

【2020年】

- 1 R. Kajimoto, M. Nakamura, K. Iida, K. Kamazawa, K. Ikeuchi, Y. Inamura, M. Ishikado
Energy resolution and neutron flux of the 4SEASONS spectrometer revisited
Journal of Neutron Research, **22**, 99, (2020).
<https://doi.org/10.3233/jnr-200146>
MLF : BL01
- 2 K. Iida, H. K. Yoshida, A. Nakao, H. O. Jeschke, Y. Iqbal, K. Nakajima, S. Ohira-
Kawamura, K. Munakata, Y. Inamura, N. Murai, M. Ishikado, R. Kumai, T. Okada, M.
Oda, K. Kakurai, M. Matsuda
 *$q=0$ long-range magnetic order in centennialite $\text{CaCu}_3(\text{OD})_6\text{Cl}_2 \cdot 0.6\text{D}_2\text{O}$: A spin-
 $1/2$ perfect kagome antiferromagnet with J_1 - J_2 - J_d*
Phys. Rev. B, **101**, 220408(R), (2020).
<https://doi.org/10.1103/PhysRevB.101.220408>
MLF : BL01, BL14, BL18, LabCROSS
他施設 : PF
- 3 Zhuo Liu, Chenxing Yang, Lei Zhang, Yuanxi Yu, Minhao Yu, Victoria García
Sakai, Madhusudan Tyagi, Takeshi Yamada, Lunhua He, Xiaohua Zhang, Liang Hong
*Heterogeneity of Water Molecules on the Free Surface of Thin Reduced Graphene
Oxide Sheets*
The Journal of Physical Chemistry C, **124**, 11064, (2020).
<https://doi.org/10.1021/acs.jpcc.0c03519>
MLF : BL02
- 4 Miguel A. González, Oleg Borodin, Maiko Kofu, Kaoru Shibata, Takeshi
Yamada, Osamu Yamamuro, Kang Xu, David L. Price, Marie-Louise Saboungi
Nanoscale Relaxation in "Water-in-Salt" and "Water-in-Bisalt" Electrolytes
The Journal of Physical Chemistry Letters, **11**, 7279, (2020).
<https://doi.org/10.1021/acs.jpcclett.0c01765>
MLF : BL02
- 5 *Quasi-Elastic Neutron Scattering Studies on Hydration Water in Phospholipid
Membranes*
Frontiers in Chemistry, (2020).

<https://doi.org/10.3389/fchem.2020.00008>

MLF : BL02

- 6 *Quasi-elastic neutron scattering study of the effects of metal cations on the hydration water between phospholipid bilayers*
Applied Physics Letters, (2020).
<https://doi.org/10.1063/1.5144012>
MLF : BL02
- 7 Shin-ichi Shamoto, Yukio Yasui, Masato Matsuura, Mitsuhiro Akatsu, Yoshiaki Kobayashi, Yuichi Nemoto, Jun'ichi Ieda
Ultralow-energy magnon anomaly in yttrium iron garnet
Physical Review Research, **2**, (2020).
<https://doi.org/10.1103/physrevresearch.2.033235>
MLF : BL02
- 8 Rintaro Inoue, Takashi Oda, Hiroshi Nakagawa, Taiki Tominaga, Tomohide Saio, Yukinobu Kawakita, Masahiro Shimizu, Aya Okuda, Ken Morishima, Nobuhiro Sato, Reiko Urade, Mamoru Sato, Masaaki Sugiyama
Dynamics of proteins with different molecular structures under solution condition
Scientific Reports, **10**, (2020).
<https://doi.org/10.1038/s41598-020-78311-4>
MLF : BL02
- 9 Kazuhiro Mori, Atsushi Mineshige, Takashi Saito, Maiko Sugiura, Yoshihisa Ishikawa, Fumika Fujisaki, Kaoru Namba, Takashi Kamiyama, Toshiya Otomo, Takeshi Abe, Toshiharu Fukunaga
Experimental Visualization of Interstitialcy Diffusion Pathways in Fast-Fluoride-Ion-Conducting Solid Electrolyte Ba_{0.6}La_{0.4}F_{2.4}
ACS Applied Energy Materials, **3**, 2873, (2020).
<https://doi.org/10.1021/acsaem.9b02494>
MLF : BL09
- 10 Peng Wu, Fengren Fan, Masato Hagihara, Maiko Kofu, Kunling Peng, Yoshihisa Ishikawa, Sanghyun Lee, Takashi Honda, Masao Yonemura, Kazutaka Ikeda, Toshiya Otomo, Guoyu Wang, Kenji Nakajima, Zhe Sun, Takashi Kamiyama

Strong lattice anharmonicity exhibited by the high-energy optical phonons in thermoelectric material

New Journal of Physics , (2020).

