

Yanbin Wang

List of Publications by Year in descending order

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212
papers

9,997
citations

34493

54
h-index

49824

91
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218
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218
docs citations

218
times ranked

7399
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultrahard nanotwinned cubic boron nitride. <i>Nature</i> , 2013, 493, 385-388.	13.7	662
2	Nanotwinned diamond with unprecedented hardness and stability. <i>Nature</i> , 2014, 510, 250-253.	13.7	611
3	High-Pressure Creep of Serpentine, Interseismic Deformation, and Initiation of Subduction. <i>Science</i> , 2007, 318, 1910-1913.	6.0	331
4	Intermediate-range order in permanently densified vitreous SiO ₂ : A neutron-diffraction and molecular-dynamics study. <i>Physical Review B</i> , 1991, 43, 1194-1197.	1.1	274
5	The deformation-DIA: A new apparatus for high temperature triaxial deformation to pressures up to 15 GPa. <i>Review of Scientific Instruments</i> , 2003, 74, 3002-3011.	0.6	262
6	Laser heated diamond cell system at the Advanced Photon Source for in situ x-ray measurements at high pressure and temperature. <i>Review of Scientific Instruments</i> , 2001, 72, 1273.	0.6	234
7	P-V-T equation of state of (Mg,Fe)SiO ₃ perovskite: constraints on composition of the lower mantle. <i>Physics of the Earth and Planetary Interiors</i> , 1994, 83, 13-40.	0.7	197
8	Thermal equation of state of CaSiO ₃ perovskite. <i>Journal of Geophysical Research</i> , 1996, 101, 661-672.	3.3	177
9	Yield strength at high pressure and temperature. <i>Geophysical Research Letters</i> , 1994, 21, 753-756.	1.5	157
10	Dehydration-driven stress transfer triggers intermediate-depth earthquakes. <i>Nature Communications</i> , 2017, 8, 15247.	5.8	152
11	Ponded melt at the boundary between the lithosphere and asthenosphere. <i>Nature Geoscience</i> , 2013, 6, 1041-1044.	5.4	144
12	Toward an international practical pressure scale: A proposal for an IPPS ruby gauge (IPPS-Ruby2020). <i>High Pressure Research</i> , 2020, 40, 299-314.	0.4	143
13	Hierarchically structured diamond composite with exceptional toughness. <i>Nature</i> , 2020, 582, 370-374.	13.7	141
14	High pressure effects on the iron-iron oxide and nickel-nickel oxide oxygen fugacity buffers. <i>Earth and Planetary Science Letters</i> , 2009, 286, 556-564.	1.8	135
15	Atomistic insight into viscosity and density of silicate melts under pressure. <i>Nature Communications</i> , 2014, 5, 3241.	5.8	133
16	Ultralow viscosity of carbonate melts at high pressures. <i>Nature Communications</i> , 2014, 5, 5091.	5.8	124
17	Chemical- and Clapeyron-induced buoyancy at the 660 km discontinuity. <i>Journal of Geophysical Research</i> , 1998, 103, 7431-7441.	3.3	121
18	Deep-Focus Earthquake Analogs Recorded at High Pressure and Temperature in the Laboratory. <i>Science</i> , 2013, 341, 1377-1380.	6.0	120

