Takaaki Kawazoe

List of Publications by Year
in descending order

53 papers	1,090 citations	394421 19 h-index	434195 31 g-index
54 all docs	54 docs citations	54 times ranked	916 citing authors

#	Article	IF	Citations
1	High pressure and temperature fabric transitions in olivine and variations in upper mantle seismic anisotropy. Earth and Planetary Science Letters, 2011, 304, 55-63.	4.4	97
2	Shear deformation of dry polycrystalline olivine under deep upper mantle conditions using a rotational Drickamer apparatus (RDA). Physics of the Earth and Planetary Interiors, 2009, 174, 128-137.	1.9	79
3	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
4	Plastic deformation of wadsleyite and olivine at high-pressure and high-temperature using a rotational Drickamer apparatus (RDA). Physics of the Earth and Planetary Interiors, 2008, 170, 156-169.	1.9	57
5	Absence of density crossover between basalt and peridotite in the cold slabs passing through 660 km discontinuity. Geophysical Research Letters, 2004, 31, .	4.0	50
6	Dislocation-accommodated grain boundary sliding as the major deformation mechanism of olivine in the Earthâ€™s upper mantle. Science Advances, 2015, 1, e1500360.	10.3	49
7	Seismic anisotropy in the mantle transition zone induced by shear deformation of wadsleyite. Physics of the Earth and Planetary Interiors, 2013, 216, 91-98.	1.9	46
8	High-pressure single-crystal elasticity of wadsleyite and the seismic signature of water in the shallow transition zone. Earth and Planetary Science Letters, 2018, 498, 77-87.	4.4	43
9	Seismically invisible water in Earth's transition zone?. Earth and Planetary Science Letters, 2018, 498, 9-16.	4.4	40
10	Change of olivine a-axis alignment induced by water: Origin of seismic anisotropy in subduction zones. Earth and Planetary Science Letters, 2012, 317-318, 111-119.	4.4	34
11	Sharp 660-km discontinuity controlled by extremely narrow binary post-spinel transition. Nature Geoscience, 2019, 12, 869-872.	12.9	31
12	Shear deformation of polycrystalline wadsleyite up to 2100 K at 14â€“17 GPa using a rotational Drickamer apparatus (RDA). Journal of Geophysical Research, 2010, 115, .	3.3	28
13	Pressure generation to 25ÂGPa using a cubic anvil apparatus with a multi-anvil 6-6 assembly. High Pressure Research, 2010, 30, 167-174.	1.2	28
14	Complete agreement of the post-spinel transition with the 660-km seismic discontinuity. Scientific Reports, 2018, 8, 6358.	3.3	27
15	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
16	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
17	Crystallographic preferred orientation of wadsleyite and ringwoodite: Effects of phase transformation and water on seismic anisotropy in the mantle transition zone. Earth and Planetary Science Letters, 2014, 397, 133-144.	4.4	23
18	Reaction between liquid iron and (Mg,Fe)SiO3-perovskite and solubilities of Si and O in molten iron at 27ÂGPa. Physics and Chemistry of Minerals, 2006, 33, 227-234.	0.8	22

