

Guoyin Shen

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

199
papers

9,583
citations

56
h-index

90
g-index

209
ext. papers

10,486
ext. citations

6.2
avg, IF

5.84
L-index

#	Paper	IF	Citations
199	Experimental Investigation of Mercury@ Magma Ocean Viscosity: Implications for the Formation of Mercury@ Cumulate Mantle, Its Subsequent Dynamic Evolution, and Crustal Petrogenesis. <i>Journal of Geophysical Research E: Planets</i> , 2021 , 126, e2021JE006946	4.1	0
198	Calibration of ruby (Cr ³⁺ :Al ₂ O ₃) and Sm ²⁺ :SrFCl luminescence lines from the melting of mercury: constraints on the initial slopes. <i>High Pressure Research</i> , 2021 , 41, 175-183	1.6	0
197	Heat-treated glassy carbon under pressure exhibiting superior hardness, strength and elasticity. <i>Journal of Materiomics</i> , 2021 , 7, 177-184	6.7	4
196	Probing the Electronic Band Gap of Solid Hydrogen by Inelastic X-Ray Scattering up to 90 GPa. <i>Physical Review Letters</i> , 2021 , 126, 036402	7.4	2
195	Density of Fe-Ni-C Liquids at High Pressures and Implications for Liquid Cores of Earth and the Moon. <i>Journal of Geophysical Research: Solid Earth</i> , 2021 , 126, e2020JB021089	3.6	2
194	Synthesis of Novel Phases in Si Nanowires Using Diamond Anvil Cells at High Pressures and Temperatures. <i>Nano Letters</i> , 2021 , 21, 1427-1433	11.5	3
193	Nitrogen in black phosphorus structure. <i>Science Advances</i> , 2020 , 6, eaba9206	14.3	38
192	Opposed type double stage cell for Mbar pressure experiment with large sample volume. <i>High Pressure Research</i> , 2020 , 40, 175-183	1.6	4
191	Crystallography of low Z material at ultrahigh pressure: Case study on solid hydrogen. <i>Matter and Radiation at Extremes</i> , 2020 , 5, 038401	4.7	11
190	Observation of 9-Fold Coordinated Amorphous TiO at High Pressure. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 374-379	6.4	6
189	Structural Evolution of SiO ₂ Glass with Si Coordination Number Greater than 6. <i>Physical Review Letters</i> , 2020 , 125, 205701	7.4	12
188	Structural Changes in Liquid Lithium under High Pressure. <i>Journal of Physical Chemistry B</i> , 2020 , 124, 7258-7262	3.4	1
187	Toward an international practical pressure scale: A proposal for an IPPS ruby gauge (IPPS-Ruby2020). <i>High Pressure Research</i> , 2020 , 40, 299-314	1.6	41
186	Compressed glassy carbon maintaining graphite-like structure with linkage formation between graphene layers. <i>Scientific Reports</i> , 2019 , 9, 7531	4.9	11
185	Sound wave velocities of Fe ₅ Si at high-pressure and high-temperature conditions: Implications to lunar and planetary cores. <i>American Mineralogist</i> , 2019 , 104, 291-299	2.9	3
184	Multimode scanning X-ray diffraction microscopy for diamond anvil cell experiments. <i>Review of Scientific Instruments</i> , 2019 , 90, 025109	1.7	11
183	Fly scan apparatus for high pressure research using diamond anvil cells. <i>Review of Scientific Instruments</i> , 2019 , 90, 015116	1.7	4

