\rm fus}$ of these alkylated molecules (2,5-C_6C_{10}-TPP, $M = 2538$; C_8C_{12}-PFB, $M = 465$) is lower than $T_{\rm fus}$ of non-alkylated molecules (TPP, $M = 615$, $T_{\rm fus}$ = 723 K; PFB, $M = 186$, $T_{\rm fus}$ = 278 K). We consider that these alkylated molecules are stabilized by the large entropy effect which is caused by the conformational disorder of long alkylchains. This situation is similar to that of ionic liquids which are in liquid states in spite of their strong interionic interactions. We collectively call this type of liquids ”super-high entropy liquids (SHEL)”.

In the present experiments, we have measured quasielastic neutron scattering (QENS) of alkylated perfluorobenzenes (APFB). These molecules are much smaller and simpler than alkylated TPP (ATPP), whose QENS have already been measured by us. The purpose of this work is to investigate the common dynamical features in APFB and ATPP. We take C_4C_8-PFB, C_6C_{10}-PFB and C_8C_{12}-PFB also to investigate the effect of the length of alkylchains.

Two QENS spectrometers, HFBS at NIST and TOFTOF at FRM II were used. They have different energy resolutions and can measure motions in different time regions (HFBS: 100 ps -10 ns, TOFTOF: 0.5 ps - 100 ps). To observe temperature dependence of motion, QENS have been measured at 4 or 5 temperature points above the glass transition temperature of each sample. $S(Q,\omega)$ data obtained by HFBS and TOFTOF were Fourier transformed to $I(Q,t)$ and then connected. $I(Q,t)$ curves were fitted to the two KWW functions corresponding to the relaxations of alkyl chains and the α-relaxations.

Figure 1 shows temperature dependence of $I(Q,t)$ curves of C_4C_8-PFB at $Q = 1.0$ Å^{-1} and fitting curves by two KWW functions. The fittings were satisfactory for all temperatures. The relaxation time of the α-relaxation tends to diverge at T_g, while that of alkyl chains is linear and independent of the α-relaxation. These results of APFB are quite similar to those of ATPP.

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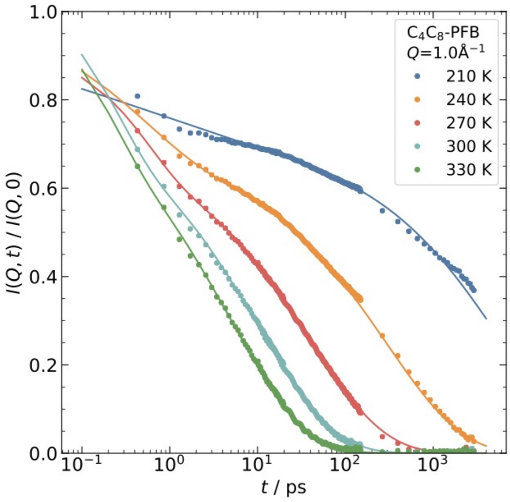

Fig. 1. Temperature dependence of $I(Q,t)$ of C_4C_8-PFB at $Q = 1.0$ Å^{-1} (circle) and fitting curves by two KWW functions (solid line).

Biology

Visualization of domain motion of tri-ubiquitin through segment deuteration and small-angle neutron scattering

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It is well recognized that domain motions in multi-domain proteins play crucial roles in essential processes such as cellular signaling and gene regulation. Therefore, identification of their domain motions must be significant for revealing the mechanism to develop functions.

Ubiquitin (Ub) is a small protein comprised of 76 amino acid residues and is deeply related to regulatory roles in various cellular events such as cell cycle progression, DNA repair, transcriptional regulation, apoptosis and so on. The C-terminal group of Ub can be linked to another Ub through seven lysine (K) residues as well as the N-terminal amino groups, producing various types of poly-Ubs. We especially focused on linear K48 poly-Ub, which are expected to have high degree of freedom of constituting domains. As the first step, we started to study the structure and dynamics of linear K48-tri-ubiqutin (linear K48-tri-Ub). Solution NMR studies supposed that linear K48-tri-Ub could have four possible different states. Additional experimental approaches are indispensable for validating the expectation from NMR studies. Elucidation of relative spatial arrangements of two domains in linear K48-tri-Ub is one of the candidates for above-mentioned experimental requirements.Through the usage of ubiquitin-conjugating enzymes and deuteration of a domain, selective deuteration of concerned domain in linear K48-tri-Ubis is technically possible. We then prepared K48-tri-Ub consisted of two hydrogenated domains and 75% deuterated domain at different positions (H-H-75D). And we performed performed small-angle neutron scattering (SANS) measurement on H-H-75D in 100% D2O at 42 C, using Quokka installed at ANSTO. Figure 5 shows the SANS profiles from H-H-75D (red circle) and H-H-H (black circle). Clear difference of scattering profiles was observed between them, supporting the successful introduction of 75% deuterated domain into linear K48-tri-Ub. Aiming at the detailed structural analysis, we are on the progress of performing long time all- atom MD simulation.

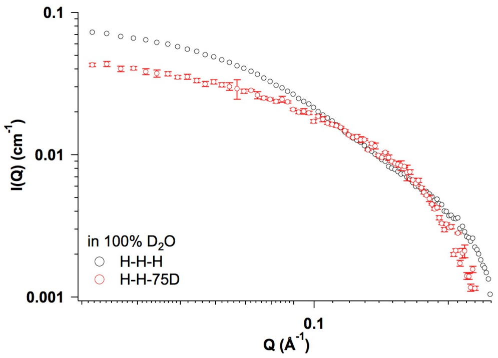

Fig. 1. SANS profiles from H-H-H and H-H-75D in 100% D2O at 42 C.

Soft Matters

Effect of a model scramblase peptide on viscoelastic properties of phspholipid bilayers

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Biological membranes consist mainly of phospholipids and proteins. During cellular processes, the morphology of lipid membranes changes dynamically, which is governed by interactions between lipids and proteins. Binding of cytosolic proteins to the membrane is often accompanied by the membrane deformation, such as invagination and tubulation. Many theoretical studies suggest that viscoelastic properties of the membrane play an important role in the membrane deformation. Some of the viscoelastic parameters can be determined by measuring the thermal fluctuations of the membrane, i.e., bending and thickness fluctuations, using neutron spin echo (NSE) spectroscopy.

Several studies suggested that lipid transbilayer movement (flip-flop) promoting peptides and proteins are involved in membrane deformation. We have previously developed a model "scramblase" peptide, TMP23Q, which has a glutamine residue in the center of the hydrophobic sequence and promotes phospholipid flip-flop. The specific aim of the present study is thus to evaluate how the presence of TMP23Q changes the thermal fluctuation and viscoelastic properties of the lipid membrane using NSE spectroscopy.

Thickness fluctuation measurement requires both tail-deuterated lipids, which are available only for saturated lipids. 1,2-Dimyristoyl-sn-glycero-3-phosphocholine (DMPC) has the most similar property in saturated lipids to that of biological membranes at 37 °C. Therefore, we use a lipid mixture of DMPC and 1,2-dimyristoyl-sn-glycero-3-phosphoglycerol (DMPG) at a 95:5 molar ratio for bending fluctuation measurements, and a lipid mixture of 1,2-dimyristoyl-d54-sn-glycero-3-phosphocholine, DMPC, and DMPG at a 90:5:5 molar ratio for thickness fluctuation measurements. Here, 5% DMPG is included to prevent the formation of multilamellar vesicles. We prepared DMPC/DMPG vesicles containing TMP23Q or a negative control peptide TMP23L in D2O.

Intermediate scattering function obtained by bending fluctuation measurement was fit to a single-membrane fluctuation model proposed by Zilman and Granek with including the effect of internal dissipation within the bilayer proposed by Watson and Brown. The intrinsic bending modulus values were changed by the presence of neither peptides. The relaxation rate obtained from thickness fluctuation measurement at q ~ 1.0 nm − 1 showed discrepancy from Zilman-Granek theory (Fig. 1). Although we calculated the area compressibility modulus K_A, peptide inclusion in the membrane did not have any effect on K_A values. However, both peptides increased the relaxation time due to the thickness fluctuation τ _TF. Considering the relationship between the membrane viscosity and τ _TF, these results suggests that the presence of transmembrane peptides in the membrane increase the membrane viscosity.

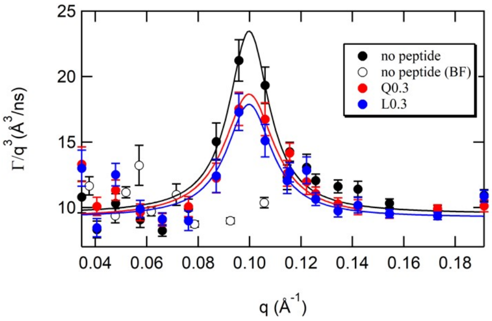

Fig. 1. Normalized relaxation rate Γ/q3 for tail-deuterated DMPC vesicles with/without peptides.

User-Program Support for Overseas Experiments

(2012 – 2019)

	海外施設名	装置名	所属機関	職位(学年)	申請者氏名	課題番号	装置	採択課題名	代表者所属	代表者氏名	旅程
1	ANSTO	ECHIDNA	東北学院大学	准教授	岡田 宏成	19562	T1-3	正方晶Mn化合物における過剰Mnの結晶構造特性と磁気特性	東北学院大学	岡田 宏成	2019.04.23-04.29
2	ANSTO	ECHIDNA	東北大学	准教授	南部 雄亮	19562	T1-3	正方晶Mn化合物における過剰Mnの結晶構造特性と磁気特性	東北学院大学	岡田 宏成	2019.04.23-04.29
3	ANSTO	WOMBAT	物質・材料研究機構	グループリーダー	長谷 正司	19802	5G	磁場中の中性子回折を利用したNi2V2O7のスピン系の決定	物質・材料研究機構	長谷 正司	2019.05.09-05.16
4	ANSTO	PELICAN	東京大学	教授	山室 修	18562	C3-1-1	PdPt合金ナノ粒子中の水素の速いダイナミクス	東京大学	山室 修	2019.04.09-04.23
		EMU				18563	C3-1-1	PdPt合金ナノ粒子中の水素の遅いダイナミクス			
5	ANSTO	WOMBAT	東京大学	助教	浅井晋一郎	19515	5G	マグネトプランバイト型コバルト酸化物SrCo12O19の磁場誘起磁気秩序	東京大学	浅井晋一郎	2019.05.13-05.18
6	ANSTO	ECHIDNA	東京工業大学	D3	張文鋭	18575	T1-3	層状ペロブスカイト型酸化物の結晶構造とイオン拡散経路	東京工業大学	八島 正知	2019.06.03-06.14
7	ANSTO	ECHIDNA	東京工業大学	M1	手島 広明	18575	T1-3	層状ペロブスカイト型酸化物の結晶構造とイオン拡散経路	東京工業大学	八島 正知	2019.06.03-06.13
8	NIST	NSE	日本原子力研究開発機構	研究副主幹	中川 洋	19545	C2-3-1	相互作用面の配向に連動したトリユビキチンダイナミクスの研究	京都大学	杉山 正明	2019.05.20-05.31
9	NIST	NSE	自然科学研究機構	助教	矢木 真穂	19545	C2-3-1	相互作用面の配向に連動したトリユビキチンダイナミクスの研究	京都大学	杉山 正明	2019.05.20-05.27
10	ANSTO	QUOKKA	東北大学	助教	奥山 大輔	19539	C1-2	Phase diagram of the moving magnetic skyrmion lattice with plastic deformation in MnSi under high electric current	東北大学	奥山 大輔	2019.06.09-06.18
11	ANSTO	QUOKKA	東北大学	D2	Aji Seno	19539	C1-2	Phase diagram of the moving magnetic skyrmion lattice with plastic deformation in MnSi under high electric current	東北大学	奥山 大輔	2019.06.09-06.18
12	HZB	E4	東京理科大学	M2	下田雄太郎	19900	T1-1	2 等辺三角格子Ising 磁性体CoNb2O6 のワニエ点における磁気相関	東京理科大学	満田 節生	2019.06.15-07.02
13	ANSTO	QUOKKA	京都大学	准教授	井上倫太郎	19532	C1-2	小角中性子散乱とセグメント重水素化によるマルチドメインタンパク質のドメイン運動の可視化	京都大学	井上倫太郎	2019.07.21-07.27
14	ANSTO	QUOKKA	京都大学	教授	杉山 正明	19532	C1-2	小角中性子散乱とセグメント重水素化によるマルチドメインタンパク質のドメイン運動の可視化	京都大学	井上倫太郎	2019.07.21-07.27
15	ISIS	SXD	東京都立大学	准教授	門脇 広明	19529	C1-1	量子スピン液体の研究	東京都立大学	門脇 広明	2019.09.16-09.24
16	NIST	NSE	富山大学	助教	中尾 裕之	19901	C2-3-1	リン脂質膜の粘弾性に対するモデルスクランブラーゼペプチドの影響	富山大学	中尾 裕之	2019.09.15-10.01
17	HZB	V2	東北大学	准教授	南部 雄亮	19903	C1-1	YIGにおけるマグノンポーラロン誘起反交差ギャップ	東北大学	南部 雄亮	2019.10.12-10.21
18	ANSTO	SIKA	沖縄科学技術大学院大学	研究員	植田 大地	19902	C1-1	希土類元素を含むフラストレート系金属間化合物の中性子非弾性散乱実験による研究	沖縄科学技術大学院大学	植田 大地	2019.10.26-11.04
19	ANSTO	SIKA	琉球大学	助教	小林 理気	19902	C1-1	希土類元素を含むフラストレート系金属間化合物の中性子非弾性散乱実験による研究	沖縄科学技術大学院大学	植田 大地	2019.10.26-11.04
20	ANSTO	ECHIDNA	東京工業大学	M2	安井 雄太	19565	T1-3	新規酸化物イオン伝導体の結晶構造解析とイオン伝導経路の解明	東京工業大学	藤井孝太郎	2019.11.02-11.10
21	NIST	HFBS	東京大学	教授	山室 修	19904	C3-1-1	超高エントロピー液体・アルキル化パーフルオロベンゼンの遅いダイナミクス	東京大学	山室 修	2019.12.01-12.11
22	ANSTO	ECHIDNA	東北大学	教授	佐藤 卓	19500	4G	磁性準結晶中の隠れた磁気秩序の探索	東北大学	佐藤 卓	2019.12.11-12.16
23	ANSTO	WOMBAT	琉球大学	助教	小林 理気	19508	4G	二次元重い電子系化合物Ce(Te1-xSex)3の研究	琉球大学	小林 理気	2019.12.01-12.08
24	ANSTO	WOMBAT	沖縄科学技術大学院大学	研究員	植田 大地	19508	4G	二次元重い電子系化合物Ce(Te1-xSex)3の研究	琉球大学	小林 理気	2019.11.30-12.08
25	ANSTO	SIKA	東北大学	教授	佐藤 卓	19523	C1-2	a-Cu2V2O7 のマグノン電場効果	東北大学	佐藤 卓	2020.01.12-01.19

