Shun-Ichiro Karato

List of Publications by Year
in descending order

183 papers	17,319 citations	14655 66 h-index	15732 125 g-index
199 all docs	199 docs citations	199 times ranked	6150 citing authors

#	Article	IF	Citations
1	Effects of pressure on diffusion creep in wet olivine aggregates. Physics of the Earth and Planetary Interiors, 2022, 324, 106840.	1.9	2
2	Pervasive low-velocity layer atop the 410-km discontinuity beneath the northwest Pacific subduction zone: Implications for rheology and geodynamics. Earth and Planetary Science Letters, 2021, 554, 116642.	4.4	22
3	The Effect of Pressure on Grainâ€Growth Kinetics in Olivine Aggregates With Some Geophysical Applications. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB020886.	3.4	3
4	Behavior and properties of water in silicate melts under deep mantle conditions. Scientific Reports, 2021, 11, 10588.	3.3	13
5	Influence of realistic rheological properties on the style of mantle convection: roles of dynamic friction and depth-dependence of rheological properties. Geophysical Journal International, 2021, 226, 1986-1996.	2.4	4
6	A Theory of Interâ€Granular Transient Dislocation Creep: Implications for the Geophysical Studies on Mantle Rheology. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022763.	3.4	8
7	Melting of Bridgmanite Under Hydrous Shallow Lower Mantle Conditions. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022222.	3.4	7
8	Thermal Ionization of Hydrogen in Hydrous Olivine With Enhanced and Anisotropic Conductivity. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022939.	3.4	7
9	Electrical Conductivity of Tiâ€Bearing Hydrous Olivine Aggregates at High Temperature and High Pressure. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020309.	3.4	14
10	Development of a Stress Sensor for In-Situ High-Pressure Deformation Experiments Using Radial X-Ray Diffraction. Minerals (Basel, Switzerland), 2020, 10, 166.	2.0	5
11	Slab weakening during the olivine to ringwoodite transition in the mantle. Nature Geoscience, 2020, 13, 170-174.	12.9	18
12	Deep mantle melting, global water circulation and its implications for the stability of the ocean mass. Progress in Earth and Planetary Science, 2020, 7, .	3.0	25
13	A unified static and dynamic recrystallization Internal State Variable (ISV) constitutive model coupled with grain size evolution for metals and mineral aggregates. International Journal of Plasticity, 2019, 112, 123-157.	8.8	25
14	Water Concentration in Singleâ€Crystal (Al,Fe)â€Bearing Bridgmanite Grown From the Hydrous Melt: Implications for Dehydration Melting at the Topmost Lower Mantle. Geophysical Research Letters, 2019, 46, 10346-10357.	4.0	46
15	Some remarks on hydrogen-assisted electrical conductivity in olivine and other minerals. Progress in Earth and Planetary Science, 2019, 6, .	3.0	17
16	Terrestrial magma ocean origin of the Moon. Nature Geoscience, 2019, 12, 418-423.	12.9	56
17	Anisotropic high-temperature creep in hydrous olivine single crystals and its geodynamic implications. Physics of the Earth and Planetary Interiors, 2019, 290, 1-9.	1.9	20
18	Global Analysis of Experimental Data on the Rheology of Olivine Aggregates. Journal of Geophysical Research: Solid Earth, 2019, 124, 310-334.	3.4	24

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19	Introduction to the Delivery of Water to Proto-Planets, Planets and Satellites. Space Sciences Series of ISSI, 2019, , 1-9.	0.0	0
20	On the Grain Size Sensitivity of Olivine Rheology. Journal of Geophysical Research: Solid Earth, 2018, 123, 674-688.	3.4	15
21	Seismic evidence for water transport out of the mantle transition zone beneath the European Alps. Earth and Planetary Science Letters, 2018, 482, 93-104.	4.4	38
22	An experimental study of grain-scale microstructure evolution during the olivineâ€“wadsleyite phase transition under nominally â€œdryâ€•conditions. Earth and Planetary Science Letters, 2018, 501, 128-137.	4.4	3
23	Water and Volatile Inventories of Mercury, Venus, the Moon, and Mars. Space Science Reviews, 2018, 214, 1.	8.1	27
