Guoyin Shen

List of Publications by Year
in descending order

204 papers	11,628 citations	18465 62 h-index	33869 99 g-index
209 all docs	209 docs citations	209 times ranked	6335 citing authors

#	Article	IF	Citations
1	Toward an internally consistent pressure scale. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 9182-9186.	3.3	566
2	Melting and crystal structure of iron at high pressures and temperatures. Geophysical Research Letters, 1998, 25, 373-376.	1.5	380
3	Phonon Density of States of Iron up to 153 Gigapascals. Science, 2001, 292, 914-916.	6.0	284
4	Elasticity and rheology of iron above 220â€‰GPa and the nature of the Earth's inner core. Nature, 1998, 396, 741-743.	13.7	253
5	X-ray Imaging of Stress and Strain of Diamond, Iron, and Tungsten at Megabar Pressures. Science, 1997, 276, 1242-1245.	6.0	237
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.	0.6	234
7	Deformation of polycrystalline MgO at pressures of the lower mantle. Journal of Geophysical Research, 2002, 107, ECV 3-1-ECV 3-17.	3.3	207
8	Lattice strains in gold and rhenium under nonhydrostatic compression to 37 GPa. Physical Review B, 1999, 60, 15063-15073.	1.1	186
9	In situ X-ray diffraction studies of iron to Earth-core conditions. Physics of the Earth and Planetary Interiors, 2004, 143-144, 455-467.	0.7	176
10	Magnetism in FeO at Megabar Pressures from X-Ray Emission Spectroscopy. Physical Review Letters, 1999, 83, 4101-4104.	2.9	175
11	Thermodynamic Data on Oxides and Silicates. , 1993, , .		174
12	Measurement of melting temperatures of some minerals under lower mantle pressures. Journal of Geophysical Research, 1995, 100, 17699-17713.	3.3	173
13	Electronic spin state of iron in lower mantle perovskite. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 14027-14030.	3.3	173
14	A synchrotron MÃ¶ssbauer spectroscopy study of (Mg,Fe)SiO3perovskite up to 120 GPa. American Mineralogist, 2005, 90, 199-205.	0.9	161
15	Ferromagnesian postperovskite silicates in the D'' layer of the Earth. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 15867-15869.	3.3	158
16	The post-spinel transformation in Mg2SiO4 and its relation to the 660-km seismic discontinuity. Nature, 2001, 411, 571-574.	13.7	151
17	Size-Dependent Pressure-Induced Amorphization in NanoscaleTiO2. Physical Review Letters, 2006, 96, 135702.	2.9	150
18	Sound Velocities of Hot Dense Iron: Birch's Law Revisited. Science, 2005, 308, 1892-1894.	6.0	149

