## Yuji Higo

## List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	In situ X-ray diffraction study on structural changes of neutron-irradiated highly oriented pyrolytic graphite under room- temperature compression and decompression. Diamond and Related Materials, 2022, 123, 108828.	3.9	0
2	Depressed 660-km discontinuity caused by akimotoite–bridgmanite transition. Nature, 2022, 601, 69-73.	27.8	15
3	Overview of the High-Pressure Beamlines at SPring-8 and the Latest Research Results. Nihon Kessho Gakkaishi, 2022, 64, 33-40.	0.0	0
4	Deformation of Postâ€Spinel Under the Lower Mantle Conditions. Journal of Geophysical Research: Solid Earth, 2022, 127, .	3.4	2
5	Viscosity of bridgmanite determined by in situ stress and strain measurements in uniaxial deformation experiments. Science Advances, 2022, 8, eabm1821.	10.3	11
6	Exploration of the best reference material on anelastic measurement by cyclic loading under high pressure. High Pressure Research, 2022, 42, 14-28.	1.2	0
7	Seismic Anisotropy in the Lower Mantle Transition Zone Induced by Lattice Preferred Orientation of Akimotoite. Geophysical Research Letters, 2022, 49, .	4.0	1
8	Synchrotron X-ray diffraction observation of phase transformation during annealing of Si processed by high-pressure torsion. Philosophical Magazine Letters, 2021, 101, 223-231.	1.2	7
9	Continuous measurement of ultrasonic elastic wave velocities, X-ray radiography and X-ray diffraction of Zr50Cu40Al10 metallic glass at high pressure and high temperature conditions. High Pressure Research, 2021, 41, 219-232.	1.2	2
10	Sound Velocity of MgSiO 3 Majorite Garnet up to 18ÂGPa and 2000ÂK. Geophysical Research Letters, 2021, 48, e2021GL093499.	4.0	4
11	Direct Viscosity Measurement of Peridotite Melt to Lowerâ€Mantle Conditions: A Further Support for a Fractional Magmaâ€Ocean Solidification at the Top of the Lower Mantle. Geophysical Research Letters, 2021, 48, e2021GL094507.	4.0	7
12	Low Velocity Zones in the Martian Upper Mantle Highlighted by Sound Velocity Measurements. Geophysical Research Letters, 2021, 48, e2021GL093977.	4.0	4
13	Simultaneous generation of ultrahigh pressure and temperature to 50ÂGPa and 3300ÂK in multi-anvil apparatus. Review of Scientific Instruments, 2021, 92, 103902.	1.3	3
14	Effect of pressure on temperature measurements using WRe thermocouple and its geophysical impact. Physics of the Earth and Planetary Interiors, 2020, 298, 106348.	1.9	20
15	Pressure effect on the electromotive force of the type R thermocouple. High Pressure Research, 2020, 40, 205-218.	1.2	0
16	Sound Velocities of Alâ€Bearing Phase D up to 22ÂGPa and 1300ÂK. Geophysical Research Letters, 2020, 47, e2020GL088877.	4.0	8
17	Effect of sulfur on sound velocity of liquid iron under Martian core conditions. Nature Communications, 2020, 11, 1954.	12.8	13
18	Stability and Solubility of the FeAlO <sub>3</sub> Component in Bridgmanite at Uppermost Lower Mantle Conditions. Journal of Geophysical Research: Solid Earth, 2020, 125, e2019JB018447.	3.4	15

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19	Thermoelastic Properties of K0.7Na0.3AlSi3O8 Hollandite and NaAlSi2O6 Jadeite: Implication for the Fate of the Subducted Continental Crust in the Deep Mantle. Minerals (Basel, Switzerland), 2020, 10, 261.	2.0	1
20	High-pressure generation in the Kawai-type multianvil apparatus equipped with tungsten-carbide anvils and sintered-diamond anvils, and X-ray observation on CaSnO3 and (Mg,Fe)SiO3. Comptes Rendus - Geoscience, 2019, 351, 253-259.	1.2	23