24	Dynamics of fault motion and the origin of contrasting tectonic style between Earth and Venus. Scientific Reports, 2018, 8, 11884.	3.3	25
25	Densityâ€Pressure Profiles of Feâ€Bearing MgSiO₃ Liquid: Effects of Valence and Spin States, and Implications for the Chemical Evolution of the Lower Mantle. Geophysical Research Letters, 2018, 45, 3959-3966.	4.0	22
26	Water and Volatile Inventories of Mercury, Venus, the Moon, and Mars. Space Sciences Series of ISSI, 2018, , 151-189.	0.0	0
27	On the Yield Strength of Oceanic Lithosphere. Geophysical Research Letters, 2017, 44, 9716-9722.	4.0	23
28	Water in the Earthâ€™s Interior: Distribution and Origin. Space Science Reviews, 2017, 212, 743-810.	8.1	139
29	Water in the Earthâ€™s Interior: Distribution and Origin. Space Sciences Series of ISSI, 2017, , 83-150.	0.0	2
30	Physical basis of trace element partitioning: A review. American Mineralogist, 2016, 101, 2577-2593.	1.9	17
31	Seismological detection of lowâ€velocity anomalies surrounding the mantle transition zone in Japan subduction zone. Geophysical Research Letters, 2016, 43, 2480-2487.	4.0	59
32	Speciation and dissolution of hydrogen in the proto-lunar disk. Earth and Planetary Science Letters, 2016, 445, 104-113.	4.4	18
33	Reply to comment by Kawakatsu and Abe on â€œNature of the seismic lithosphereâ€asthenosphere boundary within normal oceanic mantle from highâ€resolution receiver functionsâ€• Geochemistry, Geophysics, Geosystems, 2016, 17, 3493-3501.	2.5	1
34	Upper-mantle water stratification inferred from observations of the 2012 Indian Ocean earthquake. Nature, 2016, 538, 373-377.	27.8	69
35	Nature of the seismic lithosphereâ€asthenosphere boundary within normal oceanic mantle from highâ€resolution receiver functions. Geochemistry, Geophysics, Geosystems, 2016, 17, 1265-1282.	2.5	36
36	Shear deformation of bridgmanite and magnesiowÃ¼stite aggregates at lower mantle conditions. Science, 2016, 351, 144-147.	12.6	121

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37	The influence of ferric iron and hydrogen on Feâ€“Mg interdiffusion in ferropericlase ((Mg,Fe)O) in the lower mantle. Physics and Chemistry of Minerals, 2015, 42, 261-273.	0.8	10
38	Volume thermal expansion along the jadeiteâ€“diopside join. Physics and Chemistry of Minerals, 2015, 42, 1-14.	0.8	25
39	Mechanisms and geologic significance of the mid-lithosphere discontinuity in the continents. Nature Geoscience, 2015, 8, 509-514.	12.9	128
40	High-pressure and high-temperature deformation experiments on polycrystalline wadsleyite using the rotational Drickamer apparatus. Physics and Chemistry of Minerals, 2015, 42, 541-558.	0.8	17
41	Reply to comment on â€œHigh and highly anisotropic electrical conductivity of the asthenosphere due to hydrogen diffusion in olivineâ€•by Dai and Karato [Earth Planet. Sci. Lett. 408 (2014) 79â€“86]. Earth and Planetary Science Letters, 2015, 427, 300-302.	4.4	5
42	Some notes on hydrogen-related point defects and their role in the isotope exchange and electrical conductivity in olivine. Physics of the Earth and Planetary Interiors, 2015, 248, 94-98.	1.9	18
43	Markov chain Monte Carlo inversion for the rheology of olivine single crystals. Journal of Geophysical Research: Solid Earth, 2015, 120, 3142-3172.	3.4	18
44	Plastic anisotropy and slip systems in ringwoodite deformed to high shear strain in the Rotational Drickamer Apparatus. Physics of the Earth and Planetary Interiors, 2014, 228, 244-253.	1.9	22
45	The effect of pressure on the electrical conductivity of olivine under the hydrogen-rich conditions. Physics of the Earth and Planetary Interiors, 2014, 232, 51-56.	1.9	39
46	Influence of oxygen fugacity on the electrical conductivity of hydrous olivine: Implications for the mechanism of conduction. Physics of the Earth and Planetary Interiors, 2014, 232, 57-60.	1.9	35
47	Does partial melting explain geophysical anomalies?. Physics of the Earth and Planetary Interiors, 2014, 228, 300-306.	1.9	51