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19	Thermal equations of state of the $\pm 1^2$, and $\tilde{\infty}$ phases of zirconium. <i>Physical Review B</i> , 2005, 71, .	1.1	113
20	Compressed glassy carbon: An ultrastrong and elastic interpenetrating graphene network. <i>Science Advances</i> , 2017, 3, e1603213.	4.7	110
21	In situ measurements of sound velocities and densities across the orthopyroxene $\hat{+}$ high-pressure clinopyroxene transition in MgSiO ₃ at high pressure. <i>Physics of the Earth and Planetary Interiors</i> , 2004, 147, 27-44.	0.7	106
22	Electron microscopy of (Mg, Fe)SiO ₃ Perovskite: Evidence for structural phase transitions and implications for the lower mantle. <i>Journal of Geophysical Research</i> , 1992, 97, 12327-12347.	3.3	102
23	Stability field and thermal equation of state of $\hat{\mu}$ -iron determined by synchrotron X-ray diffraction in a multianvil apparatus. <i>Journal of Geophysical Research</i> , 2001, 106, 21799-21810.	3.3	102
24	In situ measurement of viscosity of liquids in the Fe-FeS system at high pressures and temperatures. <i>American Mineralogist</i> , 2000, 85, 1838-1842.	0.9	101
25	Cell assemblies for reproducible multi-anvil experiments (the COMPRES assemblies). <i>American Mineralogist</i> , 2012, 97, 353-368.	0.9	101
26	Experimental evidence supports mantle partial melting in the asthenosphere. <i>Science Advances</i> , 2016, 2, e1600246.	4.7	98
27	Toward comprehensive studies of liquids at high pressures and high temperatures: Combined structure, elastic wave velocity, and viscosity measurements in the Paris-Edinburgh cell. <i>Physics of the Earth and Planetary Interiors</i> , 2014, 228, 269-280.	0.7	96
28	Phase Transition and Thermal Expansion of MgSiO ₃ Perovskite. <i>Science</i> , 1991, 251, 410-413.	6.0	92
29	Twinning in MgSiO ₃ Perovskite. <i>Science</i> , 1990, 248, 468-471.	6.0	88
30	Laboratory earthquakes triggered during eclogitization of lawsonite-bearing blueschist. <i>Earth and Planetary Science Letters</i> , 2017, 459, 320-331.	1.8	88
31	Beyond sixfold coordinated Si in SiO ₂ glass at ultrahigh pressures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 10041-10046.	3.3	88
32	Thermal equation of state of garnets along the pyrope-majorite join. <i>Physics of the Earth and Planetary Interiors</i> , 1998, 105, 59-71.	0.7	83
33	High-pressure viscometry of polymerized silicate melts and limitations of the Eyring equation. <i>American Mineralogist</i> , 2004, 89, 1701-1708.	0.9	83
34	Sound velocity of Fe-S liquids at high pressure: Implications for the Moon's molten outer core. <i>Earth and Planetary Science Letters</i> , 2014, 396, 78-87.	1.8	80
35	Experimental constraints on the phase diagram of elemental zirconium. <i>Journal of Physics and Chemistry of Solids</i> , 2005, 66, 1213-1219.	1.9	77
36	Ultrahigh-pressure polyamorphism in GeO ₂ glass with coordination number $\hat{+}$ 6. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 3436-3441.	3.3	75

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37	Development of the Multi-anvil Assembly 6-6 for DIA and D-DIA type high-pressure apparatuses. High Pressure Research, 2008, 28, 307-314.	0.4	73
38	Approaching diamond's theoretical elasticity and strength limits. Nature Communications, 2019, 10, 5533.	5.8	73
39	Microstructures and iron partitioning in (Mg,Fe)SiO ₃ perovskite-(Mg,Fe)O magnesiowüstite assemblages: An analytical transmission electron microscopy study. Journal of Geophysical Research, 1997, 102, 5265-5280.	3.3	72
40	Phase transformations: Implications for mantle structure. Geophysical Monograph Series, 2000, , 215-235.	0.1	72
41	Characterization of Stress, Pressure, and Temperature in SAm85, a Dia Type High Pressure Apparatus. Geophysical Monograph Series, 0, , 13-17.	0.1	70
42	Crystal structure and thermal expansion of (Mg,Fe)SiO ₃ perovskite. Geophysical Research Letters, 1990, 17, 2089-2092.	1.5	69
43	Maximum solubility of FeO in (Mg, Fe)SiO ₃ -perovskite as a function of temperature at 26 GPa: Implication for FeO content in the lower mantle. Journal of Geophysical Research, 1996, 101, 11525-11530.	3.3	64
44	Thermoelastic equation of state of jadeiteNaAlSi ₂ O ₆ : An energy-dispersive Reitveld Refinement Study of low symmetry and multiple phases diffraction. Geophysical Research Letters, 1997, 24, 5-8.	1.5	63
45	Electron microscopy study of domain structure due to phase transitions in natural perovskite. Physics and Chemistry of Minerals, 1993, 20, 147.	0.3	62
46	High-pressure x-ray tomography microscope: Synchrotron computed microtomography at high pressure and temperature. Review of Scientific Instruments, 2005, 76, 073709.	0.6	61
47	Creep of phyllosilicates at the onset of plate tectonics. Earth and Planetary Science Letters, 2012, 345-348, 142-150.	1.8	59
48	High-pressure x-ray diffraction studies on the structure of liquid silicate using a Paris-Edinburgh type large volume press. Review of Scientific Instruments, 2011, 82, 015103.	0.6	58
49	Yield strength and strain hardening of MgO up to 8 GPa measured in the deformation-DIA with monochromatic X-ray diffraction. Earth and Planetary Science Letters, 2004, 226, 117-126.	1.8	57
50	Deformation and texture development in CaIrO ₃ post-perovskite phase up to 6 GPa and 1300 K. Earth and Planetary Science Letters, 2008, 268, 515-525.	1.8	57
51	Orientation Relations During the \pm Phase Transition of Zirconium: <i>In Situ</i> Texture Observations at High Pressure and Temperature. Physical Review Letters, 2018, 111, 195701.	2.9	57
52	Nanoarchitected materials composed of fullerene-like spheroids and disordered graphene layers with tunable mechanical properties. Nature Communications, 2015, 6, 6212.	5.8	57
53	The large-volume high-pressure facility at GSECARS: A "Swiss-army-knife" approach to synchrotron-based experimental studies. Physics of the Earth and Planetary Interiors, 2009, 174, 270-281.	0.7	56
54	Simultaneous structure and elastic wave velocity measurement of SiO ₂ glass at high pressures and high temperatures in a Paris-Edinburgh cell. Review of Scientific Instruments, 2012, 83, 033905.	0.6	56