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26	ANSTO	SIKA	東北大学	D1	piyawongwatthana pharit	19523	C1-2	a-Cu2V2O7 のマグノン電場効果	東北大学	佐藤　卓	2020.01.11-01.22
27	ANSTO	SIKA	東北大学	助教	奥山 大輔	19524	C1-1	量子スカーミオン励起の探索	東北大学	佐藤　卓	2020.01.23-02.05
28	ANSTO	SIKA	東北大学	D3	Aji Seno	19524	C1-1	量子スカーミオン励起の探索	東北大学	佐藤　卓	2020.01.23-02.05
29	FRM-Ⅱ	TOFTOF	東京大学	助教	秋葉　宙	18564	C3-1-1	超高エントロピー液体・アルキル化テトラフェニルポルフィリンの遅い運動	東京大学	山室 修	2020.02.23-03.05
30	FRM-Ⅱ	TOFTOF	東京大学	D2	楡井 真実	18564	C3-1-1	超高エントロピー液体・アルキル化テトラフェニルポルフィリンの遅い運動	東京大学	山室 修	2020.02.23-03.05

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1	NIST	CHRNS	筑波大学	助教	**菱田 真史**	18560	C2-3-1	リン脂質膜の粘弾性および単層膜間カップリングに対するアルカンの効果：鎖長依存性	筑波大学	菱田 真史	2018.05.10-05.23
2	NIST	CHRNS	筑波大学	D1	**臼田 初穂**	18560	C2-3-1	リン脂質膜の粘弾性および単層膜間カップリングに対するアルカンの効果：鎖長依存性	筑波大学	菱田 真史	2018.05.10-05.23
3	ANSTO	QUOKKA	東京大学	M2	**乗富 貴子**	18901	C1-2	金属貯蔵原子模倣デンドリマーの構造解析	東京大学	Li Xiang	2018.05.16-05.25
4	ANSTO	QUOKKA	東京大学	M2	**辻 優依**	18902	C1-2	均一構造を持つ高分子ゲルにおける架橋点間相関の視覚化	東京大学	Li Xiang	2018.05.13-05.21
5	ANSTO	QUOKKA	東京大学	助教	**Li Xiang**	18901	C1-2	金属貯蔵原子模倣デンドリマーの構造解析	東京大学	Li Xiang	2018.05.13-05.25
						18902	C1-2	均一構造を持つ高分子ゲルにおける架橋点間相関の視覚化			
6	ORNL	HFIR WAND	東北大学	M2	**高橋 満**	18574	T1-3	新奇量子カゴメ格子系Yb3Ni11Ge4の短距離スピン相関	東北大学	佐藤 卓	2018.05.12-05.20
7	ANSTO	ECHIDNA	東京工業大学	M2	**井上 遼太**	18584	T1-3	新規酸化物イオン伝導体の結晶構造解析とイオン伝導経路の解明	東京工業大学	藤井 孝太郎	2018.06.23-07.03
8	ANSTO	ECHIDNA	東京工業大学	M2	**松井 将洋**	18584	T1-3	新規酸化物イオン伝導体の結晶構造解析とイオン伝導経路の解明	東京工業大学	藤井 孝太郎	2018.06.23-07.03
9	ANSTO	BILBY	名古屋工業大学	准教授	**山本 勝宏**	18900	C1-2	中性子散乱法によるブロック共重合体の共連続ダブルワーク型相分離構造内における添加物の分布状態解析	名古屋工業大学	山本 勝宏	2018.05.31-06.08
10	ANSTO	BILBY	北九州市立大学	教授	**秋葉 勇**	18900	C1-2	中性子散乱法によるブロック共重合体の共連続ダブルワーク型相分離構造内における添加物の分布状態解析	名古屋工業大学	山本 勝宏	2018.05.31-06.08
11	ILL	IN16B	首都大学東京	准教授	**門脇 広明**	18534	C1-1	量子スピン液体の研究	首都大学東京	門脇 広明	2018.05.27-06.01
12	ORNL	HFIR CG-2	お茶の水女子大学	M1	**篠原 加奈依**	18548	C1-2	(Ce,Nd)CoIn5のスピン密度波と超伝導の関係	お茶の水女子大学	古川 はづき	2018.06.17-06.24
13	ISIS	WISH	物質・材料研究機構	主任研究員	**寺田 典樹**	18800	4G	DyMnO3の高圧力相の磁気秩序の探査	物質・材料研究機構	寺田 典樹	2018.06.25-07.02
14	ORNL	HFIR RELLI	東京大学	D3	**植田 大地**	18508	4G	多段メタ磁性転移を示す空間反転対称性の破れたCe系化合物CeTSi3(T = Pd, Pt)における磁気構造の決定	東京大学	益田 隆嗣	2018.06.21-07.01
15	HZB	E4	東京理科大学	教授	**満田 節生**	18903	T1-1	一軸応力による2等辺三角格子反強磁性体CoNb2O6の磁区成長過程の制御	東京理科大学	満田 節生	2018.06.30-07.16
16	HZB	E4	東京理科大学	M1	**下田 雄太郎**	18903	T1-1	一軸応力による2等辺三角格子反強磁性体CoNb2O6の磁区成長過程の制御	東京理科大学	満田 節生	2018.06.30-07.16
17	PSI	Eiger	物質・材料研究機構	グループリーダー	**長谷 正司**	18804	5G	磁場中の中性子回折を利用したCu3(P2O6OD)2の基底状態の研究	物質・材料研究機構	長谷 正司	2018.08.25-09.01
18	NIST	NCNR	首都大学東京	准教授	**門脇 広明**	17532	C1-1	量子スピン液体の研究	首都大学東京	門脇 広明	2018.08.06-08.15
19	NIST	NCNR	東北大学	教授	**佐藤 卓**	17532	C1-1	量子スピン液体の研究	首都大学東京	門脇 広明	2018.08.06-08.15
20	ORNL	HIFR HB-1	お茶の水女子大学	M2	**鏡田 奈央**	18507	4G	トポロジカル超伝導体の非弾性散乱	お茶の水女子大学	古川 はづき	2018.08.09-08.19
21	ANSTO	QUOKKA	京都大学	准教授	**井上 倫太郎**	18542	C1-2	CV-SANSによるDNA存在下での制限分解酵素の解析	京都大学	井上 倫太郎	2018.07.25-07.31
22	ANSTO	QUOKKA	京都大学	教授	**杉山 正明**	18542	C1-2	CV-SANSによるDNA存在下での制限分解酵素の解析	京都大学	井上 倫太郎	2018.07.25-07.31
23	ILL	IN20	物質・材料研究機構	主任研究員	**寺田 典樹**	18800	4G	DyMnO3の高圧力相の磁気秩序の探査	物質・材料研究機構	寺田 典樹	2018.09.23-10.05
24	ANSTO	SIKA	東北大学	教授	**佐藤 卓**	18527	C1-1	磁気スカーミオン格子におけるトポロジカルマグノンの探索	東北大学	佐藤 卓	2018.10.16-10.26
25	ANSTO	SIKA	東北大学	D1	**Seno Aji**	18527	C1-1	磁気スカーミオン格子におけるトポロジカルマグノンの探索	東北大学	佐藤 卓	2018.10.16-10.30

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26	ANSTO	ECHIDNA	東京大学	助教	**浅井 晋一郎**	18904	5G	メイプルリーフ化合物MgMn3O7･3D2Oの磁気秩序	東京大学	浅井 晋一郎	2018.08.26-08.31
27	ORNL	HFIR HB-2A	東北大学	M2	**村崎 遼**	18587	T1-3	擬スピン1/2パイロクロア反強磁性体Na3Co(CO3)2Clの磁気秩序	東北大学	那波 和宏	2018.09.02-09.07
28	ORNL	HIFR CG-3	東京大学	M1	**大平 征史**	18539	C1-2	SANS･DSC同時測定による2本鎖DNAにより架橋されたモデル物理ゲルの構造解析	東京大学	Li Xiang	2018.09.23-09.30
29	ORNL	HFIR HB-1	東京大学	M2	**長谷川 舜介**	18519	5G	マルチフェロイック物質Ba2CoGe2O7の磁気モーメントの完全電場制御	東京大学	益田 隆嗣	2018.09.10-09.26
30	ILL	IN15	理化学研究所	研究員	**左右田 稔**	18812	C2-3-1	磁気スキルミオンMnSi1-xGexにおけるダイナミクス	理化学研究所	左右田 稔	2018.10.16-10.26
31	PSI	DMC	明治大学	教授	**安井 幸夫**	18578	T1-3	量子スピンの三量体構造をもつNa2Cu3Ge4O12の磁気構造	明治大学	安井 幸夫	2018.11.28-12.04
32	PSI	DMC	明治大学	M1	**當麻 隆成**	18578	T1-3	量子スピンの三量体構造をもつNa2Cu3Ge4O12の磁気構造	明治大学	安井 幸夫	2018.11.28-12.04
33	PSI	SINQ	理化学研究所	研究員	**左右田 稔**	18546	C1-2	空間反転対称性の破れた超伝導体のヘリカル磁束格子の観測	お茶の水女子大学	古川 はづき	2018.11.19-11.27
34	ORNL	BL-14B HYSPEC	お茶の水女子大学	M1	**篠原 加奈依**	18908	C1-1	Ce(Co,Rh)In5のネスティングと超伝導発現機構	お茶の水女子大学	古川 はづき	2019.01.21-01.29
35	ISIS	GEM	名古屋工業大学	教授	**羽田 政明**	18579	T1-3	PdRuナノ粒子の構造と触媒活性	東京大学	山室 修	2019.02.10-02.17
36	ISIS	GEM	京都大学	助教	**草田 康平**	18579	T1-3	PdRuナノ粒子の構造と触媒活性	東京大学	山室 修	2019.02.10-02.18
37	ANSTO	QUOKKA	東京大学	研究員	**呉羽 拓真**	18905	C1-2	生体適合性ホ゜リオリコ゛エチレンク゛リコールメタクリレートケ゛ルの微細構造変化の調査	東京大学	呉羽 拓真	2019.02.26-03.06
38	ANSTO	QUOKKA	東京大学	助教	**Li Xiang**	18905	C1-2	生体適合性ホ゜リオリコ゛エチレンク゛リコールメタクリレートケ゛ルの微細構造変化の調査	東京大学	呉羽 拓真	2019.02.26-03.03
39	FRM-Ⅱ	PUMA	大阪大学	D1	**森 仁志**	18801	4G	熱電材料Mg3Sb2のフォノンダイナミクス	産業技術総合研究所	李 哲虎	2019.02.11-02.20
40	FRM-Ⅱ	PUMA	広島大学	助教	**長谷川 巧**	18801	4G	熱電材料Mg3Sb2のフォノンダイナミクス	産業技術総合研究所	李 哲虎	2019.02.11-02.21
41	NIST	NG-7	東北大学	助教	**奥山 大輔**	18907	C1-2	MnSi における変動電流下の磁気スキルミオンのダイナミクス	東北大学	奥山 大輔	2019.03.17-03.27
42	NIST	NG-7	東北大学	教授	**佐藤 卓**	18907	C1-2	MnSi における変動電流下の磁気スキルミオンのダイナミクス	東北大学	奥山 大輔	2019.03.18-03.23
43	ANSTO	ECHIDNA	東北大学	教授	**佐藤 卓**	18909	T1-3	歪んだ籠目格子遍歴磁性体Yb3Ru4Al12 の磁気構造	東北大学	佐藤 卓	2019.03.24-04.02
						18910	T1-3	Ga-Pd-Tb 2/1 近似結晶の磁気構造			
44	ANSTO	ECHIDNA	東北大学	助教	**壁谷 典幸**	18909	T1-3	歪んだ籠目格子遍歴磁性体Yb3Ru4Al12 の磁気構造	東北大学	佐藤 卓	2019.03.26-04.02
45	ANSTO	BILBY	北九州市立大学	研究員	**藤井 翔太**	18912	C1-2	完全に単分散な逆ミセルの構造可視化	北九州市立大学	藤井 翔太	2019.03.20-03.31
46	ANSTO	BILBY	京都大学	助教	**西村 智貴**	18911	C1-2	SANS測定による分子透過性ベシクルのPoly(propylene oxide)層中の水和量の決定	京都大学	西村 智貴	2019.03.20-03.29
47	ANSTO	BILBY	名古屋工業大学	准教授	**山本 勝宏**	18911	C1-2	SANS測定による分子透過性ベシクルのPoly(propylene oxide)層中の水和量の決定	京都大学	西村 智貴	2019.03.20-03.31

