Yanbin Wang

List of Publications by Year
in descending order

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212 papers	9,997 citations	30070 54 h-index	43889 91 g-index
218 all docs	218 docs citations	218 times ranked	6491 citing authors

#	Article	IF	Citations
1	Ultrahard nanotwinned cubic boron nitride. Nature, 2013, 493, 385-388.	27.8	662
2	Nanotwinned diamond with unprecedented hardness and stability. Nature, 2014, 510, 250-253.	27.8	611
3	High-Pressure Creep of Serpentine, Interseismic Deformation, and Initiation of Subduction. Science, 2007, 318, 1910-1913.	12.6	331
4	Intermediate-range order in permanently densified vitreousSiO2: A neutron-diffraction and molecular-dynamics study. Physical Review B, 1991, 43, 1194-1197.	3.2	274
5	The deformation-DIA: A new apparatus for high temperature triaxial deformation to pressures up to 15 GPa. Review of Scientific Instruments, 2003, 74, 3002-3011.	1.3	262
6	Laser heated diamond cell system at the Advanced Photon Source for in situ x-ray measurements at high pressure and temperature. Review of Scientific Instruments, 2001, 72, 1273.	1.3	234
7	P-V-T equation of state of (Mg,Fe)SiO3 perovskite: constraints on composition of the lower mantle. Physics of the Earth and Planetary Interiors, 1994, 83, 13-40.	1.9	197
8	Thermal equation of state of CaSiO3perovskite. Journal of Geophysical Research, 1996, 101, 661-672.	3.3	177
9	Yield strength at high pressure and temperature. Geophysical Research Letters, 1994, 21, 753-756.	4.0	157
10	Dehydration-driven stress transfer triggers intermediate-depth earthquakes. Nature Communications, 2017, 8, 15247.	12.8	152
11	Ponded melt at the boundary between the lithosphere and asthenosphere. Nature Geoscience, 2013, 6, 1041-1044.	12.9	144
12	Toward an international practical pressure scale: A proposal for an IPPS ruby gauge (IPPS-Ruby2020). High Pressure Research, 2020, 40, 299-314.	1.2	143
13	Hierarchically structured diamond composite with exceptional toughness. Nature, 2020, 582, 370-374.	27.8	141
14	High pressure effects on the ironâ€“iron oxide and nickelâ€“nickel oxide oxygen fugacity buffers. Earth and Planetary Science Letters, 2009, 286, 556-564.	4.4	135
15	Atomistic insight into viscosity and density of silicate melts under pressure. Nature Communications, 2014, 5, 3241.	12.8	133
16	Ultralow viscosity of carbonate melts at high pressures. Nature Communications, 2014, 5, 5091.	12.8	124
17	Chemical- and Clapeyron-induced buoyancy at the 660 km discontinuity. Journal of Geophysical Research, 1998, 103, 7431-7441.	3.3	121
18	Deep-Focus Earthquake Analogs Recorded at High Pressure and Temperature in the Laboratory. Science, 2013, 341, 1377-1380.	12.6	120

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19	Thermal equations of state of theÎ±,Î², andÏ‰phases of zirconium. Physical Review B, 2005, 71, .	3.2	113
20	Compressed glassy carbon: An ultrastrong and elastic interpenetrating graphene network. Science Advances, 2017, 3, e1603213.	10.3	110
21	In situ measurements of sound velocities and densities across the orthopyroxene â†' high-pressure clinopyroxene transition in MgSiO3 at high pressure. Physics of the Earth and Planetary Interiors, 2004, 147, 27-44.	1.9	106
22	Electron microscopy of (Mg, Fe)SiO₃ Perovskite: Evidence for structural phase transitions and implications for the lower mantle. Journal of Geophysical Research, 1992, 97, 12327-12347.	3.3	102
23	Stability field and thermal equation of state of Îµ-iron determined by synchrotron X-ray diffraction in a multianvil apparatus. Journal of Geophysical Research, 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. American Mineralogist, 2000, 85, 1838-1842.	1.9	101
25	Cell assemblies for reproducible multi-anvil experiments (the COMPRES assemblies). American Mineralogist, 2012, 97, 353-368.	1.9	101
26	Experimental evidence supports mantle partial melting in the asthenosphere. Science Advances, 2016, 2, e1600246.	10.3	98