21	Pressure and Composition Effects on Sound Velocity and Density of Coreâ€Forming Liquids: Implication to Core Compositions of Terrestrial Planets. Journal of Geophysical Research E: Planets, 2019, 124, 2272-2293.	3.6	39
22	Phase transition of wadsleyite-ringwoodite in the Mg2SiO4-Fe2SiO4 system. American Mineralogist, 2019, 104, 588-594.	1.9	10
23	Solid Solution and Compression Behavior of Hydroxides in the Lower Mantle. Journal of Geophysical Research: Solid Earth, 2019, 124, 10231-10239.	3.4	16
24	Sound velocity measurements of ε–FeOOH up to 24 GPa. Journal of Mineralogical and Petrological Sciences, 2019, 114, 155-160.	0.9	9
25	High-Pressure Phase Diagrams of Na2CO3 and K2CO3. Minerals (Basel, Switzerland), 2019, 9, 599.	2.0	11
26	Sharp 660-km discontinuity controlled by extremely narrow binary post-spinel transition. Nature Geoscience, 2019, 12, 869-872.	12.9	31
27	Thermal expansion and P-V-T equation of state of cubic silicon nitride. Journal of the European Ceramic Society, 2019, 39, 3627-3633.	5.7	6
28	Sound velocity and density of liquid Ni68S32 under pressure using ultrasonic and X-ray absorption with tomography methods. Comptes Rendus - Geoscience, 2019, 351, 163-170.	1.2	2
29	Ultrafine spherulite Mg alloy with high yield strength. Journal of Alloys and Compounds, 2019, 784, 1284-1289.	5.5	16
30	Sound velocity of CaSiO3 perovskite suggests the presence of basaltic crust in the Earth's lower mantle. Nature, 2019, 565, 218-221.	27.8	66
31	Hardness of polycrystalline SiO <sub>2</sub> coesite. Journal of the American Ceramic Society, 2019, 102, 2251-2256.	3.8	6
32	Deformation-induced crystallographic-preferred orientation of hcp-iron: An experimental study using a deformation-DIA apparatus. Earth and Planetary Science Letters, 2018, 490, 151-160.	4.4	12
33	Quenchable compressed graphite synthesized from neutron-irradiated highly oriented pyrolytic graphite in high pressure treatment at 1500 °C. Journal of Applied Physics, 2018, 123, 161577.	2.5	4
34	Nano-polycrystalline diamond synthesized from neutron-irradiated highly oriented pyrolytic graphite (HOPG). Diamond and Related Materials, 2018, 82, 132-136.	3.9	5
35	– High-Pressure–High-Temperature Study of Benzene: Refined Crystal Structure and New Phase Diagram up to 8 GPa and 923 K. Crystal Growth and Design, 2018, 18, 3016-3026.	3.0	20

High-pressure and high-temperature synthesis of heavy lanthanide sesquisulfides Ln 2 S 3 (Ln = Yb and) Tj ETQq0 0.05 gBT /Oyerlock 10 3.5

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37	Phase boundary between cubic B1 and rhombohedral structures in (Mg,Fe)O magnesiowüstite determined by in situ X-ray diffraction measurements. Physics and Chemistry of Minerals, 2018, 45, 51-58.	0.8	0
38	Lattice parameter evolution during heating of Ti-45Al-7.5Nb-0.25/0.5C alloys under atmospheric and high pressures. Intermetallics, 2018, 102, 120-131.	3.9	10
39	Effect of rareâ€earth ion size on elasticity and crack initiation in rareâ€earth aluminate glasses. Journal of the American Ceramic Society, 2018, 101, 5030-5036.	3.8	22
40	In-situ observation of the structural change in MgO-B2O3-SiO2 glass at high pressure and the permanent structural change. Journal of Non-Crystalline Solids, 2018, 499, 25-31.	3.1	1
41	Thermal equation of state of MgSiO4H2 phase H determined by in situ X-ray diffraction and a multianvil apparatus. Physics and Chemistry of Minerals, 2018, 45, 995-1001.	0.8	12