	海外施設名	装置名	所属機関	職位(学年)	申請者氏名	課題番号	装置	採択課題名	代表者所属	代表者氏名	旅程
1	ANSTO	ECHIDNA	東北大学	助教	那波 和宏	17584	T1-3	パイロクロア構造を有するNa3Mn(CO3)2Clの磁気構造	東北大学	那波 和宏	2017.04.23-05.01
2	ORNL	SNS CORELLI	総合科学研究機構	研究員	飯田 一樹	17806	C1-1	La5Mo4O16 における長時間磁化緩和と悪魔の階段	総合科学研究機構	飯田 一樹	2017.05.02-05.08
3	ORNL	SNS CORELLI	J-PARC	研究主幹	梶本 亮一	17806	C1-1	La5Mo4O16 における長時間磁化緩和と悪魔の階段	総合科学研究機構	飯田 一樹	2017.05.02-05.09
4	ISIS	IRIS	東北大学	教授	佐藤 卓	17501	4G	近藤籠目格子CeRhSnの量子臨界磁気揺動	東北大学	佐藤 卓	2017.04.30-05.07
5	ISIS	IRIS	東北大学	M1	高橋 満	17501	4G	近藤籠目格子CeRhSnの量子臨界磁気揺動	東北大学	佐藤 卓	2017.04.30-05.12
6	NIST	DCS	J-PARC	研究員	古府 麻衣子	17563	C3-1-1	柔粘性結晶相をもつイオン液体の速いダイナミクス	東京大学	山室 修	2017.04.11-04.18
7	NIST	DCS	東京大学	M2	楡井 真実	17563	C3-1-1	柔粘性結晶相をもつイオン液体の速いダイナミクス	東京大学	山室 修	2017.04.10-04.22
8	ORNL	SNS CORELLI	東京大学	特任研究員	吉田 雅洋	17507	4G	多段メタ磁性転移を示す空間反転対称性の破れたCePdSi3における磁気構造の決定	東京大学	吉田 雅洋	2017.04.08-04.15
9	ORNL	SNS CORELLI	東京大学	M2	植田 大地	17507	4G	多段メタ磁性転移を示す空間反転対称性の破れたCePdSi3における磁気構造の決定	東京大学	吉田 雅洋	2017.04.06-04.15
10	ANSTO	ECHIDNA	東北大学	助教	奥山 大輔	17584	T1-3	パイロクロア構造を有するNa3Mn(CO3)2Clの磁気構造	東北大学	那波 和宏	2017.04.23-05.01
11	FRM-Ⅱ	TOFTOF	東京大学	M2	楡井 真実	17562	C3-1-1	配位高分子ホスト[CuZn(CN)4]-に包接されたK+水溶液のダイナミクス	東京大学	山室 修	2017.06.25-07.03
12	FRM-Ⅱ	TOFTOF	東京大学	教授	錦織 紳一	17562	C3-1-1	配位高分子ホスト[CuZn(CN)4]-に包接されたK+水溶液のダイナミクス	東京大学	山室 修	2017.06.25-07.03
13	ANSTO	QUOKKA	京都大学	助教	長田 裕也	17556	C1-2	アルカン溶媒中でらせん反転を示すポリ(キノキサリン-2,3-ジイル)の小角中性子散乱による構造解明	京都大学	長田 裕也	2017.04.28-05.05
14	ANSTO	QUOKKA	京都大学	教授	杉山 正明	17556	C1-2	アルカン溶媒中でらせん反転を示すポリ(キノキサリン-2,3-ジイル)の小角中性子散乱による構造解明	京都大学	長田 裕也	2017.04.28-05.05
15	ANSTO	Wombat	物質・材料研究機構	グループリーダー	長谷 正司	17803	5G	スピン1/2テトラマー物質CuInVO5の磁気構造の決定	物質・材料研究機構	長谷 正司	2017.05.29-06.04
16	ANSTO	Wombat	上智大学	D2	江袋 佑太	17803	5G	スピン1/2テトラマー物質CuInVO5の磁気構造の決定	物質・材料研究機構	長谷 正司	2017.05.29-06.04
17	ISIS	GEM	東京大学	教授	山室 修	17579	T1-3	Pd/Ruナノ合金の構造	東京大学	山室 修	2017.05.25-06.02
18	ISIS	GEM	京都大学	特定助教	草田 康平	17579	T1-3	Pd/Ruナノ合金の構造	東京大学	山室 修	2017.05.25-06.02
19	ORNL	HFIR HB-3A	東京大学	特任研究員	浅井 晋一郎	17514	5G	マルチフェロイック物質RFe3(BO3)4 (R=Ce,Sm)	東京大学	益田 隆嗣	2017.06.15-06.25
20	LLB	5C1	茨城大学	教授	岩佐 和晃	17519	6G	Ce3T4Sn13 (T = Co, Rh, Ru) に現れるカイラルフェルミオンによる磁気構造と励起	茨城大学	岩佐 和晃	2017.06.17-06.30
21	FRM-Ⅱ	MLZ	東北大学	外国人特別研究員	Johannes Reim	17568	T1-1	Switching the magnetic order in CaBaCo2Fe2O7 using magnetic field	東北大学	Johannes Reim	2017.08.06-08.20
22	ORNL	HFIR HB-3A	東京大学	M1	長谷川 舜介	17514	5G	マルチフェロイック物質RFe3(BO3)4 (R=Ce,Sm)	東京大学	益田 隆嗣	2017.06.16-06.25
23	ANSTO	QUOKKA	京都大学	准教授	井上 倫太郎	17537	C1-2	Crowding環境下におけるアルファクリスタリンのサブユニット動態	京都大学	井上 倫太郎	2017.05.21-05.27
24	ANSTO	QUOKKA	京都大学	教授	杉山 正明	17537	C1-2	Crowding環境下におけるアルファクリスタリンのサブユニット動態	京都大学	井上 倫太郎	2017.05.21-05.27
25	NIST	NSE	JAEA	研究副主幹	中川 洋	17809	C2-3-1	マルチドメイン蛋白質MurDのATP依存的な機能性ドメイン運動	JAEA	中川 洋	2017.07.05-07.14
26	NIST	NSE	東北大学	准教授	南部 雄亮	17559	C2-3-1	鉄系梯子型超伝導物質BaFe2S3の中性子スピンエコー	東北大学	南部 雄亮	2017.08.31-09.10

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27	ANSTO	QUOKKA	東京大学	M2	吉川 祐輔	17547	C1-2	小角中性子散乱によるDNAモジールゲルの構造解析	東京大学	Li Xiang	2017.09.08-09.16
28	ANSTO	QUOKKA	東京大学	D3	廣澤 和	17901	C1-2	小角中性子散乱による反応率臨界ゲルクラスターの構造解析	東京大学	Li Xiang	2017.09.11-09.20
29	ANSTO	QUOKKA	東京大学	M1	乗富 貴子	17901	C1-2	小角中性子散乱による反応率臨界ゲルクラスターの構造解析	東京大学	Li Xiang	2017.09.11-09.20
30	NIST	NSE	筑波大学	助教	菱田 真史	17902	C2-3-1	脂質膜の粘弾性に及ぼすアルカンの効果	筑波大学	菱田 真史	2017.08.22-09.05
31	NIST	NSE	筑波大学	D1	臼田 初穂	17902	C2-3-1	脂質膜の粘弾性に及ぼすアルカンの効果	筑波大学	菱田 真史	2017.08.22-09.05
32	HZB	E4	東京理科大学	教授	満田 節生	17903	T1-1	2 等辺Ising 三角格子磁性体CoNb2O6 における一軸応力による鎖間交換相作用の制御	東京理科大学	満田 節生	2017.08.07-08.18
33	HZB	E4	東京理科大学	D2	逸見 龍太	17903	T1-1	2 等辺Ising 三角格子磁性体CoNb2O6 における一軸応力による鎖間交換相作用の制御	東京理科大学	満田 節生	2017.08.07-08.18
34	ANSTO	QUOKKA	東京大学	M2	渡辺 延幸	17900	C1-2	小角中性子散乱(SANS)法による高分子ゲル網目均一性の定量的評価	東京大学	Li Xiang	2017.09.05-09.13
35	PSI	ZEBRA	東京大学	D2	林田 翔平	17515	5G	CsFeCl3における圧力誘起磁気秩序状態の磁気構造	東京大学	益田 隆嗣	2017.08.22-09.09
36	ANSTO	QUOKKA	東京大学	M1	辻 優依	17547	C1-2	小角中性子散乱によるDNAモジールゲルの構造解析	東京大学	Li Xiang	2017.09.08-09.16
37	ORNL	SNS CORELLI	東京大学	特任研究員	吉田 雅洋	17507	4G	多段メタ磁性転移を示す空間反転対称性の破れたCePdSi3における磁気構造の決定	東京大学	吉田 雅洋	2017.08.28-09.12
						17904	4G	多段メタ磁性転移を示す空間反転対称性の破れたCePtSi3における磁気構造の決定			
38	ORNL	SNS CORELLI	東京大学	M2	植田 大地	17507	4G	多段メタ磁性転移を示す空間反転対称性の破れたCePdSi3における磁気構造の決定	東京大学	吉田 雅洋	2017.08.28-09.12
						17904	4G	多段メタ磁性転移を示す空間反転対称性の破れたCePtSi3における磁気構造の決定			
39	NIST	HFBS	東京大学	教授	山室 修	17564	C3-1-1	超高エントロピー液体C6C10-テトラフェニルポルフィリンの長いアルキル鎖ダイナミクス	東京大学	山室 修	2017.08.17-08.27
40	NIST	HFBS	東京大学	M2	楡井 真実	17564	C3-1-1	超高エントロピー液体C6C10-テトラフェニルポルフィリンの長いアルキル鎖ダイナミクス	東京大学	山室 修	2017.08.17-08.27
41	PSI	ZEBRA	東京大学	教授	益田 隆嗣	17513	5G	マルチフェロイック物質Ba2MnGe2O7の磁気モーメントの電場制御	東京大学	益田 隆嗣	2017.08.30-09.07
42	ANSTO	QUOKKA	京都大学	助教	守島 健	17900	C1-2	小角中性子散乱(SANS)法による高分子ゲル網目均一性の定量的評価	東京大学	Li Xiang	2017.09.05-09.11
43	FRM-Ⅱ	SANS-1	お茶の水女子大学	D1	鏡田 奈央	17546	C1-2	トポロジカル超伝導体の磁束格子	お茶の水女子大学	古川 はづき	2017.08.15-08.24
44	NIST	NSE	J-PARC	研究員	古府 麻衣子	17810	C3-1-1	Zn-Ln-Zn単分子磁石のスピンダイナミクス	J-PARC	古府 麻衣子	2017.09.06-09.13
45	ANSTO	QUOKKA	物質・材料研究機構	主幹研究員	間宮 広明	17808	C1-2	中性子小角散乱測定による耐熱超合金中の超微細析出物の評価	物質・材料研究機構	間宮 広明	2017.10.08-10.13
46	PSI	ZEBRA	東京大学	M1	長谷川 舜介	17513	5G	マルチフェロイック物質Ba2MnGe2O7の磁気モーメントの電場制御	東京大学	益田 隆嗣	2017.08.22-09.09
47	ANSTO	QUOKKA	東北大学	助教	奥山 大輔	17578	T1-3	Powder diffraction experiment on chiral magnetic Re5Ru3Al2	東北大学	奥山 大輔	2017.10.14-10.21
48	ANSTO	QUOKKA	東北大学	外国人特別研究員	Johannes Reim	17578	T1-3	Powder diffraction experiment on chiral magnetic Re5Ru3Al2	東北大学	奥山 大輔	2017.10.15-10.20
49	ORNL	HFIR HB-3A	理化学研究所	研究員	左右田 稔	17905	5G	ワイル半金属候補物質NdGaSiの磁気構造	理化学研究所	左右田 稔	2017.11.26-12.09
		SNS CORELLI				17512	5G	フラストレーションをもつ正方格子C20H19F6N5Pにおける磁気秩序			