182	In situ x-ray diffraction study of polyamorphism in HO under isothermal compression and decompression. <i>Journal of Chemical Physics</i> , 2019 , 150, 244201	3.9	2
181	Nature of polyamorphic transformations in H ₂ O under isothermal compression and decompression. <i>Physical Review Materials</i> , 2019 , 3,	3.2	2
180	Experimental observations of large changes in electron density distributions in Ge. <i>Physical Review B</i> , 2019 , 100,	3.3	2
179	Structural Transitions in MgSiO ₃ Glasses and Melts at the Core-Mantle Boundary Observed via Inelastic X-ray Scattering. <i>Geophysical Research Letters</i> , 2019 , 46, 13756-13764	4.9	4
178	Real time study of grain enlargement in zirconium under room-temperature compression across the β to β' phase transition. <i>Scientific Reports</i> , 2019 , 9, 15712	4.9	3
177	Oxygen Quadclusters in SiO ₂ Glass above Megabar Pressures up to 160 GPa Revealed by X-Ray Raman Scattering. <i>Physical Review Letters</i> , 2019 , 123, 235701	7.4	9
176	A Paris-Edinburgh Cell for High-Pressure and High-Temperature Structure Studies on Silicate Liquids Using Monochromatic Synchrotron Radiation. <i>Minerals (Basel, Switzerland)</i> , 2019 , 9, 715	2.4	4
175	Ultrahigh-pressure isostructural electronic transitions in hydrogen. <i>Nature</i> , 2019 , 573, 558-562	50.4	47
174	Pressure induced transformation and subsequent amorphization of monoclinic NbO and its effect on optical properties. <i>Journal of Physics Condensed Matter</i> , 2019 , 31, 105401	1.8	4
173	Experimental evidence of low-density liquid water upon rapid decompression. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 2010-2015	11.5	28
172	Pressure-induced structural change in MgSiO 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	11.5	25
171	A CO laser heating system for high pressure-temperature experiments at HPCAT. <i>Review of Scientific Instruments</i> , 2018 , 89, 083901	1.7	12
170	Amorphous boron oxide at megabar pressures via inelastic X-ray scattering. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 5855-5860	11.5	13
169	A metastable liquid melted from a crystalline solid under decompression. <i>Nature Communications</i> , 2017 , 8, 14260	17.4	22
168	Microstructures define melting of molybdenum at high pressures. <i>Nature Communications</i> , 2017 , 8, 14562	17.4	40
167	Compressed glassy carbon: An ultrastrong and elastic interpenetrating graphene network. <i>Science Advances</i> , 2017 , 3, e1603213	14.3	77
166	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	11.5	9
165	Pressure-induced phase transitions and insulator-metal transitions in VO ₂ nanoparticles. <i>Journal of Alloys and Compounds</i> , 2017 , 709, 260-266	5.7	8

164	Kinetically Controlled Two-Step Amorphization and Amorphous-Amorphous Transition in Ice. <i>Physical Review Letters</i> , 2017 , 119, 135701	7.4	17
163	Effect of stress on melting of rhombohedral bismuth. <i>Applied Physics Letters</i> , 2017 , 110, 161904	3.4	2
162	High-pressure studies with x-rays using diamond anvil cells. <i>Reports on Progress in Physics</i> , 2017 , 80, 0161014	10.4	77
161	Structural characteristic correlated to the electronic band gap in MoS ₂ . <i>Physical Review B</i> , 2016 , 94,	3.3	9
160	Structural analysis of liquid aluminum at high pressure and high temperature using the hard sphere model. <i>Journal of Applied Physics</i> , 2016 , 120, 135901	2.5	7
159	Rutile solubility in NaF-NaCl-KCl-bearing aqueous fluids at 0.5-0.79 GPa and 250-350 °C. <i>Geochimica Et Cosmochimica Acta</i> , 2016 , 177, 170-181	5.5	36
158	Ultra-high-pressure polyamorphism in GeO ₂ glass with coordination number >6. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 3436-41	11.5	58
157	Kinetics of the B1-B2 phase transition in KCl under rapid compression. <i>Journal of Applied Physics</i> , 2016 , 119, 045902	2.5	13
156	Coexistence of multiple metastable polytypes in rhombohedral bismuth. <i>Scientific Reports</i> , 2016 , 6, 20337.9	7.9	12
155	Pressure and temperature dependence of the structure of liquid Sn up to 5.3 GPa and 1373 K. <i>High Pressure Research</i> , 2016 , 36, 533-548	1.6	2
154	High pressure X-ray emission spectroscopy at the advanced photon source. <i>High Pressure Research</i> , 2016 , 36, 315-331	1.6	3
153	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	2.3	28
152	The mobility of Nb in rutile-saturated NaCl- and NaF-bearing aqueous fluids from 1-5 GPa and 300-800 °C. <i>American Mineralogist</i> , 2015 , 100, 1600-1609	2.9	18
151	Thermal evolution of the metastable r8 and bc8 polymorphs of silicon. <i>High Pressure Research</i> , 2015 , 35, 99-116	1.6	26
150	Pressure-induced structures of Si-doped HfO ₂ . <i>Journal of Applied Physics</i> , 2015 , 117, 234102	2.5	8
149	Developments in time-resolved high pressure x-ray diffraction using rapid compression and decompression. <i>Review of Scientific Instruments</i> , 2015 , 86, 072208	1.7	26
148	The laser micro-machining system for diamond anvil cell experiments and general precision machining applications at the High Pressure Collaborative Access Team. <i>Review of Scientific Instruments</i> , 2015 , 86, 072202	1.7	54
147	New developments in laser-heated diamond anvil cell with in situ synchrotron x-ray diffraction at High Pressure Collaborative Access Team. <i>Review of Scientific Instruments</i> , 2015 , 86, 072201	1.7	70

