

Curriculum Vitae

Hiroaki Ohfuji (Ph.D.)

Last Name: Ohfuji **First Name:** Hiroaki

Date of Birth: 4th April 1976 **Gender:** Male

Nationality: Japanese

Affiliation and Mailing address:

Department of Earth Science, Graduate School of Science, Tohoku University
6-3 Aramaki-Aza-Aoba, Aoba-Ku, Sendai 980-8578, Japan

Phone & Fax: +81-22-795-6658

Email: ohfuji@tohoku.ac.jp



Education:

- BSc. in Geology, (1999)

Department of Geology, Faculty of Science, Niigata University, Japan

- MSc. in Geology and Mineralogy, (2001)

Graduate School of Science and Technology, Niigata University, Japan

- Ph.D. (2005)

School of Earth, Ocean and Planetary Sciences, Cardiff University, UK

Ph.D. thesis title “Framboids”

Employment History:

2020.10 – Present	Professor at Department of Earth Science, Graduate School of Science, Tohoku University, Japan
2020.4 – 2020.9	Director of Premier Research Institute for Ultrahigh-pressure Sciences, at Geodynamics Research Center, Ehime University, Japan
2016.4 – 2020.9	Professor at Geodynamics Research Center, Ehime University, Japan
2012.4 – 2016.3	Associate Professor at Geodynamics Research Center, Ehime University, Japan
2005.10 – 2012.3	Assistant Professor at Geodynamics Research Center, Ehime University, Japan
2004.11 – 2005.9	Postdoctoral research fellow at Geodynamics Research Center, Ehime University, Japan

Research Interests:

- Crystal growth and self-organization mechanism of natural/synthetic minerals
 - Origin and the formation mechanism of framboidal pyrite and other authigenic iron sulfides in natural sediments and laboratory
 - Origin and formation mechanism of natural diamonds derived from mantle, metamorphism and meteoritic impact
 - Graphite – diamond transformation mechanism
 - Synthesis and characterization of siliceous potassic mineral fertilizers from natural and artificial resources.
-

Professional Memberships:

- Mineralogical Society of America – Member
 - Japan Geoscience Union – Member
 - Japan Association of Mineralogical Sciences – Member
 - The Clay Science Society of Japan – Member
 - The Japanese Association for Crystal Growth – Member
-

Awards:

2002-2004	Overseas Research Student (ORS) Award (funded by Universities UK)
2011	Young Researcher Award (given by Japan Association of Mineralogical Sciences)
2012	Outstanding Paper Award (given by Japan Association of Mineralogical Sciences)
2016	Outstanding Paper Award (given by Japanese Society for Rock Mechanics)
2018	JAMS Award (given by Japan Association of Mineralogical Sciences)

Contribution to Society:

- Editorial Board Member of Scientific Reports (Nature Research) (2017-)
 - Editorial Board Member of Progress in Earth and Planetary Science (Springer) (2020-)
 - Editorial Board Member of Journal of Mineralogical and Petrological Sciences (JAMS) (2022-)
 - Editorial Board Member of “Ganseki Kobutsu Kagaku” (JAMS) (2014-)
 - Council member of IMA (2020-)
 - Director of Japan Association of Mineralogical Sciences (2011-)
 - Chair of Public Relations Committee of Japan Association of Mineralogical Sciences (2018-)
-

Publications:

[Summary from Google scholar]

- Total Citation: 4527
- h-index: 36
- i10-index: 101

All published in peer-reviewed international journals

1. Kawamura, H., Ohfuji, H., Satish-Kumar, M., Kiran, S., Suzuki, A. (2023) Carbon isotopic composition of solid carbon and C–H–O fluid produced through the decomposition of stearic acid under HP-HT condition, *High Pressure Research*, **44**, 1-15.
2. Ishihara, A., Ohfuji, H. (2023) Mineralogical study on zeolites in gastropod fossils in Miocene sediments in Minamisoma, Fukushima, Japan, *Journal of Mineralogical and Petrological Sciences*, **118**, 230327.
3. Fujino, K., Tomioka, N., Ohfuji, H. (2023) New approach to obtain the correct chemical compositions by absorption correction using analytical transmission electron microscopy, *Journal of Mineralogical and Petrological Sciences*, **118**, 221017.
4. Mitsu, K., Irifune, T., Ohfuji, H., Yamada, A. (2021) Synthesis of transparent polycrystalline jadeite under high pressure and temperature, *Journal of Mineralogical and Petrological Sciences*, **116**, 203-210.
5. Yoshida, M., Miyahara, M., Suga, H., Yamaguchi, A., Tomioka, N., Sakai, T., Ohfuji, H., Maeda, F., Ohira, I., Ohtani, E., Kamada, S., Ohigashi, T., Inagaki, Y., Yu, K., Hirao, N. (2021) Elucidation of impact event recorded in the lherzolitic shergottite NWA 7397, *Meteoritics & Planetary Science*, **56**, 1729-1743.
6. Feng, L., Hu, Q., Lei, L., Qi, L., Zhang, L., Pu, M., Kou, Z., Peng, F., He, D., Kojima, Y., Ohfuji, H., Irifune, T. (2021) High-pressure synthesis of TaN compacts with high hardness and thermal stability, *Ceramics International*, **47**, 30039-30042.
7. Wu, B., Lei, L., Zhang, F., Tang, Q., Liu, S., Pu, M., He, D., Xia, Y., Fang, L., Ohfuji, H., Irifune, T. (2021) Pressure-induced disordering of site occupation in iron–nickel nitrides, *Matter and Radiation at Extremes*, **6**, 038401.
8. Wang, Y., Shi, F., Gasc, J., Ohfuji, H., Wen, B., Yu T., Officer, T. Nishiyama, N., Shinmei, T., Irifune, T., Dũng, M. (2021) Plastic Deformation and Strengthening Mechanisms of Nanopolycrystalline Diamond, *ACS Nano*, **15**, 8283-8294.
9. Kadobayashi, H., Ohnishi, S., Ohfuji, H., Yamamoto, Y., Muraoka, M., Yoshida, S., Hirao, N., Kawaguhi, S. I. (2021) Diamond formation from methane hydrate under the internal conditions of giant icy planets, *Scientific Reports*, **11**, 8165.
10. Makimura, S., Kurishita, H., Niikura, K., Jung, H.C., Ishizaki, H., Kimura, A., Onoi, M., Nagasawa, Y., Sakamoto, T., Ohfuji, H. (2021) Development of Toughened, Fine Grained, Recrystallized W-1.1%TiC, *Materials Science Forum*, **1024**, 103-109.
11. Wu, B., Zhang, F., Hu, Q., Tang, Q. Liu, S., Xiang, X., Xia, Y., Fang, L., Ohfuji, H., Irifune, T., Lei, L. (2021) The effect of interstitial-site nitrogen on structural, elastic, and magnetic properties of face-center cubic Co, *Journal of Applied Physics*, **129**, 105901.