48	Influence of FeO and H on the electrical conductivity of olivine. Physics of the Earth and Planetary Interiors, 2014, 237, 73-79.	1.9	35
49	High and highly anisotropic electrical conductivity of the asthenosphere due to hydrogen diffusion in olivine. Earth and Planetary Science Letters, 2014, 408, 79-86.	4.4	91
50	Water content of the Tanzanian lithosphere from magnetotelluric data: Implications for cratonic growth and stability. Earth and Planetary Science Letters, 2014, 388, 175-186.	4.4	56
51	Some remarks on the models of plate tectonics on terrestrial planets: From the view-point of mineral physics. Tectonophysics, 2014, 631, 4-13.	2.2	8
52	Asymmetric shock heating and the terrestrial magma ocean origin of the Moon. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2014, 90, 97-103.	3.8	11
53	Influence of Hydrogen-Related Defects on the Electrical Conductivity and Plastic Deformation of Mantle Minerals: A Critical Review. Geophysical Monograph Series, 2013, , 113-129.	0.1	29
54	Towards Mapping the Three-Dimensional Distribution of Water in the Upper Mantle from Velocity and Attenuation Tomography. Geophysical Monograph Series, 2013, , 225-236.	0.1	20

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55	Role of orthopyroxene in rheological weakening of the lithosphere via dynamic recrystallization. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 16355-16360.	7.1	46
56	Geophysical constraints on the water content of the lunar mantle and its implications for the origin of the Moon. Earth and Planetary Science Letters, 2013, 384, 144-153.	4.4	55
57	Ferric iron content of ferropericlase as a function of composition, oxygen fugacity, temperature and pressure: Implications for redox conditions during diamond formation in the lower mantle. Earth and Planetary Science Letters, 2013, 365, 7-16.	4.4	26
58	Plastic deformation experiments to high strain on mantle transition zone minerals wadsleyite and ringwoodite in the rotational Drickamer apparatus. Earth and Planetary Science Letters, 2013, 361, 7-15.	4.4	27
59	Theory of isotope diffusion in a material with multiple species and its implications for hydrogen-enhanced electrical conductivity in olivine. Physics of the Earth and Planetary Interiors, 2013, 219, 49-54.	1.9	45
60	An experimental study of the influence of graphite on the electrical conductivity of olivine aggregates. Geophysical Research Letters, 2013, 40, 2028-2032.	4.0	39
61	Deep penetration of molten iron into the mantle caused by a morphological instability. Nature, 2012, 492, 243-246.	27.8	71
62	Low viscosity of the bottom of the Earthâ€™s mantle inferred from the analysis of Chandler wobble and tidal deformation. Physics of the Earth and Planetary Interiors, 2012, 192-193, 68-80.	1.9	34
63	On the origin of the asthenosphere. Earth and Planetary Science Letters, 2012, 321-322, 95-103.	4.4	240
64	Effect of H2O on the density of silicate melts at high pressures: Static experiments and the application of a modified hard-sphere model of equation of state. Geochimica Et Cosmochimica Acta, 2012, 85, 357-372.	3.9	37
65	Influence of hydrogen on the electronic states of olivine: Implications for electrical conductivity. Geophysical Research Letters, 2012, 39, .	4.0	5
66	The viscosity structure of the Dâ€³ layer of the Earthâ€™s mantle inferred from the analysis of Chandler wobble and tidal deformation. Physics of the Earth and Planetary Interiors, 2012, 208-209, 11-24.	1.9	19
67	Electrical conductivity of amphibole-bearing rocks: influence of dehydration. Contributions To Mineralogy and Petrology, 2012, 164, 17-25.	3.1	71
68	A new approach to the equation of state of silicate melts: An application of the theory of hard sphere mixtures. Geochimica Et Cosmochimica Acta, 2011, 75, 6780-6802.	3.9	35
69	Water distribution across the mantle transition zone and its implications for global material circulation. Earth and Planetary Science Letters, 2011, 301, 413-423.	4.4	498
