Kei Hirose

List of Publications by Year
in descending order

235 papers	16,364 citations	15466 65 h-index	18075 120 g-index
249 all docs	249 docs citations	249 times ranked	6220 citing authors

#	Article	IF	Citations
1	Post-Perovskite Phase Transition in MgSiO3. Science, 2004, 304, 855-858.	6.0	1,234
2	Partial melting of dry peridotites at high pressures: Determination of compositions of melts segregated from peridotite using aggregates of diamond. Earth and Planetary Science Letters, 1993, 114, 477-489.	1.8	868
3	Hydrous partial melting of lherzolite at 1 GPa: The effect of H2O on the genesis of basaltic magmas. Earth and Planetary Science Letters, 1995, 133, 463-473.	1.8	427
4	The Structure of Iron in Earthâ€™s Inner Core. Science, 2010, 330, 359-361.	6.0	408
5	The fate of subducted basaltic crust in the Earth's lower mantle. Nature, 1999, 397, 53-56.	13.7	374
6	Experimentally determined postspinel transformation boundary in Mg2SiO4using MgO as an internal pressure standard and its geophysical implications. Journal of Geophysical Research, 2004, 109, .	3.3	342
7	Melting experiments on lherzolite KLB-1 under hydrous conditions and generation of high-magnesian andesitic melts. Geology, 1997, 25, 42.	2.0	302
8	Phase transition and density of subducted MORB crust in the lower mantle. Earth and Planetary Science Letters, 2005, 237, 239-251.	1.8	289
9	Phase transitions in pyrolitic mantle around 670-km depth: Implications for upwelling of plumes from the lower mantle. Journal of Geophysical Research, 2002, 107, ECV 3-1-ECV 3-13.	3.3	278
10	Geochemical Variations in Vanuatu Arc Lavas: the Role of Subducted Material and a Variable Mantle Wedge Composition. Journal of Petrology, 1997, 38, 1331-1358.	1.1	259
11	The high conductivity of iron and thermal evolution of the Earthâ€™s core. Physics of the Earth and Planetary Interiors, 2013, 224, 88-103.	0.7	251
12	The elasticity of the MgSiO3 post-perovskite phase in the Earth's lowermost mantle. Nature, 2004, 430, 442-445.	13.7	248
13	Composition and State of the Core. Annual Review of Earth and Planetary Sciences, 2013, 41, 657-691.	4.6	246
14	Melting experiments on homogeneous mixtures of peridotite and basalt: application to the genesis of ocean island basalts. Earth and Planetary Science Letters, 1998, 162, 45-61.	1.8	239
15	Stability of magnesite and its high-pressure form in the lowermost mantle. Nature, 2004, 427, 60-63.	13.7	234
16	Low Core-Mantle Boundary Temperature Inferred from the Solidus of Pyrolite. Science, 2014, 343, 522-525.	6.0	224
17	A perovskitic lower mantle inferred from high-pressure, high-temperature sound velocity data. Nature, 2012, 485, 90-94.	13.7	220
18	Partial melt compositions of carbonated peridotite at 3 GPa and role of CO2in alkali-basalt magma generation. Geophysical Research Letters, 1997, 24, 2837-2840.	1.5	219

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19	Spin crossover and iron-rich silicate melt in the Earthâ€™s deep mantle. Nature, 2011, 473, 199-202.	13.7	212
20	Experimental determination of the electrical resistivity of iron at Earthâ€™s core conditions. Nature, 2016, 534, 95-98.	13.7	209
21	Post-perovskite phase transition and mineral chemistry in the pyrolitic lowermost mantle. Geophysical Research Letters, 2005, 32, .	1.5	186
22	Water in Earth's Lower Mantle. Science, 2002, 295, 1885-1887.	6.0	175
23	Subsolidus and melting phase relations of basaltic composition in the uppermostlower mantle. Geochimica Et Cosmochimica Acta, 2002, 66, 2099-2108.	1.6	175
24	Coesite and clinopyroxene exsolution lamellae in chromites: In-situ ultrahigh-pressure evidence from podiform chromitites in the Luobusa ophiolite, southern Tibet. Lithos, 2009, 109, 314-322.	0.6	173
25	Crystallization of silicon dioxide and compositional evolution of the Earthâ€™s core. Nature, 2017, 543, 99-102.	13.7	161