27	Toward comprehensive studies of liquids at high pressures and high temperatures: Combined structure, elastic wave velocity, and viscosity measurements in the Parisâ€“Edinburgh cell. Physics of the Earth and Planetary Interiors, 2014, 228, 269-280.	1.9	96
28	Phase Transition and Thermal Expansion of MgSiO3 Perovskite. Science, 1991, 251, 410-413.	12.6	92
29	Twinning in MgSiO3 Perovskite. Science, 1990, 248, 468-471.	12.6	88
30	Laboratory earthquakes triggered during eclogitization of lawsonite-bearing blueschist. Earth and Planetary Science Letters, 2017, 459, 320-331.	4.4	88
31	Beyond sixfold coordinated Si in SiO ₂ glass at ultrahigh pressures. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 10041-10046.	7.1	88
32	Thermal equation of state of garnets along the pyrope-majorite join. Physics of the Earth and Planetary Interiors, 1998, 105, 59-71.	1.9	83
33	High-pressure viscometry of polymerized silicate melts and limitations of the Eyring equation. American Mineralogist, 2004, 89, 1701-1708.	1.9	83
34	Sound velocity of Feâ€“S liquids at high pressure: Implications for the Moon's molten outer core. Earth and Planetary Science Letters, 2014, 396, 78-87.	4.4	80
35	Experimental constraints on the phase diagram of elemental zirconium. Journal of Physics and Chemistry of Solids, 2005, 66, 1213-1219.	4.0	77
36	Ultrahigh-pressure polyamorphism in GeO ₂ glass with coordination number >6. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3436-3441.	7.1	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.	1.2	73
38	Approaching diamondâ€™s theoretical elasticity and strength limits. Nature Communications, 2019, 10, 5533.	12.8	73
39	Microstructures and iron partitioning in (Mg,Fe)SiO3perovskite-(Mg,Fe)O magnesiowÃ¼stite 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)SiO₃ perovskite. Geophysical Research Letters, 1990, 17, 2089-2092.	4.0	69
43	Maximum solubility of FeO in (Mg, Fe)SiO3-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 jadeiteNaAlSi2O6: An energy-dispersive Reitveld Refinement Study of low symmetry and multiple phases diffraction. Geophysical Research Letters, 1997, 24, 5-8.	4.0	63
45	Electron microscopy study of domain structure due to phase transitions in natural perovskite. Physics and Chemistry of Minerals, 1993, 20, 147.	0.8	62
46	High-pressure x-ray tomography microscope: Synchrotron computed microtomography at high pressure and temperature. Review of Scientific Instruments, 2005, 76, 073709.	1.3	61
47	Creep of phyllosilicates at the onset of plate tectonics. Earth and Planetary Science Letters, 2012, 345-348, 142-150.	4.4	59
48	High-pressure x-ray diffraction studies on the structure of liquid silicate using a Parisâ€“Edinburgh type large volume press. Review of Scientific Instruments, 2011, 82, 015103.	1.3	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.	4.4	57
50	Deformation and texture development in CaIrO3 post-perovskite phase up to 6ÂGPa and 1300ÂK. Earth and Planetary Science Letters, 2008, 268, 515-525.	4.4	57
51	Orientation Relations During the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î±</mml:mi></mml:math>-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Ï‰</mml:mi></mml:math>Phase Transition of Zirconium:InÂSituTexture Observations at High Pressure and Temperature. Physical Review Letters, 2013, 111, 195701.	7.8	57
52	Nanoarchitectured materials composed of fullerene-like spheroids and disordered graphene layers with tunable mechanical properties. Nature Communications, 2015, 6, 6212.	12.8	57
53	The large-volume high-pressure facility at GSECARS: A â€œSwiss-army-knifeâ€•approach to synchrotron-based experimental studies. Physics of the Earth and Planetary Interiors, 2009, 174, 270-281.	1.9	56
