

Leonid Dubrovinsky

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L-index

#	Paper	IF	Citations
4 ¹²	Finite-size and pressure effects on the Raman spectrum of nanocrystalline anatase TiO ₂ . <i>Physical Review B</i> , 2005 , 71,	3.3	331
4 ¹¹	Implementation of micro-ball nanodiamond anvils for high-pressure studies above 6 Mbar. <i>Nature Communications</i> , 2012 , 3, 1163	17.4	197
4 ¹⁰	Superhard nanocomposite of dense polymorphs of boron nitride: Noncarbon material has reached diamond hardness. <i>Applied Physics Letters</i> , 2007 , 90, 101912	3.4	177
4 ⁰⁹	Body-centered cubic iron-nickel alloy in Earth's core. <i>Science</i> , 2007 , 316, 1880-3	33.3	171
4 ⁰⁸	BX90: a new diamond anvil cell design for X-ray diffraction and optical measurements. <i>Review of Scientific Instruments</i> , 2012 , 83, 125102	1.7	169
4 ⁰⁷	Lonsdaleite is faulted and twinned cubic diamond and does not exist as a discrete material. <i>Nature Communications</i> , 2014 , 5, 5447	17.4	157
4 ⁰⁶	Experimental and theoretical identification of a new high-pressure TiO ₂ polymorph. <i>Physical Review Letters</i> , 2001 , 87, 275501	7.4	156
4 ⁰⁵	Discovery of a superhard iron tetraboride superconductor. <i>Physical Review Letters</i> , 2013 , 111, 157002	7.4	155
4 ⁰⁴	Natural NaAlSi ₃ O ₈ -hollandite in the shocked sixiangkou meteorite. <i>Science</i> , 2000 , 287, 1633-6	33.3	154
4 ⁰³	Stable intermediate-spin ferrous iron in lower-mantle perovskite. <i>Nature Geoscience</i> , 2008 , 1, 684-687	18.3	141
4 ⁰²	MossA: a program for analyzing energy-domain Mössbauer spectra from conventional and synchrotron sources. <i>Journal of Applied Crystallography</i> , 2012 , 45, 329-331	3.8	139
4 ⁰¹	Size-dependent pressure-induced amorphization in nanoscale TiO ₂ . <i>Physical Review Letters</i> , 2006 , 96, 135702	7.4	134
4 ⁰⁰	The S ³⁻ ion is stable in geological fluids at elevated temperatures and pressures. <i>Science</i> , 2011 , 331, 1052-4	33.3	128
399	Molecular dynamics of NaCl (B1 and B2) and MgO (B1) melting; two-phase simulation. <i>American Mineralogist</i> , 1996 , 81, 303-316	2.9	126
398	The ⁵⁷ Fe Synchrotron Mössbauer Source at the ESRF. <i>Journal of Synchrotron Radiation</i> , 2012 , 19, 559-69	2.4	123
397	Superhard semiconducting optically transparent high pressure phase of boron. <i>Physical Review Letters</i> , 2009 , 102, 185501	7.4	123
396	The most incompressible metal osmium at static pressures above 750 gigapascals. <i>Nature</i> , 2015 , 525, 226-9	50.4	121

395	Structural complexity of simple Fe ₂ O ₃ at high pressures and temperatures. <i>Nature Communications</i> , 2016 , 7, 10661	17.4	119
394	Terapascal static pressure generation with ultrahigh yield strength nanodiamond. <i>Science Advances</i> , 2016 , 2, e1600341	14.3	118
393	Raman Spectroscopic Study of Pressure Effects on the Spin-Crossover Coordination Polymers Fe(Pyrazine)[M(CN) ₄] ₂ H ₂ O (M = Ni, Pd, Pt). First Observation of a Piezo-Hysteresis Loop at Room Temperature. <i>Journal of Physical Chemistry B</i> , 2003 , 107, 3149-3155	3.4	111
392	Whole-cell heater for the diamond anvil cell. <i>Review of Scientific Instruments</i> , 2003 , 74, 3433-3437	1.7	110
391	Fe-N system at high pressure reveals a compound featuring polymeric nitrogen chains. <i>Nature Communications</i> , 2018 , 9, 2756	17.4	103
390	Role of disorder in the thermodynamics and atomic dynamics of glasses. <i>Physical Review Letters</i> , 2014 , 112, 025502	7.4	103
389	Planetary science. Shock compression of stishovite and melting of silica at planetary interior conditions. <i>Science</i> , 2015 , 347, 418-20	33.3	102
388	Iron-silica interaction at extreme conditions and the electrically conducting layer at the base of Earth's mantle. <i>Nature</i> , 2003 , 422, 58-61	50.4	101
387	High-pressure and high-temperature synthesis of the cubic TiO ₂ polymorph. <i>Physical Review B</i> , 2004 , 70,	3.3	96
386	A monoclinic post-stishovite polymorph of silica in the shergotty meteorite. <i>Science</i> , 2000 , 288, 1632-5	33.3	96
385	Ambient- and low-temperature synchrotron x-ray diffraction study of BaFe ₂ As ₂ and CaFe ₂ As ₂ at high pressures up to 56 GPa. <i>Physical Review B</i> , 2011 , 83,	3.3	91
384	Optical absorption and radiative thermal conductivity of silicate perovskite to 125 gigapascals. <i>Science</i> , 2008 , 322, 1529-32	33.3	91
383	Nonlinear size dependence of anatase TiO ₂ lattice parameters. <i>Applied Physics Letters</i> , 2006 , 88, 243103	3.4	91
382	High Poisson's ratio of Earth's inner core explained by carbon alloying. <i>Nature Geoscience</i> , 2015 , 8, 220-228	3.3	90
381	An ultradense polymorph of rutile with seven-coordinated titanium from the Ries crater. <i>Science</i> , 2001 , 293, 1467-70	33.3	89
380	Aggregated diamond nanorods, the densest and least compressible form of carbon. <i>Applied Physics Letters</i> , 2005 , 87, 083106	3.4	85
379	Perovskite-like Mn ₂ O ₃ : a path to new manganites. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 1494-8	16.4	82
378	Comment on "Synthesis of ultra-incompressible superhard rhenium diboride at ambient pressure". <i>Science</i> , 2007 , 318, 1550; author reply 1550	33.3	82