12. Mikhailenko, D.S., Korsakov, A.V., Ohfuji, H., Rezvukhina, O.V., Pekov, I.V. (2021) Formation of Polycrystalline Graphite Aggregates in High-Pressure Metamorphic Rocks from the Kokchetav Massif, Northern Kazakhstan, *Doklady Earth Sciences*, **497**, 227-231.
13. Mikhailenko, D.S., Korsakov, A.V., Ohfuji, H., Sobolev, N.V. (2021) Silicate Inclusions in Metamorphic Diamonds from the Ultra-High Pressure Kokchetav Complex (Kazakhstan), *Doklady Earth Sciences*, **496**, 142-145.
14. Miyahara, M., Yamaguchi, A., Saitoh, M., Fukimoto, K., Sakai, T., Ohfuji, H., Tomioka, J., Yu K., Ohtani, E. (2021) Systematic investigations of high - pressure polymorphs in shocked ordinary chondrites, *Meteoritics & Planetary Science*, **55**, 2619-1651.
15. Fukuta, R., Murakami, Y., Ohufji, H., Shinmei, T., Irifune, T., Ishikawa, F. (2021) Sn-V centers in diamond activated by ultra high pressure and high temperature treatment, *Japanese Journal of Applied Physics*, **60**, 035501.
16. Kadobayashi, H., Hirai, H., Ohfuji, H., Kawamura, H., Muraoka, M., Yoshida, S., Yamamoto, Y. (2020) Effect of Ammonia on Methane Hydrate Stability under High-Pressure and High-Temperature Conditions, *The Journal of Physical Chemistry A*, **124**, 10890-10896.
17. Gaida, N.A., Gréaux, S., Kono, Y., Ohfuji, H., Kuwahara, H., Nishiyama, N., Beermann, O., Sasaki, T., Niwa, K., Hasegawa, M. (2020) Elasticity of nanocrystalline kyanite at high pressure and temperature from ultrasonic and synchrotron X - ray techniques, *Journal of the American Ceramic Society*, **104**, 635-644.
18. Nishiyama, T., Ohfuji, H., Fukuba, K., Terauchi, M., Nishi, U., Harada, K., Unoki, H., Moribe, Y., Yoshiasa, A., Ishimaru, S., Mori, Y., Shigeno, M., Arai, S. (2020) Microdiamond in a low-grade metapelite from a Cretaceous subduction complex, western Kyushu, Japan, *Scientific Reports*, **10**, 11645.
19. Kadobayashi, K., Ohfuji, H., Hirai, H., Ohtake, M., Yamamoto, Y. (2020) Stability of methane hydrate at high-pressure and high-temperature of up to 40 GPa and 573 K, *Journal of Physics: Conference Series*, **1609**, 012007.
20. Kadobayashi, H., Hirai, H., Machita, K., Ohfuji, H., Muraoka, M., Yoshida, S., Yamamoto, Y. (2020) High-pressure phase transition of methane hydrate in water–methane–ammonia system, *Journal of Physics: Conference Series*, **1609**, 012006.
21. Fukuta, R., Yamamoto, N., Murakami, Y., Ishikawa, F., Ohfuji, H., Shinmei, T., Irifune, T. (2020) Dispersing InP Nanocrystals in Nano-polycrystalline Diamond during the Direct Conversion from Graphite, *Materials Transactions*, **61**, 1707-1710.
22. Fukimoto, F., Miyahara, M., Sakai, Ohfuji, H., T., Tomioka, N., Kodama, Y., Ohtani, E., Yamaguchi, A. (2020) Back-transformation mechanisms of ringwoodite and majorite in an ordinary chondrite, *Meteoritics and Planetary Science*, **55**
23. Tsuchiya, T., Fukuda, M., Ohfuji, H., Yamasaki, M., Kawamura, Y., Matsushita, M. (2020) A novel long-period phase in Mg₉₇Yb₂Cu₁ alloy, *Journal of Alloys and Compounds*, **844**, 155972.
24. Kadobayashi, H., Hirai, H., Ohfuji, H., Ohtake, M., Muraoka, M., Yoshida, S., Yamamoto, Y. (2020) Structural evolution of methane hydrate under pressures up to 134 GPa, *The Journal of Chemical Physics*, **152**, 194308.
25. Bekker, T.B., Litasov, K.D., Shatskiy, A., Sagatov, N., Krinitsin, P.G., Krashennnikov, S., Podborodnikov, I., Rashchenko, S.V., Davydov, A., Ohfuji, H. (2020) Towards the investigation

of ternary compound in the Ti-Al-Zr-O system: Effect of oxygen fugacity on phase formation, *Journal of the European Ceramic Society*, **40**, 3663-3672.