70	Control of the water fugacity at high pressures and temperatures: Applications to the incorporation mechanisms of water in olivine. Physics of the Earth and Planetary Interiors, 2011, 189, 27-33.	1.9	23
71	Strength of single-crystal orthopyroxene under lithospheric conditions. Contributions To Mineralogy and Petrology, 2011, 161, 961-975.	3.1	46
72	Some issues on the strength of the lithosphere. Journal of Earth Science (Wuhan, China), 2011, 22, 131-136.	3.2	3

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73	Rheological structure of the mantle of a super-Earth: Some insights from mineral physics. Icarus, 2011, 212, 14-23.	2.5	87
74	Rheology of the Earth's mantle: A historical review. Gondwana Research, 2010, 18, 17-45.	6.0	114
75	Solubility of water in pyropeâ€rich garnet at high pressures and temperature. Geophysical Research Letters, 2010, 37, .	4.0	60
76	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
77	Tetrahedral occupancy of ferric iron in (Mg,Fe)O: Implications for point defects in the Earth's lower mantle. Physics of the Earth and Planetary Interiors, 2010, 180, 179-188.	1.9	27
78	The influence of anisotropic diffusion on the high-temperature creep of a polycrystalline aggregate. Physics of the Earth and Planetary Interiors, 2010, 183, 468-472.	1.9	25
79	Rheology of the deep upper mantle and its implications for the preservation of the continental roots: A review. Tectonophysics, 2010, 481, 82-98.	2.2	147
80	Theory of lattice strain in a material undergoing plastic deformation: Basic formulation and applications to a cubic crystal. Physical Review B, 2009, 79, .	3.2	31
81	Electrical conductivity of wadsleyite at high temperatures and high pressures. Earth and Planetary Science Letters, 2009, 287, 277-283.	4.4	99
82	The density of volatile bearing melts in the Earth's deep mantle: The role of chemical composition. Chemical Geology, 2009, 262, 100-107.	3.3	23
83	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
84	Comments on â€œElectrical conductivity of wadsleyite as a function of temperature and water contentâ€• by Manthilake et al.. Physics of the Earth and Planetary Interiors, 2009, 174, 19-21.	1.9	51
85	Electrical conductivity of pyrope-rich garnet at high temperature and high pressure. Physics of the Earth and Planetary Interiors, 2009, 176, 83-88.	1.9	100
86	Electrical conductivity of orthopyroxene: Implications for the water content of the asthenosphere. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2009, 85, 466-475.	3.8	115
87	A new analysis of experimental data on olivine rheology. Journal of Geophysical Research, 2008, 113, .	3.3	159
88	Sheared lherzolite xenoliths revisited. Journal of Geophysical Research, 2008, 113, .	3.3	64
89	Effects of water and iron content on the rheological contrast between garnet and olivine. Physics of the Earth and Planetary Interiors, 2008, 166, 57-66.	1.9	60
90	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

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91	Low-temperature, high-stress deformation of olivine under water-saturated conditions. Physics of the Earth and Planetary Interiors, 2008, 168, 125-133.	1.9	175
92	Recent progress in the experimental studies on the kinetic properties in minerals. Physics of the Earth and Planetary Interiors, 2008, 170, 152-155.	1.9	6
93	Geodynamic Significance of Seismic Anisotropy of the Upper Mantle: New Insights from Laboratory Studies. Annual Review of Earth and Planetary Sciences, 2008, 36, 59-95.	11.0	606
94	Compositional effect on the pressure derivatives of bulk modulus of silicate melts. Earth and Planetary Science Letters, 2008, 272, 429-436.	4.4	29
95	Insights into the nature of plumeâ€"asthenosphere interaction from central Pacific geophysical anomalies. Earth and Planetary Science Letters, 2008, 274, 234-240.	4.4	26
96	Effect of chemical environment on the hydrogen-related defect chemistry in wadsleyite. American Mineralogist, 2008, 93, 831-843.	1.9	27
97	Comments on â€œPetrofabrics and seismic properties of garnet peridotites from the UHP Sulu terrane (China)â€• by Xu et al. [Tectonophysics 421 (2006) 111â€"127]. Tectonophysics, 2007, 429, 287-289.	2.2	6