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55	Quasi-harmonic computations of thermodynamic parameters of olivines at high-pressure and high-temperature. A comparison with experiment data. <i>Physics of the Earth and Planetary Interiors</i> , 1996, 98, 17-29.	0.7	55
56	Thermoelasticity of CaSiO ₃ perovskite and implications for the lower mantle. <i>Geophysical Research Letters</i> , 1994, 21, 895-898.	1.5	54
57	Thermodynamic properties of ferromagnesium silicate perovskites from vibrational spectroscopy. <i>Journal of Geophysical Research</i> , 1994, 99, 11795-11804.	3.3	54
58	Towards evaluating the viscosity of the Earth's outer core: An experimental high pressure study of liquid Fe-S (8.5 wt.% S). <i>Geophysical Research Letters</i> , 2002, 29, 581-584.	1.5	52
59	Characterization of Sample Environment in a Uniaxial Split-Sphere Apparatus. <i>Geophysical Monograph Series</i> , 0, , 19-31.	0.1	50
60	Viscosity of liquid Fe at high pressure. <i>Physical Review B</i> , 2002, 66, .	1.1	49
61	In-situ elasticity measurement for the unquenchable high-pressure clinopyroxene phase: Implication for the upper mantle. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	48
62	Direct Observation of Room-Temperature Dislocation Plasticity in Diamond. <i>Matter</i> , 2020, 2, 1222-1232.	5.0	48
63	Olivine as an in situ piezometer in high pressure apparatus. <i>Physics and Chemistry of Minerals</i> , 1988, 15, 493-497.	0.3	47
64	High temperature transmission electron microscopy and X-ray diffraction studies of twinning and the phase transition at 145 Å°C in LaGaO ₃ . <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1991, 132, 13-21.	2.6	46
65	Discovery of a Superconducting Cu-Bi Intermetallic Compound by High-Pressure Synthesis. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 13446-13449.	7.2	46
66	A new technique for angle-dispersive powder diffraction using an energy-dispersive setup and synchrotron radiation. <i>Journal of Applied Crystallography</i> , 2004, 37, 947-956.	1.9	45
67	Melting curve of silicon to 15 GPa determined by two-dimensional angle-dispersive diffraction using a Kawai-type apparatus with X-ray transparent sintered diamond anvils. <i>Journal of Physics and Chemistry of Solids</i> , 2008, 69, 2255-2260.	1.9	45
68	Acoustic velocities of pure and iron-bearing magnesium silicate perovskite measured to 25 GPa and 1200 K. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	45
69	T-CLIP: A New High-Pressure Apparatus for X-ray Studies.. <i>Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu</i> , 1998, 7, 1520-1522.	0.1	44
70	The Breakdown of Olivine to Perovskite and Magnesiowustite. <i>Science</i> , 1997, 275, 510-513.	6.0	43
71	Texture development and deformation mechanisms in ringwoodite. <i>Physics of the Earth and Planetary Interiors</i> , 2005, 152, 191-199.	0.7	43
72	In situ X-ray diffraction study of phase transitions of FeTiO ₃ at high pressures and temperatures using a large-volume press and synchrotron radiation. <i>American Mineralogist</i> , 2006, 91, 120-126.	0.9	43