26. Kawamura, H., Ohfuji, H. (2020) Nano-polycrystalline diamond synthesized through the decomposition of stearic acid, *High Pressure Research*, **40**, 162-174.
27. Irifune, T., Ueda, C., Ohshita, S., Ohfuji, H., Kunimoto, T., Shinmei, T. (2020) Synthesis of nano-polycrystalline diamond from glassy carbon at pressures up to 25 GPa, *High Pressure Research*, **40**, 96-106.
28. Ishii, R., Fukuta, R., Ishikawa, F., Matsushita, M., Ohfuji, H., Shinmei, T., Irifune, T., Funato, M., Kawakami, Y. (2020) Deep-ultraviolet near band-edge emissions from nano-polycrystalline diamond, *High Pressure Research*, **40**, 140-147.
29. Wang, Y., Shi, F., Ohfuji, H., Gasc, J., Nishiyama, N., Yu, T., Officer, T., Shinmei, T., Irifune, T. (2020) Strength and plastic deformation of polycrystalline diamond composites, *High Pressure Research*, **40**, 35-53.
30. Sakai, T., Yagi, T., Takeda, R., Hamatani, T., Nakamoto, Y., Kadobayashi, H., Mimori, H., Kawaguchi, S.I., Hirao, N., Kuramochi, K., Ishimatsu, N., Kunimoto, T., Ohfuji, H., Ohishi, Y., Irifune, T., Shimizu, T. (2020) Conical support for double-stage diamond anvil apparatus, *High Pressure Research*, **40**, 12-21.
31. Litasov, K.D., Bekker, T.B., Kagi, H. Ohfuji, H. (2020) Reply to the comment on "Comparison of enigmatic diamonds from the Tolbachik arc volcano (Kamchatka) and Tibetan ophiolites: Assessing the role of contamination by synthetic materials" by Litasov et al., 2019 (*Gondwana Research*, 75, 16-27) by Yang et al., *Gondwana Research*, **79**, 304-307.
32. Kawasaki, T., Adachi, T., Ohfuji, H., Osanai, Y. (2019) FeAlO₃ under ultrahigh-temperature metamorphic conditions: Experimental evidence from the sillimanite-Fe₂O₃ and sillimanite-Fe₃O₄ systems, *Journal of Mineralogical and Petrological Sciences*, **114**, 238-251.
33. Litasov, K.D., Shatskiy, A., Minin, D., Kuper, K., Ohfuji, H. (2019) The Ni-Ni₂P phase diagram at 6 GPa with implication to meteorites and super-reduced terrestrial rocks, *High Pressure Research*, **39**, 561-578
34. Kagi, H., Kubo, T., Shinozaki, A., Okada, T., Ohfuji, H., Nakao, A. (2019) Reaction between Forsterite and Nitrogen Fluid at High Pressure and High Temperature, *Geochemistry International*, **57**, 956-963.
35. Hamada, M., Akasaka, M., Ohfuji, H. (2019) Crystal chemistry of K-rich nepheline in nephelinite from Hamada, Shimane Prefecture, Japan, *Mineralogical Magazine*, **83**, 239-247.
36. Matsushita, M., Masuda, K., Waki, R., Ohfuji, H., Yamasaki, M., Kawamura, Y., Higo, Y. (2019) Ultrafine spherulite Mg alloy with high yield strength. *Journal of Alloys and Compounds*, **784**, 1284-1289.
37. Martirosyan, N., Litasov, K.D., Lobanov, S., Goncharov, A.F., Shatskiy, A., Ohfuji, H. Prakapenka, V. (2019) The Mg-carbonate-Fe interaction: Implication for the fate of subducted carbonates and formation of diamond in the lower mantle. *Geoscience Frontiers*, **10**, 1449-1458.
38. Litasov, K.D., Kagi, H. Voropaev, S.A., Hirata, T., Ohfuji, H., Ishibashi, H., Makino, Y., Bekker, T.B., Savastyanov, V.S., Afanasiev, V.P., Pokhilenko, N.P. (2019) Comparison of enigmatic diamonds from the Tolbachik arc volcano (Kamchatka) and Tibetan Ophiolites: Assessing the role of contamination by synthetic materials. *Gondwana Research*, **75**, 16-27.

39. Sakamoto, T., Kukeya, S., Ohfuji, H. (2019) Microstructure and room and high temperature mechanical properties of ultrafine structured Al-5wt%Y₂O₃ and Al-5wt%La₂O₃ nanocomposites fabricated by mechanical alloying and hot pressing. *Materials Science and Engineering: A*, **748**, 428-433.
40. Minin, D., Shatskiy, A., Litasov, K.D., Ohfuji, H. (2019) The Fe-Fe₂P phase diagram at 6 GPa. *High Pressure Research*, **39**, 50-68.
41. Gu, T., Ohfuji, H., Wang, W. (2019) Origin of milky optical features in type IaB diamonds: Dislocations, nano-inclusions, and polycrystalline diamond. *American Mineralogist*, **104**, 652-658.
42. Fukuta, R., Yamamoto, N., Ishikawa, F., Matsushita, M., Yoshitake, T., Ikenoue, H., Ohfuji, H., Shinmei, T., Irifune, T. (2018) Pulsed laser irradiation as a process of conductive surface formation on nanopolycrystalline diamond. *Japanese Journal of Applied Physics*, **57**, 118004.
43. Zhou, Y., Irifune, T., Ohfuji, H., Kuribayashi, T. (2018) New high-pressure forms of Al₂SiO₅. *Geophysical Research Letters*, **45**, 8167-8172.
44. Ichida, Y., Ohfuji, H., Irifune, T., Kunimoto, T., Kojima, Y., Shinmei, T. (2018) Synthesis of ultrafine nano-polycrystalline cubic boron nitride by direct transformation under ultrahigh pressure. *Journal of European Ceramic Society*, **38**, 2815-2822.
45. Kojima, Y., Ohfuji, H. (2018) Re-examination of solvothermal synthesis of layered carbon nitride. *Journal of Materials*, **2018**, 6576457.
46. Chertkova, N., Ohfuji, H., Nomura, R., Kadobayashi, H., Irifune, T. (2018) A step towards better understanding of behavior of organic materials at simultaneous high pressures and high temperatures. *High Pressure Research*, **38**, 337-347.
47. Ejima, T., Osanai, Y., Akasaka, M., Adachi, T., Nakano, N., Kon, Y., Ohfuji, H., Sereenen, J. (2018) Oxidation state of Fe in constituent minerals of a spinel lherzolite xenolith from the Tariat depression, Mongolia: The significance of Fe³⁺ in olivine. *Minerals*, **8**, 204.
48. Nakamura, Y., Iwata, I., Hori, R.S., Uchiyama, N., Tuji, A., Fujita, M.J., Honda, D., Ohfuji, H. Elemental composition and ultrafine structure of the skeleton in shell-bearing protists – a case study of phaeodarians and radiolarians. *Journal of Structural Biology*, **204**, 45-51.
49. Mikhailenko, D., Shchepetova, O.V., Musiyachenko, K.A., Korsakov, A.V., Ohfuji, H., Pekov, I. (2018) New data on diamond – graphite relationships in the gneisses of the Kokchetav massif (Northern Kazakhstan). *Doklady Earth Sciences*, **480**, 815-818.
50. Kadobayashi, H., Hirai, H., Ohfuji, H., Ohtake, M., Yamamoto, Y. (2018) In situ Raman and X-ray diffraction studies on the high pressure and high temperature stability of methane hydrate up to 55 GPa. *The Journal of Chemical Physics*, **148**, 164503.
51. Mizuguchi, T., Ito, T., Kimura, K., Kurisaka, T., Ohfuji, H. (2018) Transition in deformation mechanism during high-temperature tensile testing of friction-stir-processed 5083 aluminum alloy. *Journal of the Society of Materials Science, Japan*, **67**, 568-573.
52. Lei, L., Zhang, L., Gao, S., Hu, Q., Fang, L., Chen, X., Xia, Y., Wang, X., Ohfuji, H., Kojima, Redfern, S. Zeng, Z., Chen, B., He, D., Irifune, T. (2018) Neutron diffraction study of the structural and magnetic properties of ε-Fe_{2.322}Co_{0.678}N_{0.888}. *Journal of Alloys and Compounds*, **752**, 99-105.