98	Reply to Comment on â€œThe Misorientation index: Development of a new method for calculating the strength of lattice-preferred orientationâ€• Tectonophysics, 2007, 441, 119-120.	2.2	4
99	Effects of solute segregation on the grain-growth kinetics of orthopyroxene with implications for the deformation of the upper mantle. Physics of the Earth and Planetary Interiors, 2007, 164, 186-196.	1.9	24
100	Complete wetting of olivine grain boundaries by a hydrous melt near the mantle transition zone. Earth and Planetary Science Letters, 2007, 256, 466-472.	4.4	73
101	Lattice-preferred orientation of lower mantle materials and seismic anisotropy in the Dâ€³ layer. Geophysical Monograph Series, 2007, , 69-78.	0.1	18
102	Microscopic Models for the Effects of Hydrogen on Physical and Chemical Properties of Earth Materials. , 2007, , 321-356.		3
103	Slab dehydration in the Earth's mantle transition zone. Earth and Planetary Science Letters, 2006, 251, 156-167.	4.4	60
104	Grain-growth kinetics in wadsleyite: Effects of chemical environment. Physics of the Earth and Planetary Interiors, 2006, 154, 30-43.	1.9	71
105	Lattice preferred orientation in deformed polycrystalline (Mg,Fe)O and implications for seismic anisotropy in Dâ€³. Physics of the Earth and Planetary Interiors, 2006, 156, 75-88.	1.9	44
106	Effect of temperature on the B- to C-type olivine fabric transition and implication for flow pattern in subduction zones. Physics of the Earth and Planetary Interiors, 2006, 157, 33-45.	1.9	135
107	15. Remote Sensing of Hydrogen in Earth's Mantle. , 2006, , 343-376.		25
108	A wet mantle conductor? (Reply). Nature, 2006, 439, E3-E4.	27.8	10

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109	The effect of water on the electrical conductivity of olivine. Nature, 2006, 443, 977-980.	27.8	344
110	Deformation fabrics of the Cima di Gagnone peridotite massif, Central Alps, Switzerland: evidence of deformation at low temperatures in the presence of water. Contributions To Mineralogy and Petrology, 2006, 152, 43-51.	3.1	95
111	Effects of metal protection coils on thermocouple EMF in multi-anvil high-pressure experiments. American Mineralogist, 2006, 91, 111-114.	1.9	22
112	Water content in the transition zone from electrical conductivity of wadsleyite and ringwoodite. Nature, 2005, 434, 746-749.	27.8	366
113	Density of hydrous silicate melt at the conditions of Earth's deep upper mantle. Nature, 2005, 438, 488-491.	27.8	137
114	Evidence of high water content in the deep upper mantle inferred from deformation microstructures. Geology, 2005, 33, 613.	4.4	74
115	B-type olivine fabric in the mantle wedge: Insights from high-resolution non-Newtonian subduction zone models. Earth and Planetary Science Letters, 2005, 237, 781-797.	4.4	231
116	The misorientation index: Development of a new method for calculating the strength of lattice-preferred orientation. Tectonophysics, 2005, 411, 157-167.	2.2	301
117	Seismological signature of chemical differentiation of Earth's upper mantle. Journal of Geophysical Research, 2005, 110, .	3.3	51
118	Development of a rotational Drickamer apparatus for large-strain deformation experiments at deep Earth conditions. , 2005, , 167-182.		9
119	Development of a rotational Drickamer apparatus for large-strain deformation experiments at deep Earth conditions. , 2005, , 167-182.		4
120	Frequency dependence ofQin Earth's upper mantle inferred from continuous spectra of body waves. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	59
121	New type of olivine fabric from deformation experiments at modest water content and low stress. Geology, 2004, 32, 1045.	4.4	207
122	Whole-mantle convection and the transition-zone water filter. Nature, 2003, 425, 39-44.	27.8	642
123	Development of finite strain in the convecting lower mantle and its implications for seismic anisotropy. Journal of Geophysical Research, 2003, 108, .	3.3	52
