Thu. Sep 12, 2024

Poster presentation | S1: Dynamics of igneous processes (Special Session)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC | Entrance Hall Higashiyama Campus

S1: Dynamics of igneous processes (Special Session)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[S1-P-01] Oxidation states of HIMU-type ocean island basalts: Insights from μ-XANES analysis of quenched glasses and melt inclusions

*Yuuki HAGIWARA[1], Hidemi Ishibashi[2], Takeshi Hanyu[1] (1. Japan Agency for Marine-Earth Science and Technology, 2. Shizuoka Univ.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[S1-P-02] The composition and pressure of the fluid in crystal mush estimated from cordierite in tonalitic polycrystalline volcanic ejecta

*Shumpei YOSHIMURA[1] (1. Hokkaido University)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[S1-P-03] Geochemical evolution of Izu-Oshima volcano: Constraints from analysis of melt inclusions in a submarine core

*Morihisa HAMADA[1], Erika TANAKA[2], Takeshi HANYU[1], Kenji SHIMIZU[3], Takayuki USHIKUBO[2], Qing CHANG[1], Yoshihiko TAMURA[1] (1. IMG, JAMSTEC , 2. Marine Core Research Institute, Kochi Univ. , 3. Kochi Institute for Core Sample Research, JAMSTEC)

Poster presentation | S3: Rheology and Material Transfer in Mantle and Crust (Special Session)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC | Entrance Hall Higashiyama Campus

S3: Rheology and Material Transfer in Mantle and Crust (Special Session)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[S3-P-01] Preliminary results of deformation experiments on hydrous stishovite using a rotational DAC

*Shintaro AZUMA[1], Keishi Okazaki[2], Kentaro Uesugi[3], Masahiro Yasutake[3], Steeve Gréaux[4], Yoshiyuki Okuda[1,5], Bunrin Natsui[1], Eranga Jayawickrama[2], Kenji Ohta[1] (1. Tokyo Tech., 2. Hiroshima Univ., 3. JASRI, 4. Ehime Univ., 5. University of Hawai'i)

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[S3-P-02] Water weakening of Mg_2SiO_4 ringwoodite

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*Yuta Goto[1], Tomoaki Kubo[1], Rikuto Honda[1], Yuki Shibazaki[2] (1. Kyushu Univ., 2. KEK-PF)

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[S3-P-03] Toward an understanding of dehydration process of partially serpentinized slab peridotite under conditions where deep earthquakes occur

*Tomoaki KUBO[1], Musashi Ezaki[1], Nobumasa Fujiwara[1], Rikuto Honda[1], Goto Yuta[1], Noriyoshi Tsujino[2] (1. Kyushu University, 2. JASRI)

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[S3-P-04] Viscous anisotropy of olivine aggregates using micro Vickers indentation tests

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*Namu Fujii[1], Miki Tasaka[1] (1. Shizuoka University)

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[S3-P-05] Crystal-fabric analysis using principal component analysis method for the Horoman peridotite

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*Kazuki Matsuyama[1], Katsuyoshi Michibayashi[1] (1. Nagoya Univ. Env.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[S3-P-06] Traces of mantle fluid/melt within olivine phenocrysts from Ohima-Ōshima picritic basalts

*Ryo Tsukawaki[1], Terumi Ejima[2], Atusi Ninomiya[3], Shoji Arai[4] (1. Shinshu Univ. Sci., 2. Shinshu Univ. Sci. , 3. Sumiko Res. Exp. & Dev. Co., 4. Kanazawa Univ.)

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[S3-P-07] Microstructural characteristics of ultramafic rocks in the Tosa Megamullion, the Shikoku Basin.

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*So Inoue[1], Katsuyoshi Michibayashi[1,2], Yumiko Harigane[3], Yasuhiko Ohara[1,2,4] (1. GSES, Nagoya Univ. , 2. JAMSTEC, 3. GSJ/AIST, 4. JCG)

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[S3-P-08] Deformation microstructures of granitic mylonite in Hida Metamorphic Belt

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*Masaaki Horie[1], Katsuyoshi Michibayashi[1] (1. GSES. Nagoya Univ.)

Poster presentation | R1: Characterization and description of minerals (Joint Session with The Gemmological Society of Japan)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC | Entrance Hall Higashiyama Campus

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[R1-P-01] Chemical quantitative analysis of heulandite using SEM-EDS - How can we accurately estimate the chemical composition of zeolite?

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*Atsushi ISHIHARA[1], Hiroaki Ohfuji[1] (1. Tohoku uiversity)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-02] Quantitative electron microprobe analysis of xenotime

*Yasuyuki BANNO[1] (1. AIST)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-03] Deformation and compositional changes of plagioclase: A combined electron backscattered diffraction and energy dispersive X-ray spectroscopy approach

「発表賞エントリー」

*Kohei Nimura[1], Katsuyoshi Michibayashi[1,2] (1. Nagoya University, 2. JAMSTEC)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-04] Mineralogical features of smelting slags from the Early Iron Age Yashin Tepe site, northeastern Iraq

*Masanori KUROSAWA[1], Shin'ichi Nishiyama[2] (1. Univ. Tsukuba, 2. Chubu Univ.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-05] The origin of abundant graphite in quartz veins in Ishidera area, Wazuka Town, Kyoto Prefecture, Japan

*Masaki Nishio[1], Itaru Mitsukawa[1], Yohei Igami[1], Akira Miyake[1], Norimasa Shimobayashi[1] (1. Kyoto Univ. Sci.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-06] Michitoshiite-(Cu), a new Ge-containing platinum group mineral from Haraigawa, Misato machi, Kumamoto Prefecture, Japan

*Takahiro TANAKA[1], Daisuke Nishio Hamane[2], Tadashi Shinmachi (1. Nittetsu Mining Co., Ltd., 2. ISSP, Univ. of Tokyo)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-07] Fibrous inclusions in rose quartz

*Yohei SHIROSE[1], Hayato Fudamoto[1], Sayako Inoue[2] (1. Ehime Univ. Sci., 2. Ehime Univ. GRC)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-08] Rose quartz in gneisses from Uoshima Island, Ehime Prefecture

*Yohei SHIROSE[1], Shoma Sakai[1] (1. Ehime Univ. Sci.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-09] Secondary arsenate minerals from the Takumi Mine, Hyogo Prefecture, Japan

*Yohei SHIROSE[1], Riakako Kamise[1], Katsuichi Nishida, Yoshiteru Fujiwara (1. Ehime Univ. Sci.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-10] Mineralogical properties of lautenthalite and wroewolfeite from the Nii mine, Hyogo Prefecture, Japan

*Masayuki Ohnishi, Norimasa Shimobayashi[1], Daisuke Nishio-Hamane[2], Keiji Shinoda[3], Takeshi Hisano (1. Sci., Kyoto Univ., 2. ISSP, Univ. of Tokyo, 3. Sci., Osaka Metro. Univ.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-11] A re-examination of Sr-rich apatite from Itoigawa, Niigata Prefecture, Japan

*Seiichiro UEHARA[1], Koichi MONMA[2], Masayuki OHNISHI, Shunsuke OHSUMI, Yoshiya OHKI, Hiroki OKA[3] (1. Kyushu Univ. Museum, 2. Nat'l. Mus. Nat. Sci., 3. OYO Corp.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-12] Hydroxylchondrodite from Ogouchi ,Hinokage, Nisiusuki,Miyazaki Prefecture,Japan

*Toshiro Okada[1], Seiichiro Uehara[2], Isao Yukinori[3], Yohei Shirose[4] (1. Kashii 2 JHS, 2. Kyushu Univ, 3. Fukuoka Stc, 4. Ehime Univ)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-13] Arsenmedaite from the Yamato mine, Kagoshima Prefecture, SW Japan

*Shunsuke Ohsumi, Daisuke Nishio-Hamane[1], Hiroki Oka[2], Masashi Tamura[3], Kosuke Takagi[4] (1. ISSP, Univ. of Tokyo, 2. OYO Corp., 3. Fac. Eng. Tech. Div., Mie Univ., 4. Grad. Sch. of Eng., Mie Univ.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-14] "Common Hornblende" from Mt. Tawarayama (Goou-toge), the outer-rim of Mt. Aso, Kumamoto Prefecture

*Haruki Inoue[1], Seiichiro Uehara[2] (1. Enecom Co., Ltd., 2. Kyushu Univ. Museum)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-15] Chemical composition of tourmaline and amphibole associated with gabbro from Kajishima, Ehime Prefecture, Japan

「発表賞エントリー」

*Itsuki Ota[1], Kazuya Shimooka[2], satoshi saitou[1], youhei shirose[1] (1. Ehime Univ. Sci and Eng, 2. Kwansei Gakuin Univ. Sci)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-16] Constituent minerals of clay associated with the pegmatite dike in Nagatare, Fukuoka Prefecture, Japan

*Yuya TAKEDA[1], Seiichiro Uehara[2], Yoshihiro Kuwahara[3] (1. Kyushu Univ. ISGS, 2. Kyushu Univ. Museum, 3. Kyushu Univ. SCS)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-17] Microstructure of serpentine veins in peridotite in Ooshika Village, Nagano Prefecture, Japan

*Yuya TAKEDA[1], Yoshihiro Kuwahara[3], Seiichiro Uehara[2] (1. Kyushu Univ. ISGS, 2. Kyushu Univ. Museum, 3. Kyushu Univ. SCS)

Poster presentation | R3: High-pressure science and deep Earth's material

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC | Entrance Hall Higashiyama Campus

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[R3-P-01] Influence of co-existing inorganic minerals on chemical reaction of *n*-alkane under high-pressure and high-temprature conditions of subduction zone.

*Ayako SHINOZAKI[1], Kina Takimoto[1], Takaya Nagai[1], Koichi Mimura[2] (1. Hokkaido University, 2. Nagoya University)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-02] Differential Scanning Calorimetry of Mn_2SiO_4 tephroite

*Yuta Asami[1], Itaru Ohira[2], Hiroshi Kojitani[2] (1. Gakushuin Univ. Sci, 2. Gakushuin Univ.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-03] Ab initio calculation of the polarized IR spectra and hydrogen positions of hydrous Bridgmanite

*Kikuyo Inagaki[1], Jun Tsuchiya[1], Yanyao Zhang[3], Jung-Fu Lin[2], Shun-ichiro Karato[4], Jennifer Kung[5], ChingChien Li[5] (1. GRC Ehime Univ. , 2. Univ. Texas Austin , 3. Stanford Univ., 4. Yale Univ., 5. National Cheng Kung Univ.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-04] Determination of the stability of silica phases under high pressure by ultra-fast X-ray diffraction measurements

*Ryosuke SINMYO[1], Saori Kawaguchi-Imada[2], Takayuki Ishii[3], Hiroshi Sakuma[4], Ayase Ogawa[1], Kenta Kobayashi[1], Shuhou Maitani[1] (1. Meiji Univ. Sci. Tech., 2. JASRI, 3. Okayama Univ. IPM, 4. NIMS)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-05] Crystallographic preferred orientation properties of Ferropericlase polycrystals obtained from large strain deformation experiments under lower mantle pressures

「発表賞エントリー」

*Bunrin Natsui[1], Shintaro Azuma[1], Keishi Okazaki[2,5], Kentaro Uesugi[3], Masahiro Yasutake[3], Saori Kawaguchi[3], Ryuichi Nomura[4], Kenji Ohta[1] (1. Tokyo Tech, 2. Hiroshima Univ., 3. JASRI, 4. Kyoto Univ., 5. JAMSTEC)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-06] Investigation of hydrogen sealing materials at high temperature and high pressure using neutron imaging

*Sho KAKIZAWA[1], Hiroyuki Kagi[2], Masahiro Takano[2], Asami Sano-Furukawa[3], Takanori Hattori[3], Abe Jun[4], Kenichi Funakoshi[4] (1. JASRI, 2. UTokyo Sci., 3. JAEA J-PARC Center, 4. CROSS, Neutron Science and Technology Center)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-07] Reactions of FeS with hydrogen at high pressure and high temperature revisited

「発表賞エントリー」

*Masahiro Takano[1], Hiroyuki Kagi[1], Yuichiro Mori[1], Katsutoshi Aoki[1], Sho Kakizawa[2], Noriyoshi Tsujino[2], Yuji Higo[2], Asami Sano-Furukawa[3] (1. UTokyo, 2. JASRI, 3. J-PARC center, JAEA)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-08] Extreme pressure generation using toroidal diamond anvil cell

*Takeshi SAKAI[1], Yuki Nakamoto[2], Satoru Nakamura[1], Sotaro Iwatsu[2], Shuto Fukuda[2], Yuki Kato[2], Katsuya Shimizu[2], Hirokazu Kadobayashi[3], Saori Kawaguchi-Imada[3] (1. GRC, Ehime University, 2. KYOKUGEN, Osaka University, 3. JASRI)

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*Yuuki HAGIWARA[1], Hidemi Ishibashi[2], Takeshi Hanyu[1] (1. Japan Agency for Marine-Earth Science and Technology, 2. Shizuoka Univ.)