53. Zhang, L., Ya, C., Lei, L., Wang, X., Hu, Q., Wang, Q., Ohfuji, H., Kojima, Y., Zhang, Q., Zeng, Z., Peng, F., Kou, Z., He, D., Irifune, T. (2018) High-pressure synthesis of CeOCl crystals and investigation of its photo-luminescence and compressibility properties. *Crystal Growth & Design*, **18**, 1843-1847.
54. Fukuda, R., Ishikawa, F., Ishikawa, A., Hamada, K., Matsushita, M., Ohfuji, H., Shinmei, T., Irifune, T. (2018) Electronic properties of nano-polycrystalline diamond synthesized by high-pressure and high-temperature technique. *Diamond and Related Materials*, **84**, 66-70.
55. Feng, L., Hu, Q., Lei, L., Fang, L., Qi, L., Zhang, L., Pu, M., Kou, Z., Peng, F., Chen, Xia, Y., Kojima, Y., Ohfuji, H., He, D., Chen, B., Irifune, T. (2018) Neutron powder diffraction and high-pressure synchrotron x-ray diffraction study of tantalum nitrides. *Chinese Physics B*, **27**, 026201.
56. Qi, L., Lei, L., Hu, Q., Zhang, L., Feng, L., Pu, M., Ohfuji, H., Irifune, T. (2018) Strengthening effects of interstitial nitrogen on rhenium. *Journal of Applied Physics*, **123**, 055901.
57. Sakai, T., Yagi, T., Irifune, T., Kadobayashi, H., Hirao, N., Kunimono, T., Ohfuji, H., Kawaguchi-Imada, S., Ohishi, Y., Tateno, S., Hirose, K. (2018) High pressure generation using double-stage diamond anvil technique: problems and equations of state of rhenium. *High Pressure Research*, **38**, 107-119.
58. Niwase, K., Terasawa, M., Honda, S., Niibe, M., Hisakuni, T., Iwata, T., Higo, Y., Hirai, T., Shinmei, T., Ohfuji, H., Irifune, T. (2018) Quenchable compressed graphite synthesized from neutron-irradiated highly oriented pyrolytic graphite in high pressure treatment at 1500°C. *Journal of Applied Physics*, **123**, 161577.
59. Terasawa, M., Honda, S., Niwase, K., Niibe, M., Hisakuni, T., Iwata, T., Higo, Y., Shinmei, T., Ohfuji, H., Irifune, T. (2018) Nano-polycrystalline diamond synthesized from neutron-irradiated highly oriented pyrolytic graphite (HOPG). *Diamond and Related Materials*, **82**, 132-136.
60. Liu, Z., Nishi, M., Ishii, T., Fei, H., Miyajima, N., Ballaran, T.B., Ohfuji, H., Sakai, T., Wang, L., Shchekam, S., Arimoto, T., Tange, Y., Higo, Y., Irifune, T., Katsura, T. (2017) Phase relations in the system MgSiO₃-Al₂O₃ up to 2300 K at lower mantle pressures. *Journal of Geophysical Research: Solid Earth*, **122**, 7775-7788.
61. Fei, H., Yamazaki, D., Sakurai, M., Miyajima, N., Ohfuji, H., Katsura, T., Yamamoto, T. (2017) A nearly water-saturated mantle transition zone inferred from mineral viscosity. *Science Advances*, **3**, e1603024.
62. Gaida, N., Nishiyama, N., Masuno, A., Schurmann, U., Giehl, C., Beermann, O., Ohfuji, H., Bednarcik, J., Kulik, E., Holzheid, A., Irifune, T., Kienle, L. (2017) Transparent polycrystalline nanoceramics consisting of triclinic Al₂SiO₅ kyanite and Al₂O₃ corundum. *Journal of American Ceramic Society*, **2017**, 1-6.
63. Ohuchi, T., Lei, X., Ohfuji, H., Higo, Y., Tange, Y., Sakai, T., Fujino, K., Irifune, T. (2017) Intermediate-depth earthquakes linked to localized heating in dunite and harzburgite. *Nature Geoscience*, **10**, 771-776.
64. Shchepetova, O.V., Korsakov, A., Mikhailenko, D., Zelenovskiy, P., Shur, V., Ohfuji, H. (2017) Forbidden mineral assemblage coesite-disordered graphite in diamond-bearing kyanite gneisses (Kokchetav Massif). *Journal of Raman Spectroscopy*, **48**, 1606-1612.
65. Ichida, Y., Ohfuji, H., Irifune, T., Kunimoto, T., Kojima, Y., Shinmei, T. (2017) Synthesis of coarse-grain-dispersed nano-polycrystalline cubic boron nitride by direct transformation under

ultrahigh pressure, *Diamond and Related Materials*, **77**, 25-34.