<https://doi.org/10.1088/1367-2630/aba98f>

MLF : BL09, BL14, BL21

- 11 Hiroyuki Saitoh, Akihiko Machida, Riko Iizuka-Oku, Takanori Hattori, Asami Sano-Furukawa, Ken-ichi Funakoshi, Toyoto Sato, Shin-ichi Orimo, Katsutoshi Aoki
Crystal and Magnetic Structures of Double Hexagonal Close-Packed Iron Deuteride
SCIENTIFIC REPORTS, **10**, (2020).

<https://doi.org/10.1038/s41598-020-66669-4>

MLF : BL11

- 12 S. Klotz, K. Komatsu, A. Polian, S. Machida, A. Sano-Furukawa, J. P. Itié, T. Hattori
Crystal structure and magnetism of MnO under pressure
Physical Review B, **101**, (2020).

<https://doi.org/10.1103/PhysRevB.101.064105>

MLF : BL11

- 13 Kazuki Komatsu, Stefan Klotz, Satoshi Nakano, Shinichi Machida, Takanori Hattori, Asami Sano-Furukawa, Keishiro Yamashita, Tetsuo Irifune
Developments of nano-polycrystalline diamond anvil cells for neutron diffraction experiments
High Pressure Research, (2020).

<https://doi.org/10.1080/08957959.2020.1727465>

MLF : BL11

- 14 K. Iida, M. Kofu, K. Suzuki, N. Murai, S. Ohira-Kawamura, R. Kajimoto, Y. Inamura, M. Ishikado, S. Hasegawa, T. Masuda, Y. Yoshida, K. Kakurai, K. Machida, S.-H. Lee
Horizontal line nodes in Sr₂RuO₄ proved by spin resonance
J. Phys. Soc. Jpn., **89**, 053702, (2020).

<https://doi.org/10.7566/JPSJ.89.053702>

MLF : BL14

- 15 Tomokazu Yoshimura, Nara-Karyn Kawano, Shiho Yada, Hiroki Iwase
Adsorption and Aggregation Properties of Gemini-Type Amphiphilic Dendrimers.

Langmuir : the ACS journal of surfaces and colloids, **36**, 563, (2020).

<https://doi.org/10.1021/acs.langmuir.9b02506>

MLF : BL15

- 16 Tomoki Nishimura,Liliana de Campo,Hiroki Iwase,Kazunari Akiyoshi
Determining the Hydration in the Hydrophobic Layer of Permeable Polymer Vesicles by Neutron Scattering
Macromolecules, (2020).
<https://doi.org/10.1021/acs.macromol.0c01261>
MLF : BL15

- 17 Y. Araki,T. Sato,Y. Fujima,N. Abe,M. Tokunaga,S. Kimura,D. Morikawa,V. Ukleev,Y. Yamasaki,C. Tabata,H. Nakao,Y. Murakami,H. Sagayama,K. Ohishi,Y. Tokunaga,T. Arima
Metamagnetic transitions and magnetoelectric responses in the chiral polar helimagnet Ni₂InSbO₆
Physical Review B, **102**, 054409-1, (2020).
<https://doi.org/10.1103/physrevb.102.054409>
MLF : BL15

- 18 Masahiro Kawano,Koichiro Sadakane,Hiroki Iwase,Masaru Matsugami,Bogdan A Marekha,Abdenacer Idrissi,Toshiyuki Takamuku
Mixing states of imidazolium-based ionic liquid, [C₄mim][TFSI], with cycloethers studied by SANS, IR, and NMR experiments and MD simulations.
Physical chemistry chemical physics : PCCP, **22**, 5332, (2020).
<https://doi.org/10.1039/c9cp05258e>
MLF : BL15

- 19 Caidric Indaya Gupit,Xiang Li,Ryosuke Maekawa,Naoki Hasegawa,Hiroki Iwase,Shinichi Takata,Mitsuhiro Shibayama
Nanostructures and Viscosities of Nafion Dispersions in Water/Ethanol from Dilute to Concentrated Regimes
Macromolecules, **53**, 1464, (2020).
<https://doi.org/10.1021/acs.macromol.9b02314>
MLF : BL15