26	The Pyrite-Type High-Pressure Form of Silica. Science, 2005, 309, 923-925.	6.0	151
27	Postperovskite phase transition and its geophysical implications. Reviews of Geophysics, 2006, 44, .	9.0	149
28	Highly intense monochromatic X-ray diffraction facility for high-pressure research at SPring-8. High Pressure Research, 2008, 28, 163-173.	0.4	140
29	Persistence of strong silica-enriched domains in the Earthâ€™s lower mantle. Nature Geoscience, 2017, 10, 236-240.	5.4	138
30	Solubilities of O and Si in liquid iron in equilibrium with (Mg,Fe)SiO3perovskite and the light elements in the core. Geophysical Research Letters, 2005, 32, .	1.5	129
31	A critical evaluation of pressure scales at high temperatures by in situ X-ray diffraction measurements. Physics of the Earth and Planetary Interiors, 2004, 143-144, 515-526.	0.7	127
32	The Electrical Conductivity of Post-Perovskite in Earth's D'' Layer. Science, 2008, 320, 89-91.	6.0	127
33	Determination of post-perovskite phase transition boundary up to 4400ÂK and implications for thermal structure in Dâ€³ layer. Earth and Planetary Science Letters, 2009, 277, 130-136.	1.8	124
34	The naked planet Earth: Most essential pre-requisite for the origin and evolution of life. Geoscience Frontiers, 2013, 4, 141-165.	4.3	122
35	Compression of FeSi, Fe₃C, Fe_{0.95}O, and FeS under the core pressures and implication for light element in the Earth's core. Journal of Geophysical Research, 2010, 115, .	3.3	117
36	Sulfur in the Earthâ€™s inner core. Earth and Planetary Science Letters, 2001, 193, 509-514.	1.8	113

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37	Stability of CaCl2-type and Î±-PbO2-type SiO2at high pressure and temperature determined by in-situ X-ray measurements. Geophysical Research Letters, 2003, 30, n/a-n/a.	1.5	113
38	Lattice thermal conductivity of MgSiO3 perovskite and post-perovskite at the coreâ€“mantle boundary. Earth and Planetary Science Letters, 2012, 349-350, 109-115.	1.8	113
39	Experimental and Theoretical Evidence for Pressure-Induced Metallization in FeO with Rocksalt-Type Structure. Physical Review Letters, 2012, 108, 026403.	2.9	111
40	Phase transitions in pyrolite and MORB at lowermost mantle conditions: Implications for a MORB-rich pile above the coreâ€“mantle boundary. Earth and Planetary Science Letters, 2008, 267, 107-117.	1.8	109
41	Stability and equation of state of MgGeO3post-perovskite phase. American Mineralogist, 2005, 90, 262-265.	0.9	107
42	In situ measurements of the phase transition boundary in Mg3Al2Si3O12: implications for the nature of the seismic discontinuities in the Earthâ€™s mantle. Earth and Planetary Science Letters, 2001, 184, 567-573.	1.8	106
43	Precise determination of post-stishovite phase transition boundary and implications for seismic heterogeneities in the mid-lower mantle. Physics of the Earth and Planetary Interiors, 2010, 183, 104-109.	0.7	102
44	Determination of post-perovskite phase transition boundary in MgSiO3using Au and MgO pressure standards. Geophysical Research Letters, 2006, 33, n/a-n/a.	1.5	94
45	Phase relations of iron and ironâ€“nickel alloys up to 300ÂGPa: Implications for composition and structure of the Earth's inner core. Earth and Planetary Science Letters, 2008, 273, 379-385.	1.8	89
46	Phase transition in Al-bearing CaSiO3 perovskite: implications for seismic discontinuities in the lower mantle. Physics of the Earth and Planetary Interiors, 2004, 145, 67-74.	0.7	86
47	Post-stishovite phase boundary in SiO2 determined by in situ X-ray observations. Earth and Planetary Science Letters, 2002, 197, 187-192.	1.8	84
48	Equation of state of the postperovskite phase synthesized from a natural (Mg,Fe)SiO3 orthopyroxene. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 3039-3043.	3.3	84