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50	ANSTO	ECHIDNA	東京工業大学	特任助教	丹羽 栄貴	17576	T1-3	層状ペロブスカイト型酸化物の結晶構造とイオン拡散経路	東京工業大学	八島 正知	2017.11.11-11.21
51	ANSTO	ECHIDNA	東京工業大学	M1	辻口 峰史	17576	T1-3	層状ペロブスカイト型酸化物の結晶構造とイオン拡散経路	東京工業大学	八島 正知	2017.11.11-11.21
52	LLB	4F2	茨城大学	教授	岩佐 和晃	17519	6G	Ce3T4Sn13 (T = Co, Rh, Ru) に現れるカイラルフェルミオンによる磁気構造と励起	茨城大学	岩佐 和晃	2017.12.09-12.17
53	ORNL	HFIR CTAX	東北大学	M1	高橋 満	17524	C1-1	近藤籠目格子CeRhSnの量子臨界磁気揺動	東北大学	佐藤 卓	2017.11.26-12.07
54	ANSTO	ECHIDNA	東北大学	教授	佐藤 卓	17500	4G	磁性準結晶中の隠れた磁気秩序の探索	東北大学	佐藤 卓	2017.12.04-12.10
55	NIST	NG7	東北大学	助教	奥山 大輔	17548	C1-2	Current driven motion of skyrmions in helical magnets	東北大学	奥山 大輔	2018.01.23-01.31
56	NIST	NG7	東北大学	教授	佐藤 卓	17548	C1-2	Current driven motion of skyrmions in helical magnets	東北大学	奥山 大輔	2018.01.25-01.30
57	FRM-Ⅱ	SANS-Ⅰ	お茶の水女子大学	D1	鏡田 奈央	17546	C1-2	トポロジカル超伝導体の磁束格子	お茶の水女子大学	古川 はづき	2018.02.13-02.21
58	FRM-Ⅱ	MIRA	お茶の水女子大学	教授	古川 はづき	17504	4G	強磁性超伝導体における磁性と超伝導の研究	お茶の水女子大学	古川 はづき	2018.03.12-03.20
59	FRM-Ⅱ	MIRA	お茶の水女子大学	M3	高橋 美郷	17504	4G	強磁性超伝導体における磁性と超伝導の研究	お茶の水女子大学	古川 はづき	2018.03.12-03.20
60	ANSTO	WONBAT	東京大学	特任研究員	浅井 晋一郎	17906	5G	マグネトプランバイト型コバルト酸化物SrCo12O19の電荷-磁気秩序	東京大学	浅井 晋一郎	2018.03.14-03.19
61	ANSTO	WONBAT	東京大学	M1	菊地 帆高	17906	5G	マグネトプランバイト型コバルト酸化物SrCo12O19の電荷-磁気秩序	東京大学	浅井 晋一郎	2018.03.14-03.19

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1	ANSTO	PELICAN, SIKA	東京理科大学	助教	藤原 理賀	16900	C1-1	新一次元量子スピン系$K_2Cu_3O(SO_4)_3$の基底状態	東京理科大学	藤原 理賀	2016.04.05-04.16
2	ANSTO	QUOKKA	東京大学	助教	Li Xiang	16541	C1-2	電場下での荷電性高分子の構造,高分子	東京大学	Li Xiang	2016.04.28-05.09
						16560	C1-2	高分子/イオン液体溶液系における温度応答性相分離に関する熱力学的研究	東京大学	柴山 充弘	
3	ANSTO	QUOKKA	東京大学	特任研究員	守島 健	16541	C1-2	電場下での荷電性高分子の構造,高分子	東京大学	Li Xiang	2016.04.28-05.09
						16560	C1-2	高分子/イオン液体溶液系における温度応答性相分離に関する熱力学的研究	東京大学	柴山 充弘	
4	ANSTO	QUOKKA	東京大学	M2	廣澤 和	16541	C1-2	電場下での荷電性高分子の構造,高分子	東京大学	廣澤 和	2016.04.28-05.09
						16560	C1-2	高分子/イオン液体溶液系における温度応答性相分離に関する熱力学的研究	東京大学	柴山 充弘	
5	ANSTO	ECHIDNA	物質・材料研究機構	主任研究員	辻本 吉廣	16808	T1-3	新規正方格子磁性体Sr_2CrO_3X (X = F & Cl) の磁気構造解析	物質・材料研究機構	辻本 吉廣	2016.05.18-05.26
6	ANSTO	ECHIDNA	東京大学	特別研究員	浅井 晋一郎	16808	T1-3	新規正方格子磁性体Sr_2CrO_3X (X = F & Cl) の磁気構造解析	物質・材料研究機構	辻本 吉廣	2016.05.18-05.26
7	ORNL	SNS CORELLI	東京理科大学	嘱託教授	元屋 清一郎	16903	4G 他	時間分割中性子散乱測定による磁気構造変化過程の実時間追跡	東京理科大学	元屋 清一郎	2016.04.18-04.27
8	ANSTO	ECHIDNA	東京工業大学	助教	藤井孝太郎	16595	T1-3	層状ペロブスカイト型酸化物の結晶構造とイオン拡散経路	東京工業大学	八島 正知	2016.05.28-06.04
9	LLB	6T2, G41	茨城大学	教授	岩佐 和晃	16523	6G	$Ce_3T_4Sn_{13}$ (T = Co, Rh) におけるカイラルフェルミオンの磁気励起	茨城大学	岩佐和晃	2016.06.04-06.14
						16533	C1-1	$Ce_3T_4Sn_{13}$ (T = Co, Rh) におけるカイラルフェルミオンの磁気励起			
						16524	6G	PrT_2X_{20} (T = Ru, Rh, Os, Ir, X = Al, Zn)における2チャンネル近藤効果			
						16534	C1-1	PrT_2X_{20} (T = Ru, Rh, Os, Ir, X = Al, Zn)における2チャンネル近藤効果			
10	NIST	NSE	東北大学	准教授	南部 雄亮	16570	C2-3-1	鉄系梯子型物質$BaFe_2Se_3$の中性子スピンエコー	東北大学	南部 雄亮	2016.07.19-08.04
11	ANSTO	QUOKKA	京都大学	准教授	井上 倫太郎	16547	C1-2	末端残基の切断がαクリスタリンのサブユニット交換に及ぼす影響	京都大学	井上 倫太郎	2016.05.31-06.07
12	ANSTO	QUOKKA	京都大学	教授	杉山 正明	16547	C1-2	末端残基の切断がαクリスタリンのサブユニット交換に及ぼす影響	京都大学	井上 倫太郎	2016.05.31-06.05
13	ANSTO	QUOKKA	東京工業大学	D1	日比野 圭佑	16595	T1-3	層状ペロブスカイト型酸化物の結晶構造とイオン拡散経路	東京工業大学	八島 正知	2016.05.28-06.04
14	NIST	VSANS	高エネルギー加速器研究機構	博士研究員	根本 文也	16562	C1-2	Structure of imidazolium-based ionic liquid under shear flow	高エネルギー加速器研究機構	根本 文也	2016.07.13-07.20
15	ORNL	HFIR WAND	鹿児島大学	助教	重田 出	16606	T1-3	ホイスラー合金Ru_2CrSiの反強磁性状態	鹿児島大学	重田 出	2016.06.28-07.06
16	ORNL	HFIR WAND	愛媛大学	教授	渕崎 員弘	16606	T1-3	ホイスラー合金Ru_2CrSiの反強磁性状態	鹿児島大学	重田 出	2016.06.28-07.06
17	ANSTO	QUOKKA	京都大学	助教	長田 裕也	16567	C1-2	小角中性子散乱によるポリ(キノキサリン-2,3-ジイル)のらせん反転メカニズムの解明	京都大学	長田 裕也	2016.06.18-06.27
18	ANSTO	QUOKKA	京都大学	教授	杉山 正明	16567	C1-2	小角中性子散乱によるポリ(キノキサリン-2,3-ジイル)のらせん反転メカニズムの解明	京都大学	長田 裕也	2016.06.19-06.26
19	HZB	E4	東京理科大学	M3	玉造 博夢	16904	T1-1	マルチフェロイック$CuFeO_2$における強誘電性の一軸応力制御	東京理科大学	満田 節生	2016.07.03-07.22

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20	HZB	E4	東京理科大学	D1	逸見 龍太	16904	T1-1	マルチフェロイックCuFeO2における強誘電性の一軸応力制御	東京理科大学	満田 節生	2016.07.03-07.22
21	ANSTO	SIKA, PELICAN	総合科学研究機構	研究員	飯田 一樹	16802	C1-1	S = 3/2パーフェクトカゴメ系Li2Cr3SbO8の磁気相関	総合科学研究機構	飯田 一樹	2016.11.05-11.15
22	ANSTO	SIKA, PELICAN	北海道大学	助教	吉田 紘行	16802	C1-1	S = 3/2パーフェクトカゴメ系Li2Cr3SbO8の磁気相関	総合科学研究機構	飯田 一樹	2016.11.05-11.15
23	ORNL	HFIR CTAX	東北大学	D2	牧野 晃也	16905	4G	Chiral magnetic structure determination in non-centrosymmetric Pr5Ru3Al2	東北大学	奥山 大輔	2016.06.19-07.02
24	ILL	D33	お茶の水女子大学	教授	古川 はづき	16551	C1-2	Fe系超伝導体の磁束研究	お茶の水女子大学	古川 はづき	2016.07.05-07.12
25	ANSTO	TAIPAN, WONBAT	岡山大学	教授	池田 直	16906	5G	偏極中性子回折による鉄過剰育成したYbFe2+xO4の磁気相関の研究	CROSS	加倉井 和久	2016.07.31-08.17
26	ANSTO	TAIPAN, WONBAT	岡山大学	M1	鳥谷 友之	16906	5G	偏極中性子回折による鉄過剰育成したYbFe2+xO4の磁気相関の研究	CROSS	加倉井 和久	2016.07.31-08.17
27	ANSTO	SIKA	東北大学	准教授	南部 雄亮	16912	C1-1	スピントロニクス物質YIGの低エネルギー磁気励起	東北大学	南部 雄亮	2016.10.16-10.24
28	ANSTO	QUOKKA	東京大学	研究員	中川 慎太郎	16556	C1-2	4分岐ポリマーの末端架橋により合成されるモデル高分子電解質ゲルの構造	東京大学	守島 健	2016.08.18-08.30
28	ANSTO	QUOKKA	東京大学	研究員	中川 慎太郎	16907	C1-2	非膨潤性ハイドロゲルの構造に関する研究	東京大学	中川 慎太郎	2016.08.18-08.30
29	ANSTO	QUOKKA	東京大学	助教	Li Xiang	16556	C1-2	4分岐ポリマーの末端架橋により合成されるモデル高分子電解質ゲルの構造	東京大学	守島 健	2016.08.18-08.30
29	ANSTO	QUOKKA	東京大学	助教	Li Xiang	16907	C1-2	非膨潤性ハイドロゲルの構造に関する研究	東京大学	中川 慎太郎	2016.08.18-08.30
30	ANSTO	QUOKKA	東京大学	研究員	守島 健	16556	C1-2	4分岐ポリマーの末端架橋により合成されるモデル高分子電解質ゲルの構造	東京大学	守島 健	2016.08.18-08.30
30	ANSTO	QUOKKA	東京大学	研究員	守島 健	16907	C1-2	非膨潤性ハイドロゲルの構造に関する研究	東京大学	中川 慎太郎	2016.08.18-08.30
31	ORNL	SNS CNCS	総合科学研究機構	研究員	飯田 一樹	16908	C1-1	kapelasiteにおける量子スピン液体状態の磁気励起	総合科学研究機構	飯田 一樹	2016.12.11-12.18
32	ORNL	HFIR C-TAX	お茶の水女子大学	M2	高橋 美郷	16503	4G	強磁性超伝導体における磁性と超伝導の研究	お茶の水女子大学	古川 はづき	2016.08.04-08.17
33	ORNL	SNS CORELLI	東京大学	助教	左右田 稔	16909	5G	カゴメ･三角格子を持つLuBaCo4O7の磁気散漫散乱	東京大学	左右田 稔	2016.09.19-09.27
34	ANSTO	QUOKKA	物質材料研究機構	主任研究員	間宮 広明	16910	C1-3	新規ニッケルフリーオーステナイト系ODS鋼中のナノ析出粒子の研究	物質材料研究機構	間宮 広明	2016.10.12-10.20
35	ANSTO	QUOKKA	物質材料研究機構	D2	KOWALSKA ,Agata	16910	C1-3	新規ニッケルフリーオーステナイト系ODS鋼中のナノ析出粒子の研究	物質材料研究機構	間宮 広明	2016.10.12-10.20
36	ANSTO	ECHIDNA	東京大学	D2	林田 翔平	16911	5G	マルチフェロイック物質CeFe3(BO3)4の磁気構造	東京大学	益田 隆嗣	2016.12.13-12.18
37	ANSTO	ECHIDNA	東京大学	M1	加藤 大揮	16911	5G	マルチフェロイック物質CeFe3(BO3)4の磁気構造	東京大学	益田 隆嗣	2016.12.13-12.18
38	ANSTO	QUOKKA	京都大学	助教	大場洋次郎	16554	C1-2	HPT加工により発現する巨大磁気異方性の起源	京都大学	大場洋次郎	2016.11.02-11.09
39	ANSTO	QUOKKA	京都大学	特任助教	足立 望	16566	C1-2	HPT加工した純鉄の磁気構造に及ぼす高密度格子欠陥の影響	京都大学	足立 望	2016.11.02-11.08
40	ANSTO	QUOKKA	豊橋技術科学大学	准教授	戸高 義一	16566	C1-2	HPT加工した純鉄の磁気構造に及ぼす高密度格子欠陥の影響	京都大学	足立 望	2016.11.02-11.09
41	ANSTO	SIKA	東北大学	M2	沖野 友貴	16912	C1-1	スピントロニクス物質YIGの低エネルギー磁気励起	東北大学	南部 雄亮	2016.10.16-10.24