- 20 Masashi Ohira, Yui Tsuji, Nobuyuki Watanabe, Ken Morishima, Elliot P. Gilbert, Xiang Li, Mitsuhiro Shibayama
Quantitative Structure Analysis of a Near-Ideal Polymer Network with Deuterium Label by Small-Angle Neutron Scattering
Macromolecules, **53**, 4047, (2020).
<https://doi.org/10.1021/acs.macromol.9b02695>
MLF : BL15
- 21 Satoshi Kajiyama, Hiroki Iwase, Masanari Nakayama, Rino Ichikawa, Daisuke Yamaguchi, Hideki Seto, Takashi Kato
Shear-induced liquid-crystalline phase transition behaviour of colloidal solutions of hydroxyapatite nanorod composites.
Nanoscale, **12**, 11468, (2020).
<https://doi.org/10.1039/c9nr10996j>
MLF : BL15
- 22 Tadashi Sugahara, Masaaki Akamatsu, Hiroki Iwase, Yuichiro Takamatsu, Kenichi Sakai, Hideki Sakai
Structural Change of an α -Gel (α -Form Hydrated Crystal) Induced by Temperature and Shear Flow in an Oleic Acid Based Gemini Surfactant System.
Langmuir : the ACS journal of surfaces and colloids, **36**, 4695, (2020).
<https://doi.org/10.1021/acs.langmuir.0c00507>
MLF : BL15
- 23 Keisuke Shiino, Toshiya Otomo, Takeshi Yamada, Hiroshi Arima, Kosuke Hiroi, Shinichi Takata, Junpei Miyake, Kenji Miyatake
Structural Investigation of Sulfonated Polyphenylene Ionomers for the Design of Better Performing Proton-Conductive Membranes
ACS Applied Polymer Materials, **2**, 5558, (2020).
<https://doi.org/10.1021/acsapm.0c00895>
MLF : BL15
- 24 Tsukasa Miyazaki, Noboru Miyata, Tessei Yoshida, Hiroshi Arima, Yoshihiro Tsumura, Naoya Torikai, Hiroyuki Aoki, Katsuhiko Yamamoto, Toshiji Kanaya, Daisuke Kawaguchi, Keiji Tanaka
Detailed Structural Study on the Poly(vinyl alcohol) Adsorption Layers on a Si

Substrate with Solvent Vapor-Induced Swelling
Langmuir, **36**, 3415, (2020).

<https://doi.org/10.1021/acs.langmuir.9b03964>

MLF : BL17

- 25 Yoshifumi Sakaguchi, Takayasu Hanashima, Al Amin Ahmed Simon, Maria Mitkova
Excitation Light Energy Dependence of Silver Photodiffusion into Amorphous Germanium Sulfide: Neutron and X-Ray Reflectivity and X-Ray Diffraction
Physica Status Solidi (B) Basic Research, **257**, (2020).

<https://doi.org/10.1002/pssb.202000178>

MLF : BL17

他施設 : AIST (XRR, XRD)

- 26 Hiroshi Arima-Osonoi, Noboru Miyata, Tessei Yoshida, Satoshi Kasai, Keiichi Ohuchi, Shuoyuan Zhang, Tsukasa Miyazaki, Hiroyuki Aoki
Gas-flow humidity control system for neutron reflectivity measurements
Review of Scientific Instruments, **91**, 104103, (2020).

<https://doi.org/10.1063/5.0021128>

MLF : BL17

- 27 Atsushi Izumi, Yasuyuki Shudo, Mitsuhiro Shibayama, Tessei Yoshida, Noboru Miyata, Tsukasa Miyazaki, Hiroyuki Aoki
Interfacial Cross-Link Inhomogeneity of a Phenolic Resin on a Silica Surface As Revealed by X-ray and Neutron Reflection Measurements
Macromolecules, **53**, 4082, (2020).

<https://doi.org/10.1021/acs.macromol.0c00398>

MLF : BL17

- 28 Yoshifumi Sakaguchi, Takayasu Hanashima, Al Amin Ahmed Simon, Maria Mitkova
Silver photodiffusion into amorphous Ge chalcogenides
EPJ Applied Physics, **90**, (2020).

<https://doi.org/10.1051/epjap/2020190368>

MLF : BL17

- 29 Kazuhiro Akutsu-Suyama, Hiroshi Kira, Noboru Miyata, Takayasu Hanashima, Tsukasa Miyazaki, Satoshi Kasai, Dai Yamazaki, Kazuhiko

Soyama,Hiroyuki Aoki

Fine-Structure Analysis of Perhydropolysilazane-Derived Nano Layers in Deep-Buried Condition Using Polarized Neutron Reflectometry

Polymers, **12**, 2180, (2020).

<https://doi.org/10.3390/POLYM12102180>

MLF : BL17, LabCROSS

- 30 Mai Komabuchi,Daisuke Urushihara,Toru Asaka,Koichiro Fukuda,Takashi

Ohhara,Koji Munakata,Yoshihisa Ishikawa

Crystal Structure and Cation Distribution of the X-type Hexaferrite

Sr₂Co₂Fe₂₈O₄₆

Journal of the Physical Society of Japan, **89**, 034601, (2020).

<https://doi.org/10.7566/jpsj.89.034601>

MLF : BL18

- 31 Shigenori Utsumi,Seiya Tanaka,Kenichi Maruyama,Nao Hatakeyama,Kenichi

Itoh,Jun Koike,Akihiro Horikawa,Hiroki Iriyama,Hajime Kanamaru,Yasushi

Amako,Taku Iiyama,Ryusuke Futamura,Ryoji Kiyonagi,Akiko Nakao,Kentaro

Moriyama,Yoshihisa Ishikawa,Nobuyuki Momozawa

Flux Growth and Magnetic Properties of Helimagnetic Hexagonal Ferrite Ba(Fe_{1-x}Sc_x)₁₂O₁₉Single Crystals

ACS Omega, **5**, 24890, (2020).