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19	Toward an international practical pressure scale: A proposal for an IPPS ruby gauge (IPPS-Ruby2020). High Pressure Research, 2020, 40, 299-314.	0.4	143
20	Iron-Silicon Alloy in Earth's Core?. Science, 2002, 295, 313-315.	6.0	140
21	Multivariable Dependence of Fe-Mg Partitioning in the Lower Mantle. Science, 1997, 278, 2098-2100.	6.0	139
22	Structure of Liquid Iron at Pressures up to 58ÂGPa. Physical Review Letters, 2004, 92, 185701.	2.9	139
23	Atomistic insight into viscosity and density of silicate melts under pressure. Nature Communications, 2014, 5, 3241.	5.8	133
24	Elasticity, shear strength, and equation of state of molybdenum and gold from x-ray diffraction under nonhydrostatic compression to 24 GPa. Journal of Applied Physics, 1999, 86, 6729-6736.	1.1	129
25	Pressure-volume equation of state of the high-pressureB2phase of NaCl. Physical Review B, 2002, 65, .	1.1	124
26	Ultralow viscosity of carbonate melts at high pressures. Nature Communications, 2014, 5, 5091.	5.8	124
27	High pressure induced phase transformation of SiO2 and GeO2: difference and similarity. Journal of Physics and Chemistry of Solids, 2004, 65, 1537-1545.	1.9	121
28	High-pressure studies with x-rays using diamond anvil cells. Reports on Progress in Physics, 2017, 80, 016101.	8.1	118
29	Raman, infrared, and x-ray evidence for new phases of nitrogen at high pressures and temperatures. Physical Review B, 2002, 66, .	1.1	117
30	Compression of FeSi, Fe₃C, Fe_{0.95}O, and FeS under the core pressures and implication for light element in the Earth's core. Journal of Geophysical Research, 2010, 115, .	3.3	117
31	The stability and P-V-T equation of state of CaSiO3perovskite in the Earth's lower mantle. Journal of Geophysical Research, 2000, 105, 25955-25968.	3.3	113
32	Compressed glassy carbon: An ultrastrong and elastic interpenetrating graphene network. Science Advances, 2017, 3, e1603213.	4.7	110
33	Nature of the High-Pressure Transition inFe2O3Hematite. Physical Review Letters, 2002, 89, 205504.	2.9	108
34	Stability and crystal structure of MgSiO3perovskite to the core-mantle boundary. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	104
35	Iron-rich silicates in the Earth's D'' layer. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 9751-9753.	3.3	100
36	Size-Dependent Amorphization of Nanoscale<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="bold">Y</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="bold">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>at High Pressure. Physical Review Letters, 2010, 105, 095701.	2.9	100

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37	Pressure-induced transformations of cristobalite. Chemical Physics Letters, 2001, 333, 264-270.	1.2	96
38	Stability and Structure of MgSiO3 Perovskite to 2300-Kilometer Depth in Earth's Mantle. Science, 2001, 293, 2437-2440.	6.0	96
39	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.	0.7	96
40	The equation of state of CaSiO3 perovskite to 108 GPa at 300 K. Physics of the Earth and Planetary Interiors, 2000, 120, 327-338.	0.7	90
41	New developments in laser-heated diamond anvil cell with in situ synchrotron x-ray diffraction at High Pressure Collaborative Access Team. Review of Scientific Instruments, 2015, 86, 072201.	0.6	90
42	Nitrogen in black phosphorus structure. Science Advances, 2020, 6, eaba9206.	4.7	90
43	Structure of siderite<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>FeCO</mml:mtext></mml:mrow><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> at 56 GPa and hysteresis of its spin-pairing transition. Physical Review B, 2010, 82, .	3.1	89
44	Anomalous compression behavior in lanthanum/cerium-based metallic glass under high pressure. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 13565-13568.	3.3	86
45	Equation of state of the postperovskite phase synthesized from a natural (Mg,Fe)SiO3 orthopyroxene. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 3039-3043.	3.3	84
46	Partial melting in the ironâ€“sulfur system at high pressure: A synchrotron X-ray diffraction study. Physics of the Earth and Planetary Interiors, 2007, 162, 119-128.	0.7	83
47	In situ observation of texture development in olivine, ringwoodite, magnesiowÃ¼stite and silicate perovskite at high pressure. Earth and Planetary Science Letters, 2004, 226, 507-519.	1.8	82
48	Pressure-induced phase transitions and metallization in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>VO</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> Physical Review B, 2015, 91, .	1.1	82
49	High-pressure phases inSnO2to 117 GPa. Physical Review B, 2006, 73, .	1.1	81
50	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.	1.8	80
51	The laser micro-machining system for diamond anvil cell experiments and general precision machining applications at the High Pressure Collaborative Access Team. Review of Scientific Instruments, 2015, 86, 072202.	0.6	80
52	Ultrahigh-pressure isostructural electronic transitions in hydrogen. Nature, 2019, 573, 558-562.	13.7	78
53	Pressure effect on the electronic structure of iron in (Mg,Fe)(Si,Al)O3 perovskite: a combined synchrotron MÃ¶ssbauer and X-ray emission spectroscopy study up to 100ÂGPa. Physics and Chemistry of Minerals, 2006, 33, 575-585.	0.3	77
54	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.	3.3	75