54	Simultaneous structure and elastic wave velocity measurement of SiO2 glass at high pressures and high temperatures in a Paris-Edinburgh cell. Review of Scientific Instruments, 2012, 83, 033905.	1.3	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. Physics of the Earth and Planetary Interiors, 1996, 98, 17-29.	1.9	55
56	Thermoelasticity of CaSiO3perovskite and implications for the lower mantle. Geophysical Research Letters, 1994, 21, 895-898.	4.0	54
57	Thermodynamic properties of ferromagnesium silicate perovskites from vibrational spectroscopy. Journal of Geophysical Research, 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). Geophysical Research Letters, 2002, 29, 58-1-58-4.	4.0	52
59	Characterization of Sample Environment in a Uniaxial Split-Sphere Apparatus. Geophysical Monograph Series, 0, , 19-31.	0.1	50
60	Viscosity of liquid Fe at high pressure. Physical Review B, 2002, 66, .	3.2	49
61	In-situ elasticity measurement for the unquenchable high-pressure clinopyroxene phase: Implication for the upper mantle. Geophysical Research Letters, 2005, 32, .	4.0	48
62	Direct Observation of Room-Temperature Dislocation Plasticity in Diamond. Matter, 2020, 2, 1222-1232.	10.0	48
63	Olivine as an in situ piezometer in high pressure apparatus. Physics and Chemistry of Minerals, 1988, 15, 493-497.	0.8	47
64	High temperature transmission electron microscopy and X-ray diffraction studies of twinning and the phase transition at 145Â°C in LaGaO3. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 132, 13-21.	5.6	46
65	Discovery of a Superconducting Cuâ€“Bi Intermetallic Compound by Highâ€Pressure Synthesis. Angewandte Chemie - International Edition, 2016, 55, 13446-13449.	13.8	46
66	A new technique for angle-dispersive powder diffraction using an energy-dispersive setup and synchrotron radiation. Journal of Applied Crystallography, 2004, 37, 947-956.	4.5	45
67	Melting curve of silicon to 15GPa determined by two-dimensional angle-dispersive diffraction using a Kawai-type apparatus with X-ray transparent sintered diamond anvils. Journal of Physics and Chemistry of Solids, 2008, 69, 2255-2260.	4.0	45
68	Acoustic velocities of pure and ironâ€bearing magnesium silicate perovskite measured to 25 GPa and 1200 K. Geophysical Research Letters, 2012, 39, .	4.0	45
69	T-CUP: A New High-Pressure Apparatus for X-ray Studies.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 1998, 7, 1520-1522.	0.0	44
70	The Breakdown of Olivine to Perovskite and Magnesiowustite. Science, 1997, 275, 510-513.	12.6	43
71	Texture development and deformation mechanisms in ringwoodite. Physics of the Earth and Planetary Interiors, 2005, 152, 191-199.	1.9	43
72	In situ X-ray diffraction study of phase transitions of FeTiO3at high pressures and temperatures using a large-volume press and synchrotron radiation. American Mineralogist, 2006, 91, 120-126.	1.9	43

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73	Faulting of natural serpentinite: Implications for intermediate-depth seismicity. Earth and Planetary Science Letters, 2017, 474, 138-147.	4.4	42
74	Perovskite at high P-T conditions: An in situ synchrotron X ray diffraction study of NaMgF3perovskite. Journal of Geophysical Research, 1994, 99, 2871-2885.	3.3	40
75	Dislocation behaviors in nanotwinned diamond. Science Advances, 2018, 4, eaat8195.	10.3	40
76	Phase transition in CaGeO3 perovskite: Evidence from X-ray powder diffraction, thermal expansion and heat capacity. Physics and Chemistry of Minerals, 1991, 18, 224.	0.8	39
77	Determination of phase transition pressures of ZnTe under quasihydrostatic conditions. Pure and Applied Geophysics, 1993, 141, 643-652.	1.9	39
78	Microscopic anharmonicity and equation of state of MgSiO3-perovskite. Geophysical Research Letters, 1996, 23, 3043-3046.	4.0	39
79	Elasticity of (Mg0.87Fe0.13)2SiO4 wadsleyite to 12GPa and 1073K. Physics of the Earth and Planetary Interiors, 2009, 174, 98-104.	1.9	39
80	Structure of jadeite melt at high pressures up to 4.9â€‰GPa. Journal of Applied Physics, 2012, 111, 112623.	2.5	39
