Kei Hirose

List of Publications by Year in Descending Order

229 papers	13,249 citations	59 h-index	108 g-index
247 ext. papers	14,755 ext. citations	6.6 avg, IF	6.62 L-index

#	Paper	IF	Citations
229	The Fe-FeSi phase diagram at Mercury's core conditions.. *Nature Communications*, **2022**, 13, 387	17.4	2
228	Stratification in planetary cores by liquid immiscibility in Fe-S-H.. *Nature Communications*, **2022**, 13, 644	17.4	1
227	High-Temperature Equation of State of FeH: Implications for Hydrogen in Earth's Inner Core. *Geophysical Research Letters*, **2022**, 49,	4.9	3
226	The thermal conductivity of the Earth's core and implications for its thermal and compositional evolution. *National Science Review*, **2021**, 8, nwaa303	10.8	1
225	Experimental evidence for hydrogen incorporation into Earth's core. *Nature Communications*, **2021**, 12, 2588	17.4	21
224	A cylindrical SiC heater for an externally heated diamond anvil cell to 1500 K. *Review of Scientific Instruments*, **2021**, 92, 015119	1.7	3
223	Liquidus Phase Relations and Solid-Liquid Partitioning in the Fe-Si-C System Under Core Pressures. *Geophysical Research Letters*, **2021**, 48, e2021GL092681	4.9	3
222	Light elements in the Earth's core. *Nature Reviews Earth & Environment*, **2021**, 2, 645-658	30.2	14
221	Effect of sulfur on sound velocity of liquid iron under Martian core conditions. *Nature Communications*, **2020**, 11, 1954	17.4	7
220	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	5.3	15
219	Silicon-Depleted Present-Day Earth's Outer Core Revealed by Sound Velocity Measurements of Liquid Fe-Si Alloy. *Journal of Geophysical Research: Solid Earth*, **2020**, 125, e2020JB019399	3.6	5
218	Stability of fcc phase FeH to 137 GPa. *American Mineralogist*, **2020**, 105, 917-921	2.9	8
217	New developments in high-pressure X-ray diffraction beamline for diamond anvil cell at SPring-8. *Matter and Radiation at Extremes*, **2020**, 5, 018403	4.7	44
216	Chemical compositions of the outer core examined by first principles calculations. *Earth and Planetary Science Letters*, **2020**, 531, 116009	5.3	18
215	Thermodynamical Modeling of Liquid Fe-Si-Mg-O:Molten Magnesium Silicate Release From the Core. *Geophysical Research Letters*, **2020**, 47, e2020GL089218	4.9	8
214	Sound Velocity of Liquid FeP at High Pressure. *Physica Status Solidi (B): Basic Research*, **2020**, 257, 2000171	1.3	0
213	New pressure-induced phase transition to Co2Si-type Fe2P. *American Mineralogist*, **2020**, 105, 1752-1755	2.9	0

212	Thermal conductivity of Fe-bearing post-perovskite in the Earth's lowermost mantle. *Earth and Planetary Science Letters*, **2020**, 547, 116466	5.3	12
211	Anomalous compressibility in (Fe,Al)-bearing bridgmanite: implications for the spin state of iron. *Physics and Chemistry of Minerals*, **2020**, 47, 1	1.6	1
210	Equation of State of Liquid Iron under Extreme Conditions. *Physical Review Letters*, **2020**, 124, 165701	7.4	23
209	The stability of Fe5O6 and Fe4O5 at high pressure and temperature. *American Mineralogist*, **2019**, 104, 1356-1359	2.9	5
208	Melting Temperature of Iron Determined in an Internal-Resistance-Heated Diamond-Anvil Cell. *Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu*, **2019**, 29, 113-120	0	
207	Melting curve of iron to 290 GPa determined in a resistance-heated diamond-anvil cell. *Earth and Planetary Science Letters*, **2019**, 510, 45-52	5.3	48
206	Effect of spin transition of iron on the thermal conductivity of (Fe, Al)-bearing bridgmanite. *Earth and Planetary Science Letters*, **2019**, 520, 188-198	5.3	9
205	Hydrogen Limits Carbon in Liquid Iron. *Geophysical Research Letters*, **2019**, 46, 5190-5197	4.9	23
204	Static compression of B2 KCl to 230 GPa and its P-V-T equation of state. *American Mineralogist*, **2019**, 104, 718-723	2.9	12
203	Melt–crystal density crossover in a deep magma ocean. *Earth and Planetary Science Letters*, **2019**, 516, 202-211	5.3	30
202	Melting Experiments on Liquidus Phase Relations in the Fe-S-O Ternary System Under Core Pressures. *Geophysical Research Letters*, **2019**, 46, 5137-5145	4.9	8
201	Composition and pressure dependence of lattice thermal conductivity of (Mg,Fe)O solid solutions. *Comptes Rendus - Geoscience*, **2019**, 351, 229-235	1.4	4
200	Melting Curve and Equation of State of ε-Fe7N3: Nitrogen in the Core?. *Journal of Geophysical Research: Solid Earth*, **2019**, 124, 3448-3457	3.6	7
199	Melting experiments on the Fe–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	5.3	31
198	Melting in the Fe-FeO system to 204 GPa: Implications for oxygen in Earth's core. *American Mineralogist*, **2019**, 104, 1603-1607	2.9	9
197	Fe2S: The Most Fe-Rich Iron Sulfide at the Earth's Inner Core Pressures. *Geophysical Research Letters*, **2019**, 46, 11944-11949	4.9	8
196	High-temperature electrical resistivity measurements of hcp iron to Mbar pressure in an internally resistive heated diamond anvil cell. *High Pressure Research*, **2019**, 39, 579-587	1.6	9
195	Electrical resistivity of fcc phase iron hydrides at high pressures and temperatures. *Comptes Rendus - Geoscience*, **2019**, 351, 147-153	1.4	14