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55	High-pressure induced phase transitions of Y2O3 and Y2O3:Eu3+. Applied Physics Letters, 2009, 94, .	1.5	74
56	Static compression of iron-silicon alloys: Implications for silicon in the Earth's core. Journal of Geophysical Research, 2003, 108, .	3.3	73
57	Nuclear Inelastic X-Ray Scattering of FeO to 48 GPa. Physical Review Letters, 2001, 87, 255501.	2.9	71
58	Effect of helium on structure and compression behavior of SiO ₂ glass. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 6004-6007.	3.3	67
59	Beating the Miscibility Barrier between Iron Group Elements and Magnesium by High-Pressure Alloying. Physical Review Letters, 2005, 95, 245502.	2.9	65
60	Double-sided laser heating system at HPCAT forin situx-ray diffraction at high pressures and high temperatures. Journal of Physics Condensed Matter, 2006, 18, S1097-S1103.	0.7	65
61	Phase stability and density of FeS at high pressures and temperatures: implications for the interior structure of Mars. Earth and Planetary Science Letters, 2001, 185, 25-33.	1.8	64
62	Online remote control systems for static and dynamic compression and decompression using diamond anvil cells. Review of Scientific Instruments, 2015, 86, 072209.	0.6	64
63	Thermal equation of state of Fe3S and implications for sulfur in Earth's core. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	63
64	Stability of magnesiowustite in Earth's lower mantle. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 4405-4408.	3.3	62
65	Intermediate states ofGeO2glass under pressures up to35GPa. Physical Review B, 2007, 75, .	1.1	59
66	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.	0.6	58
67	Melting of wï¿½stite and iron up to pressures of 600 kbar. Physics and Chemistry of Minerals, 1993, 20, 91.	0.3	57
68	Nanoarchitectured materials composed of fullerene-like spheroids and disordered graphene layers with tunable mechanical properties. Nature Communications, 2015, 6, 6212.	5.8	57
69	Facilities for high-pressure research with the diamond anvil cell at GSECARS. Journal of Synchrotron Radiation, 2005, 12, 642-649.	1.0	56
70	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.	0.6	56
71	High-pressure phase transition in Mn2O3: Application for the crystal structure and preferred orientation of the CaIrO3type. Geophysical Research Letters, 2006, 33, .	1.5	55
72	Brillouin spectrometer interfaced with synchrotron radiation for simultaneous x-ray density and acoustic velocity measurements. Review of Scientific Instruments, 2006, 77, 103905.	0.6	55

