

# Shigeaki Ono

## List of Publications by Citations

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97  
papers

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37  
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68  
g-index

98  
ext. papers

5,240  
ext. citations

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L-index

#	Paper	IF	Citations
97	Theoretical and experimental evidence for a post-perovskite phase of MgSiO <sub>3</sub> in Earth's D" layer. <i>Nature</i> , <b>2004</b> , 430, 445-8	50.4	809
96	High-pressure phases of CaCO <sub>3</sub> : Crystal structure prediction and experiment. <i>Earth and Planetary Science Letters</i> , <b>2006</b> , 241, 95-103	5.3	291
95	Stability of magnesite and its high-pressure form in the lowermost mantle. <i>Nature</i> , <b>2004</b> , 427, 60-3	50.4	215
94	Mineralogy of subducted basaltic crust (MORB) from 25 to 37 GPa, and chemical heterogeneity of the lower mantle. <i>Earth and Planetary Science Letters</i> , <b>2001</b> , 190, 57-63	5.3	213
93	Novel high-pressure structures of MgCO <sub>3</sub> , CaCO <sub>3</sub> and CO <sub>2</sub> and their role in Earth's lower mantle. <i>Earth and Planetary Science Letters</i> , <b>2008</b> , 273, 38-47	5.3	187
92	Post-spinel transition in Mg <sub>2</sub> SiO <sub>4</sub> determined by high P in situ X-ray diffractometry. <i>Physics of the Earth and Planetary Interiors</i> , <b>2003</b> , 136, 11-24	2.3	181
91	Stability limits of hydrous minerals in sediment and mid-ocean ridge basalt compositions: Implications for water transport in subduction zones. <i>Journal of Geophysical Research</i> , <b>1998</b> , 103, 18253-18267 <sup>174</sup>		174
90	A high-pressure and high-temperature synthesis of platinum carbide. <i>Solid State Communications</i> , <b>2005</b> , 133, 55-59	1.6	141
89	Slab melting versus slab dehydration in subduction-zone magmatism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 8177-82	11.5	123
88	The high-pressure phase of alumina and implications for Earth's D" layer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2005</b> , 102, 10828-31	11.5	99
87	Post-aragonite phase transformation in CaCO <sub>3</sub> at 40 GPa. <i>American Mineralogist</i> , <b>2005</b> , 90, 667-671	2.9	98
86	Stability of CaCl <sub>2</sub> -type and PbO <sub>2</sub> -type SiO <sub>2</sub> at high pressure and temperature determined by in-situ X-ray measurements. <i>Geophysical Research Letters</i> , <b>2003</b> , 30, n/a-n/a	4.9	94
85	In situ measurements of the phase transition boundary in Mg <sub>3</sub> Al <sub>2</sub> Si <sub>3</sub> O <sub>12</sub> : implications for the nature of the seismic discontinuities in the Earth's mantle. <i>Earth and Planetary Science Letters</i> , <b>2001</b> , 184, 567-573	5.3	94
84	Second critical endpoint in the peridotite-H <sub>2</sub> O system. <i>Journal of Geophysical Research</i> , <b>2007</b> , 112,		82
83	Phase transition in Al-bearing CaSiO <sub>3</sub> perovskite: implications for seismic discontinuities in the lower mantle. <i>Physics of the Earth and Planetary Interiors</i> , <b>2004</b> , 145, 67-74	2.3	78
82	Post-stishovite phase boundary in SiO <sub>2</sub> determined by in situ X-ray observations. <i>Earth and Planetary Science Letters</i> , <b>2002</b> , 197, 187-192	5.3	77
81	High-pressure transition of CaCO <sub>3</sub> . <i>American Mineralogist</i> , <b>2007</b> , 92, 1246-1249	2.9	74