146	Pressure-induced phase transitions and metallization in VO ₂ . <i>Physical Review B</i> , 2015 , 91,	3.3	63
145	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. <i>Review of Scientific Instruments</i> , 2015 , 86, 072205	1.7	33
144	Pressure-induced cation-cation bonding in V ₂ O ₃ . <i>Physical Review B</i> , 2015 , 92,	3.3	12
143	Pressure-induced changes in the electron density distribution in β -Ge near the β -transition. <i>Applied Physics Letters</i> , 2015 , 107, 072109	3.4	12
142	Online remote control systems for static and dynamic compression and decompression using diamond anvil cells. <i>Review of Scientific Instruments</i> , 2015 , 86, 072209	1.7	45
141	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	1.7	11
140	Preface: High-pressure studies with x-rays. <i>Review of Scientific Instruments</i> , 2015 , 86, 071901	1.7	5
139	Nanoarchitected materials composed of fullerene-like spheroids and disordered graphene layers with tunable mechanical properties. <i>Nature Communications</i> , 2015 , 6, 6212	17.4	43
138	Multiscale twin hierarchy in NiMnGa shape memory alloys with Fe and Cu. <i>Acta Materialia</i> , 2015 , 87, 344-349	4.9	8
137	Atomistic insight into viscosity and density of silicate melts under pressure. <i>Nature Communications</i> , 2014 , 5, 3241	17.4	99
136	Carbon coated face-centered cubic Ru-C nanoalloys. <i>Nanoscale</i> , 2014 , 6, 10370-6	7.7	16
135	Sound velocity of Fe β liquids at high pressure: Implications for the Moon's molten outer core. <i>Earth and Planetary Science Letters</i> , 2014 , 396, 78-87	5.3	66
134	Contrasting behavior of intermediate-range order structures in jadeite glass and melt. <i>Physics of the Earth and Planetary Interiors</i> , 2014 , 228, 281-286	2.3	11
133	18. High-pressure Apparatus Integrated with Synchrotron Radiation 2014 , 745-778		
132	High-pressure experimental studies on geo-liquids using synchrotron radiation at the Advanced Photon Source. <i>Journal of Earth Science (Wuhan, China)</i> , 2014 , 25, 939-958	2.2	6
131	Controlled formation of metastable germanium polymorphs. <i>Physical Review B</i> , 2014 , 89,	3.3	36
130	Ultralow viscosity of carbonate melts at high pressures. <i>Nature Communications</i> , 2014 , 5, 5091	17.4	93
129	Termination and hydration of forsteritic olivine (0 1 0) surface. <i>Geochimica Et Cosmochimica Acta</i> , 2014 , 145, 268-280	5.5	11