42	P-V-T equation of state of CaCO3 aragonite to 29 GPa and 1673 K: In situ X-ray diffraction study. Physics of the Earth and Planetary Interiors, 2017, 265, 82-91.	1.9	48
43	Precise determination of the phase boundary between coesite and stishovite in SiO 2. Physics of the Earth and Planetary Interiors, 2017, 264, 1-6.	1.9	35
44	Grain growth of $\hat{I}\mu$ -iron: Implications to grain size and its evolution in the Earth's inner core. Earth and Planetary Science Letters, 2017, 459, 238-243.	4.4	11
45	Formation of a metastable hollandite phase from amorphous plagioclase: A possible origin of lingunite in shocked chondritic meteorites. Physics of the Earth and Planetary Interiors, 2017, 272, 50-57.	1.9	7
46	Phase Relations in the System MgSiO <sub>3</sub> â€Al <sub>2</sub> O <sub>3</sub> up to 2300ÂK at Lower Mantle Pressures. Journal of Geophysical Research: Solid Earth, 2017, 122, 7775-7788.	3.4	40
47	Synthesis of boron-doped diamond and its application as a heating material in a multi-anvil high-pressure apparatus. Review of Scientific Instruments, 2017, 88, 093904.	1.3	23
48	Intermediate-depth earthquakes linked to localized heating in dunite and harzburgite. Nature Geoscience, 2017, 10, 771-776.	12.9	53
49	Pressure generation to 65â€GPa in a Kawai-type multi-anvil apparatus with tungsten carbide anvils. High Pressure Research, 2017, 37, 507-515.	1.2	25
50	Reaction boundary between akimotoite and ringwoodite + stishovite in MgSiO3. Physics and Chemistry of Minerals, 2017, 44, 425-430.	0.8	5
51	Flow behavior and microstructures of hydrous olivine aggregates at upper mantle pressures and temperatures. Contributions To Mineralogy and Petrology, 2017, 172, 1.	3.1	7
52	Transition from melting to carbonization of naphthalene, anthracene, pyrene and coronene at high pressure. Physics of the Earth and Planetary Interiors, 2017, 270, 29-39.	1.9	21
53	Hydrostatic Compression Behavior and High-Pressure Stabilized β-Phase in γ-Based Titanium Aluminide Intermetallics. Metals, 2016, 6, 165.	2.3	22
54	In-line System to Produce High-Purity Acid Solutions. Analytical Sciences, 2016, 32, 695-700.	1.6	1

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55	Generation of pressures over 40 GPa using Kawai-type multi-anvil press with tungsten carbide anvils. Review of Scientific Instruments, 2016, 87, 024501.	1.3	64
56	Short-period cyclic loading system for <i>in situ</i> X-ray observation of anelastic properties at high pressure. Review of Scientific Instruments, 2016, 87, 105106.	1.3	3
57	Device to generate high purity hydroxide solution in-line for ion chromatography. Journal of Chromatography A, 2016, 1445, 105-111.	3.7	1
58	Compressional and shear wave velocities for polycrystalline <i>bcc</i> -Fe up to 6.3 GPa and 800 K. American Mineralogist, 2016, 101, 1150-1160.	1.9	11
59	Determination of pressure effect on thermocouple electromotive force using multi-anvil apparatus. High Pressure Research, 2016, 36, 121-139.	1.2	10
60	Creep strength of ringwoodite measured at pressure–temperature conditions of the lower part of the mantle transition zone using a deformation–DIA apparatus. Earth and Planetary Science Letters, 2016, 454, 10-19.	4.4	13
61	Towards a consensus on the pressure and composition dependence of sound velocity in the liquid Fe–S system. Physics of the Earth and Planetary Interiors, 2016, 257, 230-239.	1.9	31
62	Sound velocities of aluminumâ€bearing stishovite in the mantle transition zone. Geophysical Research Letters, 2016, 43, 4239-4246.	4.0	16
63	Mantle dynamics inferred from the crystallographic preferred orientation of bridgmanite. Nature, 2016, 539, 81-84.	27.8	55