66. Németh, P., Leinenweber, K., Ohfuji, H., Groy, T., Domanik, K.J., Kovács, I.J., Kovács, J.S., Buseck, P.R. (2017) Water-bearing, high-pressure Ca-silicates, *Earth and Planetary Science Letters*, **469**, 148-155.
67. Ejima, T., Yamada, M., Akasaka, M., Ohfuji, H., Kon, T., Nagashima, M., Nakamuta, Y. (2017) Precipitates within olivine phenocrysts in oxidized andesitic scoria from Kasayama volcano, Hagi, Yamaguchi Prefecture, Japan, *Journal of Mineralogical and Petrological Sciences*, **112**, 116-126.
68. Kimura, T., Ohfuji, H., Nishi, M., Irifune, T. (2017) Melting temperatures of MgO under high pressure by micro-texture analysis. *Nature Communications*, **8**, 15735.
69. Kadobayashi, H., Hirai, H., Ohfuji, H., Kojima, Y., Ohishi, Y., Hirao, N., Ohtake, M., Yamamoto, Y. (2017) Transition mechanism of sH to filled-ice Ih structure of methane hydrate under fixed pressure condition, *Journal of Physics: Conference Series*, **950**, 042044.
70. Ohfuji, H., Nakaya, M., Yelissev, A.P., Afanasiev, V.P., Litasov, K.D. (2017) Mineralogical and crystallographic features of polycrystalline yakutite diamond. *Journal of Mineralogical and Petrological Sciences*, **112**, 46-51.
71. Nishiyama, N., Ishikawa, R., Ohfuji, H., Marquardt, H., Kurnosov, A., Taniguchi, T., Kim, B.-N., Yoshida, H., Masuno, A., Bednarcik, J., Kulik, E., Ikuhara, Y., Wakai, F., Irifune, T. (2017) Transparent polycrystalline cubic silicon nitride. *Scientific Reports*, **7**, 44755
72. Gaida, N.A., Nishiyama, N., Masuno, A., Holzheid, A., Ohfuji, H., Schurmann, U., Szillus, C., Kulik, E., Bednarcik, J., Beermann, O., Giehl, C., Kienle, L. (2017) Synthesis of Al₂O₃/SiO₂ nano-nano composite ceramics under high pressure and its inverse Hall-Petch behavior. *Journal of American Ceramic Society*, **100**, 323-332.
73. Zhou, Y., Irifune, T., Ohfuji, H., Shinmei, T., Du, W. (2017) Stability region of K_{0.2}Na_{0.8}AlSi₃O₈ hollandite at 22 GPa and 2273 K. *Physics and Chemistry of Minerals*, **44**, 32-42.
74. Irifune, T., Kawakami, K., Arimoto, T., Ohfuji, H., Kunimoto, T., Shinmei, T. (2016) Pressure-induced nano-crystallization of silicate garnets from glass. *Nature Communications*, **7**, 13753.
75. Kagi, H., Zedgenizov, D.A., Ohfuji, H., Ishibashi, H. (2016) Micro- and nano-inclusions in a superdeep diamond from São Luiz, Brazil. *Geochemistry International*, **54**, 834-838.
76. Ishibashi, H., Kagi, H., Odake, S. Ohfuji, H., Kitawaki, H. (2016) Relationships between textural and photoluminescence spectral features of carbonado (natural polycrystalline diamond) and implications for its origin. *Geochemistry International*, **54**, 882-889.
77. Gao, S.-P., Lei, L., Hu, Q.-W., Fang, L.-M., Wang, X.-L., Ohfuji, H., Kojima, Y., Zhang, L.-L., Tan, L.-J., Zeng, Z., Peng, F., He, D.-W., Irifune, T. (2016) High-pressure solid-state metathesis synthesis of ternary iron-based metal nitrides. *Chinese Journal of High Pressure Physics*, **30**, 265-270.
78. Fujii, T., Ohfuji, H., Inoue, T. (2016) Phase relation of CaSO₄ at high pressure and high temperature up to 90 GPa and 2300 K. *Physics and Chemistry of Minerals*, **43**, 353-361.
79. Shinozaki, A., Kagi, H., Hirai, H., Ohfuji, H., Okada, T., Nakano, S., Yagi, T. (2016) Preferential dissolution of SiO₂ from enstatite to H₂ fluid under high pressure and temperature. *Physics and Chemistry of Minerals*, **43**, 277-285.

80. Ejima, T., Akasaka, M., Nagao, T., Ohfuji, H. (2016) Occurrence of Fe³⁺ and formation process of precipitates within oxidized olivine phenocrysts in basalt lava from Kuroshima volcano, Goto island, Nagasaki, Japan. *Mineralogical Magazine*, **79**, 1833-1848.
81. Ohfuji, H., Irifune, T., Litasov, K. D., Yamashita, T., Isobe, F., Afanasiev, V. P., Pokhilenko, N. P. (2015) Natural occurrence of pure nano-polycrystalline diamond from impact crater. *Scientific Reports*, **5**, 14702.
82. Ohfuji, H., Yamamoto, M. (2015) EDS quantification of light elements using osmium surface coating. *Journal of Mineralogical and Petrological Sciences*, **110**, 189-195.
83. Eleonora, K., Nishiyama, N., Masuno, A., Zubravichus, Y., Murzin, V., Khramov, E., Yamada, A., Ohfuji, H., Wille, H.C., Irifune, T., Katsura, T. (2015) A complete solid solution with rutile-type structure in SiO₂-GeO₂ system at 12 GPa and 1600 °C. *Journal of the American Ceramic Society*, **1-6**, 13859.
84. Yasuhara, H., Kinoshita, N., Ohfuji, H., Takahashi, M., Ito, K., Kishida, K. (2015) Long-term observation of permeability in sedimentary rocks under high temperature and stress conditions and its interpretation mediated by microstructural investigations. *Water Resources Research*, **51**, 5425-5449.
85. Cai, N., Inoue, T., Fujino, K., Ohfuji, H., Yurimoto, H. (2015) A Possible New Al-bearing Hydrous Mg-silicate (23 Å phase) in the Deep Upper Mantle. *American Mineralogist*, **100**, 2330-2335.
86. Yasui, N., Sougawa, M., Hirai, M., Yamamoto, K., Okada, T., Yamazaki, D., Kojima, Y., Ohfuji, H., Kunitsugu, S., Takarabe, K. (2015) High pressure and high temperature synthesis of rhenium carbide by using rhenium and nanoscale amorphous two-dimensional carbon nitride. *Cogent Physics*, **2**, 1076702.
87. Fujii, T., Ohfuji, H. (2015) Pressure estimation using the 'diamond Raman scale' at low pressures in DAC experiments using a highly confocal Raman system. *Measurement, Science and Technology*, **26**, 025501.
88. Sakai, T., Yagi, T., Ohfuji, H., Irifune, T., Ohishi, Y., Hirao, N., Suzuki, Y., Kuroda, Y., Asakawa, T., Kanemura, T. (2015) High-pressure generation using double stage micro paired diamond anvils shaped by FIB. *Review of Scientific Instruments*. **86**, 033905.
89. Maruyama, K., Kagi, H., Inoue, T., Ohfuji, H., Yoshino, T. (2015) In situ observation of pressure-induced crystallization from amorphous calcium carbonate by time-resolved x-ray diffraction. *Chemistry Letters*, **44**, 434-436.
90. Okayasu, M., Takeuchi, S., Yamamoto, M., Ohfuji, H., Ochi, T. (2015) Precise analysis of microstructural effects on mechanical properties of cast ADC12 aluminum alloy. *Metallurgical and Materials Transactions A*, **46**, 1597-1609.
91. Kono, Y., Kenney-Benson, C., Hummer, D., Ohfuji, H., Park, C., Shen, G., Wang, Y., Kavner, A., Manning, C. (2014) Ultralow viscosity of carbonate melts at high pressures. *Nature Communications*, **5**, 5091.
92. Nishiyama, N., Wakai, F., Ohfuji, H., Tamenori, Y., Murata, H., Taniguchi, T., Matsushita, M., Takahashi, M., Kulik, E., Yoshida, K., Wada, K., Bednarcik, J., Irifune, T. (2014) Fracture-induced amorphization of polycrystalline SiO₂ stishovite: a potential platform for toughening in ceramics. *Scientific Reports*, **4**, 6558.