80	Compositional change of majoritic garnet in a MORB composition from 7 to 17 GPa and 1400 to 1600°C. <i>Physics of the Earth and Planetary Interiors</i> , <b>1996</b> , 96, 171-179	2.3	74
79	Stability and compressibility of the high-pressure phases of Al <sub>2</sub> O <sub>3</sub> up to 200 GPa: Implications for the electrical conductivity of the base of the lower mantle. <i>Earth and Planetary Science Letters</i> , <b>2006</b> , 246, 326-335	5.3	71
78	High-pressure phase transition of hematite, Fe <sub>2</sub> O <sub>3</sub> . <i>Journal of Physics and Chemistry of Solids</i> , <b>2004</b> , 65, 1527-1530	3.9	69
77	Separation of supercritical slab-fluids to form aqueous fluid and melt components in subduction zone magmatism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 18695-700	11.5	66
76	In situ X-ray observations of phase assemblages in peridotite and basalt compositions at lower mantle conditions: Implications for density of subducted oceanic plate. <i>Journal of Geophysical Research</i> , <b>2005</b> , 110,		66
75	Zeta-Fe <sub>2</sub> O <sub>3</sub> --A new stable polymorph in iron(III) oxide family. <i>Scientific Reports</i> , <b>2015</b> , 5, 15091	4.9	54
74	In situ X-ray observation of phase transformation in Fe <sub>2</sub> O <sub>3</sub> at high pressures and high temperatures. <i>Journal of Physics and Chemistry of Solids</i> , <b>2005</b> , 66, 1714-1720	3.9	54
73	Phase transition of Ca-perovskite and stability of Al-bearing Mg-perovskite in the lower mantle. <i>American Mineralogist</i> , <b>2004</b> , 89, 1480-1485	2.9	52
72	Magnetic transition of iron carbide at high pressures. <i>Physics of the Earth and Planetary Interiors</i> , <b>2010</b> , 180, 1-6	2.3	48
71	High temperature stability limit of phase egg, AlSiO <sub>3</sub> (OH). <i>Contributions To Mineralogy and Petrology</i> , <b>1999</b> , 137, 83-89	3.5	47
70	High-pressure phase transformations of FeS: Novel phases at conditions of planetary cores. <i>Earth and Planetary Science Letters</i> , <b>2008</b> , 272, 481-487	5.3	46
69	Equation of state of CaIrO <sub>3</sub> -type MgSiO <sub>3</sub> up to 144 GPa. <i>American Mineralogist</i> , <b>2006</b> , 91, 475-478	2.9	46
68	High pressure and high temperature phase transitions of FeO. <i>Physics of the Earth and Planetary Interiors</i> , <b>2004</b> , 146, 273-282	2.3	46
67	Experimental constraints on the temperature profile in the lower mantle. <i>Physics of the Earth and Planetary Interiors</i> , <b>2008</b> , 170, 267-273	2.3	39
66	High-pressure form of pyrite-type germanium dioxide. <i>Physical Review B</i> , <b>2003</b> , 68,	3.3	39
65	Segregation of core melts by permeable flow in the lower mantle. <i>Earth and Planetary Science Letters</i> , <b>2004</b> , 224, 249-257	5.3	39
64	Mg/Si ratios of aqueous fluids coexisting with forsterite and enstatite based on the phase relations in the Mg <sub>2</sub> SiO <sub>4</sub> -SiO <sub>2</sub> -H <sub>2</sub> O system. <i>American Mineralogist</i> , <b>2004</b> , 89, 1433-1437	2.9	38
63	Phase transition of zircon at high P-T conditions. <i>Contributions To Mineralogy and Petrology</i> , <b>2004</b> , 147, 505-509	3.5	38