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[S1-P-02] The composition and pressure of the fluid in crystal mush estimated from cordierite in tonalitic polycrystalline volcanic ejecta

*Shumpei YOSHIMURA[1] (1. Hokkaido University)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[S1-P-03] Geochemical evolution of Izu-Oshima volcano: Constraints from analysis of melt inclusions in a submarine core

*Morihisa HAMADA[1], Erika TANAKA[2], Takeshi HANYU[1], Kenji SHIMIZU[3], Takayuki USHIKUBO[2], Qing CHANG[1], Yoshihiko TAMURA[1] (1. IMG, JAMSTEC , 2. Marine Core Research Institute, Kochi Univ. , 3. Kochi Institute for Core Sample Research, JAMSTEC)

Oxidation states of HIMU-type ocean island basalts: Insights from μ-XANES analysis of quenched glasses and melt inclusions

*Yuuki HAGIWARA[1], Hidemi Ishibashi[2], Takeshi Hanyu[1]

1. Japan Agency for Marine-Earth Science and Technology, 2. Shizuoka Univ.

Keywords: Ocean island basalt, Oxidation state, Melt inclusion, μ-XENES

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1. IMG, JAMSTEC , 2. Marine Core Research Institute, Kochi Univ. , 3. Kochi Institute for Core Sample Research, JAMSTEC

Background

Magmas erupting from Izu-Oshima volcano have been interacted with those from Izu-Tobu volcano (Ishizuka et al., 2015, EPSL). Ishizuka et al. (2015) clarified geochemical evolution of Izu-Oshima volcano based on whole-rock geochemical analysis of Izu-Oshima onland samples. In order to extend their previous study, we analyzed melt inclusions in a submarine core.

Samples and analytical methods

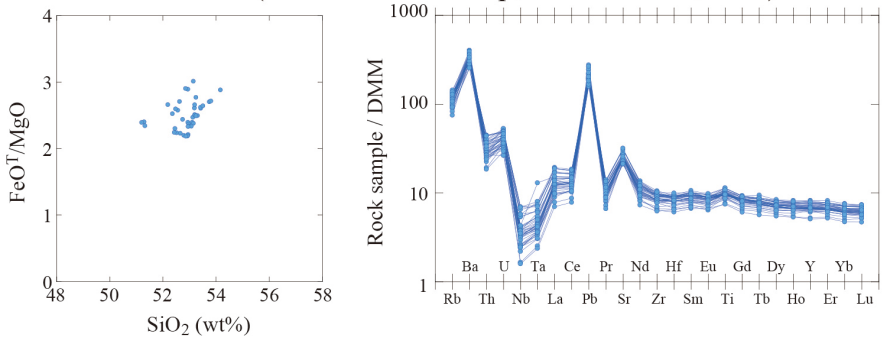
We recovered a 25-cm long submarine push core from the seafloor located as far as about 10 km east of Izu-Oshima volcano during the research cruise KR21-16. This core comprises of tephra layers deposited from 4,500 y.B.P. to 3,200 y.B.P., where ages were determined by ^{14}C dating of foraminifera. The push core samples were divided into ten parts, each of which is 2.5 cm long. We then collected minerals (olivine, plagioclase and orthopyroxene) from each part and polished them until the surface of the melt inclusions were exposed. Volatile elements (H_2O, CO_2, S, F and Cl) and P_2O_5 were analyzed by SIMS, and major elements were analyzed by EPMA. For larger melt inclusions, we also analyzed trace elements by LA-ICP-MS.

Results and discussion

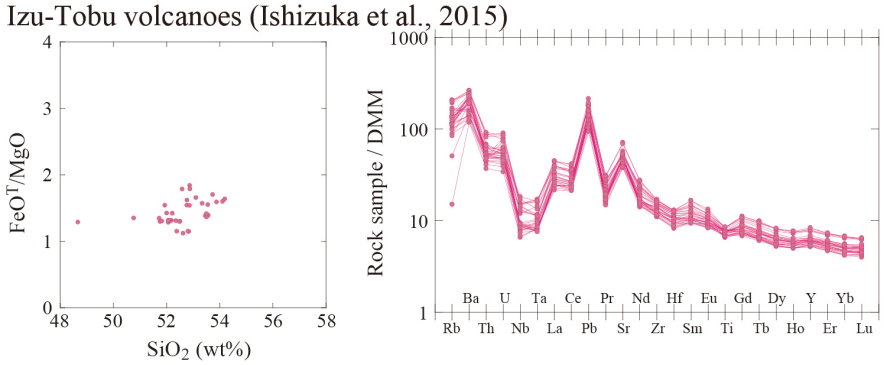
We finally analyzed 100 melt inclusions (51-55 wt% SiO_2) in total. Geochemical data of melt inclusions can be separated into 3 groups. Group A melt inclusions are dominant at upper levels of the push core, which corresponds to Izu-Oshima melts (Ishizuka et al., 2015). Systematics of H_2O and CO_2 concentrations of Group A melt inclusions demonstrate that crystallization differentiation took place at $P<100$ MPa. Group C melt inclusions are dominant at lower levels, which is hybrid magma of Izu-Oshima and Izu-Tobu magmas. Systematics of H_2O and CO_2 concentrations of Group C melt inclusions demonstrate that crystallization differentiation took place at $P>100$ MPa. Group B melt inclusions are dominant at intermediate levels and show intermediate characteristics between Group A and Group C melt inclusions, suggesting that Group A and Group C mixed. We argue that melt composition of Izu-Oshima volcano evolved from Group C, Group B to Group A from 4,500 y.B.P. to 3,200 y.B.P.

Keywords: Izu-Oshima volcano, melt inclusion

Izu-Oshima volcano (Older Oshima Group; Ishizuka et al., 2015)

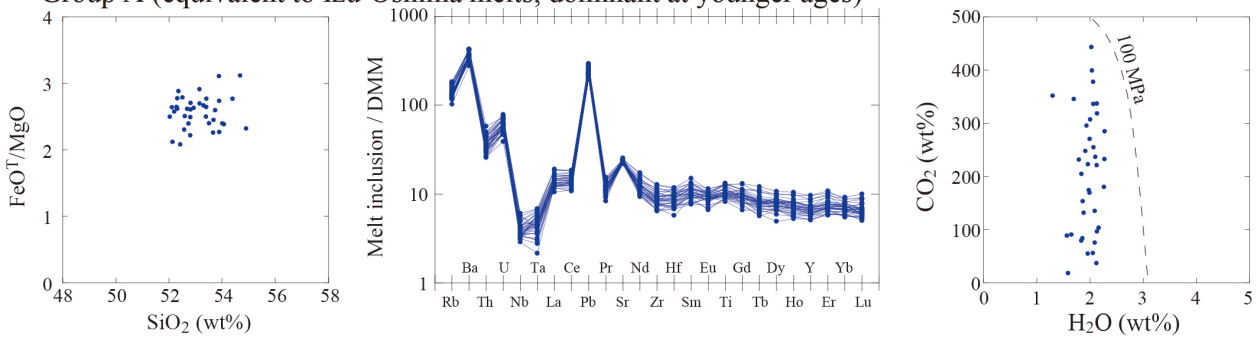


Izu-Tobu volcanoes (Ishizuka et al., 2015)

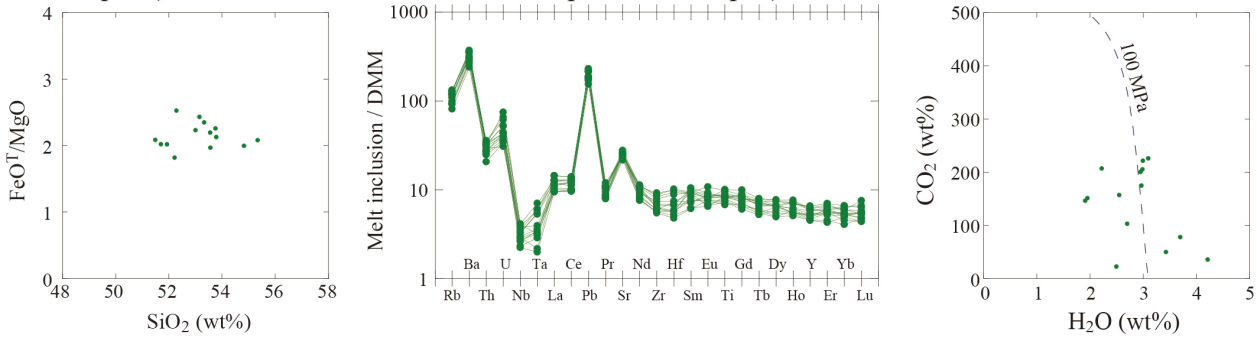


This study

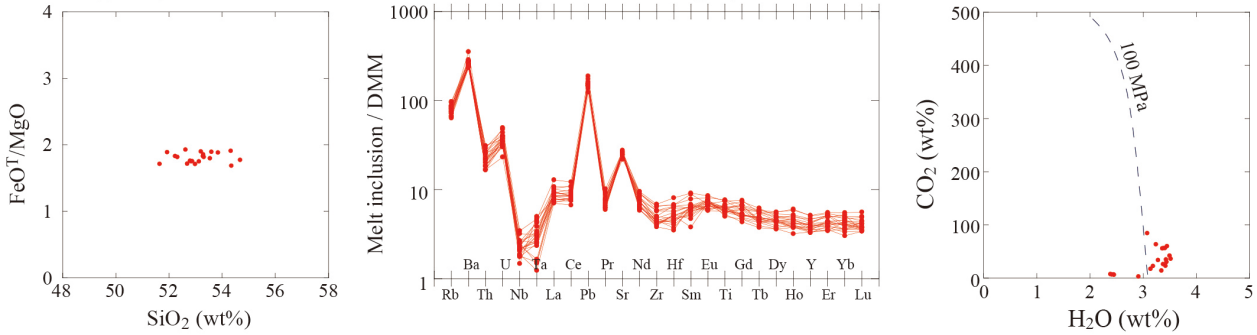
Group A (equivalent to Izu-Oshima melts, dominant at younger ages)



Group B (intermediate melts betwenen Group A and Group C)



Group C (closer to Izu-Tobu melts, dominant at older ages)



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[S3-P-03] Toward an understanding of dehydration process of partially serpentinized slab peridotite under conditions where deep earthquakes occur

*Tomoaki KUBO[1], Musashi Ezaki[1], Nobumasa Fujiwara[1], Rikuto Honda[1], Goto Yuta[1], Noriyoshi Tsujino[2] (1. Kyushu University, 2. JASRI)

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1. Tokyo Tech., 2. Hiroshima Univ., 3. JASRI, 4. Ehime Univ., 5. University of Hawai'i

Keywords: Rotational diamond anvil cell, High temperature and pressure, Hydrous stishovite, Rheology, Deformation experiment

Water weakening of Mg_2SiO_4 ringwoodite

*Yuta Goto[1], Tomoaki Kubo[1], Rikuto Honda[1], Yuki Shibazaki[2]

1. Kyushu Univ., 2. KEK-PF

Keywords: in-situ X-ray observation, high-pressure deformation experiment, water content, water weakening, mantle transition zone

Toward an understanding of dehydration process of partially serpentinized slab peridotite under conditions where deep earthquakes occur

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Keywords: deep slab, dehydration process, dehydration embrittlement, water weakening

Viscous anisotropy of olivine aggregates using micro Vickers indentation tests

*Namu Fujii[1], Miki Tasaka[1]

1. Shizuoka University

Keywords: olivine, low temperature plasticity, Vickers indentation tests, anisotropy, viscosity

Crystal-fabric analysis using principal component analysis method for the Horoman peridotite

*Kazuki Matsuyama[1], Katsuyoshi Michibayashi[1]

1. Nagoya Univ. Env.

Keywords: Olivine, Crystal-fabric, Horoman peridotite complex, Principal component analysis

Traces of mantle fluid/melt within olivine phenocrysts from Ohima-Ōshima picritic basalts

*Ryo Tsukawaki[1], Terumi Ejima[2], Atusi Ninomiya[3], Shoji Arai[4]

1. Shinshu Univ. Sci., 2. Shinshu Univ. Sci. , 3. Sumiko Res. Exp. & Dev. Co., 4. Kanazawa Univ.

Keywords: Mantle, Picritic basalt, Olivine, Fluid/melt, Oshima-Ōshima

Microstructural characteristics of ultramafic rocks in the Tosa Megamullion, the Shikoku Basin.

*So Inoue[1], Katsuyoshi Michibayashi[1,2], Yumiko Harigane[3], Yasuhiko Ohara[1,2,4]

1. GSES, Nagoya Univ. , 2. JAMSTEC, 3. GSJ/AIST, 4. JCG

Keywords: Megamullion, Olivine, Back-arc basin, ductile shear deformation

Deformation microstructures of granitic mylonite in Hida Metamorphic Belt

*Masaaki Horie[1], Katsuyoshi Michibayashi[1]

1. GSES. Nagoya Univ.

Keywords: Granitic mylonite, Deformation microstructure, Crystallographic preferred orientation, Hida Metamorphic Belt

Poster presentation | R1: Characterization and description of minerals (Joint Session with The Gemmological Society of Japan)

Thu. Sep 12, 2024 12:30 PM - 2:00 PM JST | Thu. Sep 12, 2024 3:30 AM - 5:00 AM UTC | Entrance Hall Higashiyama Campus

R1: Characterization and description of minerals (Joint Session with The Gemmological Society of Japan)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-01] Chemical quantitative analysis of heulandite using SEM-EDS - How can we accurately estimate the chemical composition of zeolite?