<https://doi.org/10.1021/acsomega.0c03671>

MLF : BL18

- 32 Shinichiro Asai,Takuma Oyama,Kazuhiro Nawa,Akiko Nakao,Koji Munakata,Keitaro

Kuwahara,Masato Hagihala,Shinichi Itoh,Zenji Hiroi,Takatsugu Masuda

Helical and collinear spin density wave order in the S= 12 one-dimensional

frustrated chain compound NaCuMoO₄(OH) investigated by neutron scattering

Physical Review B, **101**, 144437, (2020).

<https://doi.org/10.1103/PhysRevB.101.144437>

MLF : BL18

- 33 Tatsuki Sato,Yusuke Araki,Atsushi Miyake,Akiko Nakao,Nobuyuki Abe,Masashi

Tokunaga,Shojiro Kimura,Yusuke Tokunaga,Taka Hisa Arima

Magnetic phase diagram enriched by chemical substitution in a

noncentrosymmetric helimagnet

Physical Review B, **101**, 054414, (2020).

<https://doi.org/10.1103/PhysRevB.101.054414>

MLF : BL18

- 34 Kenshirou Iba, Takeshi Matsumura, Akiko Nakao, Yoshihisa Ishikawa, Kazuki Ohishi, Ryoji Kiyonagi, Yusuke Kousaka, Shigeo Ohara
Magnetic Structure of a Chiral Magnet DyNi₃Al₉
JPS Conf. Proc. Proceedings of the International Conference on Strongly Correlated Electron Systems (SCES2019), **30**, 011164-1, (2020).
<https://doi.org/10.7566/jpscp.30.011164>
MLF : BL18
- 35 N. Abe, S. Shiozawa, K. Matsuura, H. Sagayama, A. Nakao, T. Ohhara, Y. Tokunaga, T. Arima
Magnetically induced electric polarization in Ba₃Fe₂O₅Cl₂ with tunable direction in three dimensions
Physical Review B, **101**, 180407, (2020).
<https://doi.org/10.1103/PhysRevB.101.180407>
MLF : BL18
- 36 Shugo Ikeda, Koji Kaneko, Yuki Tanaka, Takuro Kawasaki, Takayasu Hanashima, Koji Munakata, Akiko Nakao, Ryoji Kiyonagi, Takashi Ohhara, Kenji Mochizuki, Akihiro Kondo, Koichi Kindo, Yoshiya Homma, Matthias D. Frontzek, Hisao Kobayashi
Multi-step magnetic transitions in EuNiIn₄
Journal of the Physical Society of Japan, **89**, 014707, (2020).
<https://doi.org/10.7566/JPSJ.89.014707>
MLF : BL18
- 37 V. Sonnenschein, Y. Tsuji, S. Kokuryu, W. Kubo, S. Suzuki, H. Tomita, Y. Kiyonagi, T. Iguchi, T. Matsushita, N. Wada, M. Kitaguchi, H. M. Shimizu, K. Hirota, T. Shinohara, K. Hiroi, H. Hayashida, W. Guo, D. Ito, Y. Saito
An experimental setup for creating and imaging 4 He 2 excimer cluster tracers in superfluid helium-4 via neutron-3He absorption reaction*
Review of Scientific Instruments, **91**, (2020).
<https://doi.org/10.1063/1.5130919>

MLF : BL22

- 38 Y. Matsumoto, K. Watanabe, K. Ohmae, A. Uritani, Y. Kiyonagi, H. Sato, M. Ohnuma, A. H. Pham, S. Morito, T. Ohba, K. Oikawa, T. Shinohara, T. Kai, S. Harjo, M. Ito
Comparative study of ancient and modern Japanese swords using neutron tomography
Materials Research Proceedings, **15**, 221, (2020).
<https://doi.org/10.21741/9781644900574-34>

MLF : BL22

- 39 H. Sato, Y. Kiyonagi, K. Oikawa, K. Ohmae, A. H. Pham, K. Watanabe, Y. Matsumoto, T. Shinohara, T. Kai, S. Harjo, M. Ohnuma, S. Morito, T. Ohba, A. Uritani, M. Ito
Crystallographic microstructure study of a Japanese sword made by Noritsuna in the Muromachi period by pulsed neutron Bragg-edge transmission imaging
Materials Research Proceedings, **15**, 214, (2020).
<https://doi.org/10.21741/9781644900574-33>

MLF : BL22

- 40 K. Ohmae, Y. Kiyonagi, H. Sato, K. Oikawa, A. H. Pham, K. Watanabe, Y. Matsumoto, T. Shinohara, T. Kai, S. Harjo, M. Ohnuma, S. Morito, T. Ohba, A. Uritani, M. Ito
Crystallographic structure study of a Japanese sword Masamitsu made in the 1969 using pulsed neutron imaging
Materials Research Proceedings, **15**, 227, (2020).
<https://doi.org/10.21741/9781644900574-35>