128	Chain breakage in liquid sulfur at high pressures and high temperatures. <i>Physical Review B</i> , 2014 , 89,	3.3	19
127	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	2.3	80
126	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	5.3	26
125	Anomalous perovskite PbRuO ₃ stabilized under high pressure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 20003-7	11.5	8
124	Anomaly in the viscosity of liquid KCl at high pressures. <i>Physical Review B</i> , 2013 , 87,	3.3	22
123	Spin transition of Fe ³⁺ in Al-bearing phase D: An alternative explanation for small-scale seismic scatterers in the mid-lower mantle. <i>Earth and Planetary Science Letters</i> , 2013 , 382, 1-9	5.3	19
122	Indexing of multi-particle diffraction data in a high-pressure single-crystal diffraction experiment. <i>Journal of Applied Crystallography</i> , 2013 , 46, 387-390	3.8	5
121	Direct observation of a pressure-induced precursor lattice in silicon. <i>Physical Review Letters</i> , 2012 , 109, 205503	7.4	19
120	Simultaneous structure and elastic wave velocity measurement of SiO ₂ glass at high pressures and high temperatures in a Paris-Edinburgh cell. <i>Review of Scientific Instruments</i> , 2012 , 83, 033905	1.7	48
119	Crystal structures of (Mg _{1-x} Fe _x)SiO ₃ postperovskite at high pressures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 1035-40	11.5	15
118	Oxygen-diffusion limited metal combustions in Zr, Ti, and Fe foils: Time- and angle-resolved x-ray diffraction studies. <i>Journal of Applied Physics</i> , 2012 , 111, 063528	2.5	3
117	Structure of jadeite melt at high pressures up to 4.9 GPa. <i>Journal of Applied Physics</i> , 2012 , 111, 112623	2.5	33
116	Charge transfer in spinel Co ₃ O ₄ at high pressures. <i>Journal of Physics Condensed Matter</i> , 2012 , 24, 435401	1.8	30
115	Time-Resolved Synchrotron X-ray Diffraction on Pulse Laser Heated Iron in Diamond Anvil Cell. <i>Journal of Physics: Conference Series</i> , 2012 , 377, 012108	0.3	3
114	Pressure-induced isostructural phase transition and correlation of FeAs coordination with the superconducting properties of 111-type Na(1-x)FeAs. <i>Journal of the American Chemical Society</i> , 2011 , 133, 7892-6	16.4	51
113	Time- and angle-resolved x-ray diffraction to probe structural and chemical evolution during Al-Ni intermetallic reactions. <i>Review of Scientific Instruments</i> , 2011 , 82, 113901	1.7	12
112	Application of a new composite cubic-boron nitride gasket assembly for high pressure inelastic x-ray scattering studies of carbon related materials. <i>Review of Scientific Instruments</i> , 2011 , 82, 073902	1.7	2
111	Effect of helium on structure and compression behavior of SiO ₂ glass. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 6004-7	11.5	56

110	High-pressure x-ray diffraction studies on the structure of liquid silicate using a Paris-Edinburgh type large volume press. <i>Review of Scientific Instruments</i> , 2011 , 82, 015103	1.7	53
109	High-pressure x-ray diffraction measurements on vitreous GeO ₂ under hydrostatic conditions. <i>Physical Review B</i> , 2010 , 81,	3.3	48
108	Structure of siderite FeCO ₃ to 56 GPa and hysteresis of its spin-pairing transition. <i>Physical Review B</i> , 2010 , 82,	3.3	59
107	High-pressure EXAFS study of vitreous GeO ₂ up to 44 GPa. <i>Physical Review B</i> , 2010 , 81,	3.3	44
106	Effect of dilution on the spin pairing transition in rhombohedral carbonates. <i>High Pressure Research</i> , 2010 , 30, 224-229	1.6	24
105	Compression of FeSi, Fe ₃ C, Fe _{0.95} O, and FeS under the core pressures and implication for light element in the Earth's core. <i>Journal of Geophysical Research</i> , 2010 , 115,		96
104	A portable laser heating microscope for high pressure research. <i>Journal of Physics: Conference Series</i> , 2010 , 215, 012191	0.3	19
103	High-Pressure Research at the Advanced Photon Source. <i>Synchrotron Radiation News</i> , 2010 , 23, 32-38	0.6	5
102	Size-dependent amorphization of nanoscale Y ₂ O ₃ at high pressure. <i>Physical Review Letters</i> , 2010 , 105, 095701	7.4	87
101	Strength and elastic moduli of TiN from radial x-ray diffraction under nonhydrostatic compression up to 45 GPa. <i>Journal of Applied Physics</i> , 2010 , 107, 113503	2.5	27
100	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. <i>Review of Scientific Instruments</i> , 2009 , 80, 104501	1.7	38
99	High-pressure induced phase transitions of Y ₂ O ₃ and Y ₂ O ₃ :Eu ³⁺ . <i>Applied Physics Letters</i> , 2009 , 94, 061931	3.4	69
98	High pressure induced coordination evolution in chain compound Li ₂ CuO ₂ . <i>Journal of Solid State Chemistry</i> , 2009 , 182, 3085-3090	3.3	5
97	X-ray diffraction studies and equation of state of methane at 202GPa. <i>Chemical Physics Letters</i> , 2009 , 473, 72-74	2.5	36
96	Temperature induced immiscibility in the NaCl-H ₂ O system at high pressure. <i>Physics of the Earth and Planetary Interiors</i> , 2008 , 170, 107-114	2.3	9
95	HPCAT: an integrated high-pressure synchrotron facility at the Advanced Photon Source. <i>High Pressure Research</i> , 2008 , 28, 145-162	1.6	32
94	A scanning angle energy-dispersive X-ray diffraction technique for high-pressure structure studies in diamond anvil cells. <i>High Pressure Research</i> , 2008 , 28, 193-201	1.6	4
93	Experimental aspects of inelastic X-ray scattering studies on liquids under extreme conditions (P11). <i>High Pressure Research</i> , 2008 , 28, 175-183	1.6	1

