

# Takayuki Ishii

## List of Publications by Year in descending order

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Version: 2024-02-01

46  
papers

855  
citations

516561

16  
h-index

501076

28  
g-index

47  
all docs

47  
docs citations

47  
times ranked

541  
citing authors

#	ARTICLE	IF	CITATIONS
1	Depressed 660-km discontinuity caused by akimotoite–bridgmanite transition. <i>Nature</i> , 2022, 601, 69-73.	13.7	15
2	Extreme conditions research using the large-volume press at the P61B endstation, PETRA III. <i>Journal of Synchrotron Radiation</i> , 2022, 29, 409-423.	1.0	19
3	Aluminum and hydrogen partitioning between bridgmanite and high-pressure hydrous phases: Implications for water storage in the lower mantle. <i>Earth and Planetary Science Letters</i> , 2022, 583, 117441.	1.8	11
4	High pressure-temperature phase relations of basaltic crust up to mid-mantle conditions. <i>Earth and Planetary Science Letters</i> , 2022, 584, 117472.	1.8	18
5	The electrical conductivity of Fe <sub>4</sub> O <sub>5</sub> , Fe <sub>5</sub> O <sub>6</sub> , and Fe <sub>7</sub> O <sub>9</sub> up to 60 GPa. <i>Physics and Chemistry of Minerals</i> , 2022, 49, .	0.3	2
6	Equations of state of $\hat{1}\pm$ -SiC (6H) and $\hat{1}2\hat{E}1$ -Mg <sub>2</sub> Si <sub>1.1</sub> from single-crystal X-ray diffraction data and novel high-pressure magnesium silicide Mg <sub>2</sub> Si <sub>7</sub> . <i>Physics and Chemistry of Minerals</i> , 2022, 49, 1.	0.3	3
7	Structural independence of hydrogen-bond symmetrisation dynamics at extreme pressure conditions. <i>Nature Communications</i> , 2022, 13, .	5.8	10
8	A New Approach Determining a Phase Transition Boundary Strictly Following a Definition of Phase Equilibrium: An Example of the Post-Spinel Transition in Mg <sub>2</sub> SiO <sub>4</sub> System. <i>Minerals (Basel)</i> , Tj ETQq0 0 0 rgBT /Ovedock 10 T850 457 To		
9	Dry metastable olivine and slab deformation in a wet subducting slab. <i>Nature Geoscience</i> , 2021, 14, 526-530.	5.4	17
10	High-pressure syntheses and crystal structure analyses of a new low-density CaFe <sub>2</sub> O <sub>4</sub> -related and CaTi <sub>2</sub> O <sub>4</sub> -type MgAl <sub>2</sub> O <sub>4</sub> phases. <i>American Mineralogist</i> , 2021, 106, 1105-1112.	0.9	3
11	Vibrational anisotropy of $\hat{1}\pm$ -(Al,Fe)OOH single crystals as probed by nuclear resonant inelastic X-ray scattering. <i>European Journal of Mineralogy</i> , 2021, 33, 485-502.	0.4	6
12	Determination of phase relations of the olivine–ahrensite transition in the Mg <sub>2</sub> SiO <sub>4</sub> –Fe <sub>2</sub> SiO <sub>4</sub> system at 1740 Å using modern multi-anvil techniques. <i>Contributions To Mineralogy and Petrology</i> , 2021, 176, 1.	1.2	4
13	The elastic properties and anisotropic behavior of MgSiO <sub>3</sub> akimotoite at transition zone pressures. <i>Physics of the Earth and Planetary Interiors</i> , 2021, 320, 106786.	0.7	2
14	Simultaneous generation of ultrahigh pressure and temperature to 50 ÅPa and 3300 ÅK in multi-anvil apparatus. <i>Review of Scientific Instruments</i> , 2021, 92, 103902.	0.6	3
15	<i>In situ</i> high-pressure nuclear magnetic resonance crystallography in one and two dimensions. <i>Matter and Radiation at Extremes</i> , 2021, 6, .	1.5	9
16	A simplified rapid-quench multi-anvil technique. <i>Review of Scientific Instruments</i> , 2021, 92, 113902.	0.6	6
17	Synthesis of paracrystalline diamond. <i>Nature</i> , 2021, 599, 605-610.	13.7	70
18	High-Pressure Elasticity of $\hat{1}\pm$ -(Al,Fe)OOH Single Crystals and Seismic Detectability of Hydrous MORB in the Shallow Lower Mantle. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094185.	1.5	7