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73	Pressure-Induced Isostructural Phase Transition and Correlation of FeAs Coordination with the Superconducting Properties of 111-Type Na_{1â€“x}FeAs. Journal of the American Chemical Society, 2011, 133, 7892-7896.	6.6	55
74	Rutile solubility in NaFâ€“NaClâ€“KCl-bearing aqueous fluids at 0.5â€“2.79 GPa and 250â€“650 Â°C. Geochimica Et Cosmochimica Acta, 2016, 177, 170-181.	1.6	55
75	Microstructures define melting of molybdenum at high pressures. Nature Communications, 2017, 8, 14562.	5.8	55
76	High-pressure x-ray diffraction measurements on vitreous<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>GeO</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:ms hydrostatic conditions. Physical Review B, 2010, 81, .	1.1	53
77	Amorphous boron gasket in diamond anvil cell research. Review of Scientific Instruments, 2003, 74, 4732-4736.	0.6	52
78	Iron-Nickel alloy in the Earth's core. Geophysical Research Letters, 2002, 29, 109-1-109-3.	1.5	51
79	Structural investigation of amorphous materials at high pressures using the diamond anvil cell. Review of Scientific Instruments, 2003, 74, 3021-3026.	0.6	50
80	Phase relations of Feâ€“Ni alloys at high pressure and temperature. Physics of the Earth and Planetary Interiors, 2006, 155, 146-151.	0.7	47
81	High-pressure EXAFS study of vitreous<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>GeO</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:ms to 44 GPa. Physical Review B, 2010, 81, .	1.1	46
82	New developments in micro-X-ray diffraction and X-ray absorption spectroscopy for high-pressure research at 16-BM-D at the Advanced Photon Source. Review of Scientific Instruments, 2015, 86, 072205.	0.6	45
83	Equation of state of MgGeO3 perovskite to 65ÂGPa: comparison with the post-perovskite phase. Physics and Chemistry of Minerals, 2006, 33, 699-709.	0.3	43
84	Experimental method for in situ determination of material textures at simultaneous high pressure and high temperature by means of radial diffraction in the diamond anvil cell. Review of Scientific Instruments, 2009, 80, 104501.	0.6	43
85	X-ray diffraction studies and equation of state of methane at 202GPa. Chemical Physics Letters, 2009, 473, 72-74.	1.2	43
86	Controlled formation of metastable germanium polymorphs. Physical Review B, 2014, 89, .	1.1	43
87	Nuclear resonant scattering at high pressure and high temperature. High Pressure Research, 2004, 24, 447-457.	0.4	42
88	X-ray diffraction and Raman studies of beryllium: Static and elastic properties at high pressures. Physical Review B, 2005, 72, .	1.1	42
89	Single-crystal synchrotron X-ray diffraction study of wÃ¼stite and magnesiowÃ¼stite at lower-mantle pressures. Journal of Synchrotron Radiation, 2005, 12, 577-583.	1.0	41
90	Compression behavior of VC0.85 up to 53 GPa. International Journal of Refractory Metals and Hard Materials, 2004, 22, 129-132.	1.7	40

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91	Elasticity and strength of calcium silicate perovskite at lower mantle pressures. Physics of the Earth and Planetary Interiors, 2004, 143-144, 93-105.	0.7	40
92	Molar volumes of molten indium at high pressures measured in a diamond anvil cell. Applied Physics Letters, 2002, 81, 1411-1413.	1.5	39
93	Absolute temperature measurement in a laser-heated diamond anvil cell. Geophysical Research Letters, 2004, 31, .	1.5	39
94	Structure of jadeite melt at high pressures up to 4.9â€‰GPa. Journal of Applied Physics, 2012, 111, 112623.	1.1	39
95	Experimental evidence of low-density liquid water upon rapid decompression. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2010-2015.	3.3	39
96	Î±â˜PbO2-type high-pressure polymorph ofGeO2. Physical Review B, 2003, 67, .	1.1	38
97	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.	0.7	38
98	Phase diagram and equation of state of praseodymium at high pressures and temperatures. Physical Review B, 2003, 67, .	1.1	36
99	Charge transfer in spinel Co₃O₄at high pressures. Journal of Physics Condensed Matter, 2012, 24, 435401.	0.7	36
100	Carbon transport in diamond anvil cells. High Temperatures - High Pressures, 2003, 35/36, 237-249.	0.3	36
101	Experimental study of the NaClâ€“H2O system up to 28GPa: Implications for ice-rich planetary bodies. Physics of the Earth and Planetary Interiors, 2006, 155, 152-162.	0.7	35
102	Density measurements of noncrystalline materials at high pressure with diamond anvil cell. Review of Scientific Instruments, 2007, 78, 103905.	0.6	35
103	HPCAT: an integrated high-pressure synchrotron facility at the Advanced Photon Source. High Pressure Research, 2008, 28, 145-162.	0.4	34
104	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.	1.8	34
105	The mobility of Nb in rutile-saturated NaCl- and NaF-bearing aqueous fluids from 1â€“6.5 GPa and 300â€“800 Â°C. American Mineralogist, 2015, 100, 1600-1609.	0.9	34
106	Pressure-induced structural change in MgSiO ₃ 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.	3.3	34
107	Stability and equation of state of the post-perovskite phase in MgGeO3to 2 Mbar. Geophysical Research Letters, 2006, 33, .	1.5	32
108	Rietveld structure refinement of MgGeO3 post-perovskite phase to 1 Mbar. American Mineralogist, 2008, 93, 965-976.	0.9	32