62	Connectivity of aqueous fluid in eclogite and its implications for fluid migration in the Earth's interior. <i>Journal of Geophysical Research</i> , <b>2003</b> , 108,		38
61	Determination of the second critical end point in silicate-H <sub>2</sub> O systems using high-pressure and high-temperature X-ray radiography. <i>Geochimica Et Cosmochimica Acta</i> , <b>2004</b> , 68, 5189-5195	5.5	37
60	Equations of state of ZrSiO <sub>4</sub> phases in the upper mantle. <i>American Mineralogist</i> , <b>2004</b> , 89, 185-188	2.9	36
59	Structural property of CsCl-type sodium chloride under pressure. <i>Solid State Communications</i> , <b>2006</b> , 137, 517-521	1.6	35
58	The stability and compressibility of MgAl <sub>2</sub> O <sub>4</sub> high-pressure polymorphs. <i>Physics and Chemistry of Minerals</i> , <b>2006</b> , 33, 200-206	1.6	34
57	In situ observation of a garnet/perovskite transition in CaGeO <sub>3</sub> . <i>Physics and Chemistry of Minerals</i> , <b>2011</b> , 38, 735-740	1.6	33
56	Mg/Fe partitioning between olivine and ultramafic melts at high pressures. <i>Geochimica Et Cosmochimica Acta</i> , <b>2006</b> , 70, 757-766	5.5	31
55	The equation of state of orthorhombic perovskite in a peridotitic mantle composition to 80 GPa: implications for chemical composition of the lower mantle. <i>Physics of the Earth and Planetary Interiors</i> , <b>2004</b> , 145, 9-17	2.3	29
54	First-principles simulation of high-pressure polymorphs in MgAl <sub>2</sub> O <sub>4</sub> . <i>Physics and Chemistry of Minerals</i> , <b>2008</b> , 35, 381-386	1.6	28
53	Phase transition between the CaCl <sub>2</sub> -type and PbO <sub>2</sub> -type structures of germanium dioxide. <i>Physical Review B</i> , <b>2003</b> , 68,	3.3	26
52	Aqueous fluid connectivity in pyrope aggregates: water transport into the deep mantle by a subducted oceanic crust without any hydrous minerals. <i>Earth and Planetary Science Letters</i> , <b>2002</b> , 203, 895-903	5.3	26
51	Letter. High-pressure magnetic transition in hcp-Fe. <i>American Mineralogist</i> , <b>2010</b> , 95, 880-883	2.9	25
50	New high-pressure phases in BaCO <sub>3</sub> . <i>Physics and Chemistry of Minerals</i> , <b>2007</b> , 34, 215-221	1.6	25
49	Large-ion lithophile elements delivered by saline fluids to the sub-arc mantle. <i>Earth, Planets and Space</i> , <b>2014</b> , 66,	2.9	24
48	Equation of state of hexagonal aluminous phase in basaltic composition to 63 GPa at 300 K. <i>Physics and Chemistry of Minerals</i> , <b>2002</b> , 29, 527-531	1.6	24
47	The compressibility of a natural composition calcium ferrite-type aluminous phase to 70 GPa. <i>Physics of the Earth and Planetary Interiors</i> , <b>2002</b> , 131, 311-318	2.3	24
46	Precise determination of the phase boundary between coesite and stishovite in SiO <sub>2</sub> . <i>Physics of the Earth and Planetary Interiors</i> , <b>2017</b> , 264, 1-6	2.3	23
45	Phase boundary between rutile-type and CaCl <sub>2</sub> -type germanium dioxide determined by in situ X-ray observations. <i>American Mineralogist</i> , <b>2002</b> , 87, 99-102	2.9	23