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19	Discovery of New Structured Postspinel MgFe <sub>2</sub> O <sub>4</sub> : Crystal Structure and High-Pressure Phase Relations. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087490.	1.5	6
20	Spin Transition of Iron in (Al,Fe)OOH Induces Thermal Anomalies in Earth's Lower Mantle. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087036.	1.5	22
21	Stability and Solubility of the FeAlO <sub>3</sub> Component in Bridgmanite at Uppermost Lower Mantle Conditions. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2019JB018447.	1.4	15
22	Effect of Water on Lattice Thermal Conductivity of Ringwoodite and Its Implications for the Thermal Evolution of Descending Slabs. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087607.	1.5	16
23	Development of High-Pressure Technology with Kawai-Type Multi-Anvil Presses and its Application to Geoscience. <i>Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu</i> , 2020, 30, 156-165.	0.1	0
24	The stability of Fe <sub>5</sub> O <sub>6</sub> and Fe <sub>4</sub> O <sub>5</sub> at high pressure and temperature. <i>American Mineralogist</i> , 2019, 104, 1356-1359.	0.9	16
25	Sharp 660-km discontinuity controlled by extremely narrow binary post-spinel transition. <i>Nature Geoscience</i> , 2019, 12, 869-872.	5.4	31
26	A Breakthrough in Pressure Generation by a Kawai-Type Multi-Anvil Apparatus with Tungsten Carbide Anvils. <i>Engineering</i> , 2019, 5, 434-440.	3.2	43
27	Phase Relations of Harzburgite and MORB up to the Uppermost Lower Mantle Conditions: Precise Comparison With Pyrolite by Multisample Cell High-Pressure Experiments With Implication to Dynamics of Subducted Slabs. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 3491-3507.	1.4	49
28	Crystal Structure of a Novel Fe-Mg Oxide and Deep Earth Science. <i>Nihon Kessho Gakkaishi</i> , 2019, 61, 205-206.	0.0	0
29	Complete agreement of the post-spinel transition with the 660-km seismic discontinuity. <i>Scientific Reports</i> , 2018, 8, 6358.	1.6	27
30	High-pressure phase transitions in MgCr <sub>2</sub> O <sub>4</sub> -Mg <sub>2</sub> SiO <sub>4</sub> composition: Reactions between olivine and chromite with implications for ultrahigh-pressure chromitites. <i>American Mineralogist</i> , 2018, 103, 161-170.	0.9	8
31	Phase relations and mineral chemistry in pyrolitic mantle at 1600–2200 °C under pressures up to the uppermost lower mantle: Phase transitions around the 660-km discontinuity and dynamics of upwelling hot plumes. <i>Physics of the Earth and Planetary Interiors</i> , 2018, 274, 127-137.	0.7	31
32	Synthesis and crystal structure of Mg-bearing Fe <sub>9</sub> O <sub>11</sub> : New insight in the complexity of Fe-Mg oxides at conditions of the deep upper mantle. <i>American Mineralogist</i> , 2018, , .	0.9	6
33	High-Pressure Phase Relations and Crystal Structures of Postspinel Phases in MgV <sub>2</sub> O <sub>4</sub> , FeV <sub>2</sub> O <sub>4</sub> , and MnCr <sub>2</sub> O <sub>4</sub> : Crystal Chemistry of AB <sub>2</sub> O <sub>4</sub> Postspinel Compounds. <i>Inorganic Chemistry</i> , 2018, 57, 6648-6657.	1.9	14
34	Shocked chromites in fossil L chondrites: A Raman spectroscopy and transmission electron microscopy study. <i>Meteoritics and Planetary Science</i> , 2017, 52, 1776-1796.	0.7	4
35	Phase Relations in the System MgSiO <sub>3</sub> -Al <sub>2</sub> O <sub>3</sub> up to 2300 K at Lower Mantle Pressures. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 7775-7788.	1.4	40
36	Pressure generation to 65 GPa in a Kawai-type multi-anvil apparatus with tungsten carbide anvils. <i>High Pressure Research</i> , 2017, 37, 507-515.	0.4	25