64	Thermoelastic properties of chromium oxide Cr2O3 (eskolaite) at high pressures and temperatures. Physics and Chemistry of Minerals, 2016, 43, 447-458.	0.8	11
65	High-pressure X-ray diffraction and Raman spectroscopy of CaFe2O4-type β-CaCr2O4. Physics and Chemistry of Minerals, 2016, 43, 307-314.	0.8	11
66	Sound velocity and elastic properties of Fe–Ni and Fe–Ni–C liquids at high pressure. Physics and Chemistry of Minerals, 2016, 43, 229-236.	0.8	19
67	Dislocation-accommodated grain boundary sliding as the major deformation mechanism of olivine in the Earth's upper mantle. Science Advances, 2015, 1, e1500360.	10.3	49
68	Curious kinetic behavior in silica polymorphs solves seifertite puzzle in shocked meteorite. Science Advances, 2015, 1, e1500075.	10.3	29
69	Equation of state of Ca2AlSiO5.5 oxygen defect perovskite. Physics and Chemistry of Minerals, 2015, 42, 327-336.	0.8	1
70	Sound velocities of Fe3Al2Si3O12 almandine up to 19 GPa and 1700 K. Physics of the Earth and Planetary Interiors, 2015, 246, 1-8.	1.9	38
71	Phase transitions of serpentine in the lower mantle. Physics of the Earth and Planetary Interiors, 2015, 245, 52-58.	1.9	14
72	In situ observation of crystallographic preferred orientation of deforming olivine at high pressure and high temperature. Physics of the Earth and Planetary Interiors, 2015, 243, 1-21.	1.9	17

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73	Elastic wave velocity of polycrystalline Mj80Py20 garnet to 21ÂGPa and 2,000ÂK. Physics and Chemistry of Minerals, 2015, 42, 213-222.	0.8	16
74	Compressibilities of MnFe2O4 polymorphs. Physics and Chemistry of Minerals, 2015, 42, 569-577.	0.8	11
75	Selective removal of carbon dioxide contained in the effluent from ion chromatography suppressors using a new non-vacuum device. Journal of Chromatography A, 2015, 1392, 69-73.	3.7	3
76	Elastic wave velocity anomalies of anorthite in a subducting plate: In situ experiments. American Mineralogist, 2015, 100, 1856-1865.	1.9	4
77	High-pressure and high-temperature phase diagram for Fe0.9Ni0.1–H alloy. Physics of the Earth and Planetary Interiors, 2014, 228, 192-201.	1.9	23
78	Sound velocities measurement on MgSiO3 akimotoite at high pressures and high temperatures with simultaneous in situ X-ray diffraction and ultrasonic study. Physics of the Earth and Planetary Interiors, 2014, 228, 97-105.	1.9	20
79	Stability of hydrous silicate at high pressures and water transport to the deep lower mantle. Nature Geoscience, 2014, 7, 224-227.	12.9	259
80	Pressure-induced amorphization of a dense coordination polymer and its impact on proton conductivity. APL Materials, 2014, 2, .	5.1	19
81	New phases of binary compounds: CsCl-type RuGe and RuSn. Europhysics Letters, 2014, 107, 56003.	2.0	6
82	High-pressure phase transitions in FeCr2O4 and structure analysis of new post-spinel FeCr2O4 and Fe2Cr2O5 phases with meteoritical and petrological implications. American Mineralogist, 2014, 99, 1788-1797.	1.9	54
83	Over 1 Mbar generation in the Kawai-type multianvil apparatus and its application to compression of (Mg0.92Fe0.08)SiO3 perovskite and stishovite. Physics of the Earth and Planetary Interiors, 2014, 228, 262-267.	1.9	55
84	High pressure study of transition metal monoxides MnO and CoO: Structure and electrical resistance. Physics of the Earth and Planetary Interiors, 2014, 228, 170-175.	1.9	7
85	Development of a New Suppressor for the Ion Chromatography of Inorganic Cations. Analytical Sciences, 2014, 30, 477-482.	1.6	11