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42	ORNL	HFIR WAND	岡山大学	M1	鳥谷 友之	16918	T1-3	鉄欠損を制御したLuFe2O4の磁気基底状態の研究	岡山大学	池田 直	2016.11.25-12.08
43	ORNL	SNS CNCS	北海道大学	助教	吉田 紘行	16908	C1-1	kapelasiteにおける量子スピン液体状態の磁気励起	総合科学研究機構	飯田 一樹	2016.12.11-12.18
44	FRM-Ⅱ	KWS-3	お茶の水女子大学	教授	古川 はづき	16549	C1-2	中性子小角散乱実験によるSr2RuO4の異常金属状態の研究	お茶の水女子大学	古川はづき	2016.10.25-11.01
45	HZB	E4	東京理科大学	D1	逸見 龍太	16917	T1-1	一軸応力による2等辺三角格子反強磁性体CoNb2O6の交換相互作用定数の制御	東京理科大学	満田 節生	2017.01.16-01.30
46	ANSTO	PELICAN	東京大学	研究員	浅井 晋一郎	16914	5G	吸着酸素磁性の磁気励起	東京大学	益田 隆嗣	2016.12.05-12.18
47	ANSTO	ECHIDNA	東京工業大学	M1	中村 圭吾	16604	T1-3	新規ペロブスカイト関連AA'BO4型構造をもつ酸化物イオン伝導体の結晶構造とイオン伝導経路の解明	東京工業大学	藤井 孝太郎	2016.12.06-12.16
48	ANSTO	ECHIDNA	東京工業大学	M2	海野 航	16604	T1-3	新規ペロブスカイト関連AA'BO4型構造をもつ酸化物イオン伝導体の結晶構造とイオン伝導経路の解明	東京工業大学	藤井 孝太郎	2016.12.06-12.16
49	PSI	SINQ HRPT	物質・材料研究機構	グループリーダー	長谷 正司	16801	5G	磁場中の中性子回折を利用したCu3(P2O6OD)2の基底状態の研究	物質・材料研究機構	長谷 正司	2016.12.06-12.14
50	ORNL	SNS HYSPEC	東北大学	M2	沖野 友貴	16915	C3-1-1	スピントロニクス物質YIGの偏極中性子非弾性散乱	東北大学	南部 雄亮	2016.11.22-12.03
51	ANSTO	PELICAN	東京大学	助教	左右田 稔	16914	5G	吸着酸素磁性の磁気励起	東京大学	益田 隆嗣	2016.12.05-12.18
52	ORNL	HFIR PTAX	お茶の水女子大学	M2	高橋 美郷	15505	4G	強磁性超伝導体における磁性と超伝導の研究	お茶の水女子大学	古川 はづき	2017.01.12-01.22
53	ANSTO	QUOKKA	東京大学	研究員	中川 慎太郎	16919	C1-2	均一な網目構造を有する温度応答性ハイドロゲルの構造	東京大学	中川 慎太郎	2017.03.14-03.23
54	ANSTO	QUOKKA	東京大学	助教	Li Xiang	16919	C1-2	均一な網目構造を有する温度応答性ハイドロゲルの構造	東京大学	中川 慎太郎	2017.03.14-03.23

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1	HZB	E4	東京理科大学	D2	玉造 博夢	15522	T1-1	スピン格子結合系における磁気相転移と電気分極の一軸応力制御	東京理科大学	満田 節生	2015.04.19-05.02
2	HZB	E4	東京理科大学	M2	中村 天風	15522	T1-1	スピン格子結合系における磁気相転移と電気分極の一軸応力制御	東京理科大学	満田 節生	2015.04.19-05.02
3	ANSTO	TAIPAN	東京大学	M1	尾山 拓弥	15523	5G	Magnetic structures of 1D frustrated chain compound NaCuMoO4(OH)	東京大学	益田 隆嗣	2015.04.26-05.05
4	ANSTO	TAIPAN	東京大学	特別研究員	浅井 晋一郎	15523	5G	Magnetic structures of 1D frustrated chain compound NaCuMoO4(OH)	東京大学	益田 隆嗣	2015.04.26-05.05
5	ANSTO	WOMBAT	東北大学	教授	藤田 全基	15631	T1-3	T'構造銅酸化物の超伝導発現と結晶構造の関係	東北大学	藤田 全基	2015.05.03-05.07
6	ISIS	LET	東京大学	教授	山室 修	15589	C3-1-1	逆浸透膜表面における水のダイナミクス	東京大学	山室 修	2015.04.26-05.03
7	ISIS	LET	東京大学	助教	古府 麻衣子	15589	C3-1-1	逆浸透膜表面における水のダイナミクス	東京大学	山室 修	2015.04.26-05.03
8	ISIS	Osiris	東京大学	助教	左右田 稔	15590	C3-1-1	リラクサー磁性体LuFeCoO4におけるナノドメインのダイナミクス	東京大学	左右田 稔	2015.07.11-07.22
9	PSI	HRPT	東京大学	特任研究員	浅井 晋一郎	15807	T1-3	平面4配位構造を有する正方格子磁性体マンガン酸塩化物の磁気基 底状態の研究	物質・材料研究機構	辻本 吉廣	2015.06.04-06.08
10	PSI	HRPT	物質・材料研究機構	主任研究員	辻本 吉廣	15807	T1-3	平面5配位構造を有する正方格子磁性体マンガン酸塩化物の磁気基 底状態の研究	物質・材料研究機構	辻本 吉廣	2015.06.04-06.07
11	ANSTO	QUOKKA	京都大学	教授	杉山 正明	15554	C1-2	小角中性子散乱によるα-クリスタリンのサブユニット交換	京都大学	井上 倫太郎	2015.05.27-06.04
12	ANSTO	QUOKKA	京都大学	准教授	井上倫太郎	15554	C1-2	小角中性子散乱によるα-クリスタリンのサブユニット交換	京都大学	井上 倫太郎	2015.05.27-06.04
13	ANSTO	ECHIDNA	東京工業大学	M2	白岩 大裕	15616	T1-3	層状ペロブスカイト型酸化物の結晶構造とイオン拡散経路	東京工業大学	八島 正知	2015.05.30-06.08
14	ANSTO	ECHIDNA	東京工業大学	M1	日比野 圭佑	15616	T1-3	層状ペロブスカイト型酸化物の結晶構造とイオン拡散経路	東京工業大学	八島 正知	2015.05.30-06.08
15	HZB	E4	東京理科大学	D2	玉造 博夢	15900	T1-1	2等辺三角格子反強磁性体CoNb2O6における交換相互作用定数の一軸応力による制御	東京理科大学	満田 節生	2015.07.04-07.28
16	HZB	E4	東京理科大学	M1	郡川 ひろ子	15900	T1-1	2等辺三角格子反強磁性体CoNb2O6における交換相互作用定数の一軸応力による制御	東京理科大学	満田 節生	2015.07.12-07.28
17	FRM-II	DNS	大阪大学	助教	中野 岳仁	15516	5G	中性子回折によるアルカリ金属ナノクラスター強磁性体の研究	大阪大学	中野 岳仁	2015.09.06-09.17
18	FRM-II	DNS	大阪大学	M1	梅本 尚嗣	15516	5G	中性子回折によるアルカリ金属ナノクラスター強磁性体の研究	大阪大学	中野 岳仁	2015.09.06-09.17
19	FRM-II	SPODI	東京大学	特任研究員	浅井 晋一郎	15628	T1-3	Magnetic structures of frustrated magnets	東京大学	益田 隆嗣	2015.07.30-08.05
20	FRM-II	SPODI	東京大学	M1	吉田 俊也	15628	T1-3	Magnetic structures of frustrated magnets	東京大学	益田 隆嗣	2015.07.30-08.04
21	ANSTO	PELICAN	東京大学	准教授	益田 隆嗣	15543	C-1-1	擬スピン 1/2 ブリージングパイロクロア磁性体Ba3Yb2Zn5O11の非弾性中性子散乱研究	東京大学	益田 隆嗣	2015.08.05-08.15
22	PSI	TriCS	東京大学	助教	左右田 稔	15518	5G	マルチフェロイックスBa2CoGe2O7におけるエレクトロマグノンの偏極解析	東京大学	左右田 稔	2015.09.06-09.15
23	PSI	TriCS	東京大学	助教	左右田 稔	15519	5G	マルチフェロイックCa2CoSi2O7の磁場下における新規磁気相	東京大学	左右田 稔	2015.09.20-09.29
24	PSI	SANS-1	お茶の水女子大学	教授	古川 はづき	15559 (14573)	C1-2	Fe系超伝導体の磁束研究	お茶の水女子大学	古川 はづき	2015.06.23-06.29
25	ANSTO	PELICAN	東京大学	D3	白 椽大	15543	C-1-1	擬スピン 1/2 ブリージングパイロクロア磁性体Ba3Yb2Zn5O11の非弾性中性子散乱研究	東京大学	益田 隆嗣	2015.08.09-08.18

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26	PSI	TriCS	東京大学	M1	吉田 俊也	15519	5G	マルチフェロイックCa2CoSi2O7の磁場下における新規磁気相	東京大学	左右田 稔	2015.09.21-09.30
27	ANSTO	QUOKKA	東京大学	助教	Li Xiang	15568	C1-2	電場印加時のゲル内でのDNAの構造解析	東京大学	柴山 充弘	2015.08.17-08.23
28	ANSTO	QUOKKA	東京大学	D1	廣澤 和	15568	C1-2	電場印加時のゲル内でのDNAの構造解析	東京大学	柴山 充弘	2015.08.17-08.23
29	ANSTO	QUOKKA	京都大学	教授	大場 洋次郎	15563	C1-2	HPT加工により発現する純鉄中の特異な磁気構造の解明	京都大学	大場 洋次郎	2015.10.07-10.20
30	ANSTO	QUOKKA	豊橋技術科学大学	D2	山本 康次郎	15563	C1-2	HPT加工により発現する純鉄中の特異な磁気構造の解明	京都大学	大場 洋次郎	2015.10.07-10.20
31	ANSTO	QUOKKA	豊橋技術科学大学	研究員	足立 望	15901	C1-2	塑性変形により形成する金属ガラスの不均一構造解析	豊橋技術科学大学	足立 望	2015.10.07-10.20
32	ANSTO	QUOKKA	豊橋技術科学大学	准教授	戸高義一	15901	C1-2	塑性変形により形成する金属ガラスの不均一構造解析	豊橋技術科学大学	足立 望	2015.10.07-10.20
33	NIST	HFBS	東京大学	教授	山室 修	15902	C3-1-1	水/逆浸透膜系の遅いダイナミクス	東京大学	山室 修	2015.08.02-08.15
34	NIST	HFBS	東京大学	助教	古府 麻衣子	15902	C3-1-1	水/逆浸透膜系の遅いダイナミクス	東京大学	山室 修	2015.08.02-08.15
35	FRM-II	SANS-1	お茶の水女子大学	教授	古川 はづき	15558 (14572)	C1-2	空間反転対称性の破れた超伝導体のヘリカル磁束格子の観測	お茶の水女子大学	古川 はづき	2015.07.27-08.09
		KWS-3				14571	C1-2	中性子小角散乱実験によるSr2RuO4の異常金属状態の研究			
36	FRM-II	SANS-1	お茶の水女子大学	D1	高橋 美郷	15558 (14572)	C1-2	空間反転対称性の破れた超伝導体のヘリカル磁束格子の観測	お茶の水女子大学	古川 はづき	2015.07.27-08.09
		KWS-3				14571	C1-2	中性子小角散乱実験によるSr2RuO4の異常金属状態の研究			
37	ANSTO	SIKA	東北大学	助教	鈴木 謙介	15611	T1-2	Al置換したLa214系銅酸化物高温超伝導体のストライプ秩序と超伝導の研究	東北大学	鈴木 謙介	2015.11.15-11.24
38	ANSTO	ECHIDNA	東北大学	助教	奥山 大輔	15621	T1-3	反転対称性の破れた磁性体Re5Ru3Al2(Re=Ce,Pr,Nd)の磁気秩序構造	東北大学	奥山 大輔	2015.10.20-10.29
39	ANSTO	ECHIDNA	東北大学	D1	牧野 晃也	15621	T1-3	反転対称性の破れた磁性体Re5Ru3Al2(Re=Ce,Pr,Nd)の磁気秩序構造	東北大学	奥山 大輔	2015.10.20-10.29
40	ANSTO	QUOKKA	京都大学	助教	佐藤 信浩	15555	C1-2	放射線誘起反応に基づく機能性高分子多孔ゲルの合成と中性子小角散乱法による構造解析	京都大学	佐藤 信浩	2015.10.22-11.02
41	ANSTO	QUOKKA	京都大学	教授	裏出 令子	15555	C1-2	放射線誘起反応に基づく機能性高分子多孔ゲルの合成と中性子小角散乱法による構造解析	京都大学	佐藤 信浩	2015.10.22-10.30
42	ANSTO	QUOKKA	京都大学	准教授	井上倫太郎	15577	C1-2	中性子小角散乱によるタンパク質凝縮物の構造解析	東京工業大学	野島 達也	2015.10.22-11.02
43	HZB	V4	お茶の水女子大学	教授	古川はづき	15560 (14574)	C1-2	希釈冷凍機温度領域におけるCeCoIn5の磁束構造の磁場方向依存性	お茶の水女子大学	古川 はづき	2015.09.27-10.08
44	FRM-II	TOFTOF	東京大学	助教	古府 麻衣子	15588	C3-1-1	パラジウムナノ粒子中の水素原子の速いダイナミクス	東京大学	山室 修	2015.09.26-10.07
45	FRM-II	TOFTOF	東京大学	M2	橋本 直樹	15588	C3-1-1	パラジウムナノ粒子中の水素原子の速いダイナミクス	東京大学	山室 修	2015.09.26-10.07
46	NIST	HFBS	東京大学	助教	古府 麻衣子	15904	C3-1-1	ROM-11.5D2Oの遅いダイナミクス	東京大学	山室 修	2015.10.18-10.25
47	ILL	IN5	首都大学東京	准教授	門脇 広明	15545	C-1-1	量子スピン液体の研究	首都大学東京	門脇 広明	2015.11.13-11.25
48	ILL	IN5	首都大学東京	M2	脇田 美香	15545	C-1-1	量子スピン液体の研究	首都大学東京	門脇 広明	2015.11.13-11.25