93. Okayasu, S., Takeuchi, S., Ohfuji, H. (2014) Mechanical strength and failure characteristics of cast Mg-9%Al-1%Zn alloys produced by a heated-mold continuous casting process: tensile properties. *Metallurgical and Materials Transactions*, **45A**, 5767-5776.
94. Shinozaki, A., Kagi, H., Noguchi, N., Hirai, H., Ohfuji, H., Okada, T., Nakano, S., Yagi, T. (2014) Formation of SiH₄ and H₂ by the dissolution of quartz in H₂ fluid under high pressure and temperature. *American Mineralogist*, **99**, 1265-1269.
95. Okayasu, M., Fukui, H., Ohfuji, H., Shiraishi, T. (2014) Strain induced martensite formation characteristics of austenite stainless steel during various loading conditions. *Materials Science and Technology*, **30**, 301-308.
96. Fujino, K., Nishio-Hamane, D., Nagai, T., Seto, Y., Kuwayama, Y., Whitaker, M., Ohfuji, H., Shinmei, T., Irifune, T. (2014) Spin transition, substitution and partitioning of iron in lower mantle minerals, *Physics of the Earth and Planetary Interiors*, **228**, 186-191.
97. Okayasu, M., Ota, K., Takeuchi, S., Ohfuji, H., Shiraishi, T. (2014) Influence of microstructural characteristics on mechanical properties of ADC12 aluminum alloy. *Materials Science & Engineering A*, **592**, 189-200.
98. Kojima, Y., Ohfuji, H. (2013) Structure and stability of carbon nitride under high pressure and high temperature up to 125 GPa and 3000 K. *Diamond and Related Materials*, **39**, 1-7.
99. Okayasu, M., Fukui, H., Ohfuji, H., Shiraishi, T. (2013) Strain-induced Martensite formation in austenitic stainless steel. *Journal of Materials Science*, **48**, 6157-6166.
100. Nishiyama, N., Taniguchi, T., Ohfuji, H., Yoshida, K., Wakai, F., Kim, B., Yoshida, H., Higo, Y., Holzheid, A., Beermann, O., Irifune, T., Sakka, Y., Funakoshi, K. (2013) Transparent nanocrystalline bulk alumina obtained at 7.7 GPa and 800°C. *Scripta Materialia*, **69**, 362-365.
101. Fang, L., Ohfuji, H., Irifune, T. (2013) A novel technique for the synthesis of nanodiamond powder. *Journal of Nanomaterials*, **2013**, 201845.
102. Shinozaki, A., Hirai, H., Ohfuji, H., Okada, T., Machida, S., Yagi, T. (2013) Influence of H₂ fluid on the stability and dissolution of Mg₂SiO₄ forsterite under high pressure and high temperature. *American Mineralogist*, **98**, 1604-1609.
103. Lei, L., Ohfuji, H., Qin, J., Zhang, X., Wang, F., Irifune, T. (2013) High-pressure Raman spectroscopy study of LiGaO₂. *Solid State Communications*, **164**, 6-10.
104. Isobe, F., Ohfuji, H., Sumiya, H., Irifune, T. (2013) Nano-layered diamond sintered compact obtained by direct conversion from highly oriented graphite under high pressure and high temperature. *Journal of Nanomaterials*, **2013**, 380165.
105. Fang, L., Chen, X., Ohfuji, H., Irifune, T., Sun, G., Chen, B., Peng, S. (2013) Formation of diamond powders from melamine under high pressure and high temperature. *Chinese Physics C*, **37**, 088002.
106. Ejima, T., Akasaka, M., Nagao, T., Ohfuji, H. (2013) Oxidation state of Fe and precipitates within olivine from orthopyroxene-olivine-clinopyroxene andesite lava from Kasayama volcano, Hagi, Yamaguchi, Japan. *Journal of Mineralogical and Petrological Sciences*, **108**, 25-36.
107. Fujino, K., Nishio-Hamane, D., Kuwayama, Y., Sata, N., Murakami, S., Whitaker, M., Shinozaki, A., Ohfuji, H., Kojima, Y., Irifune, T., Hiraoka, N., Ishii, H., Tsuei, K. (2013) Spin transition and substitution of Fe³⁺ in Al-bearing post-Mg-perovskite. *Physics of the Earth and Planetary*

Interiors, **217**, 31-35.

108. Kono, Y., Irifune, T., Ohfuji, H., Higo, Y., Funakoshi, K. (2012) Sound velocities of MORB and absence of a basaltic layer in the mantle transition region. *Geophysical Research Letters*, **39**, L24306.
109. Nishi, M., Kubo, T., Ohfuji, H., Kato, T., Nishihara, Y., Irifune, T. (2012) Slow Si-Al interdiffusion in garnet and stagnation of subducting slabs. *Earth and Planetary Science Letters*, **361**, 44-49.
110. Nishi, M., Irifune, T., Ohfuji, H., Tange, Y. (2012) Intracrystalline nucleation during the post-garnet transformation under large overpressure conditions in deep subducting slabs. *Geophysical Research Letters*, **39**, L23302.
111. Kurio, A., Tanaka, Y., Sumiya, H., Irifune, T., Shinmei, T., Ohfuji, H., Kagi, H. (2012) Wear resistance of nano-polycrystalline diamond with various hexagonal diamond contents. *Journal of Superhard Materials*, **34**, 3-11.
112. Okayasu, M., Ohkura, Y., Sakamoto, T., Takeuchi, S., Ohfuji, H., Shiraishi, T. (2012), Mechanical properties of SPCC low carbon steel joints prepared by metal inert gas welding. *Materials Science & Engineering A*, **560**, 643-652.
113. Liu, X., Ohfuji, H., Nishiyama, N., He, Q., Sanehira, T., Irifune, T. (2012) High-P behavior of anorthite composition and some phase relations of the CaO-Al₂O₃-SiO₂ system to the lower mantle of the Earth, and their geophysical implications. *Journal of Geophysical Research*, **117**, B09205.
114. Nishiyama, N., Seike, S., Hamaguchi, T., Irifune, T., Matsushita, M., Takahashi, M., Ohfuji, H., Kono, Y. (2012) Synthesis of nanocrystalline bulk SiO₂ stishovite with very high toughness. *Scripta Materialia*, **67**, 955-958.
115. Lei, L., Ohfuji, H., Irifune, T., Qin, J., Shinmei, T., Zhang, X. (2012) Disorder-activated Raman Spectra of Cubic Rocksalt-type Li_{(1-x)/2}Ga_{(1-x)/2}M_xO (M = Mg, Zn) Alloys, *Journal of Applied Physics*, **112**, 043501.
116. Zou, Y., Gréaux, S., Irifune, T., Whitaker, M.L., Shinmei, T., Ohfuji, H., Negishi, R., Higo, Y. (2012) Elasticity and sound velocities of polycrystalline Mg₃Al₂(SiO₄)₃ garnet up to 20 GPa and 1700 K. *Journal of Applied Physics*, **112**, 014910.
117. Ishibashi, H., Kagi, H., Sakurai, H., Ohfuji, H., Sumino, H. (2012) Hydrous fluid as the growth media of natural polycrystalline diamond, carbonado: implication from IR spectra and microtextural observations. *American Mineralogist*, **97**, 1366-1372.
118. Ohfuji, H., Okimoto, S., Kunimoto, T., Isobe, F., Sumiya, H., Komatsu, K., Irifune, T. (2012), Influence of graphite crystallinity on the microtexture of nano-polycrystalline diamond obtained by direct conversion. *Physics and Chemistry of Minerals*, **39**, 543-552.
119. Qin, J., Nishiyama, N., Ohfuji, H., Shinmei, T., Lei, L., He, D., Irifune, T. (2012) Polycrystalline γ -boron: As hard as polycrystalline cubic boron nitride. *Scripta Materialia*, **67**, 257-260.
120. Spengler, D., Obata, M., Hirajima, T., Ottolini, L., Ohfuji, H., Tamura, A., Arai, S. (2012) Exsolution of garnet and clinopyroxene from high-Al pyroxenes in Xugou peridotite, E China. *Journal of Petrology*, **53**, 1477-1504.
121. Okayasu, M., Ohfura, Y., Takeuchi, S., Takasu, S., Ohfuji, H., Shiraishi, T. (2012) A study of the