86	Repulsive Nature for Hydrogen Incorporation to Fe3C up to 14 GPa. ISIJ International, 2014, 54, 2637-2642.	1.4	9
87	P–V–T equation of state of siderite to 33 GPa and 1673 K. Physics of the Earth and Planetary Interiors, 2013, 224, 83-87.	1.9	16
88	In situ observation of a phase transition in Fe2SiO4 at high pressure and high temperature. Physics and Chemistry of Minerals, 2013, 40, 811-816.	0.8	20
89	The system K2CO3-MgCO3 at 6 GPa and 900-1450 ÂC. American Mineralogist, 2013, 98, 1593-1603.	1.9	79
90	High-Pressure and High-Temperature Stability and Equation of State of Superhydrous Phase B. Geophysical Monograph Series, 2013, , 147-157.	0.1	12

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91	Melting and subsolidus phase relations in the system Na2CO3-MgCO3ÂH2O at 6 GPa and the stability of Na2Mg(CO3)2 in the upper mantle. American Mineralogist, 2013, 98, 2172-2182.	1.9	47
92	Sound velocity measurements in liquid Fe–S at high pressure: Implications for Earth's and lunar cores. Earth and Planetary Science Letters, 2013, 362, 182-186.	4.4	23
93	Equation of state of Î <sup>3</sup> -Fe: Reference density for planetary cores. Earth and Planetary Science Letters, 2013, 375, 244-253.	4.4	60
94	Phase relations in the carbon-saturated C–Mg–Fe–Si–O system and C and Si solubility in liquid Fe at high pressure and temperature: implications for planetary interiors. Physics and Chemistry of Minerals, 2013, 40, 647-657.	0.8	13
95	Unusual Pressure Effect on the Shear Modulus in MgAl2O4 Spinel. Journal of Physical Chemistry C, 2013, 117, 24518-24526.	3.1	18
96	Static compression of (Mg0.83,Fe0.17)O and (Mg0.75,Fe0.25)O ferropericlase up to 58 GPa at 300, 700, and 1100 K. American Mineralogist, 2012, 97, 176-183.	1.9	6
97	Simultaneous sound velocity and density measurements of NaCl at high temperatures and pressures: Application as a primary pressure standard. American Mineralogist, 2012, 97, 1670-1675.	1.9	48
98	Elasticity and sound velocities of polycrystalline Mg3Al2(SiO4)3 garnet up to 20 GPa and 1700 K. Journa of Applied Physics, 2012, 112, .	 2.5	30
99	Development of an Anti-Analyte Ion Remover Used for Ion Chromatography: Part 1. Examination of a Device for Anion Analysis. Analytical Sciences, 2012, 28, 1071-1074.	1.6	4
100	Sound velocities of MORB and absence of a basaltic layer in the mantle transition region. Geophysical Research Letters, 2012, 39, .	4.0	15
101	Isothermal compression of face-centered cubic iron. American Mineralogist, 2012, 97, 1417-1420.	1.9	25
102	Thermal equation of state of Mg3Al2Si3O12 pyrope garnet up to 19ÂGPa and 1,700ÂK. Physics and Chemistry of Minerals, 2012, 39, 589-598.	0.8	41
103	Phase boundary between perovskite and post-perovskite structures in MnGeO3 determined by in situ X-ray diffraction measurements using sintered diamond anvils. American Mineralogist, 2011, 96, 89-92.	1.9	10
104	Exsolution kinetics of majoritic garnet from clinopyroxene in subducting oceanic crust. Physics of the Earth and Planetary Interiors, 2011, 189, 47-55.	1.9	13
105	In situ observation of a garnet/perovskite transition in CaGeO3. Physics and Chemistry of Minerals, 2011, 38, 735-740.	0.8	39
106	Hydrogenation of FeSi under high pressure. American Mineralogist, 2011, 96, 93-99.	1.9	15
107	In situ stress-strain measurements in a deformation-DIA apparatus at P-T conditions of the upper part of the mantle transition zone. American Mineralogist, 2011, 96, 1665-1672.	1.9	23