81	Creating Binary Cuâ€“Bi Compounds via High-Pressure Synthesis: A Combined Experimental and Theoretical Study. Chemistry of Materials, 2017, 29, 5276-5285.	6.7	39
82	High-pressure viscosity of liquid Fe and FeS revisited by falling sphere viscometry using ultrafast X-ray imaging. Physics of the Earth and Planetary Interiors, 2015, 241, 57-64.	1.9	38
83	Pressure-Induced Amorphization and Phase Transformations in Î²-LiAlSiO4. Chemistry of Materials, 2005, 17, 2817-2824.	6.7	37
84	Reaction-induced embrittlement of the lower continental crust. Geology, 2019, 47, 235-238.	4.4	37
85	Deformation of olivine under mantle conditions: An in situ highâ€pressure, highâ€temperature study using monochromatic synchrotron radiation. Journal of Geophysical Research, 2012, 117, .	3.3	34
86	Contrasting sound velocity and intermediate-range structural order between polymerized and depolymerized silicate glasses under pressure. Earth and Planetary Science Letters, 2014, 391, 288-295.	4.4	34
87	Pressure-induced structural change in MgSiO ‹sub›3‹/sub› glass at pressures near the Earthâ€™s coreâ€“mantle boundary. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1742-1747.	7.1	34
88	Pressure calibration to 20GPa by simultaneous use of ultrasonic and x-ray techniques. Journal of Applied Physics, 2005, 98, 013521.	2.5	33
89	Image-based Stokes flow modeling in bulk proppant packs and propped fractures under high loading stresses. Journal of Petroleum Science and Engineering, 2015, 135, 391-402.	4.2	32
90	Continuous strengthening in nanotwinned diamond. Npj Computational Materials, 2019, 5, .	8.7	32

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91	Volumetric properties of magnesium silicate glasses and supercooled liquid at high pressure by X-ray microtomography. Physics of the Earth and Planetary Interiors, 2009, 174, 292-301.	1.9	31
92	A laboratory nanoseismological study on deep-focus earthquake micromechanics. Science Advances, 2017, 3, e1601896.	10.3	30
93	Lower-crustal earthquakes in southern Tibet are linked to eclogitization of dry metastable granulite. Nature Communications, 2018, 9, 3483.	12.8	30
94	Phase stability of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>SrMn</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>hexagonal perovskite system at high pressure and temperature. Physical Review B, 2014, 90, .	3.2	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. Journal of Geophysical Research: Solid Earth, 2016, 121, 4232-4248.	3.4	29
96	Testing plausible upper-mantle compositions using fine-scale models of the 410-km discontinuity. Geophysical Research Letters, 1999, 26, 1641-1644.	4.0	28
97	Pressure and strain dependence of the strength of sintered polycrystalline Mg2SiO4ringwoodite. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	27
98	Combined ultrasonic elastic wave velocity and microtomography measurements at high pressures. Review of Scientific Instruments, 2011, 82, 023906.	1.3	27
99	Texture and elastic strains in hcp-iron plastically deformed up to 17.5 GPa and 600 K: experiment and model. Modelling and Simulation in Materials Science and Engineering, 2012, 20, 024005.	2.0	27
100	Rheology measurements at high pressure and temperature. Geophysical Monograph Series, 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. Physical Review B, 2013, 87, .	3.2	25
103	Highâ€pressure, highâ€temperature deformation of CaGeO₃ (perovskite)Â±MgO aggregates: Implications for multiphase rheology of the lower mantle. Geochemistry, Geophysics, Geosystems, 2013, 14, 3389-3408.	2.5	25
104	Acoustic travel time gauges for in-situ determination of pressure and temperature in multi-anvil apparatus. Journal of Applied Physics, 2015, 118, .	2.5	25
105	(??/?T) P of the lower mantle. Pure and Applied Geophysics, 1996, 146, 533-549.	1.9	24