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49	LLB	4F2	東北大学	准教授	岩佐 和晃	15528	6G	Ce3T4Sn13 (T = Co, Rh) における磁気励起で見出す二重ギャップ電子状態	東北大学	岩佐 和晃	2015.11.16-11.30
50	LLB	4F2	東北大学	M2	大友 優香	15528	6G	Ce3T4Sn13 (T = Co, Rh) における磁気励起で見出す二重ギャップ電子状態	東北大学	岩佐 和晃	2015.11.22-11.30
51	ORNL	SNS CNCS	東京大学	助教	左右田 稔	15541	C-1-1	フェロイックスBa2CoGe2O7における磁気異方性の電場制御	東京大学	左右田 稔	2015.12.13-12.21
52	ORNL	HFIR GP-SANS	お茶の水女子大学	D1	高橋 美郷	15559	C1-2	Fe系超伝導体の磁束研究	お茶の水女子大学	古川 はづき	2015.11.15-11.25
53	NIST	NSE	東京大学	教授	山室 修	15587	C3-1-1	イミダゾリウム系イオン液体およびその液晶相の速いダイナミクス	東京大学	山室 修	2015.11.08-11.25
54	NIST	NSE	東京大学	助教	古府 麻衣子	15587	C3-1-1	イミダゾリウム系イオン液体およびその液晶相の速いダイナミクス	東京大学	山室 修	2015.11.08-11.25
55	ANSTO	ECHIDNA	東京工業大学	助教	藤井 孝太郎	15630	T1-3	新規ペロブスカイト関連AA'BO4型構造をもつ酸化物イオン伝導体の結晶構造とイオン伝導経路の解明	東京工業大学	藤井 孝太郎	2015.11.21-12.01
56	HZB	E4	東京理科大学	助教	藤原 理賀	15903	T2-2	孤立四面体量子スピン系の新モデル物質K4Cu4OCl10の磁気構造	東京理科大学	藤原 理賀	2016.01.08-01.21
57	HZB	E4	東京理科大学	M1	廣浦 晃	15903	T2-2	孤立四面体量子スピン系の新モデル物質K4Cu4OCl10の磁気構造	東京理科大学	藤原 理賀	2016.01.08-01.21
58	ISIS	Wish	東京大学	D1	林田 翔平	15905	C1-1	カゴメ三角格子反強磁性体NaBa2Mn3F11の磁気状態	東京大学	益田 隆嗣	2016.03.06-03.10

	海外施設名	装置名	所属機関	職位(学年)	申請者氏名	課題番号	装置	採択課題名	代表者所属	代表者氏名	旅程
1	ORNL	SNS HYSPEC	東京大学	助教	左右田 稔	13570	C1-1	A2CoSi2O7(A=Ca and Ba)におけるエレクトロマグノン	東京大学	左右田 稔	2014.05.05-05.13
2	PSI	SINQ DMC, HRPT	物質・材料研究機構	研究員	長谷 正司	14806	5G	偏極中性子を用いたCu3Mo2O9単結晶の磁気構造の決定	物質・材料研究機構	長谷 正司	2014.07.10-07.23
						14807	5G	(CuZn)3Mo2O9単結晶の磁気反射の測定			
3	ORNL	SNS HYSPEC	東京大学	准教授	益田 隆嗣	13570	C1-1	A2CoSi2O7(A=Ca and Ba)におけるエレクトロマグノン	東京大学	左右田 稔	2014.05.05-05.10
4	ISIS	MERLIN	東京大学	准教授	益田 隆嗣	14559	C1-1	正方格子磁性体における新規磁気相の探索	東京大学	益田 隆嗣	2014.06.10-06.16
5	ISIS	MERLIN	東京大学	D2	白 椽大	14559	C1-1	正方格子磁性体における新規磁気相の探索	東京大学	益田 隆嗣	2014.06.10-06.17
6	ISIS	MARI	東京大学	助教	左右田 稔	14522	5G	S=1/2正四面体をもつBa3Yb2Zn5O11の磁気励起	東京大学	左右田 稔	2014.07.16-07.23
7	NIST	NCNR	首都大学東京	准教授	門脇 広明	14564	C1-1	量子スピン液体の研究	首都大学東京	門脇 広明	2014.05.21-05.27
8	PSI	SANS-1	お茶の水女子大学	教授	古川 はづき	14573	C1-2	Fe系超伝導体の磁束研究	お茶の水女子大学	古川 はづき	2014.05.27-06.03
9	ANSTO	ECHIDNA	東京工業大学	M2	齋藤 千紘	14657	T1-3	新規ペロブスカイト関連AA'BO4型構造をもつ混合イオン伝導体の結晶構造とイオン伝導経路の解明	東京工業大学	藤井 孝太郎	2014.05.21-05.31
10	ANSTO	ECHIDNA	東京工業大学	D2	川村 圭司	14657	T1-3	新規ペロブスカイト関連AA'BO4型構造をもつ混合イオン伝導体の結晶構造とイオン伝導経路の解明	東京工業大学	藤井 孝太郎	2014.05.21-05.31
11	ANSTO	QUOKKA	立命館大学	助教	貞包 浩一朗	14592	C1-2	界面不活性の働きをする界面活性剤	立命館大学	貞包 浩一朗	2014.08.17-08.23
12	PSI	FOCUS	福岡大学	教授	山口 敏男	14609	C3-1-1	メソポーラス物質に閉じ込めたジオキサン－水二成分溶液中の水分子のダイナミクス	福岡大学	山口 敏男	2014.08.10-08.19
13	PSI	FOCUS	福岡大学	M2	浦部 俊雄	14609	C3-1-1	メソポーラス物質に閉じ込めたジオキサン－水二成分溶液中の水分子のダイナミクス	福岡大学	山口 敏男	2014.08.10-08.19
14	NIST	DCS	東京大学	教授	山室 修	14607	C3-1-1	H2-SF6ハイドレート中の水素の拡散ダイナミクス	東京大学	古府 麻衣子	2014.08.03-08.10
15	NIST	DCS	東京大学	助教	古府 麻衣子	14607	C3-1-1	H2-SF6ハイドレート中の水素の拡散ダイナミクス	東京大学	古府 麻衣子	2014.08.03-08.13
16	ISIS	MARI	東京大学	D2	白 椽大	14522	5G	S=1/2正四面体をもつBa3Yb2Zn5O11の磁気励起	東京大学	左右田 稔	2014.07.15-07.23
17	NIST	NSE	福岡大学	助教	吉田 亨次	14601	C2-3-1	リチウムイオン電解液の構造緩和	福岡大学	吉田 亨次	2014.09.05-09.13
18	NIST	NSE	名古屋大学	助教	山口 毅	14601	C2-3-1	リチウムイオン電解液の構造緩和	福岡大学	吉田 亨次	2014.09.17-09.27
19	ANSTO	ECHIDNA	東京理科大学	助教	萩原 雅人	14656	T1-3	一次元フラストレート鎖 AM(VO4)(OD) (A=Ca,Sr:M=Co,Ni)の磁気構造	東京理科大学	萩原 雅人	2014.08.17-08.25
20	ANSTO	ECHIDNA	東京理科大学	教授	元屋 清一郎	14656	T1-3	一次元フラストレート鎖 AM(VO4)(OD) (A=Ca,Sr:M=Co,Ni)の磁気構造	東京理科大学	萩原 雅人	2014.08.17-08.25
21	ANSTO	WONBAT	大阪府立大学	特別講師	山田 幾也	14902	T1-3	新規鉄ペロブスカイト酸化物の結晶構造・磁気構造の決定	大阪府立大学	山田 幾也	2014.08.10-08.16
22	ANSTO	WONBAT	大阪府立大学	M1	村上 誠	14902	T1-3	新規鉄ペロブスカイト酸化物の結晶構造・磁気構造の決定	大阪府立大学	山田 幾也	2014.08.10-08.16
23	ILL	IN4	東京大学	准教授	益田 隆嗣	14528	5G	NaBa2Mn3F11の磁気状態	東京大学	益田 隆嗣	2014.09.18-10.01
24	ILL	IN4	東京大学	M2	林田 翔平	14528	5G	NaBa2Mn3F11の磁気状態	東京大学	益田 隆嗣	2014.09.18-10.01

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25	ANSTO	ECHIDNA	東京大学	M2	林田 翔平	14903	T1-3	正方格子反強磁性体A2FeGe2O7の磁気構造	東京大学	益田 隆嗣	2014.10.07-10.12
26	ANSTO	QUOKKA	東京大学	D1	廣井 卓思	14587	C1-2	親油性高分子電解質ゲルの各種誘電率を持つ溶媒下での網目構造解析	東京大学	柴山 充弘	2014.08.26-09.03
27	ANSTO	QUOKKA	東京大学	M2	栃岡 沙希	14587	C1-2	親油性高分子電解質ゲルの各種誘電率を持つ溶媒下での網目構造解析	東京大学	柴山 充弘	2014.08.26-09.03
28	ANSTO	QUOKKA	京都大学	助教	大場 洋次郎	14900	C1-2	塑性変形による鋼板中Cu粒子の変形挙動の解析	京都大学	大場 洋次郎	2014.11.24-12.06
29	ANSTO	QUOKKA	京都大学	助教	佐藤 信浩	14570	C1-2	中性子小角散乱法による多孔性放射線合成ゲルのナノ構造解析	京都大学	佐藤 信浩	2014.11.24-12.06
30	ANSTO	QUOKKA	豊橋技術科学大学	D3	足立 望	14570	C1-2	中性子小角散乱法による多孔性放射線合成ゲルのナノ構造解析	京都大学	佐藤 信浩	2014.11.24-12.06
31	NIST	NSE	東京大学	教授	山室 修	14611	C3-1-1	Dynamics of an ionic liquid C16mimPF6 in SmA liquid crystal and liquid phases	東京大学	山室 修	2014.10.06-10.23
32	NIST	NSE	東京大学	研究員	根本 文也	14611	C3-1-1	Dynamics of an ionic liquid C16mimPF6 in SmA liquid crystal and liquid phases	東京大学	山室 修	2014.10.06-10.19
33	NIST	HFBS	東京大学	助教	古府 麻衣子	14610	C3-1-1	New process of hydrogen diffusion in palladium hydrides	東京大学	山室 修	2014.10.06-10.23
34	NIST	HFBS	東京大学	M1	橋下 直樹	14610	C3-1-1	New process of hydrogen diffusion in palladium hydrides	東京大学	山室 修	2014.10.06-10.19
35	PSI	SANS-1	お茶の水女子大学	教授	古川 はづき	14573	C1-2	Fe系超伝導体の磁束研究	お茶の水女子大学	古川 はづき	2014.10.01-10.08
36	ANSTO	ECHIDNA	兵庫県立大学	助教	川崎 郁斗	14901	T1-3	中性子散乱によるSr1-xLaxRuO3のクラスターグラス相の研究	兵庫県立大学	川崎 郁斗	2014.11.29-12.08
37	ILL	IN8	総合科学研究機構	研究員	松浦 直人	14801	4G	ダイマーモット絶縁体κ-(BEDT-TTF)2Cu[N(CN)2]Clにおけるマルチフェロイクスと電荷揺らぎ・分子格子ダイナミクス	総合科学研究機構	松浦 直人	2014.12.08-12.19
38	ANSTO	ECHIDNA	茨城大学	准教授	横山 淳	14901	T1-3	中性子散乱によるSr1-xLaxRuO3のクラスターグラス相の研究	兵庫県立大学	川崎 郁斗	2014.11.29-12.08
39	NIST	BT-1	京都大学	助教	山本 隆文	14650	T1-3	異常高原子価を持つ(Ba,Sr)FeO3の磁気構造と相境界の解明	京都大学	山本 隆文	2014.11.23-11.30
40	NIST	BT-1	京都大学	D1	竹入 史隆	14650	T1-3	異常高原子価を持つ(Ba,Sr)FeO3の磁気構造と相境界の解明	京都大学	山本 隆文	2014.11.23-11.30
41	ANSTO	ECHIDNA	東北大学	教授	佐藤 卓	14904	T1-3	S=2 籠目格子反強磁性体の磁気構造	東京工業大学	田中 秀数	2014.12.07-12.15
42	ANSTO	ECHIDNA	東京工業大学	M1	日比野 圭佑	14643	T1-3	層状ペロブスカイト型酸化物の結晶構造とイオン拡散経路	東京工業大学	八島 正知	2014.12.13-12.23
43	ILL	D23	お茶の水女子大学	教授	古川 はづき	14573	C1-2	Fe系超伝導体の磁束研究	お茶の水女子大学	古川 はづき	2014.11.13-11.18
44	ANSTO	ECHIDNA	東京工業大学	M1	山田 駿太郎	14643	T1-3	層状ペロブスカイト型酸化物の結晶構造とイオン拡散経路	東京工業大学	八島 正知	2014.12.13-12.23
45	NIST	NSE, SANS	首都大学東京	助教	川端 庸平	14579	C1-2	クラフト転移で自発形成するベシクルの臨界ベシクル濃度近傍でのダイナミクス	首都大学東京	川端 庸平	2015.01.22-02.06
						14602	C2-3-1	界面活性剤2分子膜のゲル状態での膜面内ダイナミクス			
						14603	C2-3-1	クラフト転移で自発形成するベシクルの臨界ベシクル濃度近傍でのダイナミクス			
46	LLB	6T2	東北大学	准教授	岩佐 和晃	14536	6G	PrT2Zn20(T=Ru,Rh,Os,Ir)における非Kramers二重項基底状態のエントロピー解放過程	東北大学	岩佐 和晃	2015.02.20-03.03
						14554	C1-1	PrT2Zn20 (T = Ru, Rh, Os, Ir)における非Kramers二重項基底状態のエントロピー解放過程			