108	Pressure and temperature dependences of elastic properties of grossular garnet up to 17 GPa and 1 650 K. Journal of Earth Science (Wuhan, China), 2010, 21, 782-791.	3.2	40

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109	Elastic wave velocities of silica glass at high temperatures and high pressures. Journal of Applied Physics, 2010, 107, .	2.5	35
110	Pâ¿¢Vâ¿¢T relation of MgO derived by simultaneous elastic wave velocity and in situ X-ray measurements: A new pressure scale for the mantle transition region. Physics of the Earth and Planetary Interiors, 2010, 183, 196-211.	1.9	113
111	Stress relaxation experiments of olivine under conditions of subducted slab in Earth's deep upper mantle. Physics of the Earth and Planetary Interiors, 2010, 183, 164-174.	1.9	8
112	Stress measurement under high pressure using Kawai-type multi-anvil apparatus combined with synchrotron radiation. Journal of Synchrotron Radiation, 2009, 16, 757-761.	2.4	7
113	A system for measuring elastic wave velocity under high pressure and high temperature using a combination of ultrasonic measurement and the multi-anvil apparatus at SPring-8. Journal of Synchrotron Radiation, 2009, 16, 762-768.	2.4	45
114	Sound velocities of majorite garnet and the composition of the mantle transition region. Nature, 2008, 451, 814-817.	27.8	130
115	Elastic wave velocities of (Mg0.91Fe0.09)2SiO4 ringwoodite under P–T conditions of the mantle transition region. Physics of the Earth and Planetary Interiors, 2008, 166, 167-174.	1.9	54
116	Exploratory study of the new B-doped diamond heater at high pressure and temperature and its application to in situ XRD experiments on hydrous Mg-silicate melt. High Pressure Research, 2008, 28, 255-264.	1.2	16
117	Elastic wave velocities and Raman shift of MORB glass at high pressures. Journal of Mineralogical and Petrological Sciences, 2008, 103, 126-130.	0.9	5
118	Elastic wave velocities and Raman shift of MORB glass at high pressures — Reply. Journal of Mineralogical and Petrological Sciences, 2008, 103, 429-431.	0.9	2
119	The effect of iron on the elastic properties of ringwoodite at high pressure. Physics of the Earth and Planetary Interiors, 2006, 159, 276-285.	1.9	59
120	The phase boundary between wadsleyite and ringwoodite in Mg2SiO4 determined by in situ X-ray diffraction. Physics and Chemistry of Minerals, 2006, 33, 106-114.	0.8	58
121	Decomposition of kyanite and solubility of Al2O3 in stishovite at high pressure and high temperature conditions. Physics and Chemistry of Minerals, 2006, 33, 711-721.	0.8	24
122	Effects of Microwave Irradiation on Nonspecific Protein Binding in the Solid Phase Coated with Bovine Serum Albumin. Polymer Journal, 2005, 37, 109-117.	2.7	4
123	Effect of water on the spinel-postspinel transformation in Mg2SiO4. Geophysical Research Letters, 2001, 28, 3505-3508.	4.0	75
124	Correlation Lengths of Linear and Branched Polymers in a Good Solvent. Polymer Journal, 1986, 18, 941-946.	2.7	5
125	Semidilute region for linear polymers in good solvents. Macromolecules, 1984, 17, 1055-1059.	4.8	86
126	Osmotic Pressure of Semidilute Solutions of Branched Polymers. Polymer Journal, 1983, 15, 367-375.	2.7	69

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127	Gel-Permeation Chromatography and Intrinsic Viscosity of Poly(4-vinylbenzyltrimethylammonium) Tj ETQq1 1 0.	784314 rgt 2.7	BT <sub>8</sub> Overlock
128	Preparation and Characterization of a Poly(strong base) with Narrow Molecular Weight Distribution; Poly(4-vinylbenzyltrimethylammonium chloride). Polymer Journal, 1980, 12, 729-734.	2.7	8