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73	Faulting of natural serpentinite: Implications for intermediate-depth seismicity. <i>Earth and Planetary Science Letters</i> , 2017, 474, 138-147.	1.8	42
74	Perovskite at high P-T conditions: An in situ synchrotron X ray diffraction study of NaMgF ₃ perovskite. <i>Journal of Geophysical Research</i> , 1994, 99, 2871-2885.	3.3	40
75	Dislocation behaviors in nanotwinned diamond. <i>Science Advances</i> , 2018, 4, eaat8195.	4.7	40
76	Phase transition in CaGeO ₃ perovskite: Evidence from X-ray powder diffraction, thermal expansion and heat capacity. <i>Physics and Chemistry of Minerals</i> , 1991, 18, 224.	0.3	39
77	Determination of phase transition pressures of ZnTe under quasihydrostatic conditions. <i>Pure and Applied Geophysics</i> , 1993, 141, 643-652.	0.8	39
78	Microscopic anharmonicity and equation of state of MgSiO ₃ -perovskite. <i>Geophysical Research Letters</i> , 1996, 23, 3043-3046.	1.5	39
79	Elasticity of (Mg _{0.87} Fe _{0.13}) ₂ SiO ₄ wadsleyite to 12GPa and 1073K. <i>Physics of the Earth and Planetary Interiors</i> , 2009, 174, 98-104.	0.7	39
80	Structure of jadeite melt at high pressures up to 4.9 GPa. <i>Journal of Applied Physics</i> , 2012, 111, 112623.	1.1	39
81	Creating Binary Cu-Bi Compounds via High-Pressure Synthesis: A Combined Experimental and Theoretical Study. <i>Chemistry of Materials</i> , 2017, 29, 5276-5285.	3.2	39
82	High-pressure viscosity of liquid Fe and FeS revisited by falling sphere viscometry using ultrafast X-ray imaging. <i>Physics of the Earth and Planetary Interiors</i> , 2015, 241, 57-64.	0.7	38
83	Pressure-Induced Amorphization and Phase Transformations in $\hat{\Gamma}^2$ -LiAlSiO ₄ . <i>Chemistry of Materials</i> , 2005, 17, 2817-2824.	3.2	37
84	Reaction-induced embrittlement of the lower continental crust. <i>Geology</i> , 2019, 47, 235-238.	2.0	37
85	Deformation of olivine under mantle conditions: An in situ high-pressure, high-temperature study using monochromatic synchrotron radiation. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	34
86	Contrasting sound velocity and intermediate-range structural order between polymerized and depolymerized silicate glasses under pressure. <i>Earth and Planetary Science Letters</i> , 2014, 391, 288-295.	1.8	34
87	Pressure-induced structural change in MgSiO ₃ glass at pressures near the Earth's core-mantle boundary. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 1742-1747.	3.3	34
88	Pressure calibration to 20GPa by simultaneous use of ultrasonic and x-ray techniques. <i>Journal of Applied Physics</i> , 2005, 98, 013521.	1.1	33
89	Image-based Stokes flow modeling in bulk proppant packs and propped fractures under high loading stresses. <i>Journal of Petroleum Science and Engineering</i> , 2015, 135, 391-402.	2.1	32
90	Continuous strengthening in nanotwinned diamond. <i>Npj Computational Materials</i> , 2019, 5, .	3.5	32

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91	Volumetric properties of magnesium silicate glasses and supercooled liquid at high pressure by X-ray microtomography. <i>Physics of the Earth and Planetary Interiors</i> , 2009, 174, 292-301.	0.7	31
92	A laboratory nanoseismological study on deep-focus earthquake micromechanics. <i>Science Advances</i> , 2017, 3, e1601896.	4.7	30
93	Lower-crustal earthquakes in southern Tibet are linked to eclogitization of dry metastable granulite. <i>Nature Communications</i> , 2018, 9, 3483.	5.8	30
94	Phase stability of the SrMnO_3 hexagonal perovskite system at high pressure and temperature. <i>Physical Review B</i> , 2014, 90, .	1.1	29
95	Anomalous density and elastic properties of basalt at high pressure: Reevaluating of the effect of melt fraction on seismic velocity in the Earth's crust and upper mantle. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 4232-4248.	1.4	29
96	Testing plausible upper-mantle compositions using fine-scale models of the 410-km discontinuity. <i>Geophysical Research Letters</i> , 1999, 26, 1641-1644.	1.5	28
97	Pressure and strain dependence of the strength of sintered polycrystalline Mg_2SiO_4 ringwoodite. <i>Geophysical Research Letters</i> , 2005, 32, n/a-n/a.	1.5	27
98	Combined ultrasonic elastic wave velocity and microtomography measurements at high pressures. <i>Review of Scientific Instruments</i> , 2011, 82, 023906.	0.6	27
99	Texture and elastic strains in hcp-iron plastically deformed up to 17.5 GPa and 600 K: experiment and model. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2012, 20, 024005.	0.8	27
100	Rheology measurements at high pressure and temperature. <i>Geophysical Monograph Series</i> , 1998, , 473-482.	0.1	25
101	In situ high-pressure and high-temperature X-ray microtomographic imaging during large deformation: A new technique for studying mechanical behavior of multiphase composites. , 2011, 7, 40-53.		25
102	Anomaly in the viscosity of liquid KCl at high pressures. <i>Physical Review B</i> , 2013, 87, .	1.1	25
103	High-pressure, high-temperature deformation of CaGeO_3 (perovskite) \pm MgO aggregates: Implications for multiphase rheology of the lower mantle. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 3389-3408.	1.0	25
104	Acoustic travel time gauges for <i>in-situ</i> determination of pressure and temperature in multi-anvil apparatus. <i>Journal of Applied Physics</i> , 2015, 118, .	1.1	25
105	(P vs T) P of the lower mantle. <i>Pure and Applied Geophysics</i> , 1996, 146, 533-549.	0.8	24
106	Thermal equation of state of akimotoite MgSiO_3 and effects of the akimotoite \rightarrow garnet transformation on seismic structure near the 660 km discontinuity. <i>Physics of the Earth and Planetary Interiors</i> , 2004, 143-144, 57-80.	0.7	24
107	Study of liquid gallium as a function of pressure and temperature using synchrotron x-ray microtomography and x-ray diffraction. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	24
108	High-pressure Apparatus Integrated with Synchrotron Radiation. <i>Reviews in Mineralogy and Geochemistry</i> , 2014, 78, 745-777.	2.2	24