92	Rietveld structure refinement of MgGeO ₃ post-perovskite phase to 1 Mbar. <i>American Mineralogist</i> , 2008 , 93, 965-976	2.9	29
91	Anomalous compression behavior in lanthanum/cerium-based metallic glass under high pressure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 13565-8	11.5	80
90	Toward an internally consistent pressure scale. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 9182-6	11.5	460
89	Distinct thermal behavior of GeO ₂ glass in tetrahedral, intermediate, and octahedral forms. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 14576-9	11.5	27
88	Density measurements of noncrystalline materials at high pressure with diamond anvil cell. <i>Review of Scientific Instruments</i> , 2007 , 78, 103905	1.7	32
87	Intermediate states of GeO ₂ glass under pressures up to 35GPa. <i>Physical Review B</i> , 2007 , 75,	3.3	53
86	Partial melting in the iron-sulfur system at high pressure: A synchrotron X-ray diffraction study. <i>Physics of the Earth and Planetary Interiors</i> , 2007 , 162, 119-128	2.3	72
85	Crystal structure and compression of an iron-bearing Phase A to 33 GPa. <i>Physics and Chemistry of Minerals</i> , 2006 , 33, 192-199	1.6	13
84	Pressure effect on the electronic structure of iron in (Mg,Fe)(Si,Al)O ₃ perovskite: a combined synchrotron Mössbauer and X-ray emission spectroscopy study up to 100 GPa. <i>Physics and Chemistry of Minerals</i> , 2006 , 33, 575-585	1.6	70
83	Equation of state of MgGeO ₃ perovskite to 65 GPa: comparison with the post-perovskite phase. <i>Physics and Chemistry of Minerals</i> , 2006 , 33, 699-709	1.6	35
82	Double-sided laser heating system at HPCAT for in situ x-ray diffraction at high pressures and high temperatures. <i>Journal of Physics Condensed Matter</i> , 2006 , 18, S1097-103	1.8	53
81	Brillouin spectrometer interfaced with synchrotron radiation for simultaneous x-ray density and acoustic velocity measurements. <i>Review of Scientific Instruments</i> , 2006 , 77, 103905	1.7	39
80	Equation of state of the postperovskite phase synthesized from a natural (Mg,Fe)SiO ₃ orthopyroxene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 3039-43	11.5	74
79	High-pressure phases in SnO ₂ to 117 GPa. <i>Physical Review B</i> , 2006 , 73,	3.3	67
78	Hard x-ray radiation induced dissociation of N ₂ and O ₂ molecules and the formation of ionic nitrogen oxide phases under pressure. <i>Physical Review B</i> , 2006 , 74,	3.3	13
77	Thermal equation of state of Fe ₃ S and implications for sulfur in Earth's core. <i>Journal of Geophysical Research</i> , 2006 , 111, n/a-n/a		53
76	Stability and equation of state of the post-perovskite phase in MgGeO ₃ to 2 Mbar. <i>Geophysical Research Letters</i> , 2006 , 33,	4.9	26
75	High-pressure phase transition in Mn ₂ O ₃ : Application for the crystal structure and preferred orientation of the CaIrO ₃ type. <i>Geophysical Research Letters</i> , 2006 , 33,	4.9	49