#	Article	IF	Citations
19	Compressional behavior and spin state of Î´-(Al,Fe)OOH at high pressures. American Mineralogist, 2019, 104, 1273-1284.	1.9	22
20	Deformation experiment at Pâ€“T conditions of the mantle transition zone using D-DIA apparatus. Physics of the Earth and Planetary Interiors, 2010, 183, 190-195.	1.9	18
21	Single crystal synthesis of Î´-(Al,Fe)OOH. American Mineralogist, 2017, 102, 1953-1956.	1.9	18
22	Superplasticity in hydrous melt-bearing dunite: Implications for shear localization in Earthâ€™s upper mantle. Earth and Planetary Science Letters, 2012, 335-336, 59-71.	4.4	17
23	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
24	Phase relations in the system Feâ€“Niâ€“Si to 200 GPa and 3900 K and implications for Earth's core. Earth and Planetary Science Letters, 2019, 512, 83-88.	4.4	17
25	Temperature dependence of [100](010) and [001](010) dislocation mobility in natural olivine. Earth and Planetary Science Letters, 2016, 441, 81-90.	4.4	15
26	Technical development of simple shear deformation experiments using a deformation-DIA apparatus. Journal of Earth Science (Wuhan, China), 2010, 21, 523-531.	3.2	14
27	Rheology of fineâ€grained forsterite aggregate at deep upper mantle conditions. Journal of Geophysical Research: Solid Earth, 2014, 119, 253-273.	3.4	14
28	Synthesis and crystal structure of LiNbO3-type Mg3Al2Si3O12: A possible indicator of shock conditions of meteorites. American Mineralogist, 2017, 102, 1947-1952.	1.9	14
29	Preliminary deformation experiment of ringwoodite at 20 GPa and 1 700 K using a D-DIA apparatus. Journal of Earth Science (Wuhan, China), 2010, 21, 517-522.	3.2	13
30	Creep strength of ringwoodite measured at pressureâ€“temperature conditions of the lower part of the mantle transition zone using a deformationâ€“DIA apparatus. Earth and Planetary Science Letters, 2016, 454, 10-19.	4.4	13
31	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
32	The influence of Î´-(Al,Fe)OOH on seismic heterogeneities in Earthâ€™s lower mantle. Scientific Reports, 2021, 11, 12036.	3.3	12
33	The equation of state of wadsleyite solid solutions: Constraining the effects of anisotropy and crystal chemistry. American Mineralogist, 2017, 102, 2494-2504.	1.9	11
34	High-pressure, high-temperature deformation of dunite, eclogite, clinopyroxenite and garnetite using in situ X-ray diffraction. Earth and Planetary Science Letters, 2017, 473, 291-302.	4.4	10
35	Hydrous magnesium-rich magma genesis at the top of the lower mantle. Scientific Reports, 2019, 9, 7420.	3.3	9
36	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

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37	Stability, composition, and crystal structure of Fe-bearing Phase E in the transition zone. American Mineralogist, 2019, 104, 1620-1624.	1.9	8
38	Structural Study of Î´-AlOOH Up to 29 GPa. Minerals (Basel, Switzerland), 2020, 10, 1055.	2.0	8
39	Synthesis of large wadsleyite single crystals by solid-state recrystallization. American Mineralogist, 2015, 100, 2336-2339.	1.9	7
40	Transition metals in the transition zone: Crystal chemistry of minor element substitution in wadsleyite. American Mineralogist, 2016, 101, 2322-2330.	1.9	7
41	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
42	Single-crystal elasticity of iron-bearing phase E and seismic detection of water in Earth's upper mantle. American Mineralogist, 2019, 104, 1526-1529.	1.9	7
43	Coupled substitution of Fe3+and H+for Si in wadsleyite: A study by polarized infrared and MÃ¶ssbauer spectroscopies and single-crystal X-ray diffraction. American Mineralogist, 2016, 101, 1236-1239.	1.9	6
44	Identical activation volumes of dislocation mobility in the [100](010) and [001](010) slip systems in natural olivine. Geophysical Research Letters, 2017, 44, 2687-2692.	4.0	5
45	Application of Scanning Precession Electron Diffraction in the Transmission Electron Microscope to the Characterization of Deformation in Wadsleyite and Ringwoodite. Minerals (Basel, Switzerland), 2018, 8, 153.	2.0	5
46	Activation of [100](001) slip system by water incorporation in olivine and the cause of seismic anisotropy decrease with depth in the asthenosphere. American Mineralogist, 2019, 104, 47-52.	1.9	5
47	Dislocation microstructures in simple-shear-deformed wadsleyite at transition-zone conditions: Weak-beam dark-field TEM characterization of dislocations on the (010) plane. American Mineralogist, 2015, 100, 2749-2752.	1.9	2
48	A miniature cubic anvil apparatus for optical measurement under high pressure. Review of Scientific Instruments, 2012, 83, 035111.	1.3	1
49	Transition metals in the transition zone: partitioning of Ni, Co, and Zn between olivine, wadsleyite, ringwoodite, and clinoenstatite. Contributions To Mineralogy and Petrology, 2018, 173, 1.	3.1	1
50	Recent Advances in Deep Mantle Rheology. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2014, 24, 88-99.	0.0	1
51	High pressure synthesis at 10ÂGPa and 1400ÂK using a small cubic anvil apparatus with a multi-anvil 6-6 system. High Pressure Research, 2012, 32, 347-353.	1.2	0
52	Pressure Effect on Isotope Fractionation Factor. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 2020, 30, 85-94.	0.0	0
53	Small effect of water incorporation on dislocation mobility in olivine: Negligible creep enhancement and water-induced fabric transition in the asthenosphere. Earth and Planetary Science Letters, 2022, 579, 117360.	4.4	0