124	Effects of pressure on high-temperature dislocation creep in olivine. Philosophical Magazine, 2003, 83, 401-414.	1.6	362
125	Mapping water content in the upper mantle. Geophysical Monograph Series, 2003, , 135-152.	0.1	136
126	A scanning electron microscope study of the effects of dynamic recrystallization on lattice preferred orientation in olivine. Tectonophysics, 2002, 351, 331-341.	2.2	46

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127	Fabric development in (Mg,Fe)O during large strain, shear deformation: implications for seismic anisotropy in Earthâ€™s lower mantle. Physics of the Earth and Planetary Interiors, 2002, 131, 251-267.	1.9	110
128	2. New Developments in Deformation Experiments at High Pressure. , 2002, , 21-50.		15
129	13. Theoretical Analysis of Shear Localization in the Lithosphere. , 2002, , 387-420.		6
130	Development of anisotropic structure in the Earth's lower mantle by solid-state convection. Nature, 2002, 416, 310-314.	27.8	137
131	Origin of lateral variation of seismic wave velocities and density in the deep mantle. Journal of Geophysical Research, 2001, 106, 21771-21783.	3.3	255
132	Localization of dislocation creep in the lower mantle: implications for the origin of seismic anisotropy. Earth and Planetary Science Letters, 2001, 191, 85-99.	4.4	82
133	Rheological structure and deformation of subducted slabs in the mantle transition zone: implications for mantle circulation and deep earthquakes. Physics of the Earth and Planetary Interiors, 2001, 127, 83-108.	1.9	299
134	Water-Induced Fabric Transitions in Olivine. Science, 2001, 293, 1460-1463.	12.6	730
135	Some mineral physics constraints on the rheology and geothermal structure of Earthâ€™s lower mantle. American Mineralogist, 2001, 86, 385-391.	1.9	268
136	High-pressure rotational deformation apparatus to 15 GPa. Review of Scientific Instruments, 2001, 72, 4207-4211.	1.3	91
137	Effects of water on dynamically recrystallized grain-size of olivine. Journal of Structural Geology, 2001, 23, 1337-1344.	2.3	135
138	Dynamics and anisotropy of the Earth's inner core. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2000, 76, 1-6.	3.8	2
139	Simple shear deformation of olivine aggregates. Tectonophysics, 2000, 316, 133-152.	2.2	170
140	Seismic anisotropy of the Earth's inner core resulting from flow induced by Maxwell stresses. Nature, 1999, 402, 871-873.	27.8	134
141	Thermal-mechanical effects of low-temperature plasticity (the Peierls mechanism) on the deformation of a viscoelastic shear zone. Earth and Planetary Science Letters, 1999, 168, 159-172.	4.4	208
142	Melt distribution in mantle rocks deformed in shear. Geophysical Research Letters, 1999, 26, 1505-1508.	4.0	130
143	Plastic deformation of silicate spinel under the transition-zone conditions of the Earth's mantle. Nature, 1998, 395, 266-269.	27.8	59
144	Mechanisms of shear localization in the continental lithosphere: inference from the deformation microstructures of peridotites from the Ivrea zone, northwestern Italy. Journal of Structural Geology, 1998, 20, 195-209.	2.3	158

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145	Water, partial melting and the origin of the seismic low velocity and high attenuation zone in the upper mantle. Earth and Planetary Science Letters, 1998, 157, 193-207.	4.4	478
146	Some remarks on the origin of seismic anisotropy in the Dâ€•layer. Earth, Planets and Space, 1998, 50, 1019-1028.	2.5	81
147	A Dislocation Model of Seismic Wave Attenuation and Micro-creep in the Earth: Harold Jeffreys and the Rheology of the Solid Earth. , 1998, , 239-256.		4
148	Seismic Anisotropy in the Deep Mantle, Boundary Layers and the Geometry of Mantle Convection. , 1998, , 565-587.		17
149	Toward an experimental study of deep mantle rheology: A new multianvil sample assembly for deformation studies under high pressures and temperatures. Journal of Geophysical Research, 1997, 102, 20111-20122.	3.3	100