49	Pressureâ€volumeâ€temperature relations in MgO: An ultrahigh pressureâ€temperature scale for planetary sciences applications. Journal of Geophysical Research, 2008, 113, .	3.3	84
50	New developments in high-pressure X-ray diffraction beamline for diamond anvil cell at SPring-8. Matter and Radiation at Extremes, 2020, 5, .	1.5	84
51	Trace element partitioning in Earthâ€™s lower mantle and implications for geochemical consequences of partial melting at the coreâ€“mantle boundary. Physics of the Earth and Planetary Interiors, 2004, 146, 249-260.	0.7	81
52	Melting curve of iron to 290 GPa determined in a resistance-heated diamond-anvil cell. Earth and Planetary Science Letters, 2019, 510, 45-52.	1.8	81
53	The structure of Feâ€“Si alloy in Earth's inner core. Earth and Planetary Science Letters, 2015, 418, 11-19.	1.8	77
54	Phase relations in the system Fe-FeSi at 21 GPa. American Mineralogist, 2004, 89, 273-276.	0.9	76

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55	Solubilities of nitrogen and noble gases in silicate melts under various oxygen fugacities: implications for the origin and degassing history of nitrogen and noble gases in the earth. Geochimica Et Cosmochimica Acta, 2004, 68, 387-401.	1.6	74
56	The Soret diffusion in laser-heated diamond-anvil cell. Physics of the Earth and Planetary Interiors, 2010, 180, 172-178.	0.7	74
57	High-pressure behavior of MnGeO3 and CdGeO3 perovskites and the post-perovskite phase transition. Physics and Chemistry of Minerals, 2006, 32, 721-725.	0.3	73
58	Partitioning of iron between perovskite/postperovskite and ferropericlase in the lower mantle. Journal of Geophysical Research, 2008, 113, .	3.3	73
59	Melting experiments on Feâ€“Fe 3 S system to 254 GPa. Earth and Planetary Science Letters, 2017, 464, 135-141.	1.8	73
60	Solubility of FeO in (Mg,Fe)SiO3 perovskite and the post-perovskite phase transition. Physics of the Earth and Planetary Interiors, 2007, 160, 319-325.	0.7	72
61	Compression of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mtext>H</mml:mtext><mml:mn>2</mml:mn></mml:msub><mml:mtext>O</mml:mte to 126 GPa and implications for hydrogen-bond symmetrization: Synchrotron x-ray diffraction measurements and density-functional calculations. Physical Review B, 2008, 77, .	1.1	72
62	In situ measurements of the majorite-akimotoite-perovskite phase transition boundaries in MgSiO3. Geophysical Research Letters, 2001, 28, 4351-4354.	1.5	71
63	Light elements in the Earthâ€™s core. Nature Reviews Earth & Environment, 2021, 2, 645-658.	12.2	69
64	Clapeyron slope of the post-perovskite phase transition in CaIrO3. Geophysical Research Letters, 2005, 32, .	1.5	68
65	Sound velocity of MgSiO3 post-perovskite phase: A constraint on the Dâ€³ discontinuity. Earth and Planetary Science Letters, 2007, 259, 18-23.	1.8	66
66	Phase relations in Mg3Al2Si3O12to 180 GPa: Effect of Al on post-perovskite phase transition. Geophysical Research Letters, 2005, 32, .	1.5	65
67	Phase transition boundary between B1 and B8 structures of FeO up to 210GPa. Physics of the Earth and Planetary Interiors, 2010, 179, 157-163.	0.7	65
68	Melting experiments on peridotite to lowermost mantle conditions. Journal of Geophysical Research: Solid Earth, 2014, 119, 4684-4694.	1.4	65
69	Phase transition in CaSiO3 perovskite. Earth and Planetary Science Letters, 2007, 260, 564-569.	1.8	64
70	Liquid ironâ€hydrogen alloys at outer core conditions by firstâ€principles calculations. Geophysical Research Letters, 2015, 42, 7513-7520.	1.5	64
71	Experimental evidence for hydrogen incorporation into Earthâ€™s core. Nature Communications, 2021, 12, 2588.	5.8	63
72	Simultaneous volume measurements of Au and MgO to 140GPa and thermal equation of state of Au based on the MgO pressure scale. Physics of the Earth and Planetary Interiors, 2008, 167, 149-154.	0.7	61