「発表賞エントリー」

*Atsushi ISHIHARA[1], Hiroaki Ohfuji[1] (1. Tohoku uiversity)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-02] Quantitative electron microprobe analysis of xenotime

*Yasuyuki BANNO[1] (1. AIST)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-03] Deformation and compositional changes of plagioclase: A combined electron backscattered diffraction and energy dispersive X-ray spectroscopy approach

「発表賞エントリー」

*Kohei Nimura[1], Katsuyoshi Michibayashi[1,2] (1. Nagoya University, 2. JAMSTEC)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-04] Mineralogical features of smelting slags from the Early Iron Age Yashin Tepe site, northeastern Iraq

*Masanori KUROSAWA[1], Shin'ichi Nishiyama[2] (1. Univ. Tsukuba, 2. Chubu Univ.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-05] The origin of abundant graphite in quartz veins in Ishidera area, Wazuka Town, Kyoto Prefecture, Japan

*Masaki Nishio[1], Itaru Mitsukawa[1], Yohei Igami[1], Akira Miyake[1], Norimasa Shimobayashi[1] (1. Kyoto Univ. Sci.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-06] Michitoshiite-(Cu), a new Ge-containing platinum group mineral from Haraigawa, Misato machi, Kumamoto Prefecture, Japan

*Takahiro TANAKA[1], Daisuke Nishio Hamane[2], Tadashi Shinmachi (1. Nittetsu Mining Co., Ltd., 2. ISSP, Univ. of Tokyo)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-07] Fibrous inclusions in rose quartz

*Yohei SHIROSE[1], Hayato Fudamoto[1], Sayako Inoue[2] (1. Ehime Univ. Sci., 2. Ehime Univ. GRC)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-08] Rose quartz in gneisses from Uoshima Island, Ehime Prefecture

*Yohei SHIROSE[1], Shoma Sakai[1] (1. Ehime Univ. Sci.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-09] Secondary arsenate minerals from the Takumi Mine, Hyogo Prefecture, Japan

*Yohei SHIROSE[1], Riakako Kamise[1], Katsuichi Nishida, Yoshiteru Fujiwara (1. Ehime Univ. Sci.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-10] Mineralogical properties of lautenthalite and wroewolfeite from the Nii mine, Hyogo Prefecture, Japan

*Masayuki Ohnishi, Norimasa Shimobayashi[1], Daisuke Nishio-Hamane[2], Keiji Shinoda[3], Takeshi Hisano (1. Sci., Kyoto Univ., 2. ISSP, Univ. of Tokyo, 3. Sci., Osaka Metro. Univ.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-11] A re-examination of Sr-rich apatite from Itoigawa, Niigata Prefecture, Japan

*Seiichiro UEHARA[1], Koichi MONMA[2], Masayuki OHNISHI, Shunsuke OHSUMI, Yoshiya OHKI, Hiroki OKA[3] (1. Kyushu Univ. Museum, 2. Nat'l. Mus. Nat. Sci., 3. OYO Corp.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-12] Hydroxylchondrodite from Ogouchi ,Hinokage, Nisiusuki,Miyazaki Prefecture,Japan

*Toshiro Okada[1], Seiichiro Uehara[2], Isao Yukinori[3], Yohei Shirose[4] (1. Kashii 2 JHS, 2. Kyushu Univ, 3. Fukuoka Stc, 4. Ehime Univ)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-13] Arsenmedaite from the Yamato mine, Kagoshima Prefecture, SW Japan

*Shunsuke Ohsumi, Daisuke Nishio-Hamane[1], Hiroki Oka[2], Masashi Tamura[3], Kosuke Takagi[4] (1. ISSP, Univ. of Tokyo, 2. OYO Corp., 3. Fac. Eng. Tech. Div., Mie Univ., 4. Grad. Sch. of Eng., Mie Univ.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-14] “Common Hornblende” from Mt. Tawarayama (Goou-toge), the outer-rim of Mt. Aso, Kumamoto Prefecture

*Haruki Inoue[1], Seiichiro Uehara[2] (1. Enecom Co., Ltd., 2. Kyushu Univ. Museum)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-15] Chemical composition of tourmaline and amphibole associated with gabbro from Kajishima, Ehime Prefecture, Japan

「発表賞エントリー」

*Itsuki Ota[1], Kazuya Shimooka[2], satoshi saitou[1], youhei shirose[1] (1. Ehime Univ. Sci and Eng, 2. Kwansei Gakuin Univ. Sci)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-16] Constituent minerals of clay associated with the pegmatite dike in Nagatare, Fukuoka Prefecture, Japan

*Yuya TAKEDA[1], Seiichiro Uehara[2], Yoshihiro Kuwahara[3] (1. Kyushu Univ. ISGS, 2. Kyushu Univ. Museum, 3. Kyushu Univ. SCS)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R1-P-17] Microstructure of serpentine veins in peridotite in Ooshika Village, Nagano Prefecture, Japan

*Yuya TAKEDA[1], Yoshihiro Kuwahara[3], Seiichiro Uehara[2] (1. Kyushu Univ. ISGS, 2. Kyushu Univ. Museum, 3. Kyushu Univ. SCS)

Chemical quantitative analysis of heulandite using SEM-EDS - How can we accurately estimate the chemical composition of zeolite?

*Atsushi ISHIHARA[1], Hiroaki Ohfuji[1]

1. Tohoku uiversity

Keywords: Zeolite, SEM-EDS, heulandite

*balance error : $E = \frac{[Al]-([Na]+[K]+[Ca]\times 2)}{([Na]+[K]+[Ca]\times 2)} \times 100$ (Passaglia, 1970)

Quantitative electron microprobe analysis of xenotime

*Yasuyuki BANNO[1]

1. AIST

The conditions suitable for the quantitative analysis of xenotime from the Takehara mine in Mie Prefecture, Japan, using EPMA were investigated. First, a qualitative analysis was performed to identify the major elements and determine the characteristic X-ray positions and the appropriate background measurement positions. In cases where the overlap of peaks was significant, a pulse height analyzer was used when higher-order lines overlapped. An interference correction factor was determined to correct the measured intensity when first-order lines interfered.

Keywords: EPMA, Xenotime, Chemical composition, Takehara mine

Deformation and compositional changes of plagioclase: A combined electron backscattered diffraction and energy dispersive X-ray spectroscopy approach

*Kohei Nimura[1], Katsuyoshi Michibayashi[1,2]

1. Nagoya University, 2. JAMSTEC

Keywords: plagioclase, recrystallization, electron backscattered diffraction, energy dispersive X-ray spectroscopy

Mineralogical features of smelting slags from the Early Iron Age Yashin Tepe site, northeastern Iraq

*Masanori KUROSAWA[1], Shin'ichi Nishiyama[2]

1. Univ. Tsukuba, 2. Chubu Univ.

Microstructures, materials, and chemical compositions of four metal-smelting slags and two specimens of corroded ironware from the Early Iron Age Yasin Tepe site in northeastern Iraq were analyzed with a scanning electron microscope equipped with an energy-dispersive X-ray spectrometer (SEM-EDS) to examine the technical level of the Iron Age iron-smelting in the frontier area of West Asia. Two types of metal-smelting slag were identified in the slag samples: copper smelting slag and iron smelting slag. The surfaces of both types were covered with a thin altered film. The copper smelting slag was vitreous with a light greenish interior and consisted mainly of Ca-Al silicate glass and precipitated crystals of augite. The slag also contained tiny fragments of limestone in the process of melting reaction. The ironmaking slag was black vitreous inside and composed of dendritic crystals of wustite, Ca-Al silicate glass, and Ca-Al silicate mineral precipitates. The Ca-Al silicates were found to have precipitated at 1200-1300 degrees. Small pieces of limestone in the middle of the melting reaction were also observed. Since limestone is abundant around the site, it is thought that limestone was used as a slag-forming agent in metal smelting. The CaO-rich slag produced by limestone incorporation is favorable for the production of high-purity iron, suggesting that high-quality iron was produced in the early Iron Age. The ironware samples were almost completely corroded and consisted mainly of iron hydroxide and small amounts of iron oxides. However, some traces of metallic iron were also observed, and the metallic iron was of high quality with very few impurities. These results indicate that iron suitable for ironware making with high purity was produced in in the frontier area of West Asia from around 800 BCE using advanced smelting technology that utilizes high temperatures of over 1200 degrees and limestone as a slag-forming agent.

Keywords: slag, iron smelting, ironware, SEM-EDS, Yasin-Tepe site

The origin of abundant graphite in quartz veins in Ishidera area, Wazuka Town, Kyoto Prefecture, Japan

*Masaki Nishio[1], Itaru Mitsukawa[1], Yohei Igami[1], Akira Miyake[1], Norimasa Shimobayashi[1]

1. Kyoto Univ. Sci.

Keywords: Graphite, Fluid inclusion, C-O-H fluid, Quartz vein

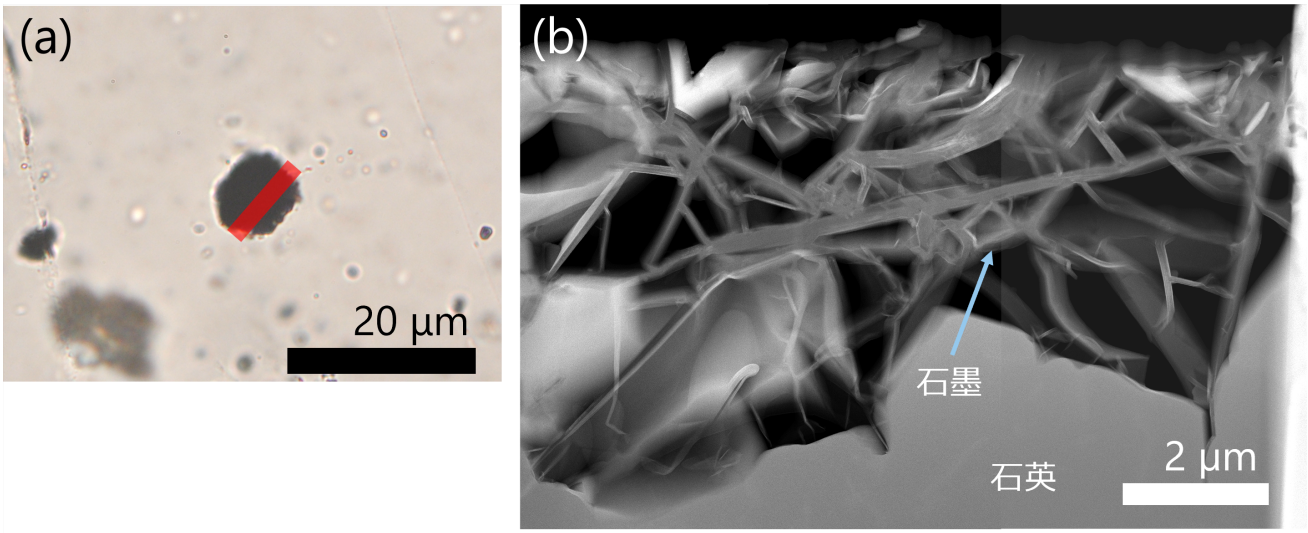

図　(a) 光学顕微鏡下で球状の外形をなす、石英粒子内の石墨 (※赤線はFIBで切り出した場所を示す)
(b) (a)から切り出した試料のTEMでのHAADF-STEM像

Michitoshiite-(Cu), a new Ge-containing platinum group mineral from Haraigawa, Misato machi, Kumamoto Prefecture, Japan

*Takahiro TANAKA[1], Daisuke Nishio Hamane[2], Tadashi Shinmachi

1. Nittetsu Mining Co., Ltd., 2. ISSP, Univ. of Tokyo

Michitoshite-(Cu) is a new mineral of Ge-containing platinum group minerals (PGM) discovered from the Haraigawa, Kumamoto Prefecture, Japan. It is named in honor of Michitoshi Miyahisa (1928-1983), a former professor of the Ehime University. The mineral and name have been approved by the IMA Commission on New Minerals, Nomenclature and Classification (IMA2019-029a). The PGM placer deposit where the michitoshiite-(Cu) was found is located in a small stream that crossing a clinopyroxenite mass (Nishio-Hamane et al., 2019). Michitoshite-(Cu) is opaque, has a metallic luster, and is silver-gray in color. It is light gray with brownish tints and shows no pleochroism and anisotropy in reflected light. The Mohs hardness is 5, and the density calculated from the empirical formula and powder X-ray diffraction (XRD) data is 10.78 g/cm^3. The empirical formula is calculated on the basis of 2 apfu is $(Rh_{0.95}Pt_{0.03}Ir_{0.01})_{\Sigma 0.99}[(Cu_{0.36}Fe_{0.24})_{\Sigma 0.60}Ge_{0.41}]_{\Sigma 1.01}$. The powder XRD pattern shows five strong peaks [d in A (I/I0) hkl], 2.103 (100) 110, 1.717 (3) 111, 1.487 (15) 200, 1.332 (6) 210, 1.216 (70) 211, and can be indexed as the cubic *Pm*-3*m* (#221) with the lattice parameters a = 2.9771(11) A and V = 26.39(3) A3 (Z = 1). From previous studies, the RhCu-RhFe-RhGe system has a *face-centered cubic* (*fcc)* structure for RhCu, a CsCl-type structure for RhFe, and a MnP-type structure for RhGe, with the end-member of each compound having a different structure, but the solid solution structure has not been investigated. Since $Rh[(Cu_{0.35}Fe_{0.25})_{\Sigma 0.60}Ge_{0.40}]$, which was synthesized to mimic the empirical formula of the natural sample, had a CsCl-type structure, the crystal structure of michitoshite-(Cu) was considered to be CsCl-type. Considering that the synthetic materials of Rh(Cu,Fe) composition synthetics were not *bcc-based* crystal structures but rather *fcc* structures in the synthesis experiments, the presence of Ge is considered essential for the formation of the *bcc-based* crystal structure. Therefore, based on the relationship between composition and crystal structure obtained from the behavior of other synthetics, the ideal formula for michitoshite-(Cu) is $Rh(Cu_{1-x}Ge_x)$ $0 < x <= 0.5$.