mechanical properties of an Al-Si-Cu alloy (ADC12) produced by various casting processes., *Material Science & Engineering A*, **543**, 185-192.

122. Qin, J., Irifune, T., Dekura, H., Ohfuji, H., Nishiyama, N., Lei, L., Shinmei, T. (2012) Phase relations in boron at pressure up to 18 GPa and temperature up to 2200 °C. *Physical Review B*, **85**, 014107.
123. Settsu, N., Matsushita, M., Takahashi, M., Tanimoto, M., Ohfuji, H. (2012) Influence of brazing filler metal diffusion on the mechanical strength of SUS304/Cu/Si₃N₄ composite. *材料*, **61**, 197-202.
124. Ejima, T., Akasaka, M., Ohfuji, H. (2011) Oxidation state of Fe in olivine of lherzolite xenolith from Oku district, Oki-Dogo Island, Shimane Prefecture, Japan. *Journal of Mineralogical and Petrological Sciences*, **106**, 246-254.
125. Yasuhara, H., Kinoshita, N., Ohfuji, H., Lee, D., Nakashima, S., Kishida, K. (2011) Temporal alteration of fracture permeability in granite under hydrothermal conditions and its interpretation by coupled chemo-mechanical model. *Applied Geochemistry*, **26**, 2074-2088.
126. Yamamoto, J., Otsuka, K., Ohfuji, H., Ishibashi, H., Hirano, N., Kagi, H. (2011) Retentivity of CO₂ in fluid inclusions in mantle minerals, *European Journal of Mineralogy*, **23**, 805-815.
127. Matsushita, M., Kuji, T., Kuroda, H., Aoyama, S., Ohfuji, H. (2011) EBSD analysis of the submicron width fiber shaped grain copper fabricated by drawing. *Materials Science and Applications*, **2**, 911-916.
128. Hirai, S., Kojima, Y., Ohfuji, H., Nishiyama, N., Irifune, T., Klemme, S., Bromiley, G., Atfield, J.P. (2011) High-pressure Raman studies and heat capacity measurements on the MgSiO₃ analogue CaIr_{0.5}Pt_{0.5}O₃, *Physics and Chemistry of Minerals*, **38**, 631-637.
129. Fang, L., Ohfuji, H., Shinmei, T., Irifune, T. (2011) Experimental study on the stability of graphitic C₃N₄ under high pressure and high temperature. *Diamond and Related Materials*, **20**, 819-825.
130. Greaux, S., Nishiyama, N., Kono, Y., Gautron, L., Ohfuji, H., Kunimoto, T., Menguy, N., Irifune, T. (2011) Phase transformations of Ca₃Al₂Si₃O₁₂ grossular garnet to the depths of the Earth's mantle transition zone. *Physics of the Earth and Planetary Interiors*, **185**, 89-99.
131. Matsushita, M., Nakano, S., Ohfuji, H., Yamada, I., Kikegawa, T. (2011) Volume and structural study of Fe⁶⁴Mn³⁶ anti-ferromagnetic Invar alloy under high pressure. *Journal of Magnetism and Magnetic Materials*. **323**, 838-841.
132. Lei, L., Irifune, T., Shinmei, T., Ohfuji, H., Fang, L. (2010) Cation order-disorder phase transitions in LiGaO₂: Observation of the pathways of ternary wurtzite under high pressure, *Journal of Applied Physics*, **108**, 083531.
133. Yamada, I., Takahashi, Y., Ohgushi, K., Nishiyama, N., Takahashi, R., Wada, K., Kunimoto, T., Ohfuji, H., Kojima, Y., Inoue, T., Irifune, T. (2010) CaCu₃Pt₄O₁₂: The First perovskite with the B site fully occupied by Pt⁴⁺, *Inorganic Chemistry*, **49**, 6778-6780.
134. Ohfuji, H., Okuchi, T., Odake, S., Kagi, H., Sumiya, H., Irifune, T. (2010) Micro-/nanostructural investigation of laser-cut surfaces of single- and polycrystalline diamonds, *Diamond and Related Materials*, **19**, 1040-1051.
135. Ohfuji, H., Okada, T., Yagi, T., Sumiya, H., Irifune, T. (2010) Application of nano-polycrystalline