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73	Thermal conductivity of ferropericlase in the Earth's lower mantle. Earth and Planetary Science Letters, 2017, 465, 29-37.	1.8	61
74	Cr-spinel, an excellent micro-container for retaining primitive melts â€“ implications for a hydrous plume origin for komatiites. Earth and Planetary Science Letters, 2001, 189, 177-188.	1.8	60
75	Thermoelastic property and high-pressure stability of Fe7C3: Implication for iron-carbide in the Earth's core. American Mineralogist, 2011, 96, 1158-1165.	0.9	60
76	Phase Transition of FeO and Stratification in Earthâ€™s Outer Core. Science, 2011, 334, 792-794.	6.0	60
77	North Fiji Basin basalts and their magma sources: Part I. Incompatible element constraints. Marine Geology, 1994, 116, 153-178.	0.9	59
78	Electrical conductivities of pyrolitic mantle and MORB materials up to the lowermost mantle conditions. Earth and Planetary Science Letters, 2010, 289, 497-502.	1.8	59
79	Electrical resistivity of substitutionally disordered hcp Feâ€“Si and Feâ€“Ni alloys: Chemically-induced resistivity saturation in the Earth's core. Earth and Planetary Science Letters, 2016, 451, 51-61.	1.8	59
80	Reconciling magmaâ€ocean crystallization models with the presentâ€day structure of the Earth's mantle. Geochemistry, Geophysics, Geosystems, 2017, 18, 2785-2806.	1.0	58
81	Elasticity of MgO to 130ÂGPa: Implications for lower mantle mineralogy. Earth and Planetary Science Letters, 2009, 277, 123-129.	1.8	57
82	High-temperature compression of ferropericlase and the effect of temperature on iron spin transition. Earth and Planetary Science Letters, 2010, 297, 691-699.	1.8	57
83	High-pressure melting experiments on Feâ€“Si alloys and implications for silicon as a light element in the core. Earth and Planetary Science Letters, 2016, 456, 47-54.	1.8	57
84	Au-Pd sample containers for melting experiments on iron and water bearing systems. European Journal of Mineralogy, 1994, 6, 381-386.	0.4	57
85	Stability of phase A in antigorite (serpentine) composition determined by in situ X-ray pressure observations. Physics of the Earth and Planetary Interiors, 2005, 151, 276-289.	0.7	56
86	Potential host phase of aluminum and potassium in the Earthâ€™s lower mantle. American Mineralogist, 2001, 86, 740-746.	0.9	55
87	Experimental evidence of superionic conduction in H2O ice. Journal of Chemical Physics, 2012, 137, 194505.	1.2	55
88	Carbon-depleted outer core revealed by sound velocity measurements of liquid ironâ€“carbon alloy. Nature Communications, 2015, 6, 8942.	5.8	55
89	Equation of State of Liquid Iron under Extreme Conditions. Physical Review Letters, 2020, 124, 165701.	2.9	55
90	The valence state and partitioning of iron in the Earth's lowermost mantle. Journal of Geophysical Research, 2011, 116, .	3.3	54

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91	Perovskite in Earthâ€™s deep interior. Science, 2017, 358, 734-738.	6.0	54
92	Meltâ€“crystal density crossover in a deep magma ocean. Earth and Planetary Science Letters, 2019, 516, 202-211.	1.8	54
93	The structure of Feâ€Ni alloy in Earth's inner core. Geophysical Research Letters, 2012, 39, .	1.5	53
94	Electrical resistivity and thermal conductivity of hcp Feâ€“Ni alloys under high pressure: Implications for thermal convection in the Earthâ€™s core. Physics of the Earth and Planetary Interiors, 2015, 247, 2-10.	0.7	53
95	The North Fiji Basin basalts and their magma sources: Part II. Sr-Nd isotopic and trace element constraints. Marine Geology, 1994, 116, 179-195.	0.9	51
96	High pressure and high temperature phase transitions of FeO. Physics of the Earth and Planetary Interiors, 2004, 146, 273-282.	0.7	51