Keywords: Michitoshiite-(Cu), Germanium, Platinum group mineral, Synthetic experiment, Kumamoto

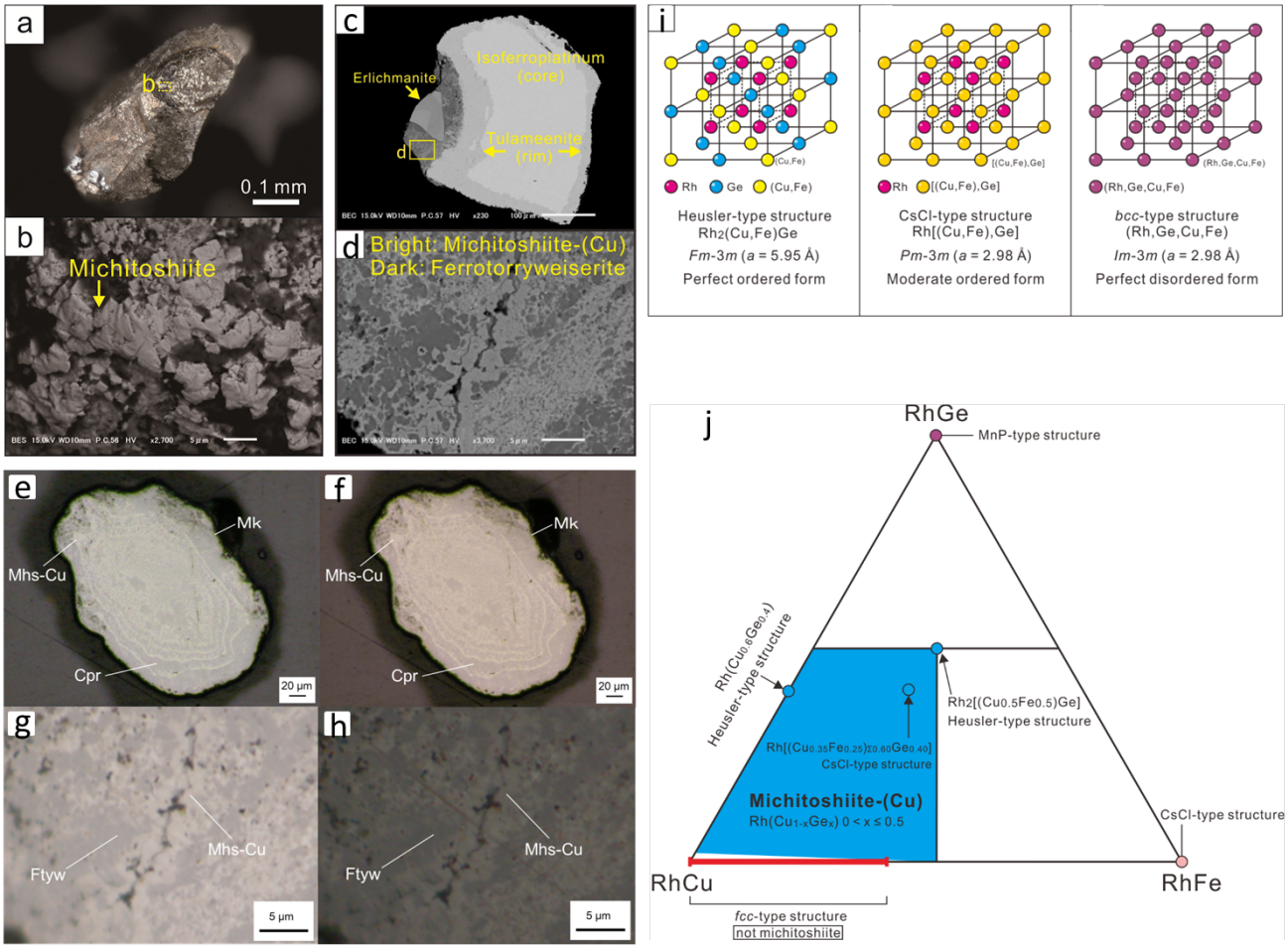

図. 三千年鉱の産状（a：写真，b：SEM像，c：BSE像，d：BSE像），三千年鉱の反射顕微鏡写真（e：オープンニコル，f：クロスニコル，g：オープンニコル，h：クロスニコル），三千年鉱の取りうる結晶構造（i），合成実験における三千年鉱の組成範囲及び固溶体の結晶構造 (j).

Fibrous inclusions in rose quartz

*Yohei SHIROSE[1], Hayato Fudamoto[1], Sayako Inoue[2]

1. Ehime Univ. Sci., 2. Ehime Univ. GRC

Keywords: rose quartz, dumortierite, dumortierite-like mineral, pegmatite, Fukuyoshi

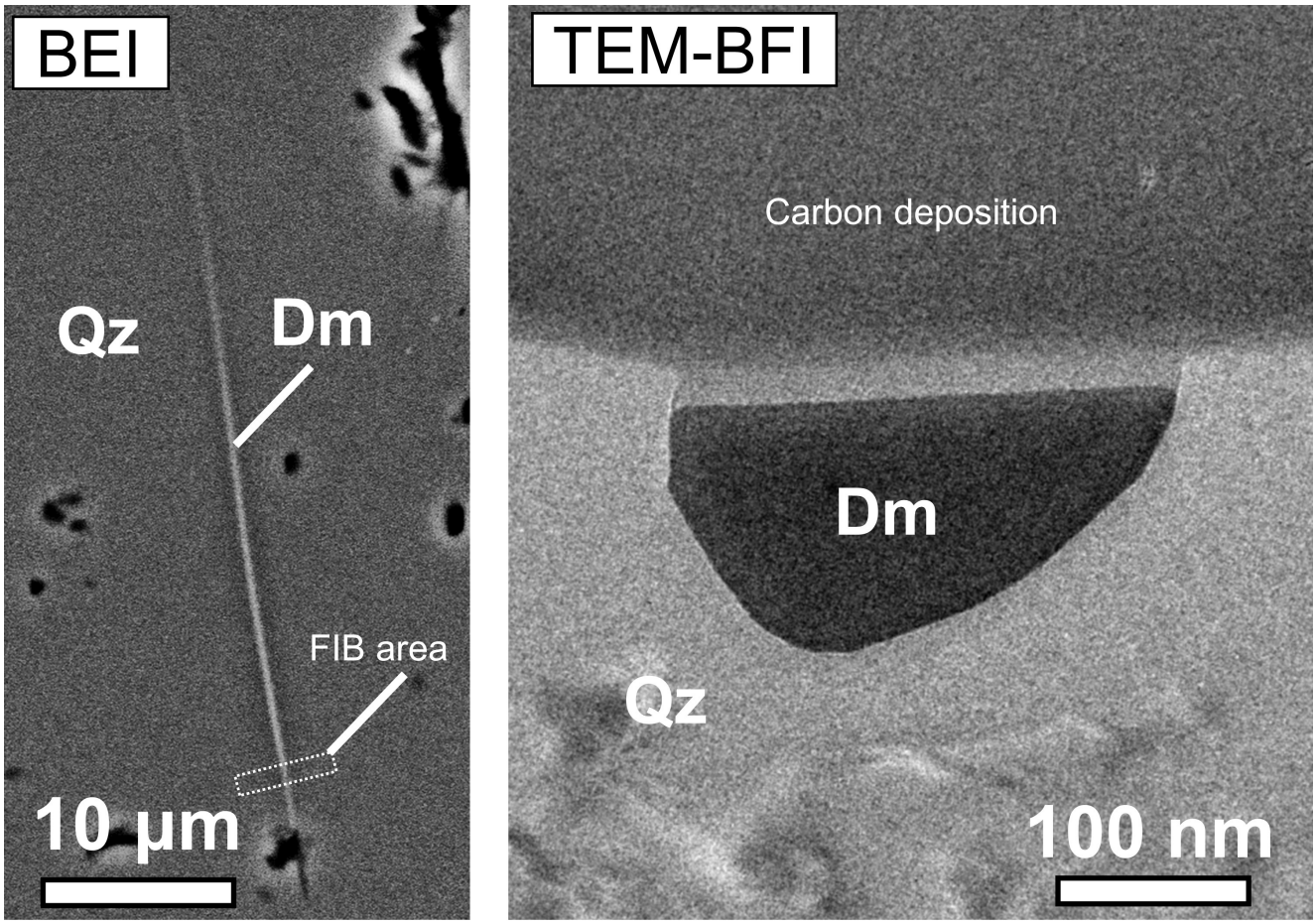

Fig. SEM-BEI and TEM-BFI of dumortierite-like fibrous inclusion (Dm) in rose quartz (Qz)

Rose quartz in gneisses from Uoshima Island, Ehime Prefecture

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Keywords: rose quartz, gneiss, dumortierite-like mineral, Uoshima Island, boron

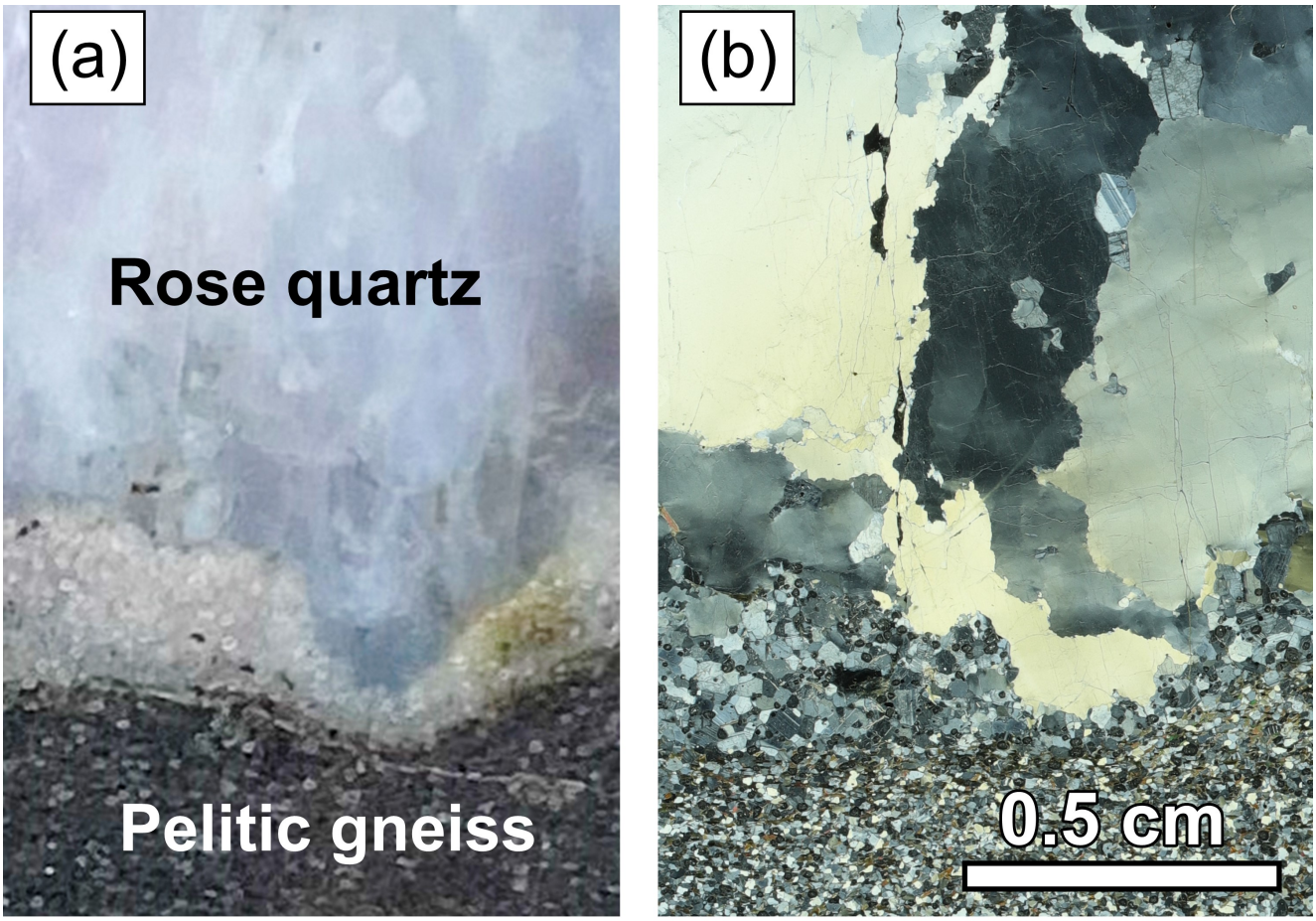

Fig. (a) Photograph and (b) crossed polarized photomicrograph of rose quartz in a gneiss from Uoshima Island.