74	Size-dependent pressure-induced amorphization in nanoscale TiO ₂ . <i>Physical Review Letters</i> , 2006 , 96, 135702	7.4	134
73	Phase relations of FeNi alloys at high pressure and temperature. <i>Physics of the Earth and Planetary Interiors</i> , 2006 , 155, 146-151	2.3	44
72	Experimental study of the NaCl-H ₂ O system up to 28 GPa: Implications for ice-rich planetary bodies. <i>Physics of the Earth and Planetary Interiors</i> , 2006 , 155, 152-162	2.3	29
71	High pressure high temperature studies and reactivity of FeMo ₂ N and FeMoN. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006 , 203, 831-836	1.6	25
70	X-ray diffraction and Raman studies of beryllium: Static and elastic properties at high pressures. <i>Physical Review B</i> , 2005 , 72,	3.3	36
69	X-ray diffraction study of phase stability in SiO ₂ at deep mantle conditions. <i>Earth and Planetary Science Letters</i> , 2005 , 235, 273-282	5.3	27
68	A synchrotron Mössbauer spectroscopy study of (Mg,Fe)SiO ₃ perovskite up to 120 GPa. <i>American Mineralogist</i> , 2005 , 90, 199-205	2.9	127
67	The equation of state of Al,H-bearing SiO ₂ stishovite to 58 GPa. <i>Physics and Chemistry of Minerals</i> , 2005 , 32, 466-470	1.6	13
66	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. <i>Journal of Synchrotron Radiation</i> , 2005 , 12, 637-41	2.4	13
65	Grain-size control in situ at high pressures and high temperatures in a diamond-anvil cell. <i>Journal of Synchrotron Radiation</i> , 2005 , 12, 560-5	2.4	5
64	Single-crystal synchrotron X-ray diffraction study of wüstite and magnesiowüstite at lower-mantle pressures. <i>Journal of Synchrotron Radiation</i> , 2005 , 12, 577-83	2.4	32
63	Facilities for high-pressure research with the diamond anvil cell at GSECARS. <i>Journal of Synchrotron Radiation</i> , 2005 , 12, 642-9	2.4	41
62	Nuclear resonant inelastic X-ray scattering and synchrotron Mössbauer spectroscopy with laser-heated diamond anvil cells 2005 , 397-411		4
61	Sound velocities of hot dense iron: Birch's law revisited. <i>Science</i> , 2005 , 308, 1892-4	33.3	133
60	Beating the miscibility barrier between iron group elements and magnesium by high-pressure alloying. <i>Physical Review Letters</i> , 2005 , 95, 245502	7.4	52
59	Iron-rich silicates in the Earth's D'' layer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 9751-3	11.5	92
58	Electronic spin state of iron in lower mantle perovskite. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 14027-30	11.5	160
57	Highly efficient gaseous sample loading technique for diamond anvil cells. <i>Review of Scientific Instruments</i> , 2004 , 75, 5149-5151	1.7	2

56	Ferromagnesian postperovskite silicates in the D _Q layer of the Earth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 15867-9	11.5	147
55	Compression behavior of VC0.85 up to 53 GPa. <i>International Journal of Refractory Metals and Hard Materials</i> , 2004 , 22, 129-132	4.1	39
54	Absolute temperature measurement in a laser-heated diamond anvil cell. <i>Geophysical Research Letters</i> , 2004 , 31,	4.9	33
53	High pressure induced phase transformation of SiO ₂ and GeO ₂ : difference and similarity. <i>Journal of Physics and Chemistry of Solids</i> , 2004 , 65, 1537-1545	3.9	104
52	Nuclear resonant scattering at high pressure and high temperature. <i>High Pressure Research</i> , 2004 , 24, 447-457	1.6	35
51	Stability and crystal structure of MgSiO ₃ perovskite to the core-mantle boundary. <i>Geophysical Research Letters</i> , 2004 , 31, n/a-n/a	4.9	92
50	Structure of liquid iron at pressures up to 58 GPa. <i>Physical Review Letters</i> , 2004 , 92, 185701	7.4	123
49	In situ observation of texture development in olivine, ringwoodite, magnesiowüstite and silicate perovskite at high pressure. <i>Earth and Planetary Science Letters</i> , 2004 , 226, 507-519	5.3	74
48	The structure of amorphous iron at high pressures to 67GPa measured in a diamond anvil cell. <i>Physics of the Earth and Planetary Interiors</i> , 2004 , 143-144, 481-495	2.3	18
47	In situ X-ray diffraction studies of iron to Earth-core conditions. <i>Physics of the Earth and Planetary Interiors</i> , 2004 , 143-144, 455-467	2.3	160
46	Formation of iron hydride and high-magnetite at high pressure and temperature. <i>Physics of the Earth and Planetary Interiors</i> , 2004 , 146, 313-317	2.3	16
45	Elasticity and strength of calcium silicate perovskite at lower mantle pressures. <i>Physics of the Earth and Planetary Interiors</i> , 2004 , 143-144, 93-105	2.3	37
44	Stability of magnesiowüstite in Earth's lower mantle. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 4405-8	11.5	57
43	Static compression of iron-silicon alloys: Implications for silicon in the Earth's core. <i>Journal of Geophysical Research</i> , 2003 , 108,		62
42	BbO ₂ -type high-pressure polymorph of GeO ₂ . <i>Physical Review B</i> , 2003 , 67,	3.3	34
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