97	Magnesium Partitioning Between Earth's Mantle and Core and its Potential to Drive an Early Exsolution Geodynamo. Geophysical Research Letters, 2018, 45, 13,240.	1.5	50
98	Simultaneous volume measurements of post-perovskite and perovskite in MgSiO3 and their thermal equations of state. Earth and Planetary Science Letters, 2008, 265, 515-524.	1.8	49
99	Structural distortion of CaSnO3 perovskite under pressure and the quenchable post-perovskite phase as a low-pressure analogue to MgSiO3. Physics of the Earth and Planetary Interiors, 2010, 181, 54-59.	0.7	47
100	Chemical equilibrium between ferropericlase and molten iron to 134 GPa and implications for iron content at the bottom of the mantle. Geophysical Research Letters, 2008, 35, .	1.5	46
101	Water solubility in majoritic garnet in subducting oceanic crust. Geophysical Research Letters, 2003, 30, .	1.5	45
102	High-pressure form of pyrite-type germanium dioxide. Physical Review B, 2003, 68, .	1.1	45
103	Ferric iron in Al-bearing post-perovskite. Geophysical Research Letters, 2006, 33, .	1.5	44
104	Thermal diffusivity measurement in a diamond anvil cell using a light pulse thermoreflectance technique. Measurement Science and Technology, 2011, 22, 024011.	1.4	43
105	Melting experiments on the Feâ€“C binary system up to 255 GPa: Constraints on the carbon content in the Earth's core. Earth and Planetary Science Letters, 2019, 515, 135-144.	1.8	43
106	Segregation of core melts by permeable flow in the lower mantle. Earth and Planetary Science Letters, 2004, 224, 249-257.	1.8	42
107	Phase relations of ironâ€“silicon alloys at high pressure and high temperature. Physics and Chemistry of Minerals, 2009, 36, 511-518.	0.3	42
108	Spin crossover, structural change, and metallization in NiAs-type FeO at high pressure. Physical Review B, 2011, 84, .	1.1	42

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109	Iron partitioning in pyrolitic lower mantle. Physics and Chemistry of Minerals, 2013, 40, 107-113.	0.3	42
110	Hydrogen Limits Carbon in Liquid Iron. Geophysical Research Letters, 2019, 46, 5190-5197.	1.5	42
111	Experimental study of reaction between perovskite and molten iron to 146ÂGPa and implications for chemically distinct buoyant layer at the top of the core. Physics and Chemistry of Minerals, 2009, 36, 355-363.	0.3	40
112	High pressure generation using double-stage diamond anvil technique: problems and equations of state of rhenium. High Pressure Research, 2018, 38, 107-119.	0.4	39
113	The effect of melt segregation on polybaric mantle melting: Estimation from the incremental melting experiments. Physics of the Earth and Planetary Interiors, 1998, 107, 111-118.	0.7	38
114	Unsolved problems in the lowermost mantle. Geophysical Research Letters, 2006, 33, .	1.5	38
115	Liquid ironâ€sulfur alloys at outer core conditions by firstâ€principles calculations. Geophysical Research Letters, 2014, 41, 6712-6717.	1.5	38
116	Measurements of lattice thermal conductivity of MgO to coreâ€mantle boundary pressures. Geophysical Research Letters, 2014, 41, 4542-4547.	1.5	37
117	Chemical compositions of the outer core examined by first principles calculations. Earth and Planetary Science Letters, 2020, 531, 116009.	1.8	37
118	Development of in situ Brillouin spectroscopy at high pressure and high temperature with synchrotron radiation and infrared laser heating system: Application to the Earth's deep interior. Physics of the Earth and Planetary Interiors, 2009, 174, 282-291.	0.7	35
119	The effect of iron spin transition on electrical conductivity of (Mg,Fe)O magnesiowuestite. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2007, 83, 97-100.	1.6	33
120	The influence of sulfur on the electrical resistivity of hcp iron: Implications for the core conductivity of Mars and Earth. Geophysical Research Letters, 2017, 44, 8254-8259.	1.5	33