MLF : BL22

- 41 Eita Shoji, Shosei Isogai, Rikuto Suzuki, Masaki Kubo, Takao Tsukada, Tetsuya Kai, Takenao Shinohara, Yoshihiro Matsumoto, Hiroyuki Fukuyama
Neutron computed tomography of phase separation structures in solidified CuCo alloys and investigation of relationship between the structures and melt convection during solidification
Scripta Materialia, **175**, 29, (2020).
<https://doi.org/10.1016/j.scriptamat.2019.08.041>

MLF : BL22

- 42 K. Oikawa, Y. Kiyonagi, H. Sato, K. Ohmae, A. H. Pham, K. Watanabe, Y. Matsumoto, T.

Shinohara, T. Kai, S. Harjo, M. Ohnuma, S. Morito, T. Ohba, A. Uritani, M. Ito
Pulsed neutron imaging based crystallographic structure study of a Japanese sword made by Sukemasa in the Muromachi period
Materials Research Proceedings, **15**, 207, (2020).
<https://doi.org/10.21741/9781644900574-32>

MLF : BL22

- 43 Takenao Shinohara, Tetsuya Kai, Kenichi Oikawa, Takeshi Nakatani, Mariko Segawa, Kosuke Hiroi, Yuhua Su, Motoki Ooi, Masahide Harada, Hiroshi Iikura, Hirotohi Hayashida, Joseph D Parker, Yoshihiro Matsumoto, Takashi Kamiyama, Hirotaka Sato, Yoshiaki Kiyanagi
The energy-resolved neutron imaging system, RADEN.
The Review of scientific instruments, **91**, 043302, (2020).
<https://doi.org/10.1063/1.5136034>

MLF : BL22

- 44 Izumi Umegaki, Yuki Higuchi, Yasuhito Kondo, Kazuhiko Ninomiya, Soshi Takeshita, Motonobu Tampo, Hiroyuki Nakano, Hideaki Oka, Jun Sugiyama, Michael K. Kubo, Yasuhiro Miyake
Nondestructive High-Sensitivity Detections of Metallic Lithium Deposited on a Battery Anode Using Muonic X-rays
Analytical Chemistry, **92**, 8194, (2020).
<https://doi.org/10.1021/acs.analchem.0c00370>

MLF : D2

- 45 Nami Matsubara, Titus Masese, Emmanuelle Suard, Ola Kenji Forslund, Elisabetta Nocerino, Rasmus Palm, Zurab Guguchia, Daniel Andreica, Alexandra Hardut, Motoyuki Ishikado, Konstantinos Papadopoulos, Yasmine Sassa, Martin Månsson
Cation Distributions and Magnetic Properties of Ferrispinel MgFeMnO₄
Inorganic Chemistry, **59**, 17970, (2020).
<https://doi.org/10.1021/acs.inorgchem.0c02241>

MLF : LabCROSS

- 46 Hiroki Yamauchi, Dita Puspita Sari, Isao Watanabe, Yukio Yasui, Lieh-Jeng Chang, Keietsu Kondo, Takashi U. Ito, Motoyuki Ishikado, Masato Hagihara, Matthias

D. Frontzek, Songxue Chi, Jaime A. Fernandez-Baca, James S. Lord, Adam Berlie, Atsuhiko Kotani, Shigeo Mori, Shin-ichi Shamoto

High-temperature short-range order in Mn₃RhSi

Communications Materials, **1**, (2020).

<https://doi.org/10.1038/s43246-020-0042-1>

MLF : LabCROSS

他施設 : HFIR (ORNL) , ISIS

- 47 Takashi Uchino, Nanami Teramachi, Ryosuke Matsuzaki, Emi Tsushima, Shusuke Fujii, Yusuke Seto, Kazuyuki Takahashi, Takao Mori, Yutaka Adachi, Yukihito Nagashima, Yoshifumi Sakaguchi, Kazuki Ohishi, Akihiro Koda, Takahiro Sakurai, Hitoshi Ohta

Proximity coupling of superconducting nanograins with fractal distributions

Physical Review B, **101**, 035146-1, (2020).

<https://doi.org/10.1103/PhysRevB.101.035146>

MLF : S1

他施設 : ANSTO, NSRRC(Taiwan)

- 48 T. Okudaira, T. Oku, T. Ino, H. Hayashida, H. Kira, K. Sakai, K. Hiroi, S. Takahashi, K. Aizawa, H. Endo, S. Endo, M. Hino, K. Hirota, T. Honda, K. Ikeda, K. Kakurai, W. Kambara, M. Kitaguchi, T. Oda, H. Ohshita, T. Otomo, H.M. Shimizu, T. Shinohara, J. Suzuki, T. Yamamoto

Development and application of a ³He neutron spin filter at J-PARC

Nucl. Instr. and Methods in Phys. Res. Sec. A, **977**, 164301, (2020).