194	High pressure generation using double-stage diamond anvil technique: problems and equations of state of rhenium. *High Pressure Research*, **2018**, 38, 107-119	1.6	31
193	Measurements of sound velocity in iron–nickel alloys by femtosecond laser pulses in a diamond anvil cell. *Physics and Chemistry of Minerals*, **2018**, 45, 589-595	1.6	9
192	Core-Exsolved SiO2 Dispersal in the Earth's Mantle. *Journal of Geophysical Research: Solid Earth*, **2018**, 123, 176-188	3.6	9
191	Isotopic signature of core-derived SiO2. *American Mineralogist*, **2018**, 103, 1161-1164	2.9	2
190	An Experimental Examination of Thermal Conductivity Anisotropy in hcp Iron. *Frontiers in Earth Science*, **2018**, 6,	3.5	11
189	Magnesium Partitioning Between Earth's Mantle and Core and its Potential to Drive an Early Exsolution Geodynamo. *Geophysical Research Letters*, **2018**, 45, 13,240	4.9	34
188	Experimental Determination of Eutectic Liquid Compositions in the MgO-SiO2 System to the Lowermost Mantle Pressures. *Geophysical Research Letters*, **2018**, 45, 9552-9558	4.9	6
187	Melting experiments on Fe–Si alloys to core pressures: Silicon in the core?. *American Mineralogist*, **2018**, 103, 742-748	2.9	14
186	Melting Phase Relations and Element Partitioning in MORB to Lowermost Mantle Conditions. *Journal of Geophysical Research: Solid Earth*, **2018**, 123, 5515-5531	3.6	11
185	Crystallization of silicon dioxide and compositional evolution of the Earth's core. *Nature*, **2017**, 543, 99-102	42.4	120
184	Thermal conductivity of ferropericlase in the Earth's lower mantle. *Earth and Planetary Science Letters*, **2017**, 465, 29-37	5.3	46
183	Persistence of strong silica-enriched domains in the Earth's lower mantle. *Nature Geoscience*, **2017**, 10, 236-240	18.3	100
182	Melting experiments on Fe–Fe3S system to 254 GPa. *Earth and Planetary Science Letters*, **2017**, 464, 135-141	5.3	51
181	Sound velocity of liquid Fe-Ni-S at high pressure. *Journal of Geophysical Research: Solid Earth*, **2017**, 122, 3624-3634	3.6	23
180	Phase transition in SiC from zinc-blende to rock-salt structure and implications for carbon-rich extrasolar planets. *American Mineralogist*, **2017**, 102, 2230-2234	2.9	15
179	Synthesis and crystal structure of LiNbO3-type Mg3Al2Si3O12: A possible indicator of shock conditions of meteorites. *American Mineralogist*, **2017**, 102, 1947-1952	2.9	9
178	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	5.3	20
177	Reconciling magma-ocean crystallization models with the present-day structure of the Earth's mantle. *Geochemistry, Geophysics, Geosystems*, **2017**, 18, 2785-2806	3.6	41