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109	Ultrahard stitching of nanotwinned diamond and cubic boron nitride in C2-BN composite. Scientific Reports, 2016, 6, 30518.	1.6	24
110	Strengthening-softening transition in yield strength of nanotwinned Cu. Scripta Materialia, 2019, 162, 372-376.	2.6	24
111	Structural Evolution of SiO_2 Class with Si Coordination Number Greater than 6. Physical Review Letters, 2020, 125, 205701.	2.9	24
112	A large-volume press facility at the Advanced Photon Source: diffraction and imaging studies on materials relevant to the cores of planetary bodies. Journal of Physics Condensed Matter, 2002, 14, 11517-11523.	0.7	23
113	In situ measurement of interfacial tension of Fe-S and Fe-P liquids under high pressure using X-ray radiography and tomography techniques. Physics of the Earth and Planetary Interiors, 2009, 174, 220-226.	0.7	23
114	Dislocation dissociation in CaGeO ₃ perovskite. Physics and Chemistry of Minerals, 1989, 16, 630.	0.3	22
115	Yield strength enhancement of MgO by nanocrystals. Journal of Materials Science, 2005, 40, 5763-5766.	1.7	22
116	Kinetics of SiC formation during high P-T reaction between diamond and silicon. Diamond and Related Materials, 2005, 14, 1611-1615.	1.8	22
117	Phase transitions of harzburgite and buckled slab under eastern China. Geochemistry, Geophysics, Geosystems, 2013, 14, 1182-1199.	1.0	22
118	Elastic wave velocities in polycrystalline Mg ₃ Al ₂ Si ₃ O ₁₂ -pyrope garnet to 24 GPa and 1300 K. American Mineralogist, 2016, 101, 991-997.	0.9	22
119	Advances in equation-of-state measurements in SAM-85. Geophysical Monograph Series, 1998, , 365-372.	0.1	21
120	Viscosity and density of Fe-S liquids at high pressures. Journal of Physics Condensed Matter, 2002, 14, 11325-11330.	0.7	21
121	High-pressure cells for in situ multi-anvil experiments. High Pressure Research, 2006, 26, 283-292.	0.4	21
122	High Pressure Phase-Transformation Induced Texture Evolution and Strengthening in Zirconium Metal: Experiment and Modeling. Scientific Reports, 2015, 5, 12552.	1.6	21
123	Role of plastic deformation in tailoring ultrafine microstructure in nanotwinned diamond for enhanced hardness. Science China Materials, 2017, 60, 178-185.	3.5	21
124	Synchrotron X-ray topography studies of twinning and the phase transition at 145°C in LaGaO ₃ single crystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 132, 23-30.	2.6	20
125	Partitioning of nickel, cobalt and manganese between silicate perovskite and periclase: a test of crystal field theory at high pressure. Earth and Planetary Science Letters, 1997, 146, 499-509.	1.8	20
126	Non-cubic crystal symmetry of CaSiO ₃ perovskite up to 18 GPa and 1600 K. Earth and Planetary Science Letters, 2009, 282, 268-274.	1.8	20