<https://doi.org/10.1016/j.nima.2020.164301>

MLF : 共通技術, BL04, BL06, BL10, BL15, BL17, BL21

- 49 Xin Huang, Shintaro Nakagawa, Xiang Li, Mitsuhiro Shibayama, Naoko Yoshie
A Simple and Versatile Method for the Construction of Nearly Ideal Polymer Networks

Angewandte Chemie, (2020).

<https://doi.org/10.1002/ange.202001271>

- 50 Tsuyoshi TAKAMI, Yoshihisa ISHIKAWA, Masao YONEMURA, Toshiharu FUKUNAGA, Eiichiro MATSUBARA, Takeshi ABE

Crystal structure, ionic conductivity and lithium-ion diffusion pathway in a La-Li-

Co–O system

Journal of the Ceramic Society of Japan, **128**, 453, (2020).

<https://doi.org/10.2109/jcersj2.19233>

- 51 Al Amin Ahmed Simon, Lyle Jones, Yoshifumi Sakaguchi, Henri Kunold, Isabella van Rooyen, Maria Mitkova
Effect of Ion Irradiation on Amorphous and Crystalline Ge–Se and Their Application as Phase Change Temperature Sensor
Physica Status Solidi (B) Basic Research, (2020).
<https://doi.org/10.1002/pssb.202000429>
- 52 Masato Matsuura, Takahiko Sasaki, Satoshi Iguchi, Elena Gati, Jens Müller, Oliver Stockert, Andrea Piovano, Martin Böhm, Jitae T. Park, Sananda Biswas, Stephen M. Winter, Roser Valentí, Akiko Nakao, Michael Lang
Erratum: Lattice Dynamics Coupled to Charge and Spin Degrees of Freedom in the Molecular Dimer-Mott Insulator $\kappa - F_2Cu [N(CN)_2] Cl$ (Physical Review Letters (2019) 123 (027601) DOI: 10.1103/PhysRevLett.123.027601)
Physical Review Letters, **125**, 239901, (2020).
<https://doi.org/10.1103/PhysRevLett.125.239901>
- 53 H. Masuda, H. Sakai, H. Takahashi, Y. Yamasaki, A. Nakao, T. Moyoshi, H. Nakao, Y. Murakami, T. Arima, S. Ishiwata
Field-induced spin reorientation in the antiferromagnetic Dirac material $EuMnBi_2$ revealed by neutron and resonant x-ray diffraction
Physical Review B, **101**, 174411, (2020).
<https://doi.org/10.1103/physrevb.101.174411>
- 54 Kazuki Komatsu, Shinichi Machida, Fumiya Noritake, Takanori Hattori, Asami Sano-Furukawa, Ryo Yamane, Keishiro Yamashita, Hiroyuki Kagi
Ice Ic without stacking disorder by evacuating hydrogen from hydrogen hydrate
Nature Communications, **11**, (2020).
<https://doi.org/10.1038/s41467-020-14346-5>
- 55 Ola Kenji Forslund, Konstantinos Papadopoulos, Elisabetta Nocerino, Gerald Morris, Bassam Hitti, Donald Arseneau, Vladimir Pomjakushin, Nami Matsubara, Jean-Christophe Orain, Peter Svedlindh, Daniel Andreica, Somnath Jana, Jun

Sugiyama, Martin Månsson, Yasmine Sassa
Intertwined magnetic sublattices in the double perovskite compound LaSrNiReO6
Physical Review B, **102**, 144409-1, (2020).
<https://doi.org/10.1103/physrevb.102.144409>

56 John O. Ticknor, Izumi Umegaki, Ryan M. L. McFadden, Aris Chatzichristos, Derek Fujimoto, Victoria L. Karner, Robert F. Kiefl, Shintaro Kobayashi, C. D. Philip Levy, Ruohong Li, Gerald D. Morris, Matthew R. Pearson, Kazuyoshi Yoshimura, Jun Sugiyama, W. Andrew MacFarlane
Investigation of ionic and anomalous magnetic behavior in CrSe2 using 8Li β -NMR
RSC Advances, **10**, 8190, (2020).

57 Tsukasa Miyazaki, Takeshi Yamada
Invitation to soft matter neutron scattering studies - Hierarchical structures of water domains in materials related to their functions
Journal of Fiber Science and Technology, **76**, P180, (2020).
<https://doi.org/10.2115/FIBER.76.P-180>

58 Jun Sugiyama, Ola Kenji Forslund, Elisabetta Nocerino, Nami Matsubara, Konstantinos Papadopoulos, Yasmine Sassa, Stephen P. Cottrell, Adrian D. Hillier, Katsuhiko Ishida, Martin Månsson, Jess H. Brewer
Lithium diffusion in LiMnPO4 detected with $\mu\pm$ SR
Physical Review Research, **2**, 033161-1, (2020).
<https://doi.org/10.1103/physrevresearch.2.033161>

59 Jun Sugiyama, Daniel Andreica, Ola Kenji Forslund, Elisabetta Nocerino, Nami Matsubara, Yasmine Sassa, Zurab Guguchia, Rustem Khasanov, Francis L. Pratt, Hiroyuki Nakamura, and Martin Månsson
Magnetic phase boundary of BaVS3 clarified with high-pressure μ +SR
Physical Review B, **101**, 174403-1, (2020).