176	Perovskite in Earth's deep interior. *Science*, **2017**, 358, 734-738	33.3	35
175	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	4.9	23
174	High-pressure melting experiments on Fe–Si alloys and implications for silicon as a light element in the core. *Earth and Planetary Science Letters*, **2016**, 456, 47-54	5.3	45
173	Experimental determination of the electrical resistivity of iron at Earth's core conditions. *Nature*, **2016**, 534, 95-8	50.4	164
172	Compression of Fe–Si–H alloys to core pressures. *Geophysical Research Letters*, **2016**, 43, 3686-3692	4.9	19
171	Melting in the FeO SiO 2 system to deep lower-mantle pressures: Implications for subducted Banded Iron Formations. *Earth and Planetary Science Letters*, **2016**, 440, 56-61	5.3	11
170	Post-stishovite transition in hydrous aluminous SiO2. *Physics of the Earth and Planetary Interiors*, **2016**, 255, 18-26	2.3	14
169	Phase Transition and Melting in the Deep Lower Mantle. *Geophysical Monograph Series*, **2016**, 209-224	1.1	
168	Electrical resistivity of substitutionally disordered hcp Fe–Si and Fe–Ni alloys: Chemically-induced resistivity saturation in the Earth's core. *Earth and Planetary Science Letters*, **2016**, 451, 51-61	5.3	48
167	Electrical resistivity and thermal conductivity of hcp Fe–Ni alloys under high pressure: Implications for thermal convection in the Earth's core. *Physics of the Earth and Planetary Interiors*, **2015**, 247, 2-10	2.3	39
166	Mineralogy of the Deep Mantle : The Post-Perovskite Phase and its Geophysical Significance **2015**, 85-115		12
165	Temperature dependence of the velocity-density relation for liquid metals under high pressure: Implications for the Earth's outer core. *American Mineralogist*, **2015**, 100, 2602-2609	2.9	5
164	Fractional Melting and Freezing in the Deep Mantle and Implications for the Formation of a Basal Magma Ocean. *Geophysical Monograph Series*, **2015**, 123-142	1.1	10
163	Nature of the Volume Isotope Effect in Ice. *Physical Review Letters*, **2015**, 115, 173005	7.4	17
162	Liquid iron-hydrogen alloys at outer core conditions by first-principles calculations. *Geophysical Research Letters*, **2015**, 42, 7513-7520	4.9	46
161	Stability and compressibility of a new iron-nitride : Fe7N3 to core pressures. *Geophysical Research Letters*, **2015**, 42, 5206-5211	4.9	28
160	The structure of Fe–Si alloy in Earth's inner core. *Earth and Planetary Science Letters*, **2015**, 418, 11-19	5.3	59
159	Carbon-depleted outer core revealed by sound velocity measurements of liquid iron-carbon alloy. *Nature Communications*, **2015**, 6, 8942	17.4	42

158	Melting experiments on peridotite to lowermost mantle conditions. *Journal of Geophysical Research: Solid Earth*, **2014**, 119, 4684-4694	3.6	50
157	Identifying the spin transition in Fe2+-rich MgSiO3 perovskite from X-ray diffraction and vibrational spectroscopy. *American Mineralogist*, **2014**, 99, 1270-1276	2.9	6
156	Deep Earth mineralogy revealed by ultrahigh-pressure experiments. *Mineralogical Magazine*, **2014**, 78, 437-446	1.7	1
155	Measurements of lattice thermal conductivity of MgO to core-mantle boundary pressures. *Geophysical Research Letters*, **2014**, 41, 4542-4547	4.9	28
154	Liquid iron-sulfur alloys at outer core conditions by first-principles calculations. *Geophysical Research Letters*, **2014**, 41, 6712-6717	4.9	34
153	Thermal diffusivities of MgSiO3 and Al-bearing MgSiO3 perovskites. *American Mineralogist*, **2014**, 99, 94-97	2.9	11
152	Accumulation of anti-continent at the base of the mantle and its recycling in mantle plumes. *Geochimica Et Cosmochimica Acta*, **2014**, 143, 23-33	5.5	6
151	Low core-mantle boundary temperature inferred from the solidus of pyrolite. *Science*, **2014**, 343, 522-5	33.3	172
150	The high conductivity of iron and thermal evolution of the Earth core. *Physics of the Earth and Planetary Interiors*, **2013**, 224, 88-103	2.3	209
149	Decomposition of Fe3S above 250 GPa. *Geophysical Research Letters*, **2013**, 40, 4845-4849	4.9	21
148	The naked planet Earth: Most essential pre-requisite for the origin and evolution of life. *Geoscience Frontiers*, **2013**, 4, 141-165	6	96
147	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	1.6	15
146	Iron partitioning in pyrolitic lower mantle. *Physics and Chemistry of Minerals*, **2013**, 40, 107-113	1.6	36
145	Composition and State of the Core. *Annual Review of Earth and Planetary Sciences*, **2013**, 41, 657-691	15.3	194
144	Sound velocities of Na0.4Mg0.6Al1.6Si0.4O4 NAL and CF phases to 73 GPa determined by Brillouin scattering method. *Physics and Chemistry of Minerals*, **2013**, 40, 195-201	1.6	14
143	High-Pressure, High-Temperature X-ray Diffraction Measurements and the Discovery of Post-Perovskite Phase Transition. *Journal of the Physical Society of Japan*, **2013**, 82, 021010	1.5	1
142	Acoustic velocity measurements for stishovite across the post-stishovite phase transition under deviatoric stress: Implications for the seismic features of subducting slabs in the mid-mantle. *American Mineralogist*, **2013**, 98, 2053-2062	2.9	11
141	High-pressure experiments on phase transition boundaries between corundum, Rh2O3(II)- and CaIrO3-type structures in Al2O3. *American Mineralogist*, **2013**, 98, 335-339	2.9	11