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127	Intersectional nanotwinned diamond-the hardest polycrystalline diamond by design. Npj Computational Materials, 2020, 6, .	3.5	20
128	Local structure of liquid gallium under pressure. Scientific Reports, 2017, 7, 5666.	1.6	19
129	Recent developments in microtomography at GeoSoilEnviroCARS. , 2006, , .		18
130	Optical Absorption Spectra of (Mg, Fe)SiO ₃ Silicate Perovskites. Physics and Chemistry of Minerals, 1994, 20, 478.	0.3	17
131	Rheology of Éâ€ron up to 19 GPa and 600 K in the Dâ€DIA. Geophysical Research Letters, 2007, 34, .	1.5	17
132	A Multi-Anvil, High-Pressure Facility for Synchrotron Radiation Research at GeoSoilEnviroCARS at the Advanced Photon Source.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 1998, 7, 1490-1495.	0.1	16
133	Coexistence of multiple metastable polytypes in rhombohedral bismuth. Scientific Reports, 2016, 6, 20337.	1.6	16
134	Sound velocities of aluminumâ€bearing stishovite in the mantle transition zone. Geophysical Research Letters, 2016, 43, 4239-4246.	1.5	16
135	Temperature-dependent hardness of zinc-blende structured covalent materials. Science China Materials, 2021, 64, 2280-2288.	3.5	16
136	Orthorhombicâ€tetragonal phase transition in CaGeOâ€ ³ perovskite at high temperature. Geophysical Research Letters, 1988, 15, 1231-1234.	1.5	15
137	2. New Developments in Deformation Experiments at High Pressure. , 2002, , 21-50.		15
138	Flow-law for ringwoodite at subduction zone conditions. Physics of the Earth and Planetary Interiors, 2003, 136, 3-9.	0.7	15
139	Contrasting behavior of intermediate-range order structures in jadeite glass and melt. Physics of the Earth and Planetary Interiors, 2014, 228, 281-286.	0.7	15
140	Ultrasonic Velocity of Diopside Liquid at High Pressure and Temperature: Constraints on Velocity Reduction in the Upper Mantle Due to Partial Melts. Journal of Geophysical Research: Solid Earth, 2018, 123, 8676-8690.	1.4	15
141	High-pressure elastic properties of dolomite melt supporting carbonate-induced melting in deep upper mantle. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18285-18291.	3.3	15
142	In situ investigation of high-pressure melting behavior in the Fe-S system using synchrotron X-ray radiography. High Pressure Research, 2008, 28, 315-326.	0.4	14
143	Experimental evidence for wall-rock pulverization during dynamic rupture at ultra-high pressure conditions. Earth and Planetary Science Letters, 2019, 528, 115832.	1.8	14
144	The thermal equation of state of FeTiO ₃ ilmenite based on in situ X-ray diffraction at high pressures and temperatures. American Mineralogist, 2010, 95, 1708-1716.	0.9	13

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145	In situ determination of the spinel-post-spinel transition in Fe ₃ O ₄ at high pressure and temperature by synchrotron X-ray diffraction. <i>American Mineralogist</i> , 2011, 96, 820-827.	0.9	13
146	X-ray imaging for studying behavior of liquids at high pressures and high temperatures using Paris-Edinburgh press. <i>Review of Scientific Instruments</i> , 2015, 86, 072207.	0.6	13
147	High-pressure, high-temperature plastic deformation of sintered diamonds. <i>Diamond and Related Materials</i> , 2015, 59, 95-103.	1.8	13
148	Crystallographic evidence for simultaneous growth in graphic granite. <i>Gondwana Research</i> , 2015, 27, 1550-1559.	3.0	13
149	Imaging in 3D under pressure: a decade of high-pressure X-ray microtomography development at GSECARS. <i>Progress in Earth and Planetary Science</i> , 2016, 3, .	1.1	13
150	The effects of shear deformation on planetesimal core segregation: Results from in-situ X-ray micro-tomography. <i>American Mineralogist</i> , 2016, 101, 1996-2004.	0.9	12
151	Deep melting reveals liquid structural memory and anomalous ferromagnetism in bismuth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 3375-3380.	3.3	12
152	High-Pressure Sound Velocity Measurements of Liquids Using In Situ Ultrasonic Techniques in a Multianvil Apparatus. <i>Minerals (Basel, Switzerland)</i> , 2020, 10, 126.	0.8	12
153	A new facility for high-pressure research at the advanced photon source. <i>Geophysical Monograph Series</i> , 1998, , 79-87.	0.1	11
154	Recent advances in high pressure and temperature rheological studies. <i>Journal of Earth Science (Wuhan, China)</i> , 2010, 21, 495-516.	1.1	11
155	Pressure Dependence of the Liquidus and Solidus Temperatures in the Fe-Fe Binary System Determined by In Situ Ultrasonics: Implications to the Solidification of Fe Liquids in Planetary Cores. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 1113-1124.	1.5	11
156	Tian et al. reply. <i>Nature</i> , 2013, 502, E2-E3.	13.7	10
157	Observation of 9-Fold Coordinated Amorphous TiO ₂ at High Pressure. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 374-379.	2.1	10
158	Recent developments in computed tomography at GSECARS. <i>Proceedings of SPIE</i> , 2010, , .	0.8	9
159	Thermal equation of state of CaIrO ₃ post-perovskite. <i>Physics and Chemistry of Minerals</i> , 2011, 38, 407-417.	0.3	9
160	Interfacial tension measurement of Ni-S liquid using high-pressure X-ray micro-tomography. <i>High Pressure Research</i> , 2008, 28, 327-334.	0.4	8
161	Controlling Dimensionality in the Ni-Bi System with Pressure. <i>Chemistry of Materials</i> , 2019, 31, 955-959.	3.2	8
162	Enhanced visibility of subduction slabs by the formation of dense hydrous phase A. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL095487.	1.5	8