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109	Developments in time-resolved high pressure x-ray diffraction using rapid compression and decompression. Review of Scientific Instruments, 2015, 86, 072208.	0.6	32
110	X ray diffraction with a double hot-plate laser-heated diamond cell. Geophysical Monograph Series, 1998, , 27-34.	0.1	30
111	X-ray diffraction study of phase stability in SiO at deep mantle conditions. Earth and Planetary Science Letters, 2005, 235, 273-282.	1.8	30
112	Distinct thermal behavior of GeO ₂ glass in tetrahedral, intermediate, and octahedral forms. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14576-14579.	3.3	30
113	Strength and elastic moduli of TiN from radial x-ray diffraction under nonhydrostatic compression up to 45 GPa. Journal of Applied Physics, 2010, 107, .	1.1	30
114	Effect of dilution on the spin pairing transition in rhombohedral carbonates. High Pressure Research, 2010, 30, 224-229.	0.4	30
115	High pressure - high temperature studies and reactivity of Î³-Mo2N and Î´-MoN. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 831-836.	0.8	29
116	Thermal evolution of the metastable r8 and bc8 polymorphsÂofÂsilicon. High Pressure Research, 2015, 35, 99-116.	0.4	26
117	A metastable liquid melted from a crystalline solid under decompression. Nature Communications, 2017, 8, 14260.	5.8	26
118	Anomaly in the viscosity of liquid KCl at high pressures. Physical Review B, 2013, 87, .	1.1	25
119	Amorphous boron oxide at megabar pressures via inelastic X-ray scattering. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5855-5860.	3.3	25
120	Two-dimensional energy dispersive x-ray diffraction at high pressures and temperatures. Review of Scientific Instruments, 2001, 72, 1302.	0.6	24
121	A portable laser heating microscope for high pressure research. Journal of Physics: Conference Series, 2010, 215, 012191.	0.3	24
122	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:math> Glass with Si Coordination Number Greater than 6. Physical Review Letters, 2020, 125, 205701.	2.9	24
123	Chain breakage in liquid sulfur at high pressures and high temperatures. Physical Review B, 2014, 89, .	1.1	23
124	The structure of amorphous iron at high pressures to 67GPa measured in a diamond anvil cell. Physics of the Earth and Planetary Interiors, 2004, 143-144, 481-495.	0.7	22
125	Direct Observation of a Pressure-Induced Precursor Lattice in Silicon. Physical Review Letters, 2012, 109, 205503.	2.9	22
126	Spin transition of Fe3+ in Al-bearing phase D: An alternative explanation for small-scale seismic scatterers in the mid-lower mantle. Earth and Planetary Science Letters, 2013, 382, 1-9.	1.8	22