140	NAL phase in K-rich portions of the lower mantle. *Geophysical Research Letters*, **2013**, 40, 5085-5088	4.9	11
139	A perovskitic lower mantle inferred from high-pressure, high-temperature sound velocity data. *Nature*, **2012**, 485, 90-4	50.4	186
138	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	5.3	19
137	Lattice thermal conductivity of MgSiO3 perovskite and post-perovskite at the core–mantle boundary. *Earth and Planetary Science Letters*, **2012**, 349-350, 109-115	5.3	84
136	Experimental and theoretical evidence for pressure-induced metallization in FeO with rocksalt-type structure. *Physical Review Letters*, **2012**, 108, 026403	7.4	96
135	The structure of Fe-Ni alloy in Earth's inner core. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	41
134	In situ X-ray diffraction measurements of the fcc–hcp phase transition boundary of an Fe–Ni alloy in an internally heated diamond anvil cell. *Physics and Chemistry of Minerals*, **2012**, 39, 329-338	1.6	25
133	Compression of Na0.4Mg0.6Al1.6Si0.4O4 NAL and Ca-ferrite-type phases. *Physics and Chemistry of Minerals*, **2012**, 39, 525-530	1.6	13
132	Crystal structures of (Mg1-x,Fe(x))SiO3 postperovskite at high pressures. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 1035-40	11.5	15
131	Experimental evidence of superionic conduction in H2O ice. *Journal of Chemical Physics*, **2012**, 137, 194505	3.9	42
130	The valence state and partitioning of iron in the Earth's lowermost mantle. *Journal of Geophysical Research*, **2011**, 116,		43
129	Thermoelastic property and high-pressure stability of Fe7C3: Implication for iron-carbide in the Earth's core. *American Mineralogist*, **2011**, 96, 1158-1165	2.9	52
128	Spin crossover and iron-rich silicate melt in the Earth's deep mantle. *Nature*, **2011**, 473, 199-202	50.4	180
127	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	1.6	21
126	Pressure-induced structural evolution of pyrite-type SiO2. *Physics and Chemistry of Minerals*, **2011**, 38, 591-597	1.6	17
125	Spin crossover, structural change, and metallization in NiAs-type FeO at high pressure. *Physical Review B*, **2011**, 84,	3.3	29
124	Phase transition of FeO and stratification in Earth's outer core. *Science*, **2011**, 334, 792-4	33.3	47
123	Thermal diffusivity measurement in a diamond anvil cell using a light pulse thermoreflectance technique. *Measurement Science and Technology*, **2011**, 22, 024011	2	35