121	In situ X-ray diffraction measurements of the fccâ€“hcp phase transition boundary of an Feâ€“Ni alloy in an internally heated diamond anvil cell. Physics and Chemistry of Minerals, 2012, 39, 329-338.	0.3	32
122	Stability and compressibility of a new ironâ€nitride <i>Î²</i>â€Fe₇N₃ to core pressures. Geophysical Research Letters, 2015, 42, 5206-5211.	1.5	32
123	Sound velocity of liquid Feâ€Niâ€S at high pressure. Journal of Geophysical Research: Solid Earth, 2017, 122, 3624-3634.	1.4	32
124	Compression of Feâ€“Siâ€“H alloys to core pressures. Geophysical Research Letters, 2016, 43, 3686-3692.	1.5	31
125	Phase transition between theCaCl2-type andÎ±â^'PbO2-type structures of germanium dioxide. Physical Review B, 2003, 68, .	1.1	30
126	Iron partitioning between perovskite and post-perovskite: A transmission electron microscope study. American Mineralogist, 2008, 93, 1678-1681.	0.9	30

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127	High-pressure experimental evidence for metal FeO with normal NiAs-type structure. Physical Review B, 2010, 82, .	1.1	29
128	Decomposition of Fe₃S above 250â€‰GPa. Geophysical Research Letters, 2013, 40, 4845-4849.	1.5	29
129	Phase boundary between rutile-type and CaCl₂-type germanium dioxide determined by in situ X-ray observations. American Mineralogist, 2002, 87, 99-102.	0.9	28
130	The electrical resistance measurements of (Mg,Fe)SiO3 perovskite at high pressures and implications for electronic spin transition of iron. Physics of the Earth and Planetary Interiors, 2010, 180, 154-158.	0.7	28
131	A new experimental approach for incremental batch melting of peridotite at 1.5 GPa. Geophysical Research Letters, 1994, 21, 2139-2142.	1.5	27
132	The compressibility of a natural composition calcium ferrite-type aluminous phase to 70 GPa. Physics of the Earth and Planetary Interiors, 2002, 131, 311-318.	0.7	27
133	Equation of state of hexagonal aluminous phase in basaltic composition to 63 GPa at 300 K. Physics and Chemistry of Minerals, 2002, 29, 527-531.	0.3	27
134	Discovery of Post-Perovskite and New Views on the Core-Mantle Boundary Region. Elements, 2008, 4, 183-189.	0.5	27
135	Reconciling the post-perovskite phase with seismological observations of lowermost mantle structure. Geophysical Monograph Series, 2007, , 129-153.	0.1	26
136	Seismic anisotropy of post-perovskite and the lowermost mantle. Geophysical Monograph Series, 2007, , 171-189.	0.1	26
137	Resistivity saturation of hcp Fe-Si alloys in an internally heated diamond anvil cell: A key to assessing the Earth's core conductivity. Earth and Planetary Science Letters, 2020, 543, 116357.	1.8	26
138	Equation of state of Al-bearing stishovite to 40 GPa at 300 K. American Mineralogist, 2002, 87, 1486-1489.	0.9	25
139	The effect of iron and aluminum incorporation on lattice thermal conductivity of bridgmanite at the Earth's lower mantle. Earth and Planetary Science Letters, 2017, 474, 25-31.	1.8	25
140	Stability of fcc phase FeH to 137 GPa. American Mineralogist, 2020, 105, 917-921.	0.9	25
141	Deformation of MnGeO₃ postâ€perovskite at lower mantle pressure and temperature. Geophysical Research Letters, 2010, 37, .	1.5	24
142	Sound velocity measurement in liquid water up to 25 GPa and 900 K: Implications for densities of water at lower mantle conditions. Earth and Planetary Science Letters, 2010, 289, 479-485.	1.8	24
143	Sound velocity measurements of CaSiO3 perovskite to 133GPa and implications for lowermost mantle seismic anomalies. Earth and Planetary Science Letters, 2012, 349-350, 1-7.	1.8	24
144	Electrical resistivity of fcc phase iron hydrides at high pressures and temperatures. Comptes Rendus - Geoscience, 2019, 351, 147-153.	0.4	24

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145	New high-pressure B2 phase of FeS above 180 GPa. American Mineralogist, 2008, 93, 492-494.	0.9	23