- diamond to laser-heated diamond anvil cell experiments. *High Pressure Research*, **30**, 142-150.
136. Ohfuji, H., Okada, T., Yagi, T., Sumiya, H., Irifune, T. (2010) Laser heating in nano-polycrystalline diamond anvil cell. *Journal of Physics: Conference Series*, **215**, 012192.
 137. Matsushita, M., Ohfuji, H. (2010) Analysis of the recrystallization of cold-rolled copper after isothermal annealing using electron backscattered diffraction patterns. *Defect and Diffusion Forum*, **297-301**, 359-364.
 138. Kono, Y., Greaux, S., Higo, Y., Ohfuji, H., Irifune, T. (2010) Pressure and temperature dependences of elastic properties of grossular garnet up to 17 GPa and 1650 K. *Journal of Earth Science*, **21**, 782-791.
 139. Ohfuji, H., Kuroki, K. (2009) Origin of unique microstructures in nano-polycrystalline diamond synthesized by direct conversion of graphite at static high pressure. *Journal of Mineralogical and Petrological Sciences*, **104**, 307-312.
 140. Watanabe, K., Ohfuji, H., Kitagawa, R., Matsui, Y. (2009) Nanoscale pseudobrookite layer in the glaze surface of a Japanese Sekishu roof tile. *Clay Minerals*, **44**, 177-180.
 141. Okuchi, T., Ohfuji, H., Odake, S., Kagi, H., Nagatomo, S., Sugata, M., Sumiya, H. (2009) Micromachining and surface processing of the super-hard nano-polycrystalline diamond by three types of pulsed lasers, *Applied Physics A*, **96**, 833-842.
 142. Matsushita, M., Suko, T., Matsuda, S., Ohfuji, H., Ogiyama, H. (2009) Analysis of the texture of superplastic carburized duplex stainless alloy, *Materials Chemistry and Physics*, **114**, 522-524.
 143. Odake, S., Ohfuji, H., Okuchi, T., Kagi, H., Sumiya, H., Irifune, T. (2009) Pulsed laser processing of nano-polycrystalline diamond: A comparative study with single crystal diamond, *Diamond and Related Materials*, **18**, 877-880.
 144. Kono, Y., Ohfuji, H., Higo, H., Yamada, A., Inoue, T., Irifune, T., Funakoshi, K. (2008) Elastic wave velocities and Raman shift of MORB glass at high pressures - Reply, *Journal of Mineralogical and Petrological Sciences*, **103**, 429-431.
 145. Sanehira, T., Irifune, T., Shinmei, T., Ohfuji, H., Brunet, F., Funakoshi, K. (2008) Density profiles of pyrolite and MORB compositions across the 660 km seismic discontinuity, *High Pressure Research*, **28**, 335-349.
 146. Matsuda, S., Matsushita, M., Takahashi, M., Ohfuji, H., Okabe, N. (2008) Study for the Origin of Fracture of Advanced Pore-Free Silicon Carbide, *Journal of the Ceramic Society of Japan*, **116**, 126-129.
 147. Kono, Y., Ohfuji, H., Higo, Y., Yamada, A., Inoue, T., Irifune, T., Funakoshi, K. (2008) Elastic wave velocities and Raman shift of MORB glass at high pressures. *Journal of Mineralogical and Petrological Sciences*, **103**, 126-130.
 148. Sata, N., Ohfuji, H., Hirose, K., Kobayashi, H., Ohishi, Y., Hirao, N. (2008) New high-pressure B2 phase of FeS above 180 GPa. *American Mineralogist*, **93**, 492-494.
 149. Irifune, T., Higo, Y., Inoue, T., Kono, Y., Ohfuji, H., Funakoshi, K. (2008) Sound velocities of majorite garnet and the composition of the mantle transition region. *Nature*, **451**, 814-817.
 150. Ohfuji, H., Sata, N., Kobayashi, H., Ohishi, Y., Hirose, K., Irifune, T. (2007) A new high-pressure and high-temperature polymorph of FeS. *Physics and Chemistry of Minerals*, **34**, 335-343.

151. Guillou, C.L., Brunet, F., Irifune, T., Ohfuji, H., Rouzaud, J. (2007) Nanodiamond nucleation below 2273 K at 15 GPa from carbons with different structural organizations. *Carbon*, **45**, 636-648.
152. Kono, Y., Higo, Y., Ohfuji, H., Inoue, T., Irifune, T. (2007) Elastic wave velocities of garnetite with MORB composition up to 14 GPa. *Geophysical Research Letters*, **34**, L14308.
153. Yamada, A., Inoue, T., Urakawa, S., Funakoshi, K., Funamori, N., Kikegawa, T., Ohfuji, H., Irifune, T. (2007) In situ X-ray experiment on the structure of hydrous Mg-silicate melt under high pressure and high temperature. *Geophysical Research Letters*, **34**, L10303.
154. Ohfuji, H., Rickard, D. (2006) High resolution transmission electron microscopic study of synthetic nanocrystalline mackinawite. *Earth and Planetary Science Letters*, **241**, 227-233.
155. Ohfuji, H., Rickard, D., Light, M.E., Hursthouse, M.B. (2006) Structure of framboidal pyrite: a single crystal X-ray diffraction study. *European Journal of Mineralogy*, **18**, 93-98.
156. Watanabe, K., Ohfuji, H., Ando, J., Kitagawa, R. (2006) Elemental behavior during the process of corrosion of Sekishu glazed roof-tiles affected by *Leicidea* s.lat. sp. (crustose lichen). *Clay Minerals*, **41**, 819-826.
157. Sumiya, H., Yusa, H., Inoue, T., Ohfuji, H., Irifune, T. (2006) Conditions and mechanism of formation of nano-polycrystalline diamonds on direct transformation from graphite and non-graphitic carbon at high pressure and temperature. *High Pressure Research*, **26**, 63-69.
158. Yamazaki, D., Yoshino, T., Ohfuji, H., Ando, J., Yoneda, A. (2006) Origin of the seismic anisotropy in the D'' layer inferred from shear deformation of post-perovskite phase. *Earth and Planetary Science Letters*, **252**, 372-378.
159. Ohfuji, H., Rickard, D. (2005) Experimental syntheses of framboids – a review. *Earth-Science Reviews*, **71**, 147-170.
160. Ohfuji, H., Boyle, A.P., Prior, D., Rickard, D. (2005) Structure of framboidal pyrite: an electron backscatter diffraction study. *American Mineralogist*, **90**, 1693-1704.
161. Akai, J., Izumi, K., Fukuhara, H., Masuda, H., Nakano, S., Yoshimura, T., Ohfuji, H., Anawar, H.M., Akai, K. (2004) Mineralogical and geomicrobiological investigations on groundwater arsenic enrichment in Bangladesh. *Applied Geochemistry*, **19**, 215-230.
162. Ohfuji, H., Akai, J. (2002) Icosahedral domain structure of framboidal pyrite. *American Mineralogist*, **87**, 176-180.