60 Nami Matsubara, Elisabetta Nocerino, Ola Kenji Forslund, Anton Zubayer, Konstantinos Papadopoulos, Daniel Andreica, Jun Sugiyama, Rasmus Palm, Zurab Guguchia, Stephen P. Cottrell, Takashi Kamiyama, Takashi Saito, Alexei Kalaboukhov, Yasmine Sassa, Titus Masese, Martin Månsson
Magnetism and ion diffusion in honeycomb layered oxide K2Ni2TeO6

Scientific Reports, **10**, 18305-1, (2020).

<https://doi.org/10.1038/s41598-020-75251-x>

- 61 N. Matsubara, E. Nocerino, K. Kamazawa, O. K. Forslund, Y. Sassa, L. Keller, V. V. Sikolenko, V. Pomjakushin, H. Sakurai, J. Sugiyama, M. Månsson
Neutron powder diffraction study of NaMn₂O₄ and Li_{0.92}Mn₂O₄: Insights on spin-charge-orbital ordering
Physical Review Research, **2**, 043143-1, (2020).
<https://doi.org/10.1103/physrevresearch.2.043143>
- 62 Tsukasa Miyazaki, Keisuke Shimokita, Katsuhiro Yamamoto, Hiroyuki Aoki, Norifumi L. Yamada, Noboru Miyata
Neutron Reflectivity on the Mobile Surface and Immobile Interfacial Layers in the Poly(vinyl acetate) Adsorption Layer on a Si Substrate with Deuterated Toluene Vapor-Induced Swelling
Langmuir, **36**, 15181, (2020).
<https://doi.org/10.1021/acs.langmuir.0c03025>
- 63 Jun Sugiyama, Izumi Umegaki, Soshi Takeshita, Hiroya Sakurai, Shoichiro Nishimura, Ola Kenji Forslund, Elisabetta Nocerino, Nami Matsubara, Martin Månsson, Takehito Nakano, Ichihiko Yamauchi, Kazuhiko Ninomiya, M. Kenya Kubo, Koichiro Shimomura
Nuclear magnetic field in Na_{0.7}CoO₂ detected with μ -SR
Physical Review B, **102**, 144431-1, (2020).
<https://doi.org/10.1103/physrevb.102.144431>
- 64 Al Amin Ahmed Simon, Bahareh Badamchi, Harish Subbaraman, Yoshifumi Sakaguchi, Maria Mitkova
Phase change in Ge-Se chalcogenide glasses and its implications on optical temperature-sensing devices
Journal of Materials Science: Materials in Electronics, **31**, 11211, (2020).
<https://doi.org/10.1007/s10854-020-03669-0>
- 65 Yoshifumi Sakaguchi, Kozaburo Tamura
Photo-induced effects on amorphous and liquid selenium by pulsed laser illumination: Photo-induced structural changes in a network of selenium chains

Zeitschrift für Physikalische Chemie, (2020).

<https://doi.org/10.1515/zpch-2020-1650>

他施設：京都大学 (Nd: YAG Laser)

- 66 K.Moriyama,T.Nakatani
Public Cloud-based Remote Access Infrastructure for Neutron Scattering Experiments at MLF, J-PARC
Proceedings of the 17th International Conference on Accelerator and Large Experimental Physics Control Systems (ICALEPCS2019), (2020).
- 67 Takuma Kureha,Seina Hiroshige,Daisuke Suzuki,Jun Sawada,Daisuke Aoki,Toshikazu Takata,Mitsuhiro Shibayama
Quantification for the Mixing of Polymers on Microspheres in Water-borne Latex Films
Langmuir, (2020).
<https://doi.org/10.1021/acs.langmuir.0c00612>
- 68 Kengo Arai,Yoshiki Horikawa,Toshiyuki Shikata,Hiroki Iwase
Reconsideration of the conformation of methyl cellulose and hydroxypropyl methyl cellulose ethers in aqueous solution
RSC Advances, **10**, 19059, (2020).
<https://doi.org/10.1039/d0ra03437a>
- 69 Ola Kenji Forslund,Hiroto Ohta,Kazuya Kamazawa,Scott L. Stubbs,Oren Ofer,Martin Månsson,Chishiro Michioka,Kazuyoshi Yoshimura,Bassam Hitti,Donald Arseneau,Gerald D. Morris,Eduardo J. Ansaldo,Jess H. Brewer,Jun Sugiyama
Revisiting the A-type antiferromagnet NaNiO₂ with muon spin rotation measurements and density functional theory calculations
Physical Review B, **102**, 184412-1, (2020).
<https://doi.org/10.1103/physrevb.102.184412>
- 70 N. Katayama,H. Takeda,T. Yamaguchi,Y. Yamada,K. Iida,M. Takigawa,Y. Ohta,H. Sawa
Robust atomic orbital in the cluster magnet LiMoO₂
Phys. Rev. B, **102**, 081106(R), (2020).
<https://doi.org/10.1103/PhysRevB.102.081106>