Secondary arsenate minerals from the Takumi Mine, Hyogo Prefecture, Japan

*Yohei SHIROSE[1], Riakako Kamise[1], Katsuichi Nishida, Yoshiteru Fujiwara

1. Ehime Univ. Sci.

Keywords: rooseveltite, parasymplesite, scorodite, bismuthinite, Takumi Mine

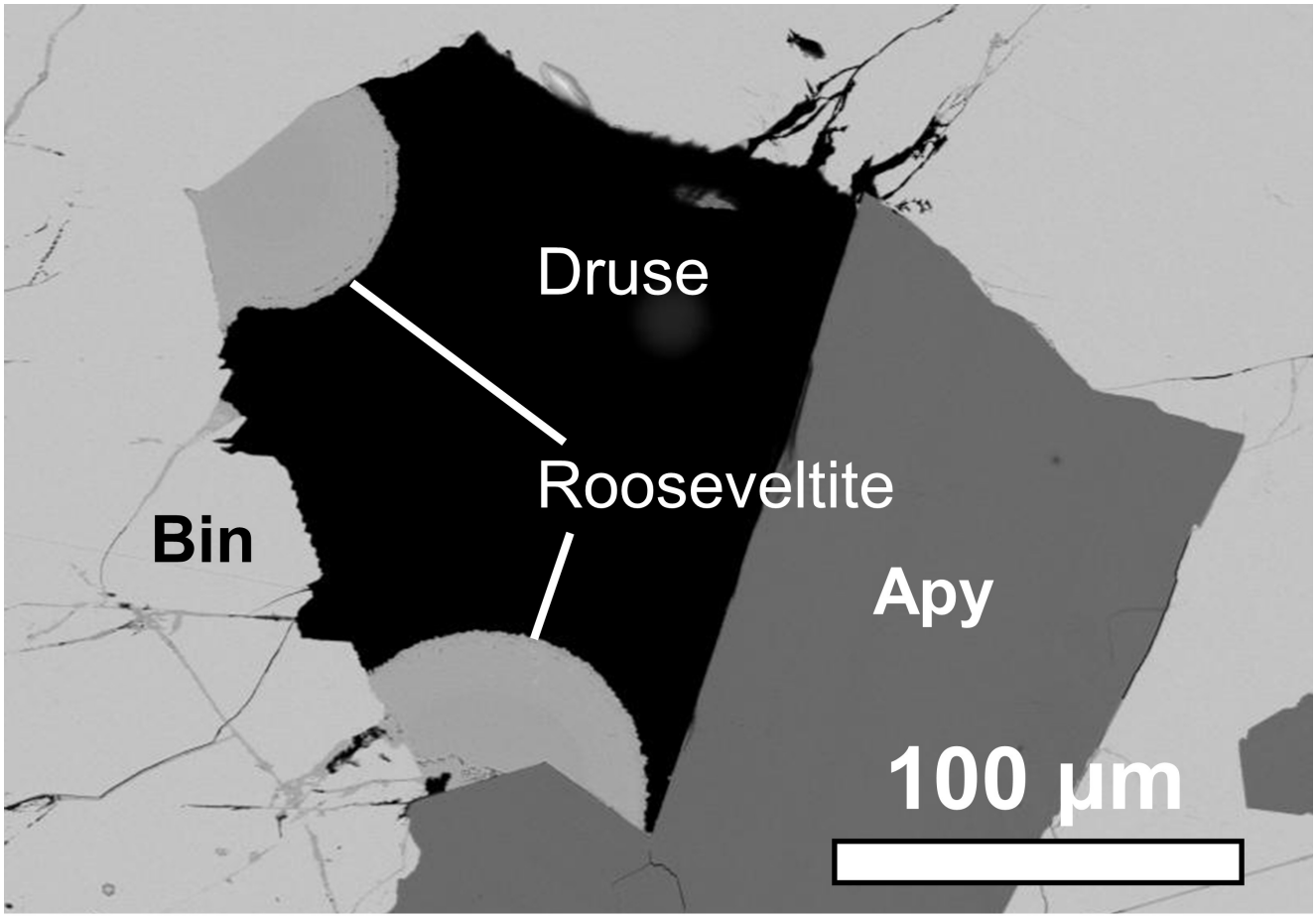

Fig. BEI of rooseveltite with bismuthinite (Bin) and arsenopyrite (Apy).

Mineralogical properties of lautenthalite and wroewolfeite from the Nii mine, Hyogo Prefecture, Japan

*Masayuki Ohnishi, Norimasa Shimobayashi[1], Daisuke Nishio-Hamane[2], Keiji Shinoda[3], Takeshi Hisano

1. Sci., Kyoto Univ., 2. ISSP, Univ. of Tokyo, 3. Sci., Osaka Metro. Univ.

Lautenthalite and wroewolfeite have been found in the dump of the Nii mine, Hyogo Prefecture, Japan. The minerals occur in cracks of quartz containing ore minerals such as chalcopyrite, galena and sphalerite.
Lautenthalite is aggregates of platy crystals up to 0.5 mm in length and 0.1 mm in thick. Lautenthalite is always in overgrowth on wroewolfeite. The mineral is blue-green in color with a vitreous luster. It is monoclinic with unit cell parameters of a = 21.557(6), b = 6.019(1), c = 22.467(5) Å, and β = 108.06(3)˚. A WDS analysis yields the empirical formula (based on total cations = 7; water by stoichiometry), $(Pb_{0.97}Ca_{0.06})_{\Sigma 1.03}(Cu_{3.97}Zn_{0.11}Mn_{0.02})_{\Sigma 4.10}(SO_4)_{1.87}(OH)_{6.52}\cdot 3H_2O$.
Wroewolfeite is aggregates of platy crystals up to 1 mm in length and 0.1 mm in thick in association with langite, brochantite, linarite and cerussite. The mineral is blue in color with a vitreous luster. It is monoclinic with unit cell parameters of a = 6.042(8), b = 5.637(6), c = 14.45(2) Å, and β = 93.5(1)˚. A WDS analysis yields the empirical formula (based on total cations = 5; water by stoichiometry), $(Cu_{3.94}Zn_{0.04}Ca_{0.02}Fe_{0.01}Pb_{0.01}Mn_{0.01})_{\Sigma 4.04}(SO_4)_{0.96}(OH)_{6.14}\cdot 2H_2O$. Optically, the mineral is biaxial (-) with refractive indices α = 1.641(2), β = 1.691(2) and γ = 1.701(2), and $2V$ (calc.) = 47.0˚.

Keywords: Lautenthalite, Wroewolfeite, Sulfate, Nii mine

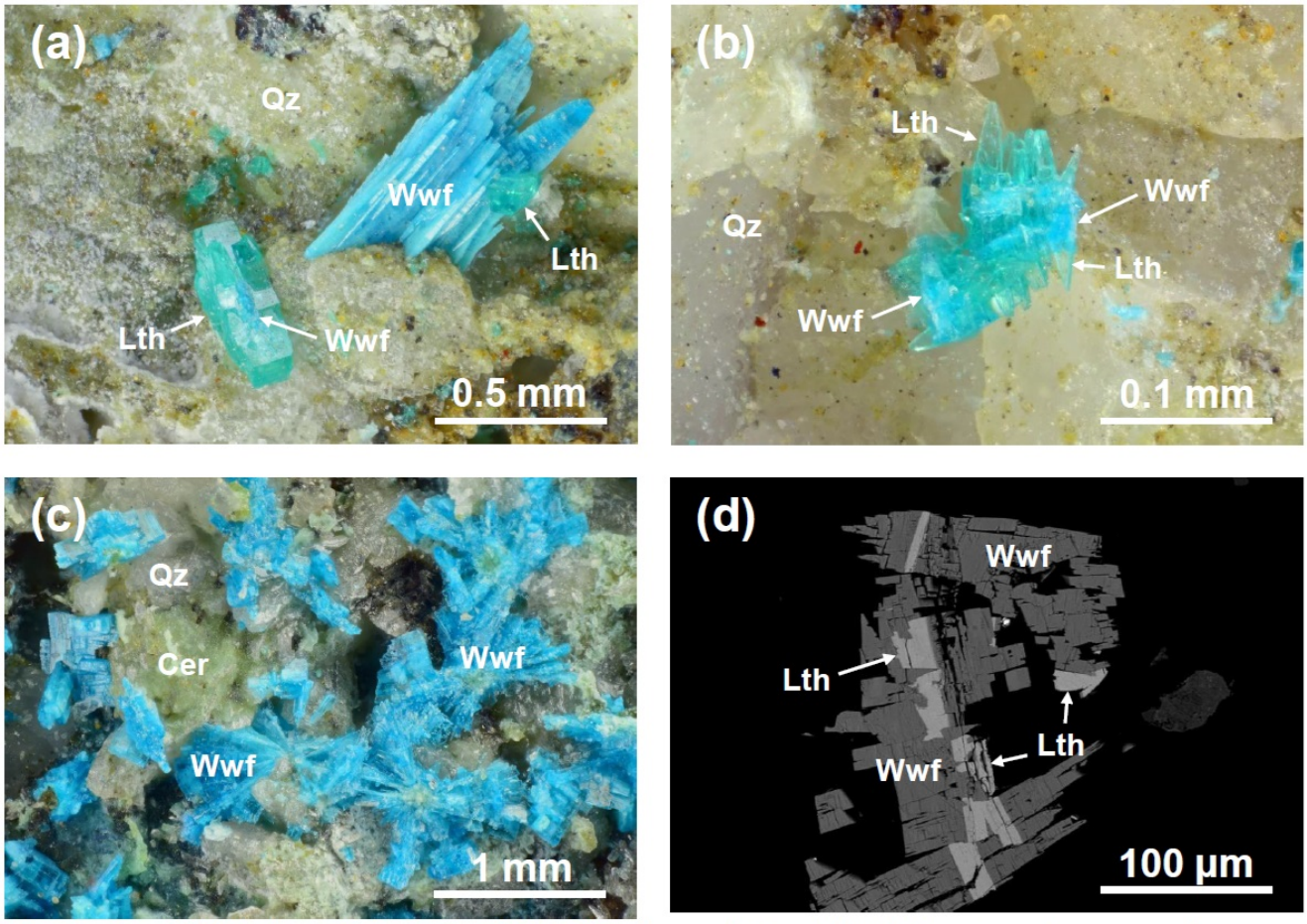

Figure 1. (a) and (b) Photomicrographs of aggregates of lautenthalite and wroewolfeite crystals. (c) A photomicrograph of aggregates of wroewolfeite crystals. (d) A back-scattered electron image of a polished section of lautenthalite and wroewolfeite. Abbreviations: Lth, lautenthalite; Wwf, wroewolfeite; Qz, quartz; Cer, cerussite.

A re-examination of Sr-rich apatite from Itoigawa, Niigata Prefecture, Japan

*Seiichiro UEHARA[1], Koichi MONMA[2], Masayuki OHNISHI, Shunsuke OHSUMI, Yoshiya OHKI, Hiroki OKA[3]

1. Kyushu Univ. Museum, 2. Nat' l. Mus. Nat. Sci., 3. OYO Corp.

Keywords: Sr-apatite like mineral, OH-analog of stronadelphite, New Mineral, Omi-gawa River, Itoigawa, Niigata Prefecture, Albitite

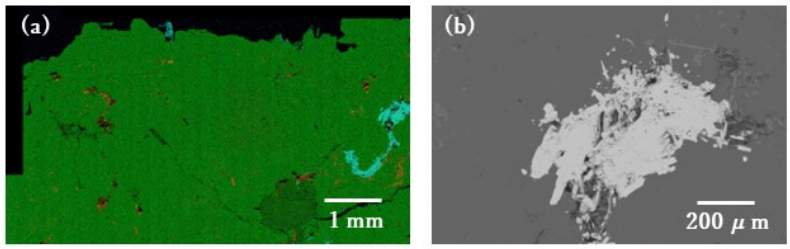

Fig. 1 SEM images of Sr-apatite ('hydroxylstronadelphite') in albitite from the Omi-gawa River, Itoigawa, Niigata Prefecture.
(a) Large area RGB X-ray mapping image (R:Ca*Kα*, G:Sr*Lα*, B:P*Kα*). Red grains are pectolite, blue grains are Sr-apatite.
(b) BSE image of Sr-apatite.