146	Thermoelastic properties of ice VII and its high-pressure polymorphs: Implications for dynamics of cold slab subduction in the lower mantle. Earth and Planetary Science Letters, 2010, 299, 474-482.	1.8	23
147	Stabilities of NAL and Ca-ferrite-type phases on the join NaAlSiO4-MgAl2O4 at high pressure. Physics and Chemistry of Minerals, 2011, 38, 557-560.	0.3	23
148	The advanced ion-milling method for preparation of thin film using ion slicer: Application to a sample recovered from diamond-anvil cell. Review of Scientific Instruments, 2009, 80, 013901.	0.6	22
149	High-temperature compression experiments of CaSiO3 perovskite to lowermost mantle conditions and its thermal equation of state. Physics and Chemistry of Minerals, 2013, 40, 81-91.	0.3	22
150	Nature of the Volume Isotope Effect in Ice. Physical Review Letters, 2015, 115, 173005.	2.9	22
151	An Experimental Examination of Thermal Conductivity Anisotropy in hcp Iron. Frontiers in Earth Science, 2018, 6, .	0.8	22
152	Melting experiments on Feâ€“Siâ€“S alloys to core pressures: Silicon in the core?. American Mineralogist, 2018, 103, 742-748.	0.9	22
153	Experimental Determination of Composition of Melt Formed by Equilibrium Partial Melting of Peridotite at High Pressures Using Aggregates of Diamond Grains.. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 1992, 68, 63-68.	1.6	21
154	Pressure-induced structural evolution of pyrite-type SiO2. Physics and Chemistry of Minerals, 2011, 38, 591-597.	0.3	21
155	Post-stishovite transition in hydrous aluminous SiO2. Physics of the Earth and Planetary Interiors, 2016, 255, 18-26.	0.7	21
156	Phase transition in SiC from zinc-blende to rock-salt structure and implications for carbon-rich extrasolar planets. American Mineralogist, 2017, 102, 2230-2234.	0.9	21
157	Thermal conductivity of Fe-bearing post-perovskite in the Earth's lowermost mantle. Earth and Planetary Science Letters, 2020, 547, 116466.	1.8	21
158	Simultaneous high-pressure and high-temperature volume measurements of ice VII and its thermal equation of state. Physical Review B, 2010, 82, .	1.1	20
159	Static compression of B2 KCl to 230 GPa and its P-V-T equation of state. American Mineralogist, 2019, 104, 718-723.	0.9	20
160	A new high-pressure and high-temperature polymorph of FeS. Physics and Chemistry of Minerals, 2007, 34, 335-343.	0.3	19
161	Lattice-preferred orientation of lower mantle materials and seismic anisotropy in the Dâ€³ layer. Geophysical Monograph Series, 2007, , 69-78.	0.1	18
162	Sound velocities of Na0.4Mg0.6Al1.6Si0.4O4 NAL and CF phases to 73ÂGPa determined by Brillouin scattering method. Physics and Chemistry of Minerals, 2013, 40, 195-201.	0.3	18

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163	Ferric iron content in (Mg,Fe)SiO3 perovskite and post-perovskite at deep lower mantle conditions. American Mineralogist, 2008, 93, 1899-1902.	0.9	17
164	Thermal diffusivities of MgSiO3 and Al-bearing MgSiO3 perovskites. American Mineralogist, 2014, 99, 94-97.	0.9	17
165	Measurements of sound velocity in ironâ€"nickel alloys by femtosecond laser pulses in a diamond anvil cell. Physics and Chemistry of Minerals, 2018, 45, 589-595.	0.3	17
166	Fe₂S: The Most Feâ€Rich Iron Sulfide at the Earth's Inner Core Pressures. Geophysical Research Letters, 2019, 46, 11944-11949.	1.5	17
167	The stability of Fe5O6 and Fe4O5 at high pressure and temperature. American Mineralogist, 2019, 104, 1356-1359.	0.9	16
168	Melting Experiments on Liquidus Phase Relations in the Feâ€Sâ€O Ternary System Under Core Pressures. Geophysical Research Letters, 2019, 46, 5137-5145.	1.5	16
169	Highâ€Temperature Equation of State of FeH: Implications for Hydrogen in Earth's Inner Core. Geophysical Research Letters, 2022, 49, .	1.5	16
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