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37	Synthesis and crystal structure of LiNbO <sub>3</sub> -type Mg <sub>3</sub> Al <sub>2</sub> Si <sub>3</sub> O <sub>12</sub> : A possible indicator of shock conditions of meteorites. <i>American Mineralogist</i> , 2017, 102, 1947-1952.	0.9	14
38	Single crystal synthesis of $\hat{\Gamma}$ -(Al,Fe)OOH. <i>American Mineralogist</i> , 2017, 102, 1953-1956.	0.9	18
39	A shallow origin of so-called ultrahigh-pressure chromitites, based on single-crystal X-ray structure analysis of the high-pressure Mg <sub>2</sub> Cr <sub>2</sub> O <sub>5</sub> phase, with modified ludwigite-type structure. <i>American Mineralogist</i> , 2017, 102, 2113-2118.	0.9	9
40	High-pressure high-temperature phase relations in FeTiO <sub>3</sub> up to 35 GPa and 1600°C. <i>Physics and Chemistry of Minerals</i> , 2017, 44, 63-73.	0.3	19
41	High-pressure high-temperature transitions in MgCr <sub>2</sub> O <sub>4</sub> and crystal structures of new Mg <sub>2</sub> Cr <sub>2</sub> O <sub>5</sub> and post-spinel MgCr <sub>2</sub> O <sub>4</sub> phases with implications for ultrahigh-pressure chromitites in ophiolites. <i>American Mineralogist</i> , 2015, 100, 59-65.	0.9	43
42	High-pressure phase transitions in FeCr <sub>2</sub> O <sub>4</sub> and structure analysis of new post-spinel FeCr <sub>2</sub> O <sub>4</sub> and Fe <sub>2</sub> Cr <sub>2</sub> O <sub>5</sub> phases with meteoritical and petrological implications. <i>American Mineralogist</i> , 2014, 99, 1788-1797.	0.9	54
43	High-pressure phase relations in the system TiO <sub>2</sub> -ZrO <sub>2</sub> to 12 GPa: stability of $\hat{\Gamma}$ -PbO <sub>2</sub> -type srilankite solid solutions of (Ti <sub>1-x</sub> , Zr <sub>x</sub> )O <sub>2</sub> (0 ≤ x ≤ 0.6). <i>Physics and Chemistry of Minerals</i> , 2012, 39, 797-802.	0.3	5
44	High-pressure phase transitions and subduction behavior of continental crust at pressure-temperature conditions up to the upper part of the lower mantle. <i>Earth and Planetary Science Letters</i> , 2012, 357-358, 31-41.	1.8	42
45	Thermodynamic investigation on phase equilibrium boundary between calcium ferrite-type MgAl <sub>2</sub> O <sub>4</sub> and MgO- $\hat{\Gamma}$ -Al <sub>2</sub> O <sub>3</sub> . <i>Physics of the Earth and Planetary Interiors</i> , 2012, 212-213, 100-105.	0.7	11
46	Post-spinel transitions in pyrolite and Mg <sub>2</sub> SiO <sub>4</sub> and akimotoite-perovskite transition in MgSiO <sub>3</sub> : Precise comparison by high-pressure high-temperature experiments with multi-sample cell technique. <i>Earth and Planetary Science Letters</i> , 2011, 309, 185-197.	1.8	79