Hydroxylchondrodite from Ogouchi ,Hinokage, Nisiusuki,Miyazaki Prefecture,Japan

*Toshiro Okada[1], Seiichiro Uehara[2], Isao Yukinori[3], Yohei Shirose[4]

1. Kashii 2 JHS, 2. Kyushu Univ, 3. Fukuoka Stc, 4. Ehime Univ

Keywords: Hydroxylchondrodite, Humite group, Phlogopite, Skarn, Ogouchi Hinokage Nisiusuki Miyazaki Prefecture

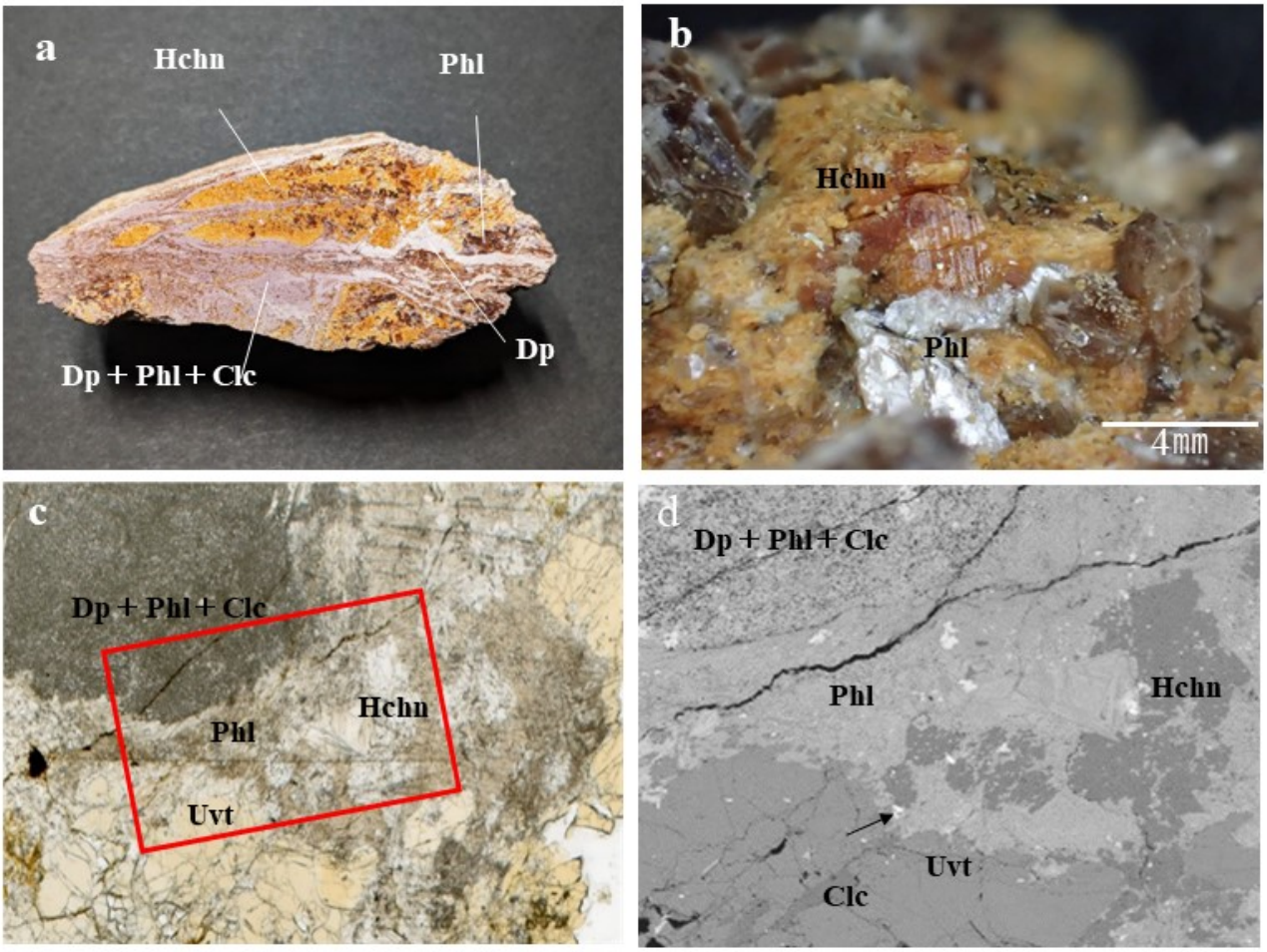

Fig. 1. Hydroxylchondrodite and associated minerals from Ogouchi, Hinokage, Nisiusuki, Miyazaki Prefecture, Japan.
(a) Sample shows occurrence of hydroxylchondrodite of sample No. SD11. Sample width is 6.2 cm.
(b) Hydroxylchondrodite crystal with phlogopite of sample No. SD11.
(c) Thin section image under plane polarized light of sample No. SD01, which contains hydroxylchondrodite, uvite, phlogopite, diopside, clinochlore and titanite. Width is 2.0 cm.
(d) Back scattered electron image of hydroxylchondrodite and associate minerals. The red frame in figure (c) corresponds to this BSE image. Darkest grains are hydroxylchondrodite and clinochlore. Small bright grains are mainly titanite some are zirconolite and apatite. Arrow indicates zirconolite.
Hchn: hydroxylchondrodite. Phl: phlogopite. Dp: diopside. Uvt: uvite. Clc:clinochlore

Arsenmedaite from the Yamato mine, Kagoshima Prefecture, SW Japan

*Shunsuke Ohsumi, Daisuke Nishio-Hamane[1], Hiroki Oka[2], Masashi Tamura[3], Kosuke Takagi[4]

1. ISSP, Univ. of Tokyo, 2. OYO Corp., 3. Fac. Eng. Tech. Div., Mie Univ., 4. Grad. Sch. of Eng., Mie Univ.

The Yamato mine in the Amami Oshima Island, Kagoshima Prefecture, southwestern Japan, is a well-known manganese mine as the type locality of haradaite (Watanabe et al., 1982) and occurrences of V and/or As-rich minerals such as roscoelite (Yoshimura & Momoi, 1964), goldmanite (Momoi, 1964), tiragalloite (Nakao et al., 2005), palenzonaite, nabiasite, tokyoite, vuorelainenite (Yamada et al., 2008), medaite, saneroite (Matsubara et al., 2013), poppiite (Niwa & Ishibashi, 2015), and reppiaite (Yamada et al., 2018). In this study, we report the first occurrence of arsenmedaite in Japan.Arsenmedaite, As^{5+}-analogue of medaite, was reported in quartz veinlets cutting braunite ores from the Molinello mine, which is hosted within metacherts of the Northern Apennines. It is associated with calcite, As-rich medaite, rhodochrosite, talc, and ganophyllite.In the Yamato mine, arsenmedaite was found as from yellow to orange-reddish granular crystals, up to 1 mm in diameter, with a vitreous lustre in siliceous manganese ores, which consist mainly of massive hausmannite, rhodochrosite, and coarse-grained rhodonite, with absence of medaite. Tiny crystals of rhodonite are ubiquitously included in arsenmedaite. The occurrence of arsenmedaite in the Yamato mine differs from that in the type locality.The representative chemical composition by SEM-EDS is: SiO_2 30.12, CaO 0.99, V_2O_5 3.25, MnO 48.03, As_2O_5 13.26, $H_2O_{calc.}$ 1.01, total 96.65 wt%, and they gave the empirical formula as $(Mn^{2+}_{6.04}Ca_{0.16})_{\Sigma 6.20}[(As_{1.03}V_{0.32})_{1.35}Si_{4.47}]_{\Sigma 5.82}O_{18}(OH)$, assuming total cations = 18 and Mn = Mn^{2+}. The empirical formula is slightly richer in As and V and less in Si than the ideal formula of arsenmedaite, $Mn^{2+}_6\ As^{5+}Si_5O_{18}(OH)$. Therefore, it is inferred that As and V partly substitute the Si-tetrahedral framework in arsenmedaite.Raman spectroscopy detected weak peaks at 340–360 and 994 cm^{-1}, moderate peaks at 644 and 658 cm^{-1}, and strong peaks at 859, 879, and 894 cm^{-1}. These Raman peaks are comparable with those of arsenmedaite (Biagioni et al., 2019) and medaite (Lafuente et al., 2015).Although a precise crystallographic analysis has not been completed yet due to its rarity and rhodonite inclusions, the occurrence of arsenmedaite possibly contributes to V/As-mineralization in the Yamato mine.

Keywords: arsenmedaite, Yamato mine

“Common Hornblende” from Mt. Tawarayama (Goou-toge), the outer-rim of Mt. Aso, Kumamoto Prefecture

*Haruki Inoue[1], Seiichiro Uehara[2]

1. Enecom Co., Ltd., 2. Kyushu Univ. Museum

Keywords: Mt. Tawarayama, Goou-toge, magnesio-hastingsite, common hornblende

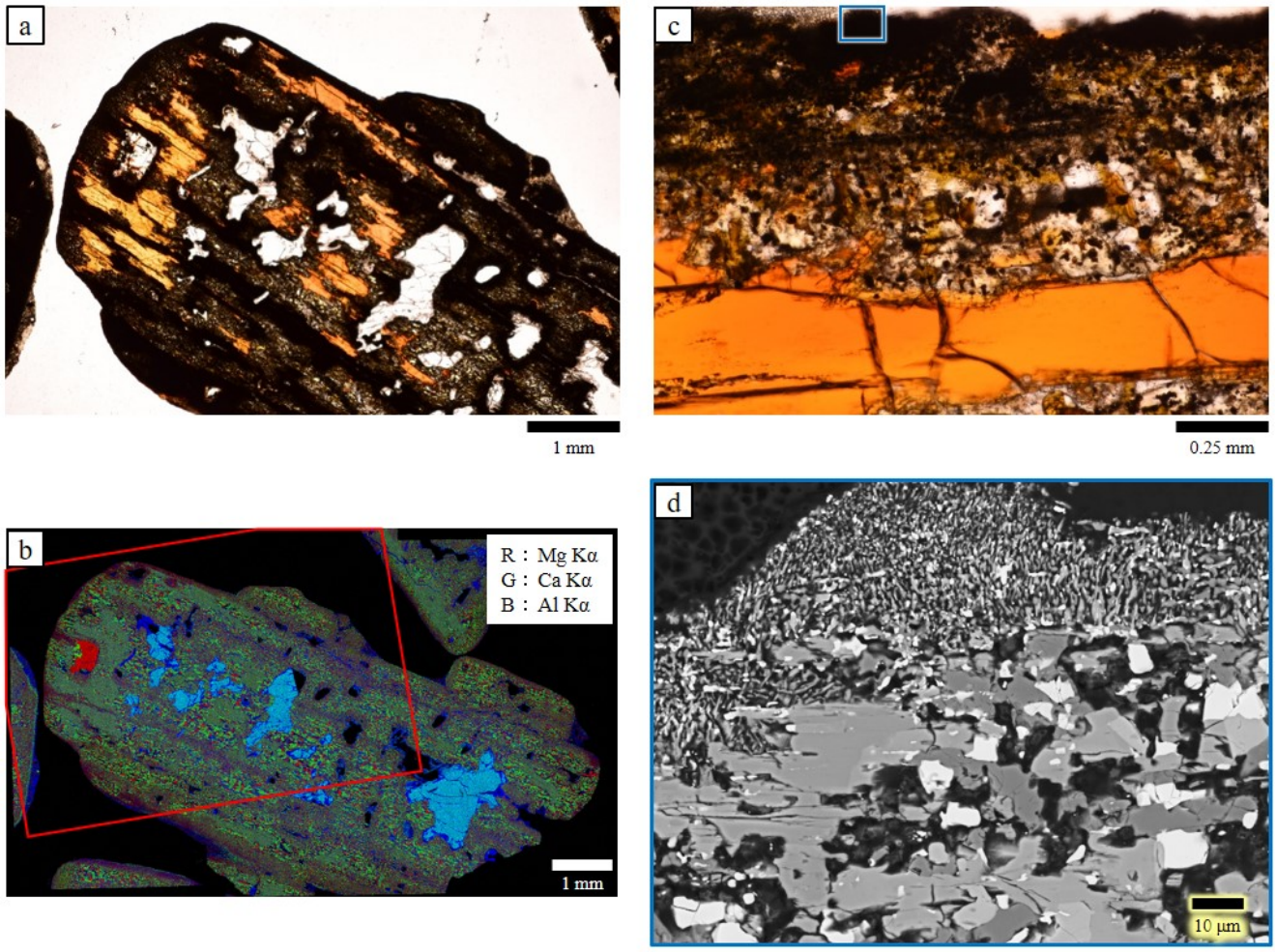

Fig.1. Polarizing microscope images and scanning electron microscope images of “Common Hornblende” from Mt. Tawarayama (Goou-toge), the outer-rim of Mt. Aso, Kumamoto Prefecture, Japan.
(a) Optical microscope image of amphibole phenocryst under plane polarized light. The cross section is parallel to the *c*-axis. (b) EDS X-ray maps of amphibole phenocryst. This image has RGB colors overlaid. The red frame indicates the area in Fig. 1a. (c) Optical microscope image of opacitization of hornblende under plane polarized light. The blue frame indicates the area in Fig. 1d. (d) BSE image of opacitization of “common hornblende”. There are microscopic minerals that cannot be observed with a polarizing microscope.