122	The Earth's missing ingredient. *Scientific American*, **2010**, 302, 76-83	0.5	4
121	High-pressure experimental evidence for metal FeO with normal NiAs-type structure. *Physical Review B*, **2010**, 82,	3.3	21
120	Simultaneous high-pressure and high-temperature volume measurements of ice VII and its thermal equation of state. *Physical Review B*, **2010**, 82,	3.3	18
119	Geochemistry. Deep mantle properties. *Science*, **2010**, 327, 151-2	33.3	4
118	Correction to Pressure-volume-temperature relations in MgO: An ultrahigh pressure-temperature scale for planetary sciences applications *Journal of Geophysical Research*, **2010**, 115,		2
117	Deformation of MnGeO3 post-perovskite at lower mantle pressure and temperature. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	21
116	Compression of FeSi, Fe3C, Fe0.95O, and FeS under the core pressures and implication for light element in the Earth's core. *Journal of Geophysical Research*, **2010**, 115,		96
115	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	5.3	23
114	Electrical conductivities of pyrolitic mantle and MORB materials up to the lowermost mantle conditions. *Earth and Planetary Science Letters*, **2010**, 289, 497-502	5.3	52
113	High-temperature compression of ferropericlase and the effect of temperature on iron spin transition. *Earth and Planetary Science Letters*, **2010**, 297, 691-699	5.3	49
112	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	5.3	20
111	The Soret diffusion in laser-heated diamond-anvil cell. *Physics of the Earth and Planetary Interiors*, **2010**, 180, 172-178	2.3	61
110	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	2.3	25
109	Phase transition boundary between B1 and B8 structures of FeO up to 210GPa. *Physics of the Earth and Planetary Interiors*, **2010**, 179, 157-163	2.3	55
108	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	2.3	44
107	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	2.3	36
106	The structure of iron in Earth's inner core. *Science*, **2010**, 330, 359-61	33.3	295
105	Comparison of Room-Temperature Pressure Scales Using Simultaneous Volume Measurements with Laser Annealing Technique. *Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu*, **2010**, 20, 240-243	0	

104	Review of five years of activity at IFREE /JAMSTEC. *JAMSTEC Report of Research and Development*, **2009**, 9, 2_43-2_94	0	0
103	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	2.9	141
102	Experimental study of reaction between perovskite and molten iron to 146 GPa and implications for chemically distinct buoyant layer at the top of the core. *Physics and Chemistry of Minerals*, **2009**, 36, 355-363	1.6	37
101	Phase relations of iron–silicon alloys at high pressure and high temperature. *Physics and Chemistry of Minerals*, **2009**, 36, 511-518	1.6	36
100	Determination of post-perovskite phase transition boundary up to 4400 K and implications for thermal structure in D? layer. *Earth and Planetary Science Letters*, **2009**, 277, 130-136	5.3	114
99	Elasticity of MgO to 130 GPa: Implications for lower mantle mineralogy. *Earth and Planetary Science Letters*, **2009**, 277, 123-129	5.3	51
98	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	2.3	30
97	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	1.7	21
96	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,	4.9	42
95	Pressure-volume-temperature relations in MgO: An ultrahigh pressure-temperature scale for planetary sciences applications. *Journal of Geophysical Research*, **2008**, 113,		75
94	Simultaneous volume measurements of Au and MgO to 140 GPa and thermal equation of state of Au based on the MgO pressure scale. *Physics of the Earth and Planetary Interiors*, **2008**, 167, 149-154	2.3	53
93	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	5.3	46
92	Phase transitions in pyrolite and MORB at lowermost mantle conditions: Implications for a MORB-rich pile above the core–mantle boundary. *Earth and Planetary Science Letters*, **2008**, 267, 107-117	5.3	97
91	Partitioning of iron between perovskite/postperovskite and ferropericlase in the lower mantle. *Journal of Geophysical Research*, **2008**, 113,		66
90	Phase relations of iron and iron–nickel alloys up to 300 GPa: Implications for composition and structure of the Earth's inner core. *Earth and Planetary Science Letters*, **2008**, 273, 379-385	5.3	80
89	Highly intense monochromatic X-ray diffraction facility for high-pressure research at SPring-8. *High Pressure Research*, **2008**, 28, 163-173	1.6	125
88	New high-pressure B2 phase of FeS above 180 GPa. *American Mineralogist*, **2008**, 93, 492-494	2.9	19
87	The electrical conductivity of post-perovskite in Earth's D'' layer. *Science*, **2008**, 320, 89-91	33.3	108