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47	NIST	NSE	東京大学	研究員	根本 文也	14905	C3-1-1	Collective dynamics of alkyl-methyl imidaozlium based ionic liquids with liquid crystallline phase	東京大学	山室 修	2015.02.03-02.16
48	ORNL	HFIR GP-SANS	東京大学	M2	廣澤 和	14906	C1-2	イオン液体中における刺激応答性高分子の温度応答性相転移	東京大学	柴山 充弘	2015.03.04-03.10

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1	NIST	HFBS	東京大学	教授	山室 修	13620	C3-1-1	H2-SF6ハイドレート中の水素の拡散ダイナミクス	東京大学	古府 麻衣子	2013.05.28-06.11
2	NIST	HFBS	東京大学	助教	古府 麻衣子	13620	C3-1-1	H2-SF6ハイドレート中の水素の拡散ダイナミクス	東京大学	古府 麻衣子	2013.05.28-06.11
3	HANARO	SANS	名古屋大学	准教授	高野 敦志	13604	C1-2	結び目を有する環状高分子の溶液中のコンフォメーション	名古屋大学	高野 敦志	2013.06.02-06.05
4	HANARO	SANS	名古屋大学	D1	土肥 侑也	13604	C1-2	結び目を有する環状高分子の溶液中のコンフォメーション	名古屋大学	高野 敦志	2013.06.02-06.05
5	ANSTO	ECHIDNA	東京工業大学	M2	江崎 勇一	13679	T1-3	新規AA'BO4型構造をもつ混合イオン伝導体の結晶構造とイオン伝導経路の解明	東京工業大学	藤井 孝太郎	2013.06.06-06.14
6	ANSTO	ECHIDNA	東京工業大学	M2	上田 孝志朗	13679	T1-3	新規AA'BO4型構造をもつ混合イオン伝導体の結晶構造とイオン伝導経路の解明	東京工業大学	藤井 孝太郎	2013.06.06-06.14
7	HANARO	40mSANS	東京大学	D2	草野 巧巳	13596	C1-2	燃料電池電極用触媒インクの構造解析	東京大学	柴山 充弘	2013.06.30-07.06
8	HANARO	40mSANS	東京大学	M2	廣井 卓思	13596	C1-2	燃料電池電極用触媒インクの構造解析	東京大学	柴山 充弘	2013.06.30-07.06
9	PSI	SINQ TASP	東京大学	助教	左右田 稔	13532	5G	A2CoSi2O7(A=Ca and Ba)におけるエレクトロマグノン	東京大学	左右田 稔	2013.08.25-09.04
						13570	C1-1	A2CoSi2O7(A=Ca and Ba)におけるエレクトロマグノン			
10	PSI	SINQ TASP	東京大学	M1	林田 翔平	13532	5G	A2CoSi2O7(A=Ca and Ba)におけるエレクトロマグノン	東京大学	左右田 稔	2013.08.25-09.04
						13570	C1-1	A2CoSi2O7(A=Ca and Ba)におけるエレクトロマグノン			
11	HZB	E4	東京理科大学	M2	玉造 博夢	12658	T1-1	スピン格子結合系CuFeO2のスピン波分散関係の一軸応力変化	東京理科大学	満田 節生	2013.09.17-10.06
						12659	T1-1	スピン誘導型強誘電体CuFeO2における磁気ピエゾ効果			
12	HZB	E4	東京理科大学	M1	保坂 翔太	12658	T1-1	スピン格子結合系CuFeO2のスピン波分散関係の一軸応力変化	東京理科大学	満田 節生	2013.09.17-09.24
						12659	T1-1	スピン誘導型強誘電体CuFeO2における磁気ピエゾ効果			
13	ORNL	SNS NSE	東京大学	教授	柴山 充弘	13612	C2-3-1	Tetra-PEG イオンゲル・ハイドロゲルの動的挙動の解析	東京大学	柴山 充弘	2013.08.12-08.19
14	ORNL	SNS NSE	東京大学	M2	廣井 卓思	13612	C2-3-1	Tetra-PEG イオンゲル・ハイドロゲルの動的挙動の解析	東京大学	柴山 充弘	2013.08.12-08.27
15	HANARO	HRPD	東京工業大学	助教	藤井 孝太郎	13699	T1-3	格子間酸素を利用したイオン伝導性セラミックスの結晶構造とイオン拡散経路	東京工業大学	八島 正知	2013.07.14-07.20
16	ORNL	SNS CNCS	東京大学	准教授	益田 隆嗣	13531	5G	カゴメ格子・三角格子積層系YBaCo4O7の磁気励起	東京大学	左右田 稔	2013.08.21-08.27
						13569	C1-1	カゴメ格子・三角格子積層系YBaCo4O7の磁気励起			
17	ORNL	SNS CNCS	東京大学	助教	左右田 稔	13531	5G	カゴメ格子・三角格子積層系YBaCo4O7の磁気励起	東京大学	左右田 稔	2013.08.18-08.24
						13569	C1-1	カゴメ格子・三角格子積層系YBaCo4O7の磁気励起			
18	PSI	SANS-1	お茶の水女子大学	教授	古川 はづき	13578	C1-2	希釈冷凍機温度領域におけるCeMIn5(M=Co, Ir)の磁束の磁気形状因子の異常	お茶の水女子大学	古川 はづき	2013.09.04-09.18
19	PSI	SANS-1	お茶の水女子大学	D2	呉 麻美子	13578	C1-2	希釈冷凍機温度領域におけるCeMIn5(M=Co, Ir)の磁束の磁気形状因子の異常	お茶の水女子大学	古川 はづき	2013.09.04-09.19

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20	LLB	6T2	東北大学	准教授	岩佐 和晃	13543	6G	PrIr2Zn20における非Kramers二重項による四極子秩序の検証	東北大学	岩佐 和晃	2013.10.12-10.21
						13557	C1-1	DyFe2Zn20における異方性変化を伴う逐次磁気相転移			
						13702	T2-2	DyFe2Zn20における異方性変化を伴う逐次磁気相転移			
21	ANSTO	ECHIDNA	東京大学	D1	白 椽大	13559	C1-1	スピン・ネマティック相関の検出	東京大学	益田 隆嗣	2013.10.06-10.14
22	ANSTO	ECHIDNA	東京大学	M1	林田 翔平	13559	C1-1	スピン・ネマティック相関の検出	東京大学	益田 隆嗣	2013.10.06-10.14
23	ISIS	OSIRIS	慶應義塾大学	講師	千葉 文野	13615	C3-1-1	GeTe系の液液転移と個別原子拡散	慶應義塾大学	千葉 文野	2013.09.29-10.10
24	ISIS	OSIRIS	JAEA	主任研究員	服部 高典	13615	C3-1-1	GeTe系の液液転移と個別原子拡散	慶應義塾大学	千葉 文野	2013.09.29-10.10
25	ORNL	HFIR GP-SANS	お茶の水女子大学	D2	呉 麻美子	13576	C1-2	空間反転対称性の破れた超伝導体のヘリカル磁束格子の観測	お茶の水女子大学	古川 はづき	2013.10.07-10.14
26	HANARO	FCD	東北大学	教授	木村 宏之	12730	T2-2	マルチフェロイック物質(Bi,Eu)Mn2O5の圧力誘起磁気秩序と強誘電性	東北大学	木村 宏之	2013.11.04-11.14
27	NIST	BT-7	首都大学東京	助教	高津 浩	13558	C1-1	量子スピンアイスの研究	首都大学東京	門脇 広明	2014.01.26-02.03
28	HANARO	18mSANS	立命館大学	助教	貞包 浩一朗	13589	C1-2	界面不活性の働きをする界面活性剤	立命館大学	貞包 浩一朗	2013.12.19-12.22
29	HANARO	18mSANS	立命館大学	M2	高木 寛和	13589	C1-2	界面不活性の働きをする界面活性剤	立命館大学	貞包 浩一朗	2013.12.19-12.23
30	FRMⅡ	TOFTOF	大阪大学	准教授	金子 文俊	13617	C3-1-1	非晶性高分子の分子運動への超臨界二酸化炭素の影響	大阪大学	金子 文俊	2014.01.15-01.25
31	NIST	HFBS	東京大学	教授	山室 修	13627	C3-1-1	多孔性配位高分子MIL-55におけるプロトン伝導ダイナミクス	東京大学	山室 修	2013.12.01-12.10
32	NIST	HFBS	東京大学	M2	宮津 怜嗣	13627	C3-1-1	多孔性配位高分子MIL-55におけるプロトン伝導ダイナミクス	東京大学	山室 修	2013.12.01-12.10
33	HANARO	40mSANS	東京大学	M1	廣澤 和	13592	C1-2	PEG／PDMS相互連結相構造を有する高分子ゲルの構造解析	東京大学	酒井 崇匡	2014.01.05-01.11
34	HANARO	40mSANS	東京大学	M2	廣井 卓思	13592	C1-2	PEG／PDMS相互連結相構造を有する高分子ゲルの構造解析	東京大学	酒井 崇匡	2014.01.05-01.11
35	HANARO	SANS	名古屋大学	M2	木下 敬太	13604	C1-2	結び目を有する環状高分子の溶液中のコンフォメーション	名古屋大学	高野 敦志	2014.01.09-01.14
36	HANARO	SANS	名古屋大学	M2	小林 侑生	13604	C1-2	結び目を有する環状高分子の溶液中のコンフォメーション	名古屋大学	高野 敦志	2014.01.09-01.14
37	NIST	DCS	東京大学	助教	古府 麻衣子	13408	C3-1-1	AGNES(高分解能パルス冷中性子分光器) IRT課題	東京大学	古府 麻衣子	2014.01.16-01.23
38	NIST	DCS	東京大学	教授	山室 修	13408	C3-1-1	AGNES(高分解能パルス冷中性子分光器) IRT課題	東京大学	古府 麻衣子	2014.01.18-01.23
39	ANSTO	WOMBAT	京都大学	准教授	藤田 晃司	12693	T1-3	ニオブ酸リチウム型構造をもつ遷移金属酸化物の磁気構造	京都大学	藤田 晃司	2014.02.04-02.09
40	ANSTO	WOMBAT	京都大学	D1	河本 崇博	12693	T1-3	ニオブ酸リチウム型構造をもつ遷移金属酸化物の磁気構造	京都大学	藤田 晃司	2014.02.04-02.09
41	LLB	6T2	広島大学	准教授	松村 武	13547	6G	Ce0.5La0.5B6における磁気八極子秩序の検証	広島大学	松村 武	2014.02.25-03.11
42	ISIS	IRIS	東京大学	助教	古府 麻衣子	13626	C3-1-1	逆浸透膜表面での水のダイナミクス	東京大学	山室 修	2014.03.12-03.21

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43	ISIS	IRIS	東京大学	研究員	根本　文也	13626	C3-1-1	逆浸透膜表面での水のダイナミクス	東京大学	山室　修	2014.03.12-03.21