Chemical composition of tourmaline and amphibole associated with gabbro from Kajishima, Ehime Prefecture, Japan

*Itsuki Ota[1], Kazuya Shimooka[2], satoshi saitou[1], youhei shirose[1]

1. Ehime Univ. Sci and Eng, 2. Kwansei Gakuin Univ. Sci

Keywords: kajishima, gabbro, pegmatite, tourmaline, amphibole

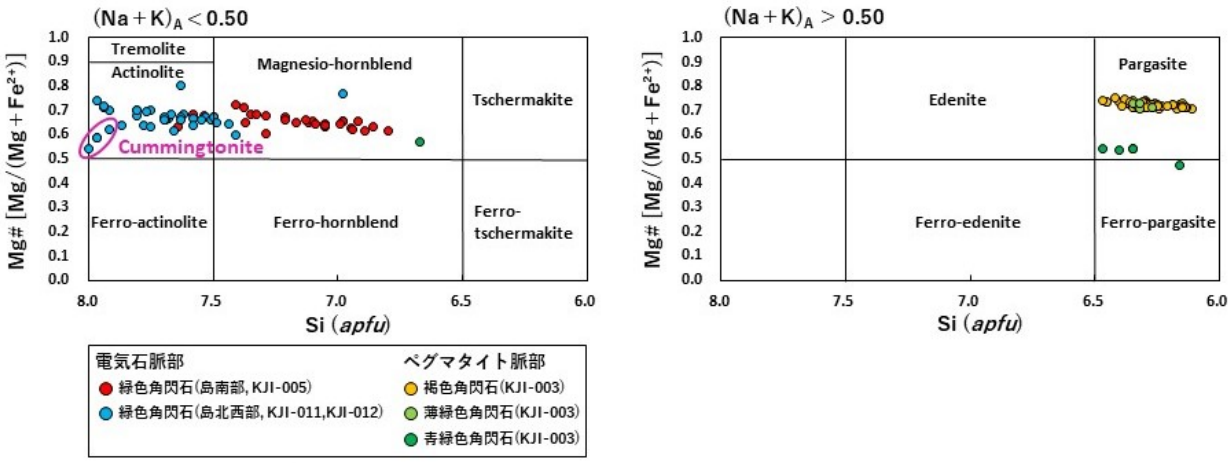

Fig. 1 角閃石の化学組成変化　(分類はHawthorne et al., 2012; Leake, 1997を参考)

Constituent minerals of clay associated with the pegmatite dike in Nagatare, Fukuoka Prefecture, Japan

*Yuya TAKEDA[1], Seiichiro Uehara[2], Yoshihiro Kuwahara[3]

1. Kyushu Univ. ISGS, 2. Kyushu Univ. Museum, 3. Kyushu Univ. SCS

Keywords: kaoline, halloysite, nagatare

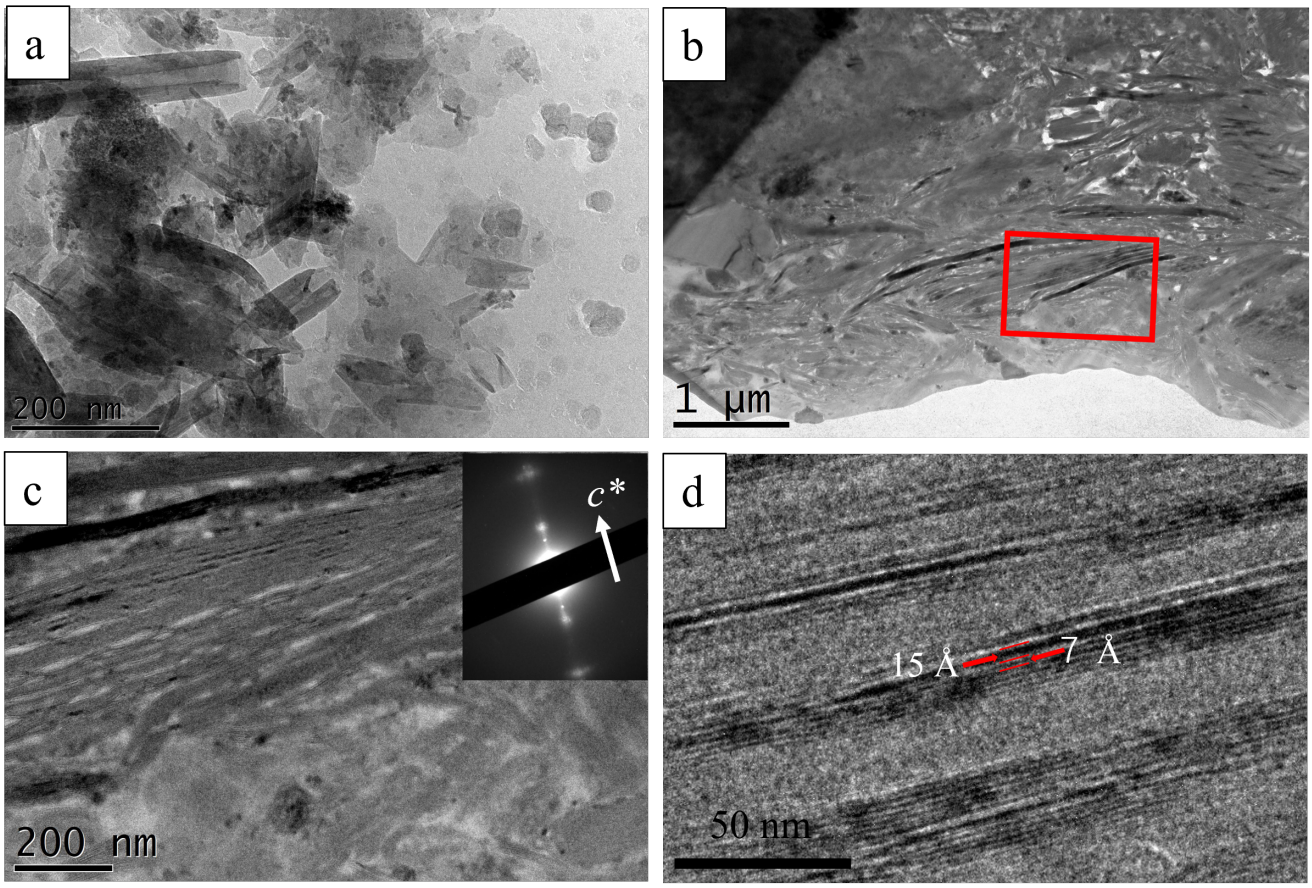

Fig. 1. Photographs of clays in Nagatare. (a) Bright field TEM image of halloysite. (b) Bright field TEM image of FIB thin section. (c) Bright field TEM image of kaolinite in the red box area of (b). (d) Enlarged TEM image of kaolinite.

Microstructure of serpentine veins in peridotite in Ooshika Village, Nagano Prefecture, Japan

*Yuya TAKEDA[1], Yoshihiro Kuwahara[3], Seiichiro Uehara[2]

1. Kyushu Univ. ISGS, 2. Kyushu Univ. Museum, 3. Kyushu Univ. SCS

Keywords: chrysotile, serpentine vein, iron

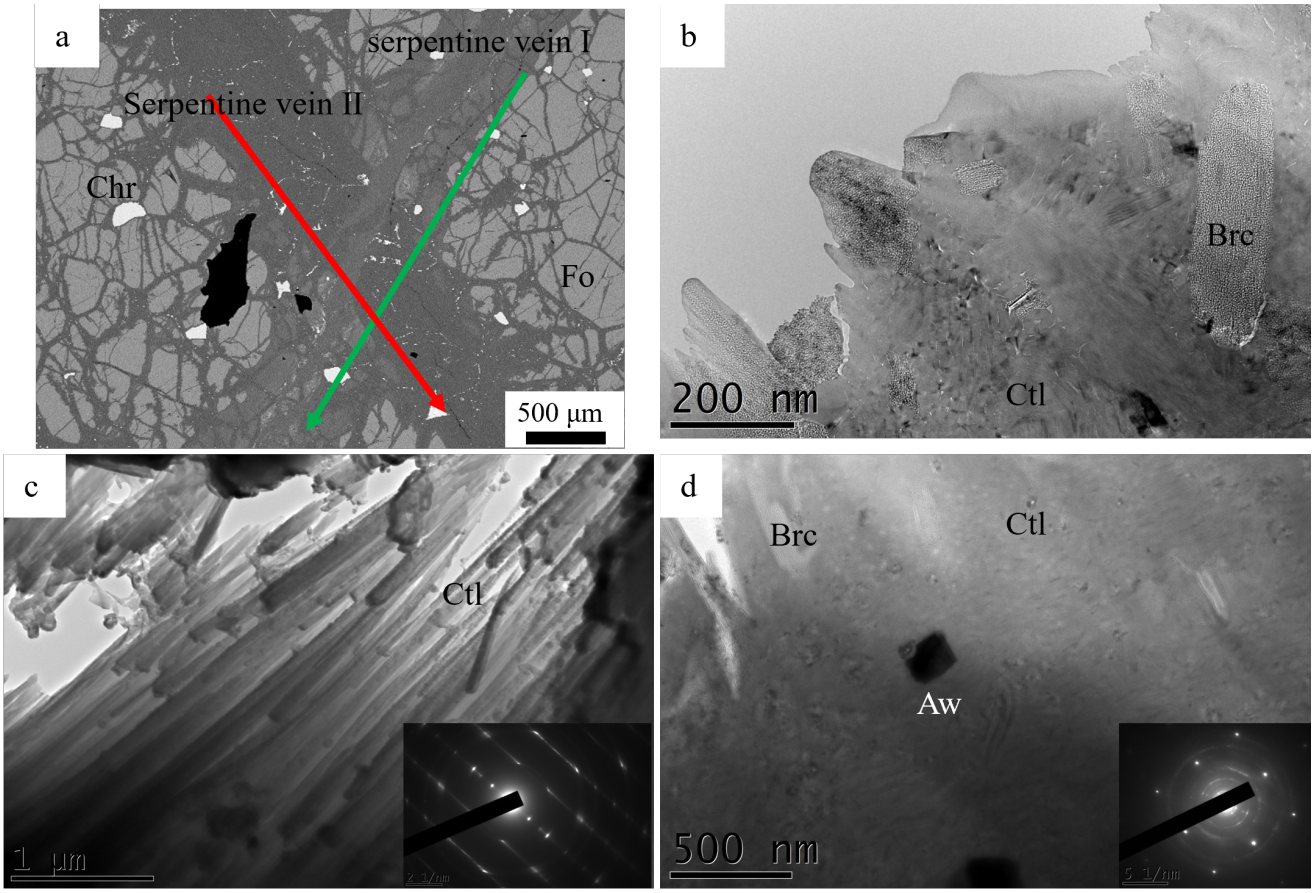

Fig. 1. Photographs of serpentine vein I and II. (a) Back scattered electron image by SEM of serpentine vein I and II. (b) Bright field TEM image of chrysotile and brucite in serpentine vein I. (c) Bright field TEM images of chrysotile and SAED pattern of chrysotile in serpentine vein II. (d) Bright field TEM images of chrysotile and brucite and awaruite in serpentine vein I. SAED pattern of awaruite.
Ctl: chrysotile. Brc: brucite. Aw: awaruite. Chr: chromite. Fo: forsterite.

Poster presentation | R3: High-pressure science and deep Earth's material

Thu. Sep 12, 2024 12:30 PM - 2:00 PM JST | Thu. Sep 12, 2024 3:30 AM - 5:00 AM UTC | Entrance Hall Higashiyama Campus

R3: High-pressure science and deep Earth's material

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-01] Influence of co-existing inorganic minerals on chemical reaction of *n*-alkane under high-pressure and high-temprature conditions of subduction zone.

*Ayako SHINOZAKI[1], Kina Takimoto[1], Takaya Nagai[1], Koichi Mimura[2] (1. Hokkaido University, 2. Nagoya University)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-02] Differential Scanning Calorimetry of Mn_2SiO_4 tephroite

*Yuta Asami[1], Itaru Ohira[2], Hiroshi Kojitani[2] (1. Gakushuin Univ. Sci, 2. Gakushuin Univ.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-03] Ab initio calculation of the polarized IR spectra and hydrogen positions of hydrous Bridgmanite

*Kikuyo Inagaki[1], Jun Tsuchiya[1], Yanyao Zhang[3], Jung-Fu Lin[2], Shun-ichiro Karato[4], Jennifer Kung[5], ChingChien Li[5] (1. GRC Ehime Univ. , 2. Univ. Texas Austin , 3. Stanford Univ., 4. Yale Univ., 5. National Cheng Kung Univ.)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-04] Determination of the stability of silica phases under high pressure by ultra-fast X-ray diffraction measurements

*Ryosuke SINMYO[1], Saori Kawaguchi-Imada[2], Takayuki Ishii[3], Hiroshi Sakuma[4], Ayase Ogawa[1], Kenta Kobayashi[1], Shuhou Maitani[1] (1. Meiji Univ. Sci. Tech., 2. JASRI, 3. Okayama Univ. IPM, 4. NIMS)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-05] Crystallographic preferred orientation properties of Ferropericlase polycrystals obtained from large strain deformation experiments under lower mantle pressures

「発表賞エントリー」

*Bunrin Natsui[1], Shintaro Azuma[1], Keishi Okazaki[2,5], Kentaro Uesugi[3], Masahiro Yasutake[3], Saori Kawaguchi[3], Ryuichi Nomura[4], Kenji Ohta[1] (1. Tokyo Tech, 2. Hiroshima Univ., 3. JASRI, 4. Kyoto Univ., 5. JAMSTEC)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-06] Investigation of hydrogen sealing materials at high temperature and high pressure using neutron imaging

*Sho KAKIZAWA[1], Hiroyuki Kagi[2], Masahiro Takano[2], Asami Sano-Furukawa[3], Takanori Hattori[3], Abe Jun[4], Kenichi Funakoshi[4] (1. JASRI, 2. UTokyo Sci., 3. JAEA J-PARC Center, 4. CROSS, Neutron Science and Technology Center)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-07] Reactions of FeS with hydrogen at high pressure and high temperature revisited

「発表賞エントリー」

*Masahiro Takano[1], Hiroyuki Kagi[1], Yuichiro Mori[1], Katsutoshi Aoki[1], Sho Kakizawa[2], Noriyoshi Tsujino[2], Yuji Higo[2], Asami Sano-Furukawa[3] (1. UTokyo, 2. JASRI, 3. J-PARC center, JAEA)

12:30 PM - 2:00 PM JST | 3:30 AM - 5:00 AM UTC

[R3-P-08] Extreme pressure generation using toroidal diamond anvil cell

*Takeshi SAKAI[1], Yuki Nakamoto[2], Satoru Nakamura[1], Sotaro Iwatsu[2], Shuto Fukuda[2], Yuki Kato[2], Katsuya Shimizu[2], Hirokazu Kadobayashi[3], Saori Kawaguchi-Imada[3] (1. GRC, Ehime University, 2. KYOKUGEN, Osaka University, 3. JASRI)

Influence of co-existing inorganic minerals on chemical reaction of *n*-alkane under high-pressure and high-temprature conditions of subduction zone.