86	Ferric iron content in (Mg,Fe)SiO3 perovskite and post-perovskite at deep lower mantle conditions. *American Mineralogist*, **2008**, 93, 1899-1902	2.9	16
85	Discovery of Post-Perovskite and New Views on the Core-Mantle Boundary Region. *Elements*, **2008**, 4, 183-189	3.8	19
84	Compression of H2O ice to 126 GPa and implications for hydrogen-bond symmetrization: Synchrotron x-ray diffraction measurements and density-functional calculations. *Physical Review B*, **2008**, 77,	3.3	66
83	Letter. Iron partitioning between perovskite and post-perovskite: A transmission electron microscope study. *American Mineralogist*, **2008**, 93, 1678-1681	2.9	26
82	Dissociation of CAS phase in the uppermost lower mantle. *Physics and Chemistry of Minerals*, **2008**, 35, 197-200	1.6	13
81	An Introduction to Post-Perovskite: The Last Mantle Phase Transition. *Geophysical Monograph Series*, **2007**, 1-7	1.1	2
80	Review of Experimental Studies on Mantle Phase Transitions. *Geophysical Monograph Series*, **2007**, 9-18	1.1	
79	Discovery of Post-Perovskite Phase Transition and the Nature of D? Layer. *Geophysical Monograph Series*, **2007**, 19-35	1.1	7
78	Predicting a Global Perovskite and Post-Perovskite Phase Boundary. *Geophysical Monograph Series*, **2007**, 155-170	1.1	2
77	Mantle Dynamics and the D? Layer: Impacts of the Post Perovskite Phase. *Geophysical Monograph Series*, **2007**, 217-227	1.1	6
76	A new high-pressure and high-temperature polymorph of FeS. *Physics and Chemistry of Minerals*, **2007**, 34, 335-343	1.6	18
75	Discovery of post-perovskite phase transition and implications for the nature of the D? layer of the mantle **2007**,		2
74	The effect of iron spin transition on electrical conductivity of (Mg,Fe)O magnesiowüstite. *Proceedings of the Japan Academy Series B: Physical and Biological Sciences*, **2007**, 83, 97-100	4	27
73	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	2.3	70
72	Sound velocity of MgSiO3 post-perovskite phase: A constraint on the D? discontinuity. *Earth and Planetary Science Letters*, **2007**, 259, 18-23	5.3	59
71	Phase transition in CaSiO3 perovskite. *Earth and Planetary Science Letters*, **2007**, 260, 564-569	5.3	55
70	Effect of Iron on the Properties of Post-Perovskite Silicate. *Geophysical Monograph Series*, **2007**, 37-46	1.1	2
69	Electronic Transitions and Spin States in the Lower Mantle. *Geophysical Monograph Series*, **2007**, 47-68	1.1	7

68	Lattice-Preferred Orientation of Lower Mantle Materials and Seismic Anisotropy in the D? Layer. *Geophysical Monograph Series*, **2007**, 69-78	1.1	15
67	Thermodynamic Properties and Stability Field of MgSiO3 Post-Perovskite. *Geophysical Monograph Series*, **2007**, 79-97	1.1	1
66	The High-Temperature Elasticity of MgSiO3 Post-Perovskite. *Geophysical Monograph Series*, **2007**, 99-113	1.1	11
65	Reconciling the Post-Perovskite Phase with Seismological Observations of Lowermost Mantle Structure. *Geophysical Monograph Series*, **2007**, 129-153	1.1	19
64	Seismic Anisotropy of Post-Perovskite and the Lowermost Mantle. *Geophysical Monograph Series*, **2007**, 171-189	1.1	23
63	Constraints on the Presence or Absence of Post-Perovskite in the Lowermost Mantle from Long-Period Seismology. *Geophysical Monograph Series*, **2007**, 191-216	1.1	5
62	Influence of the Post-Perovskite Transition on Thermal and Thermo-Chemical Mantle Convection. *Geophysical Monograph Series*, **2007**, 229-247	1.1	9
61	The Dynamical Influences from Physical Properties in the Lower Mantle and Post-Perovskite Phase Transition. *Geophysical Monograph Series*, **2007**, 249-270	1.1	5
60	Deformation-Induced Mechanical Instabilities at the Core-Mantle Boundary. *Geophysical Monograph Series*, **2007**, 271-287	1.1	3
59	Post-Perovskite Phase Transition and the Nature of the D? Layer **2007**, 69-82		1
58	High-pressure behavior of MnGeO3 and CdGeO3 perovskites and the post-perovskite phase transition. *Physics and Chemistry of Minerals*, **2006**, 32, 721-725	1.6	63
57	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, 3039-43	11.5	74
56	Determination of post-perovskite phase transition boundary in MgSiO3 using Au and MgO pressure standards. *Geophysical Research Letters*, **2006**, 33, n/a-n/a	4.9	81
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