#	ARTICLE	IF	CITATIONS
163	Deviatoric stress measurements at high pressure and temperature. AIP Conference Proceedings, 1994, , .	0.3	7
164	Microtomography at GeoSoilEnviroCARS. , 2004, , .		7
165	Stress and strain measurements of polycrystalline materials under controlled deformation at high pressure using monochromatic synchrotron radiation. , 2005, , 137-165.		7
166	A combination of a Drickamer anvil apparatus and monochromatic X-rays for stress and strain measurements under high pressure. Journal of Synchrotron Radiation, 2009, 16, 742-747.	1.0	7
167	An experimental study of phase transformations in olivine under pressure and temperature conditions corresponding to the mantle transition zone. Science Bulletin, 2012, 57, 894-901.	1.7	7
168	High-pressure experimental studies on geo-liquids using synchrotron radiation at the Advanced Photon Source. Journal of Earth Science (Wuhan, China), 2014, 25, 939-958.	1.1	7
169	On velocity anomalies beneath southeastern China: An investigation combining mineral physics studies and seismic tomography observations. Gondwana Research, 2016, 31, 200-217.	3.0	7
170	The W-WO ₂ oxygen fugacity buffer (WWO) at high pressure and temperature: Implications for O ₂ buffering and metal-silicate partitioning. American Mineralogist, 2016, 101, 211-221.	0.9	7
171	An internally consistent pressure calibration of geobarometers applicable to the Earth's upper mantle using in situ XRD. Geochimica Et Cosmochimica Acta, 2018, 222, 421-435.	1.6	7
172	A Paris-Edinburgh Cell for High-Pressure and High-Temperature Structure Studies on Silicate Liquids Using Monochromatic Synchrotron Radiation. Minerals (Basel, Switzerland), 2019, 9, 715.	0.8	7
173	Simultaneous equation of state, pressure calibration and sound velocity measurements to lower mantle pressures using multi-anvil apparatus. , 2005, , 49-66.		7
174	Sound velocity and compressibility of melts along the hedenbergite (CaFeSi ₂ O ₆)-diopside (CaMgSi ₂ O ₆) join at high pressure: Implications for stability and seismic signature of Fe-rich melts in the mantle. Earth and Planetary Science Letters, 2022, 577, 117250.	1.8	7
175	Equations of state, phase relations, and oxygen fugacity of the Ru-RuO ₂ buffer at high pressures and temperatures. American Mineralogist, 2020, 105, 333-343.	0.9	6
176	A scanning angle energy-dispersive X-ray diffraction technique for high-pressure structure studies in diamond anvil cells. High Pressure Research, 2008, 28, 193-201.	0.4	5
177	High-Pressure Research at the Advanced Photon Source. Synchrotron Radiation News, 2010, 23, 32-38.	0.2	5
178	An upgraded and integrated large-volume high-pressure facility at the GeoSoilEnviroCARS bending magnet beamline of the Advanced Photon Source. Comptes Rendus - Geoscience, 2019, 351, 269-279.	0.4	5
179	A machine-learning-based method of detecting and picking the first <i>P</i> -wave arrivals of acoustic emission events in laboratory experiments. Geophysical Journal International, 2022, 230, 1818-1823.	1.0	5
180	Experimental Evidence Supporting an Overturned Iron-Titanium-Rich Melt Layer in the Deep Lunar Interior. Geophysical Research Letters, 2022, 49, .	1.5	5