44	Compressibility of Mg <sub>0.9</sub> Al <sub>0.2</sub> Si <sub>0.9</sub> O <sub>3</sub> perovskite. <i>Proceedings of the Japan Academy Series B: Physical and Biological Sciences</i> , <b>2000</b> , 76, 103-107	4	23
43	A new high-pressure phase of strontium carbonate. <i>Physics and Chemistry of Minerals</i> , <b>2005</b> , 32, 8-12	1.6	21
42	Structural refinements of high-pressure phases in germanium dioxide. <i>Acta Crystallographica Section B: Structural Science</i> , <b>2003</b> , 59, 701-8		20
41	Ab initio molecular dynamics simulations for thermal equation of state of B2-type NaCl. <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 023510	2.5	19
40	Elastic, thermal and structural properties of platinum. <i>Journal of Physics and Chemistry of Solids</i> , <b>2011</b> , 72, 169-175	3.9	18
39	Letter. High-pressure study of FeS, between 20 and 120 GPa, using synchrotron X-ray powder diffraction. <i>American Mineralogist</i> , <b>2006</b> , 91, 1941-1944	2.9	18
38	Equation of state of the high-pressure polymorph of FeSi to 67 GPa. <i>European Journal of Mineralogy</i> , <b>2007</b> , 19, 183-187	2.2	18
37	In situ observation of a phase transition in Fe <sub>2</sub> SiO <sub>4</sub> at high pressure and high temperature. <i>Physics and Chemistry of Minerals</i> , <b>2013</b> , 40, 811-816	1.6	17
36	First-principles molecular dynamics calculations of the equation of state for tantalum. <i>International Journal of Molecular Sciences</i> , <b>2009</b> , 10, 4342-51	6.3	16
35	Letters. Equation of state of Al-bearing stishovite to 40 GPa at 300 K. <i>American Mineralogist</i> , <b>2002</b> , 87, 1486-1489	2.9	15
34	High-pressure and high-temperature synthesis of a cubic IrO <sub>2</sub> polymorph. <i>Physica B: Condensed Matter</i> , <b>2005</b> , 363, 140-145	2.8	14
33	Phase transformation of GaAs at high pressures and temperatures. <i>Journal of Physics and Chemistry of Solids</i> , <b>2018</b> , 113, 1-4	3.9	14
32	Effect of incorporation of iron and aluminum on the thermoelastic properties of magnesium silicate perovskite. <i>Physics and Chemistry of Minerals</i> , <b>2007</b> , 34, 131-143	1.6	13
31	Aluminum substitution in stishovite and MgSiO <sub>3</sub> perovskite: High-resolution <sup>27</sup> Al NMR. <i>American Mineralogist</i> , <b>2006</b> , 91, 337-343	2.9	13
30	In situ observation of the decomposition of kyanite at high pressures and high temperatures. <i>American Mineralogist</i> , <b>2007</b> , 92, 1624-1629	2.9	13
29	Raman spectra of culet face of diamond anvils and application as optical pressure sensor to high temperatures. <i>Journal of Applied Physics</i> , <b>2014</b> , 116, 053517	2.5	12
28	Determination of the phase boundary of the ferroelastic rutile to CaCl <sub>2</sub> transition in RuO <sub>2</sub> using in situ high-pressure and high-temperature Raman spectroscopy. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	12
27	Compressibility of the calcium aluminosilicate, CAS, phase to 44 GPa. <i>Physics of the Earth and Planetary Interiors</i> , <b>2005</b> , 150, 331-338	2.3	11