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1	ILL	D23	東京大学	教授	佐賀山 基	11533 (H23転送課題)	5G	マルチフェロイックMn3O4の高磁場領域におけるスピン配列の変化	東京大学	佐賀山 基	2012.06.22-06.29
2	ILL	FIGARO	九州大学	D2	堀 耕一郎	11665 (H23転送課題)	C3-1-2-3	混合液体と接触した高分子界面の凝集構造	九州大学	田中 敬二	2012.07.07-07.12
3	ISIS	Let	東京大学	准教授	益田 隆嗣	12573	C1-1	[Cu2(bza)4(pyz)]nにおける吸着酸素分子の磁気相関	東京大学	左右田 稔	2012.05.17-05.26
4	ISIS	Let	東京大学	助教	左右田 稔	12573	C1-1	[Cu2(bza)4(pyz)]nにおける吸着酸素分子の磁気相関	東京大学	左右田 稔	2012.05.17-05.29
5	ANSTO	ECHIDA	東京工業大学	D3	尾本 和樹	12723 他	T1-3	鉛フリー圧電体ニオブ酸銀系材料の結晶構造と誘電性 他	東京工業大学	八島 正知	2012.05.09-05.17
6	ILL	D11	お茶の水女子大学	教授	古川 はづき	12581	C1-2	新規Fe系超伝導BaFe2(AS,P)2の磁束研究	お茶の水女子大学	古川 はづき	2012.06.24-06.29
7	ANSTO	ECHIDA	東京工業大学	M2	原武 大樹	12723 他	T1-3	鉛フリー圧電体ニオブ酸銀系材料の結晶構造と誘電性 他	東京工業大学	八島 正知	2012.05.09-05.17
8	ANSTO	TAIPAN	東北大学	准教授	藤田 全基	12539	6G	新規T'構造銅酸化物Pr2-xCaxCuO4における磁気相関のホールドープ効果	東北大学	藤田 全基	2012.05.29-06.05
9	ANSTO	TAIPAN	東北大学	D1	堤 健之	12539	6G	新規T'構造銅酸化物Pr2-xCaxCuO4における磁気相関のホールドープ効果	東北大学	藤田 全基	2012.05.29-06.05
10	ILL	IN5	岡山大学	准教授	奥地 拓生	11648 (H23転送課題)	C3-1-1	水素ハイドレートのトンネル拡散過程	東京大学	山室 修	2012.07.26-08.02
11	ANSTO	ECHIDA	京都大学	助教	小林 洋治	12700	T1-3	異常高原子価を持つ(Ba,Sr)FeO3の磁気構造と相境界の解明	京都大学	陰山 洋	2012.06.27-07.04
12	ANSTO	ECHIDA	京都大学	D3	山本 隆文	12700	T1-3	異常高原子価を持つ(Ba,Sr)FeO3の磁気構造と相境界の解明	京都大学	陰山 洋	2012.06.27-07.04
13	FRM-II	PUMA	東北大学	M2	奈良 壮	12540	6G	反強磁性金属Mn3Siにおける高温スピン励起	東北大学	平賀 晴弘	2012.09.02-09.11
						12680	T1-2	反強磁性金属Mn3Siにおける高温スピン励起			
14	FRM-II	PUMA	東北大学	助教	平賀 晴弘	12540	6G	反強磁性金属Mn3Siにおける高温スピン励起	東北大学	平賀 晴弘	2012.09.02-09.11
						12680	T1-2	反強磁性金属Mn3Siにおける高温スピン励起			
15	ILL	IN5	東京電機大学	准教授	山室 憲子	11647 (H23転送課題)	C3-1-1	両性イオン適合溶質グリシンベタインの水溶液のダイナミクス	東京電機大学	山室 憲子	2012.07.23-08.03
16	HANARO	4CD	東北大学	M2	古川 圭作	12730	T2-2	マルチフェロイック物質(Bi,Eu)Mn2O5の圧力誘起磁気秩序と強誘電性	東北大学	木村 宏之	2012.06.14-06.19
17	HANARO	HRPD	東北大学	M2	萩谷 聡	12701	T1-3	混晶系マルチフェロイクス(1-x)BiFeO3-xPbTiO3のMPB近傍の結晶構造と磁気構造	東北大学	木村 宏之	2012.06.03-06.09
18	HANARO	40mSANS	東京大学	D2	西 健吾	12597	C1-2	温度応答性部位を有するTetraゲルの構造解析	東京大学	酒井 崇匡	2012.07.08-07.14
19	HANARO	40mSANS	東京大学	M2	橋本 慧	12606	C1-2	時分割SANS法によるイオン液体中のゲル化反応メカニズム解明	東京大学	柴山 充弘	2012.07.08-07.14
20	ILL	IN5	首都大学東京	准教授	門脇 広明	11567 (H23転送課題)	C1-1	量子スピンアイスの研究	首都大学東京	門脇 広明	2012.09.25-10.01
21	ILL	IN14	琉球大学	准教授	阿曽 尚文	11563 (H23転送課題)	C1-1	空間反転対称性のない超伝導体CeIrSi3の磁気励起	琉球大学	阿曽 尚文	2012.10.21-10.31
22	ANSTO	ECHIDA	京都大学	D3	山本 隆文	12699	T1-3	層間酸素を含んだ鉄平面4配位酸化物	京都大学	陰山 洋	2012.10.24-10.29
23	ILL	IN11	福岡大学	教授	山口 敏男	12629	C3-1-1	有機無機ハイブリッドメソポーラスシリカ中に閉じ込めた水とメタノールのダイナミクス	福岡大学	山口 敏男	2012.10.22-11.04

	海外施設名	装置名	所属機関	職位(学年)	申請者氏名	課題番号	装置	採択課題名	代表者所属	代表者氏名	旅程
24	HANARO	HRPD	東京工業大学	M2	兼子 直人	12723 他	T1-3	鉛フリー圧電体ニオブ酸銀系材料の結晶構造と誘電性 他	東京工業大学	八島 正知	2012.11.21-11.26
25	HANARO	HRPD	東京工業大学	M2	原武 大樹	12723 他	T1-3	鉛フリー圧電体ニオブ酸銀系材料の結晶構造と誘電性 他	東京工業大学	八島 正知	2012.11.21(往路)
26	HANARO	40mSANS	高エネ研	研究員	貞包 浩一朗	12596	C1-2	界面不活性の働きをする界面活性剤	高エネ研	貞包 浩一朗	2012.12.02(往路)
27	PSI	TriCS	東京大学	特任研究員	萩原 雅人	12694	T1-3	擬一次元鎖フラストレーション磁性体SrCo2V2O8の中性子回折	東京大学	萩原 雅人	2012.10.20-10.27
28	ILL	D33	お茶の水女子大学	教授	古川 はづき	12581	C1-2	新規Fe系超伝導BaFe2(AS,P)2の磁束研究	お茶の水女子大学	古川 はづき	2012.12.02-12.13
						12582	C1-2	中性子小角散乱実験によるSr2RuO4の異常金属状態の研究			
29	FRM-II	TOFTOF	東京大学	助教	古府 麻衣子	12626	C3-1-1	M(OH)(bdc-R) (M=Fe, Al, bdc=terephthalate, R=NH2,OH,(COOH)2)配位高分子の酸発生基によるプロトン伝導性の制御	京都大学	北川 宏	2013.02.03-02.12
30	FRM-II	TOFTOF	東京大学	M1	宮津 怜嗣	12626	C3-1-1	M(OH)(bdc-R) (M=Fe, Al, bdc=terephthalate, R=NH2,OH,(COOH)2)配位高分子の酸発生基によるプロトン伝導性の制御	京都大学	北川 宏	2013.02.03-02.12
31	ISIS	IRIS	東京大学	助教	古府 麻衣子	12632	C3-1-1	逆浸透膜表面における水のダイナミクス	東京大学	山室 修	2013.02.17-03.11
32	ISIS	IRIS	東京大学	准教授	山室 修	12632	C3-1-1	逆浸透膜表面における水のダイナミクス	東京大学	山室 修	2013.02.28-03.11

Publications and Dissertations

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Dissertations

2020

- Title: First Principle Calculations & Inelastic Neutron Scattering on the Single-Crystalline Superconductor LaPt2Si2
  Author: MAZZA F.
  Degree type: Master
  Received from: KTH ROYAL INSTITUTE OF TECHNOLOGY (2020)

- Title: Near ideal physical gel cross-linked via double-stranded DNA
  Author: Ohira M.
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2019

- Title: Control of stoichiometry and observation of spin excitation in the S = 1/2 bilayer triangular lattice antiferromagnet LiZn2Mo3O8
  Author: SANDVIK K. E. A.
  Degree type: Doctor/Ph.D
  Received from: Tohoku University (2019)

- Title: 空間反転対称性の破れた重い電子系CeTSi3 (T = Rh, Ir, Pd, Pt)の磁気構造と結晶場準位の研究
  Author: Ueta D.
  Degree type: Doctor/Ph.D
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- Title: Spin Excitations and Neutron Spin Resonance Studies in New-type Iron-based Superconductors
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- Title: 超酸化物NaO2の中性子散乱研究

- Author: Iida S.
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- Title: 中性子散乱実験によるトポロジカル超伝導体β-PdBi2の研究
  Author: Kagamida N.
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- Title: ブリージングパイロクロア格子反強磁性体Ba3Yb2Zn5O11における超高分解能中性子散乱研究
  Author: Kikuchi H.
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- Title: 2等辺三角格子反強磁性体 CoNb2O6における交換相互作用の一軸応力による異方的制御
  Author: Shinoda Y.
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  Author: Hayashida S.
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  Author: Kato D.
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  Author: Tamatsukuri H.
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- Title: 反転対称性の破れた希土類化合物R5Ru3Al2(R=La, Ce, Pr)の新奇磁気秩序
  Author: Makino K.
  Degree type: Master
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  Author: Suyama K.
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- Title: 梯子形鉄系化合物における結晶及び磁気構造と輸送現象に関する研究
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  Degree type: Doctor/Ph.D
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  Author: Kawamoto T.
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  Author: Okazumi Y.
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  Author: Otomo Y.
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  Author: Oyama T.
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- Title: トポロジカル近藤絶縁体YbB12のZr置換によるフェルミ準位チューニング
  Author: Wada T.

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  Author: Wakita M.
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  Author: Yoshida T.
  Degree type: Master
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  Author: Hayashida S.
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  Author: Suzuki A.
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  Author: Asai H.
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  Author: Sakao M.
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  Degree type: Master
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  Author: Ikuka S.
  Degree type: Doctor/Ph.D
  Received from: University of Tokyo (2012)

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  Author: Yano S.

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- Title: ハロゲン化アルカリ塩誘起によるアセトニトリルー水混合溶液の相分離
  Author: Haramaki H.
  Degree type: Master
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- Title: 中性子散乱による層状ニッケル酸化物R2-xSrxNiO4(R=La, Pr) のスピン・電荷相関の研究
  Author: Imasato T.
  Degree type: Master
  Received from: Tohoku University (2012)

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  Author: Ishikawa T.
  Degree type: Master
  Received from: Faculty of Science and Technology, Tokyo University of Science (2012)

- Title: 還元熱処理によるリチウムイオン電池正極材料Li2MnO3-Li(Mn, Co, Ni)O2系固溶体の物性、平均・局所構造、電子構造と電池特性
  Author: Kashima T.
  Degree type: Master
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  Author: Kobayashi H.
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  Author: Soejima K.
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- Title: High temperature structure of KDP and DKDP
  Author: Kaki Y.
  Degree type: Bachelor
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  Author: Atarashi H.
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  Author: Terayama Y.
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  Author: Ai Y.
  Degree type: Master
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  Author: Ebihara A.
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  Author: Fuwa Y.
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  Author: Hirata T.
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  Author: Muroi R.
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- Title: クラスレート化合物Eu8Ga16Ge30の特異な強磁性に対するキャリア制御と圧力の効果
  Author: Yamane H.
  Degree type: Master
  Received from: Hiroshima University (2011)

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  Author: Yokobori T.
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  Author: Tomita N.

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Received from: Yamagata University (2011)

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  Author: Tsukamoto H.
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  Author: IIda K.
  Degree type: Doctor/Ph.D
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  Author: Igarashi D.
  Degree type: Doctor/Ph.D
  Received from: Graduate School of Engineering, Tohoku University (2010)

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  Author: Kataoka K.
  Degree type: Doctor/Ph.D
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- Title: Neutron Scattering Study on Formation Mechanism of Gas Hydrates and Dynamic Structures of Related Materials
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  Author: Kimura K.
  Degree type: Doctor/Ph.D
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  Author: Kubo H.
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  Author: Miura Y.
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  Author: Nakajima T.
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  Author: Sakuma Y.
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  Author: Suekuni K.
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  Author: Tassel C.
  Degree type: Doctor/Ph.D
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  Author: Yamasaki Y.
  Degree type: Doctor/Ph.D
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  Author: Hanazawa A.
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  Author: Hondo S.
  Degree type: Master
  Received from: Internation graduate schools of arts and sciences, Yokohama City University (2010)

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  Author: Igarashi R.
  Degree type: Master
  Received from: Tohoku University (2010)

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