他施設：あいちシンクロトロン

- 71 Zhijian Tan, Ping Miao, Masato Hagihala, Sanghyun Lee, Yoshihisa Ishikawa, Shuki Torii, Masao Yonemura, Takashi Saito, Sihao Deng, Jie Chen, Lunhua He, Rong Du, Junrong Zhang, Haisheng Li, Junliang Sun, Yingxia Wang, Xiaohuan Lin, Kuo Li, Takashi Kamiyama
Room Temperature Zero Thermal Expansion in a Cubic Cobaltite
The Journal of Physical Chemistry Letters, (2020).
<https://doi.org/10.1021/acs.jpcllett.0c01919>
- 72 Hiromasa Uchiyama, Mayu Dowaki, Kazunori Kadota, Hiroshi Arima, Kazumasa Sugiyama, Yuichi Tozuka
Single-stranded β -1,3-1,6-glucan as a carrier for improved dissolution and membrane permeation of poorly water-soluble compounds
Carbohydrate Polymers, **247**, 116698, (2020).
<https://doi.org/10.1016/j.carbpol.2020.116698>
他施設：東北大学金属材料研究所
- 73 Tadao Nishiyama, Hibiki Eguchi, Dai Shiosaki, Akira Yoshiasa, Nobutatsu Mochizuki, Yasushi Mori, Kazumasa Sugiyama, Hiroshi Arima, Kunio Yubuta
Spinifex-like textured metaperidotites from the Higo Metamorphic Rocks, Japan, a possible high-pressure dehydration product of antigorite serpentinite
Island Arc, **30**, (2020).
<https://doi.org/10.1111/iar.12382>
- 74 Seiya Nakazato, Kazuaki Iwasa, Daisuke Hashimoto, Mami Shiozawa, Keitaro Kuwahara, Hironori Nakao, Hajime Sagayama, Motoyuki Ishikado, Takashi Ohhara, Akiko Nakao, Koji Munakata, Ryoji Kiyonagi
Successive Phase Transitions in $R_3\text{Ir}_4\text{Sn}_{13}$ (R: La and Ce) Investigated Using Neutron and X-ray Diffraction
JPS Conf. Proc., **30**, 011128, (2020).
<https://doi.org/10.7566/jpscpc.30.011128>
- 75 Daitaro KITAHARA, Hiroshi ARIMA, Toru KAWAMATA, Kazumasa SUGIYAMA, Takashi MIKOUCHI
The location of Mn and Fe in axinite-(Fe) from Nandan, China determined by

anomalous X-ray scattering (AXS)

Journal of Mineralogical and Petrological Sciences, **115**, 227, (2020).

<https://doi.org/10.2465/jmps.190110>

他施設 : KEK 物構研 PF

- 76 Etsuo A Susaki, Chika Shimizu, Akihiro Kuno, Kazuki Tainaka, Xiang Li, Kengo Nishi, Ken Morishima, Hiroaki Ono, Koji L Ode, Yuki Saeki, Kazunari Miyamichi, Kaoru Isa, Chihiro Yokoyama, Hiroki Kitaura, Masako Ikemura, Tetsuo Ushiku, Yoshihiro Shimizu, Takashi Saito, Takaomi C Saido, Masashi Fukayama, Hiroataka Onoe, Kazushige Touhara, Tadashi Isa, Akiyoshi Kakita, Mitsuhiro Shibayama, Hiroki R Ueda

Versatile whole-organ/body staining and imaging based on electrolyte-gel properties of biological tissues.

Nature communications, **11**, 1982, (2020).

<https://doi.org/10.1038/s41467-020-15906-5>

- 77 Naoki Nakamura, Ryuji Higashinaka, Kengo Fushiya, Ryo Tsubota, Takashi U. Ito, Wataru Higemoto, Akiko Nakao, Ryoji Kiyanagi, Takashi Ohhara, Koji Kaneko, Tatsuma D. Matsuda, Yuji Aoki
- μ SR and Neutron Scattering Studied on Possible Partially-Disordered Magnetic State Coexisting with Heavy Quasiparticles in SmPt₂Si₂*
- JPS Conf. Proc.*, **29**, 012009, (2020).

<https://doi.org/10.7566/jpscp.29.012009>