106	Thermal equation of state of akimotoite MgSiO3 and effects of the akimotoiteâ€“garnet transformation on seismic structure near the 660 km discontinuity. Physics of the Earth and Planetary Interiors, 2004, 143-144, 57-80.	1.9	24
107	Study of liquid gallium as a function of pressure and temperature using synchrotron x-ray microtomography and x-ray diffraction. Applied Physics Letters, 2014, 105, .	3.3	24
108	High-pressure Apparatus Integrated with Synchrotron Radiation. Reviews in Mineralogy and Geochemistry, 2014, 78, 745-777.	4.8	24

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109	Ultrahard stitching of nanotwinned diamond and cubic boron nitride in C2-BN composite. Scientific Reports, 2016, 6, 30518.	3.3	24
110	Strengthening-softening transition in yield strength of nanotwinned Cu. Scripta Materialia, 2019, 162, 372-376.	5.2	24
111	Structural Evolution of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow><mml:mi>SiO</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> Glass with Si Coordination Number Greater than 6. Physical Review Letters, 2020, 125, 205701.	7.8	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.	1.8	23
113	In situ measurement of interfacial tension of Feâ€“S and Feâ€“P liquids under high pressure using X-ray radiography and tomography techniques. Physics of the Earth and Planetary Interiors, 2009, 174, 220-226.	1.9	23
114	Dislocation dissociation in CaGeO3 perovskite. Physics and Chemistry of Minerals, 1989, 16, 630.	0.8	22
115	Yield strength enhancement of MgO by nanocrystals. Journal of Materials Science, 2005, 40, 5763-5766.	3.7	22
116	Kinetics of SiC formation during high Pâ€“T reaction between diamond and silicon. Diamond and Related Materials, 2005, 14, 1611-1615.	3.9	22
117	Phase transitions of harzburgite and buckled slab under eastern China. Geochemistry, Geophysics, Geosystems, 2013, 14, 1182-1199.	2.5	22
118	Elastic wave velocities in polycrystalline Mg₃Al₂Si₃O₁₂-pyrope garnet to 24 GPa and 1300 K. American Mineralogist, 2016, 101, 991-997.	1.9	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 FeÂS liquids at high pressures. Journal of Physics Condensed Matter, 2002, 14, 11325-11330.	1.8	21
121	High-pressure cells forin situmulti-anvil experiments. High Pressure Research, 2006, 26, 283-292.	1.2	21
122	High Pressure Phase-Transformation Induced Texture Evolution and Strengthening in Zirconium Metal: Experiment and Modeling. Scientific Reports, 2015, 5, 12552.	3.3	21
123	Role of plastic deformation in tailoring ultrafine microstructure in nanotwinned diamond for enhanced hardness. Science China Materials, 2017, 60, 178-185.	6.3	21
124	Synchrotron X-ray topography studies of twinning and the phase transition at 145Â°C in LaGaO3 single crystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 132, 23-30.	5.6	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.	4.4	20
126	Non-cubic crystal symmetry of CaSiO3 perovskite up to 18ÂGPa and 1600ÂK. Earth and Planetary Science Letters, 2009, 282, 268-274.	4.4	20

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127	Intersectional nanotwinned diamond-the hardest polycrystalline diamond by design. Npj Computational Materials, 2020, 6, .	8.7	20
128	Local structure of liquid gallium under pressure. Scientific Reports, 2017, 7, 5666.	3.3	19
129	Recent developments in microtomography at GeoSoilEnviroCARS. , 2006, , .		18
130	Optical Absorption Spectra of (Mg, Fe)SiO3 Silicate Perovskites. Physics and Chemistry of Minerals, 1994, 20, 478.	0.8	17
131	Rheology of É›â€ iron up to 19 GPa and 600 K in the Dâ€ÐIA. Geophysical Research Letters, 2007, 34, .	4.0	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.	0.0	16
133	Coexistence of multiple metastable polytypes in rhombohedral bismuth. Scientific Reports, 2016, 6, 20337.	3.3	16
134	Sound velocities of aluminumâ€bearing stishovite in the mantle transition zone. Geophysical Research Letters, 2016, 43, 4239-4246.	4.0	16