*Ayako SHINOZAKI[1], Kina Takimoto[1], Takaya Nagai[1], Koichi Mimura[2]

1. Hokkaido University, 2. Nagoya University

Keywords: Hydrocarbons, olivine, Gas specteometry/Mass spectroscopy , Raman, Subduction zone

Differential Scanning Calorimetry of Mn_2SiO_4 tephroite

*Yuta Asami[1], Itaru Ohira[2], Hiroshi Kojitani[2]

1. Gakushuin Univ. Sci, 2. Gakushuin Univ.

Keywords: Tephroite, Heat capacity, d-orbital electrons

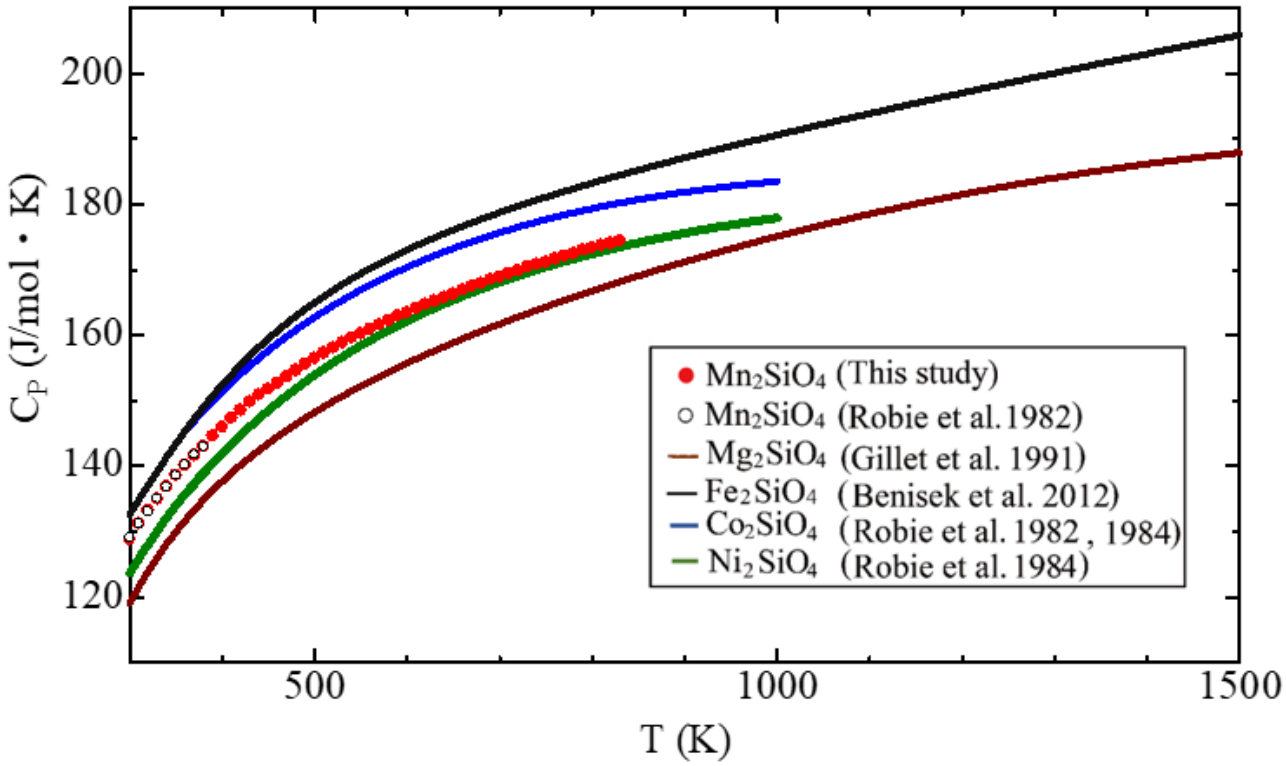

図 1.オリビン型 M_2SiO_4(M=Mn、Fe、Co、Ni、Mg)の定圧モル熱容量↵

Ab initio calculation of the polarized IR spectra and hydrogen positions of hydrous Bridgmanite

*Kikuyo Inagaki[1], Jun Tsuchiya[1], Yanyao Zhang[3], Jung-Fu Lin[2], Shun-ichiro Karato[4], Jennifer Kung[5], ChingChien Li[5]

1. GRC Ehime Univ. , 2. Univ. Texas Austin , 3. Stanford Univ., 4. Yale Univ., 5. National Cheng Kung Univ.

Keywords: Bridgmanite, Hydrogen, ab initio calculation

Determination of the stability of silica phases under high pressure by ultra-fast X-ray diffraction measurements

*Ryosuke SINMYO[1], Saori Kawaguchi-Imada[2], Takayuki Ishii[3], Hiroshi Sakuma[4], Ayase Ogawa[1], Kenta Kobayashi[1], Shuhou Maitani[1]

1. Meiji Univ. Sci. Tech., 2. JASRI, 3. Okayama Univ. IPM, 4. NIMS

Keywords: SiO2, high pressure and high temperature, X-ray diffraction measurement, seifertite

Crystallographic preferred orientation properties of Ferropericlase polycrystals obtained from large strain deformation experiments under lower mantle pressures

*Bunrin Natsui[1], Shintaro Azuma[1], Keishi Okazaki[2,5], Kentaro Uesugi[3], Masahiro Yasutake[3], Saori Kawaguchi[3], Ryuichi Nomura[4], Kenji Ohta[1]

1. Tokyo Tech, 2. Hiroshima Univ., 3. JASRI, 4. Kyoto Univ., 5. JAMSTEC

Keywords: Rheology, Deformation experiment, Lower mantle

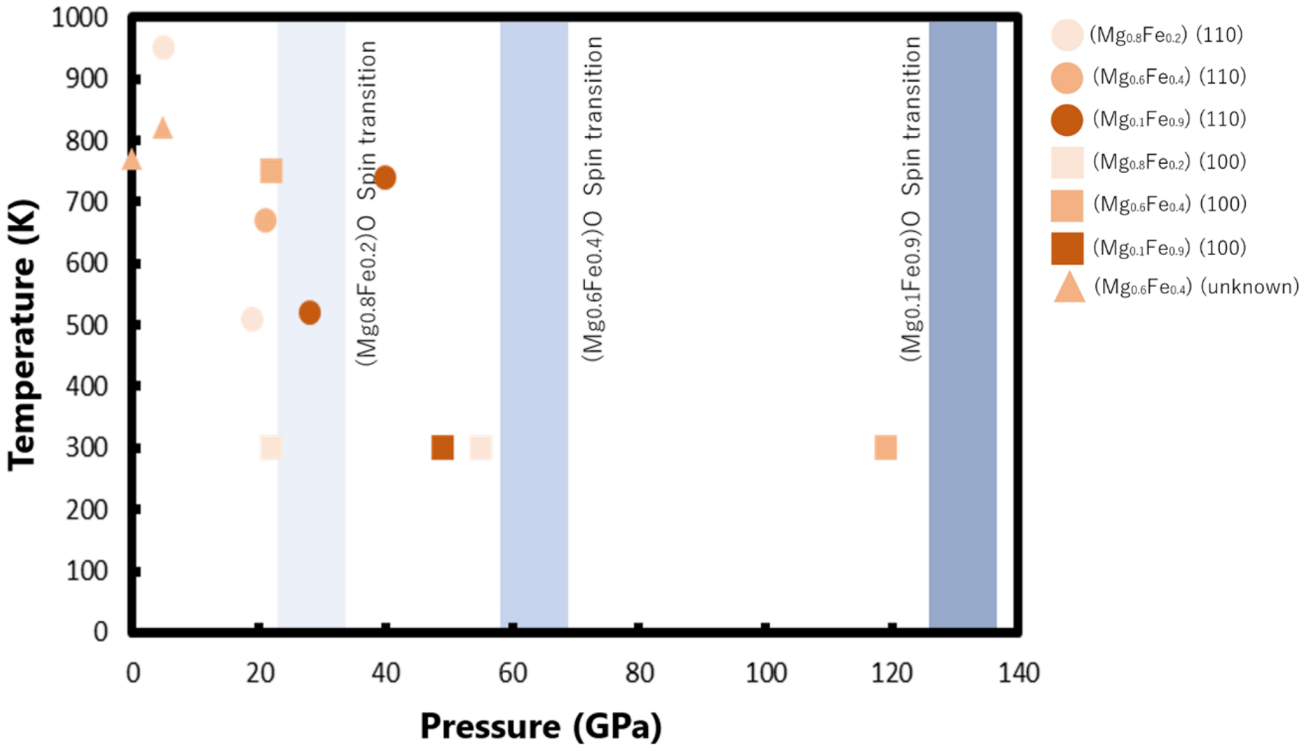

図　活性化するすべり面と温度および圧力の関係

Investigation of hydrogen sealing materials at high temperature and high pressure using neutron imaging

*Sho KAKIZAWA[1], Hiroyuki Kagi[2], Masahiro Takano[2], Asami Sano-Furukawa[3], Takanori Hattori[3], Abe Jun[4], Kenichi Funakoshi[4]

1. JASRI, 2. UTokyo Sci., 3. JAEA J-PARC Center, 4. CROSS, Neutron Science and Technology Center

Keywords: Hydrogen, Neutron Imaging, hydrogen sealing materials

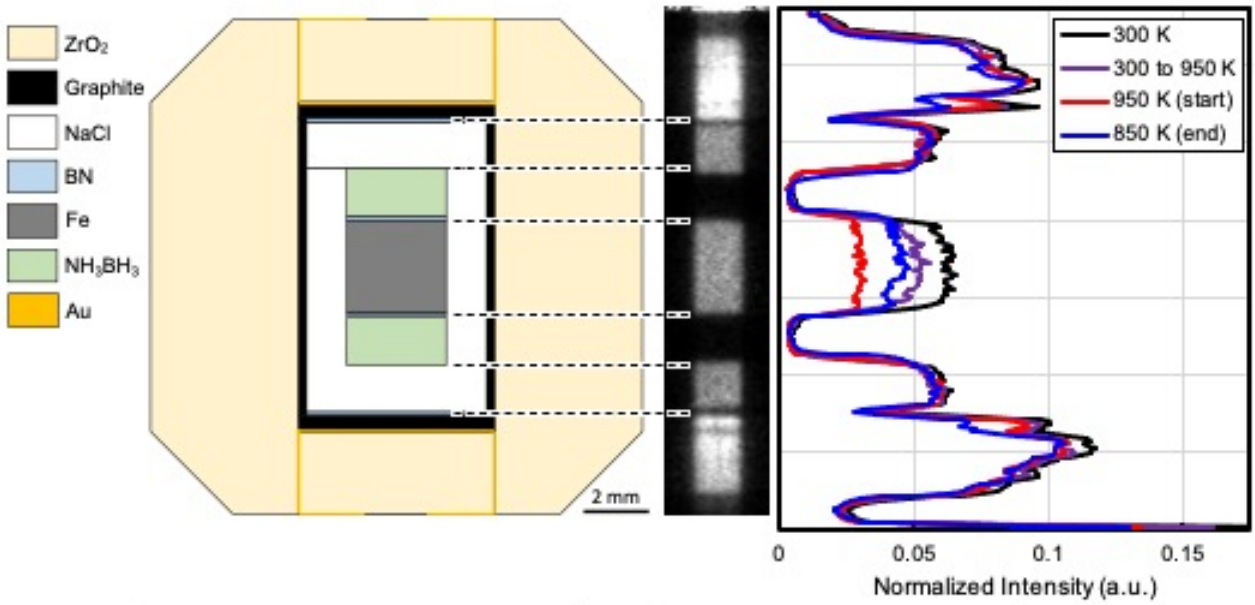

図 1：（左）使用した高圧セルおよび（右）得られた透過像および透過プロファイル

Reactions of FeS with hydrogen at high pressure and high temperature revisited

*Masahiro Takano[1], Hiroyuki Kagi[1], Yuichiro Mori[1], Katsutoshi Aoki[1], Sho Kakizawa[2], Noriyoshi Tsujino[2], Yuji Higo[2], Asami Sano-Furukawa[3]

1. UTokyo, 2. JASRI, 3. J-PARC center, JAEA

Keywords: neutron diffraction, X-ray diffraction, FeS, hydrogenation

Extreme pressure generation using toroidal diamond anvil cell

*Takeshi SAKAI[1], Yuki Nakamoto[2], Satoru Nakamura[1], Sotaro Iwatsu[2], Shuto Fukuda[2], Yuki Kato[2], Katsuya Shimizu[2], Hirokazu Kadobayashi[3], Saori Kawaguchi-Imada[3]

1. GRC, Ehime University, 2. KYOKUGEN, Osaka University, 3. JASRI

Keywords: Toroidal type DAC(t-DAC)