26	Determination of the phase boundary of the omega to beta transition in Zr using in situ high-pressure and high-temperature X-ray diffraction. <i>Journal of Solid State Chemistry</i> , <b>2015</b> , 225, 110-113	3.3	10
25	Determination of the phase boundary of GaP using in situ high pressure and high-temperature X-ray diffraction. <i>High Pressure Research</i> , <b>2017</b> , 37, 28-35	1.6	9
24	Equation of state and elasticity of B2-type FeSi: Implications for silicon in the inner core. <i>Physics of the Earth and Planetary Interiors</i> , <b>2013</b> , 224, 32-37	2.3	9
23	Phase transition of ZnS at high pressures and temperatures. <i>Phase Transitions</i> , <b>2018</b> , 91, 9-14	1.3	8
22	Electrical conductivity of aragonite in the subducted slab. <i>European Journal of Mineralogy</i> , <b>2013</b> , 25, 11-15	2.2	8
21	Titanium boride equation of state determined by in-situ X-ray diffraction. <i>Heliyon</i> , <b>2016</b> , 2, e00220	3.6	8
20	Workshop report on hard-rock drilling into mid-Cretaceous Pacific oceanic crust on the Hawaiian North Arch. <i>Scientific Drilling</i> , <b>2016</b> , 26, 47-58		6
19	High-pressure phase transition of bismuth. <i>High Pressure Research</i> , <b>2018</b> , 38, 414-421	1.6	6
18	Influence of pressure and temperature on the electrical conductivity of dolomite. <i>Physics and Chemistry of Minerals</i> , <b>2015</b> , 42, 773-779	1.6	5
17	The Lehmann Discontinuity Due to Dehydration of Subducted Sediment <b>2007</b> , 1, 1-4		5
16	Overview of the Drilling Project on the Bend-fault Hydrology in Old Incoming Plate. <i>Journal of Geography (Chigaku Zasshi)</i> , <b>2017</b> , 126, 247-262	0.5	5
15	Reaction boundary between akimotoite and ringwoodite + stishovite in MgSiO <sub>3</sub> . <i>Physics and Chemistry of Minerals</i> , <b>2017</b> , 44, 425-430	1.6	4
14	In situ Raman spectroscopy of cubic boron nitride to 90 GPa and 800 K. <i>Journal of Physics and Chemistry of Solids</i> , <b>2015</b> , 76, 120-124	3.9	3
13	Elastic Properties of CaSiO <sub>3</sub> Perovskite from ab initio Molecular Dynamics. <i>Entropy</i> , <b>2013</b> , 15, 4300-4309	2.8	3
12	Density and seismic velocities of chromitite body in oceanic mantle peridotite. <i>American Mineralogist</i> , <b>2010</b> , 95, 1422-1428	2.9	3
11	Fate of subducted argon in the deep mantle. <i>Scientific Reports</i> , <b>2020</b> , 10, 1393	4.9	3
10	Decomposition boundary from high-pressure clinoenstatite to wadsleyite + stishovite in MgSiO <sub>3</sub> . <i>American Mineralogist</i> , <b>2018</b> , 103, 1512-1515	2.9	2
9	Crucial Scientific Issues in Earth Science Revealed Only by Mantle Drilling: Understanding the Current State of the Oceanic Plates of a Life-bearing Planet. <i>Journal of Geography (Chigaku Zasshi)</i> , <b>2021</b> , 130, 483-506	0.5	2

8	Relationship between structural variation and spin transition of iron under high pressures and high temperatures. <i>Solid State Communications</i> , <b>2015</b> , 203, 1-4	1.6	1
7	Phase transition in ZnSe at high pressures and high temperatures. <i>Journal of Physics and Chemistry of Solids</i> , <b>2020</b> , 141, 109409	3.9	1
6	Review of five years of activity at IFREE /JAMSTEC. <i>JAMSTEC Report of Research and Development</i> , <b>2009</b> , 9, 2_43-2_94	0	0
5	Overview of the Special Issue The Forefront of Subducting Oceanic Plate Science: Oceanic Drilling in the Outer Rise Region <i>Journal of Geography (Chigaku Zasshi)</i> , <b>2017</b> , 126, 105-108	0.5	
4	Multiple Approaches from Theoretical Simulations and High-Pressure Experiments to Determine Accurate Equation of State for Materials. <i>Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu</i> , <b>2010</b> , 20, 244-251	0	
3	Overview of the Special Issue Hard-rock Drilling Science: Challenges of Mantle Drilling <i>Journal of Geography (Chigaku Zasshi)</i> , <b>2021</b> , 130, 453-455	0.5	
2	Introduction to the Special Issue Hard-rock Drilling Science: Challenges of Mantle Drilling <i>Journal of Geography (Chigaku Zasshi)</i> , <b>2021</b> , 130, 457-459	0.5	
1	Equation of State Determination for Rhenium Using First-Principles Molecular Dynamics Calculations and High-Pressure Experiments. <i>Advances in Condensed Matter Physics</i> , <b>2022</b> , 2022, 1-6		1