#	ARTICLE	IF	CITATIONS
181	Yield strength, slip systems and deformation induced phase transition of San Carlos olivine up to the transition zone pressure at room temperature. <i>Geophysical Monograph Series</i> , 1998, , 483-493.	0.1	4
182	Strength and plastic deformation of polycrystalline diamond composites. <i>High Pressure Research</i> , 2020, 40, 35-53.	0.4	4
183	Density of NaAlSi ₂ O ₆ Melt at High Pressure and Temperature Measured by In-Situ X-ray Microtomography. <i>Minerals (Basel, Switzerland)</i> , 2020, 10, 161.	0.8	4
184	The Indo-“Eurasia convergent margin and earthquakes in and around Tibetan Plateau. <i>Journal of Mineralogical and Petrological Sciences</i> , 2020, 115, 118-137.	0.4	4
185	High-pressure angle-dispersive powder diffraction using an energy-dispersive setup and white synchrotron radiation. , 2005, , 339-352.		4
186	High Brilliance and High Pressure: A New Diamond Anvil Cell Facility at the Advanced Photon Source.. Review of High Pressure Science and Technology/ <i>Koatsuryoku No Kagaku To Gijutsu</i> , 1998, 7, 1529-1531.	0.1	3
187	Advances in high-pressure mineral physics: From the deep mantle to the core. <i>Physics of the Earth and Planetary Interiors</i> , 2009, 174, 1-2.	0.7	3
188	Thermally Induced Anomaly in the Shear Behavior of Magnetite at High Pressure. <i>Physical Review Applied</i> , 2018, 10, .	1.5	3
189	Plastic Deformation and Strengthening Mechanisms of Nanopolycrystalline Diamond. <i>ACS Nano</i> , 2021, 15, 8283-8294.	7.3	3
190	Large Volume Presses for High-Pressure Studies Using Synchrotron Radiation. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2010, , 81-96.	0.2	3
191	Rheology at High Pressures and High Temperatures. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2010, , 97-110.	0.2	3
192	Simultaneous equation of state, pressure calibration and sound velocity measurements to lower mantle pressures using multi-anvil apparatus. , 2005, , 49-66.		3
193	Metamorphism-facilitated faulting in deforming orthopyroxene: Implications for global intermediate-depth seismicity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2112386119.	3.3	3
194	A Large Volume Multi-Anvil Apparatus for the Earth Sciences Community in Taiwan. <i>Terrestrial, Atmospheric and Oceanic Sciences</i> , 2012, 23, 647.	0.3	2
195	Experimental investigation of phase transformations of olivine and enstatite at the lower part of the mantle transition zone: Implications for structure of the 660 km seismic discontinuity. <i>Science China Earth Sciences</i> , 2014, 57, 592-599.	2.3	2
196	A multi-faceted experimental study on the dynamic behavior of MgSiO ₃ glass in the Earth’s deep interior. <i>American Mineralogist</i> , 2022, 107, 1313-1324.	0.9	2
197	Phase Evolution of Oil Well Cements with Nano-additive at Elevated Temperature/Pressure. <i>ACI Materials Journal</i> , 2016, 113, .	0.3	2
198	Development of Experimental Techniques Using LVP (Large Volume Press) at GSECARS Beamlines, Advanced Photon Source. Review of High Pressure Science and Technology/ <i>Koatsuryoku No Kagaku To Gijutsu</i> , 2008, 18, 214-222.	0.1	2

#	ARTICLE	IF	CITATIONS
199	Unraveling microstrain-promoted structural evolution and thermally driven phase transition in O_3 nanocrystals at high pressure. <i>Physical Review B</i> , 2020, 102, .		
200	Performance of tapered anvils in a DIA-type, cubic-anvil, high-pressure apparatus for X ray diffraction studies. <i>Geophysical Monograph Series</i> , 1998, , 35-39.	0.1	1
201	X-ray microtomography under high pressure. , 2007, , .		1
202	DETERMINATION OF PRESSURE-DEPENDENT PHASE DIAGRAMS. , 2007, , 412-441.		1
203	$(\hat{\alpha}, \hat{\mu}, \hat{\alpha}, T)_p$ of the Lower Mantle. , 1996, , 533-549.		1
204	Extreme dislocation-mediated plasticity of yttria-stabilized zirconia. <i>Materials Today Physics</i> , 2022, 22, 100588.	2.9	1
205	Synthesis of the Candidate Topological Compound Ni_3Pb_2 . <i>Journal of the American Chemical Society</i> , 2022, 144, 11943-11948.	6.6	1
206	Application of the double-difference relocation method to acoustic emission events in high-pressure deformation experiments. <i>Physics and Chemistry of Minerals</i> , 2022, 49, .	0.3	1
207	Shear wave velocities across the olivine \leftrightarrow wadsleyite \leftrightarrow ringwoodite transitions and sharpness of the 410 km seismic discontinuity. <i>Earth and Planetary Science Letters</i> , 2022, 593, 117690.	1.8	1
208	Pressure-Induced Amorphization and Phase Transformations in LiAlSiO_4 . <i>ChemInform</i> , 2005, 36, no.	0.1	0
209	A New Era in Mineral Physics. <i>Eos</i> , 2013, 94, 57-57.	0.1	0
210	18. High-pressure Apparatus Integrated with Synchrotron Radiation. , 2014, , 745-778.		0
211	Compression of porous aluminum: combined ultrasonic and microtomography measurements with lattice-Boltzmann permeability simulations. <i>High Pressure Research</i> , 2019, 39, 438-456.	0.4	0
212	Harry W. Green II (1940 \leftrightarrow 2017). <i>Eos</i> , 2018, 99, .	0.1	0