135	Temperature-dependent hardness of zinc-blende structured covalent materials. Science China Materials, 2021, 64, 2280-2288.	6.3	16
136	Orthorhombicâ€tetragonal phase transition in CaGeOÂ³ perovskite at high temperature. Geophysical Research Letters, 1988, 15, 1231-1234.	4.0	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.	1.9	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.	1.9	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.	3.4	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.	7.1	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.	1.2	14
143	Experimental evidence for wall-rock pulverization during dynamic rupture at ultra-high pressure conditions. Earth and Planetary Science Letters, 2019, 528, 115832.	4.4	14
144	The thermal equation of state of FeTiO3 ilmenite based on in situ X-ray diffraction at high pressures and temperatures. American Mineralogist, 2010, 95, 1708-1716.	1.9	13

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145	In situ determination of the spinel-post-spinel transition in Fe3O4 at high pressure and temperature by synchrotron X-ray diffraction. American Mineralogist, 2011, 96, 820-827.	1.9	13
146	X-ray imaging for studying behavior of liquids at high pressures and high temperatures using Paris-Edinburgh press. Review of Scientific Instruments, 2015, 86, 072207.	1.3	13
147	High-pressure, high-temperature plastic deformation of sintered diamonds. Diamond and Related Materials, 2015, 59, 95-103.	3.9	13
148	Crystallographic evidence for simultaneous growth in graphic granite. Gondwana Research, 2015, 27, 1550-1559.	6.0	13
149	Imaging in 3D under pressure: a decade of high-pressure X-ray microtomography development at GSECARS. Progress in Earth and Planetary Science, 2016, 3, .	3.0	13
150	The effects of shear deformation on planetesimal core segregation: Results from in-situ X-ray micro-tomography. American Mineralogist, 2016, 101, 1996-2004.	1.9	12
151	Deep melting reveals liquid structural memory and anomalous ferromagnetism in bismuth. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 3375-3380.	7.1	12
152	High-Pressure Sound Velocity Measurements of Liquids Using In Situ Ultrasonic Techniques in a Multianvil Apparatus. Minerals (Basel, Switzerland), 2020, 10, 126.	2.0	12
153	A new facility for high-pressure research at the advanced photon source. Geophysical Monograph Series, 1998, , 79-87.	0.1	11
154	Recent advances in high pressure and temperature rheological studies. Journal of Earth Science (Wuhan, China), 2010, 21, 495-516.	3.2	11
155	Pressure Dependence of the Liquidus and Solidus Temperatures in the Feâ€P Binary System Determined by In Situ Ultrasonics: Implications to the Solidification of Feâ€P Liquids in Planetary Cores. Journal of Geophysical Research E: Planets, 2018, 123, 1113-1124.	3.6	11
156	Tian et al. reply. Nature, 2013, 502, E2-E3.	27.8	10
157	Observation of 9-Fold Coordinated Amorphous TiO₂ at High Pressure. Journal of Physical Chemistry Letters, 2020, 11, 374-379.	4.6	10
158	Recent developments in computed tomography at GSECARS. Proceedings of SPIE, 2010, , .	0.8	9
159	Thermal equation of state of CaIrO3 post-perovskite. Physics and Chemistry of Minerals, 2011, 38, 407-417.	0.8	9
160	Interfacial tension measurement of Ni-S liquid using high-pressure X-ray micro-tomography. High Pressure Research, 2008, 28, 327-334.	1.2	8
161	Controlling Dimensionality in the Niâ€“Bi System with Pressure. Chemistry of Materials, 2019, 31, 955-959.	6.7	8
162	Enhanced visibility of subduction slabs by the formation of dense hydrous phase A. Geophysical Research Letters, 2021, 48, e2021GL095487.	4.0	8

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163	Deviatoric stress measurements at high pressure and temperature. AIP Conference Proceedings, 1994, , .	0.4	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.	2.4	7
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