150	Grain-size evolution in subducted oceanic lithosphere associated with the olivine-spinel transformation and its effects on rheology. Earth and Planetary Science Letters, 1997, 148, 27-43.	4.4	147
151	On the separation of crustal component from subducted oceanic lithosphere near the 660 km discontinuity. Physics of the Earth and Planetary Interiors, 1997, 99, 103-111.	1.9	88
152	Shear attenuation and dispersion in MgO. Physics of the Earth and Planetary Interiors, 1997, 99, 249-257.	1.9	30
153	Core formation and chemical equilibrium in the Earthâ€"I. Physical considerations. Physics of the Earth and Planetary Interiors, 1997, 100, 61-79.	1.9	87
154	Core formation and chemical equilibrium in the Earthâ€"II: Chemical consequences for the mantle and core. Physics of the Earth and Planetary Interiors, 1997, 100, 81-95.	1.9	16
155	Two-dimensional thermo-kinetic model for the olivine-spinel phase transition in subducting slabs. Physics of the Earth and Planetary Interiors, 1996, 94, 217-239.	1.9	42
156	High-temperature creep in fine-grained polycrystalline CaTiO 3 , an analogue material of (Mg, Fe)SiO 3 perovskite. Physics of the Earth and Planetary Interiors, 1996, 95, 19-36.	1.9	74
157	High temperature creep of single crystal gadolinium gallium garnet. Physics and Chemistry of Minerals, 1996, 23, 73.	0.8	16
158	Microstructural Development During Nucleation and Growth. Geophysical Journal International, 1996, 125, 397-414.	2.4	40
159	Rock deformation: Ductile and brittle. Reviews of Geophysics, 1995, 33, 451.	23.0	4
160	Effects of Water on Seismic Wave Velocities in the Upper Mantle.. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 1995, 71, 61-66.	3.8	98
161	Lattice preferred orientation of olivine aggregates deformed in simple shear. Nature, 1995, 375, 774-777.	27.8	698
162	Ultramafic pseudotachylite from the Balmuccia peridotite, Ivrea-Verbano zone, northern Italy. Tectonophysics, 1995, 242, 313-328.	2.2	89

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163	Plastic deformation of garnets: systematics and implications for the rheology of the mantle transition zone. Earth and Planetary Science Letters, 1995, 130, 13-30.	4.4	168
164	Elasticity of CaTiO3, SrTiO3 and BaTiO3 perovskites up to 3.0 Gpa: the effect of crystallographic structure. Physics and Chemistry of Minerals, 1993, 20, 97.	0.8	87
165	TEM observation of dissociated dislocations with b = [010] in naturally deformed olivine. Physics of the Earth and Planetary Interiors, 1993, 78, 131-137.	1.9	11
166	High temperature creep of single crystal strontium titanate (SrTiO3): a contribution to creep systematics in perovskites. Physics of the Earth and Planetary Interiors, 1993, 79, 299-312.	1.9	61
167	Importance of anelasticity in the interpretation of seismic tomography. Geophysical Research Letters, 1993, 20, 1623-1626.	4.0	763
168	Dislocation recovery in olivine under deep upper mantle conditions: Implications for creep and diffusion. Journal of Geophysical Research, 1993, 98, 9761-9768.	3.3	68
169	Diffusion Creep in Perovskite: Implications for the Rheology of the Lower Mantle. Science, 1992, 255, 1238-1240.	12.6	157
170	On the Lehmann discontinuity. Geophysical Research Letters, 1992, 19, 2255-2258.	4.0	157
171	Plasticity of M_GS_IO₃ perovskite: The results of microhardness tests on single crystals. Geophysical Research Letters, 1990, 17, 13-16.	4.0	34
172	Plasticity-crystal structure systematics in dense oxides and its implications for the creep strength of the Earth's deep interior: a preliminary result. Physics of the Earth and Planetary Interiors, 1989, 55, 234-240.	1.9	106
173	The role of recrystallization in the preferred orientation of olivine. Physics of the Earth and Planetary Interiors, 1988, 51, 107-122.	1.9	95
174	Seismic anisotropy due to lattice preferred orientation of minerals: Kinematic or dynamic?. Geophysical Monograph Series, 1987, , 455-471.	0.1	27
175	Rheology of synthetic olivine aggregates: Influence of grain size and water. Journal of Geophysical Research, 1986, 91, 8151-8176.	3.3	738
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