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127	Kinetically Controlled Two-Step Amorphization and Amorphous-Amorphous Transition in Ice. Physical Review Letters, 2017, 119, 135701.	2.9	22
128	Oxygen Quadclusters in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>SiO</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></m Glass above Megabar Pressures up to 160ÂGPa Revealed by X-Ray Raman Scattering. Physical Review Letters, 2019, 123, 235701.	2.9	22
129	Melting studies of indium: determination of the structure and density of melts at high pressures and high temperatures. Journal of Physics Condensed Matter, 2002, 14, 10533-10540.	0.7	21
130	Melting of indium at high pressure determined by monochromatic x-ray diffraction in an externally-heated diamond anvil cell. Applied Physics Letters, 2001, 78, 3208-3210.	1.5	20
131	Multimode scanning X-ray diffraction microscopy for diamond anvil cell experiments. Review of Scientific Instruments, 2019, 90, 025109.	0.6	19
132	A CO2 laser heating system for in situ high pressure-temperature experiments at HPCAT. Review of Scientific Instruments, 2018, 89, 083901.	0.6	18
133	Optical Absorption Spectra of (Mg, Fe)SiO3 Silicate Perovskites. Physics and Chemistry of Minerals, 1994, 20, 478.	0.3	17
134	Formation of iron hydride and high-magnetite at high pressure and temperature. Physics of the Earth and Planetary Interiors, 2004, 146, 313-317.	0.7	17
135	Carbon coated face-centered cubic Ruâ€“C nanoalloys. Nanoscale, 2014, 6, 10370-10376.	2.8	17
136	Pressure-induced cation-cation bonding in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi mathvariant="normal">V</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2015, 92, .	1.1	17
137	Compressed glassy carbon maintaining graphite-like structure with linkage formation between graphene layers. Scientific Reports, 2019, 9, 7531.	1.6	17
138	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
139	High-energy-resolution monochromator for 83Kr nuclear resonant scattering. Review of Scientific Instruments, 2002, 73, 1608-1610.	0.6	16
140	The equation of state of Al,H-bearing SiO2 stishovite to 58ÂGPa. Physics and Chemistry of Minerals, 2005, 32, 466-470.	0.3	16
141	X-ray emission spectroscopy with a laser-heated diamond anvil cell: a new experimental probe of the spin state of iron in the Earth's interior. Journal of Synchrotron Radiation, 2005, 12, 637-641.	1.0	16
142	Crystal structure and compression of an iron-bearing Phase A to 33ÂGPa. Physics and Chemistry of Minerals, 2006, 33, 192-199.	0.3	16
143	Termination and hydration of forsteritic olivine (0 1 0) surface. Geochimica Et Cosmochimica Acta, 2014, 145, 268-280.	1.6	16
144	Pressure-induced changes in the electron density distribution in Î±-Ge near the Î±-Î² transition. Applied Physics Letters, 2015, 107, 072109.	1.5	16

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145	Coexistence of multiple metastable polytypes in rhombohedral bismuth. Scientific Reports, 2016, 6, 20337.	1.6	16
146	Crystal structures of (Mg _{1- x} ,Fe _x)SiO ₃ postperovskite at high pressures. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1035-1040.	3.3	15
147	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
148	Crystallography of low Z material at ultrahigh pressure: Case study on solid hydrogen. Matter and Radiation at Extremes, 2020, 5, .	1.5	15
149	Time- and angle-resolved x-ray diffraction to probe structural and chemical evolution during Al-Ni intermetallic reactions. Review of Scientific Instruments, 2011, 82, 113901.	0.6	14
150	Anomalous perovskite PbRuO ₃ stabilized under high pressure. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20003-20007.	3.3	14
151	Kinetics of the B1-B2 phase transition in KCl under rapid compression. Journal of Applied Physics, 2016, 119, 045902.	1.1	14
152	Structural characteristic correlated to the electronic band gap in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2016, 94, .	1.1	14
153	Chapter 12. HIGH-PRESSURE MELTING OF DEEP MANTLE AND CORE MATERIALS. , 1998, , 369-396.		13
154	Hard x-ray radiation induced dissociation ofN2andO2molecules and the formation of ionic nitrogen oxide phases under pressure. Physical Review B, 2006, 74, .	1.1	13
155	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.	0.6	13
156	Structural Transitions in MgSiO₃ Glasses and Melts at the Coreâ€Mantle Boundary Observed via Inelastic Xâ€ray Scattering. Geophysical Research Letters, 2019, 46, 13756-13764.	1.5	13
157	Temperature induced immiscibility in the NaClâ€“H2O system at high pressure. Physics of the Earth and Planetary Interiors, 2008, 170, 107-114.	0.7	12
158	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.	3.3	12
159	Pressure-induced phase transitions and insulator-metal transitions in VO2 nanoparticles. Journal of Alloys and Compounds, 2017, 709, 260-266.	2.8	12
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