377	High-pressure and high-temperature in situ X-ray diffraction study of iron and corundum to 68 GPa using an internally heated diamond anvil cell. <i>Physics and Chemistry of Minerals</i> , 1998 , 25, 434-441	1.6	80
376	Partitioning of oxygen between the Earth's mantle and core. <i>Journal of Geophysical Research</i> , 2010 , 115,		77
375	Seifertite, a dense orthorhombic polymorph of silica from the Martian meteorites Shergotty and Zagami. <i>European Journal of Mineralogy</i> , 2008 , 20, 523-528	2.2	76
374	A novel gas-loading system for mechanically closing of various types of diamond anvil cells. <i>Review of Scientific Instruments</i> , 2008 , 79, 045110	1.7	76
373	A natural shock-induced dense polymorph of rutile with PbO_2 structure in the suevite from the Ries crater in Germany. <i>Earth and Planetary Science Letters</i> , 2001 , 192, 485-495	5.3	76
372	Structures of dolomite at ultrahigh pressure and their influence on the deep carbon cycle. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 13509-14	11.5	75
371	Synthesis of an orthorhombic high pressure boron phase. <i>Science and Technology of Advanced Materials</i> , 2008 , 9, 044209	7.1	75
370	Nanocrystalline diamond synthesized from C_{60} . <i>Diamond and Related Materials</i> , 2005 , 14, 16-22	3.5	74
369	Pure iron compressed and heated to extreme conditions. <i>Physical Review Letters</i> , 2007 , 99, 165505	7.4	71
368	Noblest of all metals is structurally unstable at high pressure. <i>Physical Review Letters</i> , 2007 , 98, 045503	7.4	69
367	Superior wear resistance of aggregated diamond nanorods. <i>Nano Letters</i> , 2006 , 6, 824-6	11.5	69
366	Pressure-induced Invar effect in Fe-Ni alloys. <i>Physical Review Letters</i> , 2001 , 86, 4851-4	7.4	68
365	Experimental pressure-temperature phase diagram of boron: resolving the long-standing enigma. <i>Scientific Reports</i> , 2011 , 1, 96	4.9	66
364	Synthesis of bulk superhard semiconducting BC_2 material. <i>Applied Physics Letters</i> , 2004 , 85, 1508-1510	3.4	66
363	Cubic TiO_2 as a potential light absorber in solar-energy conversion. <i>Physical Review B</i> , 2004 , 70,	3.3	64
362	Compression behavior of nanocrystalline anatase TiO_2 . <i>Solid State Communications</i> , 2003 , 125, 111-115	1.6	62
361	High-pressure behavior of iron carbide (Fe_7C_3) at inner core conditions. <i>Journal of Geophysical Research</i> , 2011 , 116,		61
360	Stability of iron-bearing carbonates in the deep Earth's interior. <i>Nature Communications</i> , 2017 , 8, 15960	17.4	59

- 359 Portable laser-heating system for diamond anvil cells. *Journal of Synchrotron Radiation*, **2009**, 16, 737-412.4 59
- 358 X-ray diffraction and Mössbauer spectroscopy study of fcc iron hydride FeH at high pressures and implications for the composition of the Earth's core. *Earth and Planetary Science Letters*, **2011**, 307, 409-414 57
- 357 Single-crystal X-ray diffraction at megabar pressures and temperatures of thousands of degrees. *High Pressure Research*, **2010**, 30, 620-633 1.6 57
- 356 Unusual compression behavior of anatase TiO₂ nanocrystals. *Physical Review Letters*, **2009**, 103, 075505 7.4 57
- 355 High-pressure phase transition in LiBH₄. *Journal of Solid State Chemistry*, **2007**, 180, 510-517 3.3 57
- 354 Experimental vibrational Grüneisen ratio values for α -iron up to 330 GPa at 300 K. *Geophysical Research Letters*, **2001**, 28, 399-402 4.9 57
- 353 Letter. Optical absorption spectra of ferropericlase to 84 GPa. *American Mineralogist*, **2007**, 92, 433-436 2.9 56
- 352 Temperature-induced ruby fluorescence shifts up to a pressure of 150 GPa in an externally heated diamond anvil cell. *High Temperatures - High Pressures*, **1999**, 31, 299-305 1.3 56
- 351 Phase transition in CaSiO₃ perovskite. *Earth and Planetary Science Letters*, **2007**, 260, 564-569 5.3 55
- 350 Evidence for fractional crystallization of wadsleyite and ringwoodite from olivine melts in chondrules entrained in shock-melt veins. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 8542-7 11.5 54
- 349 Beating the miscibility barrier between iron group elements and magnesium by high-pressure alloying. *Physical Review Letters*, **2005**, 95, 245502 7.4 52
- 348 An insight into what superconducts in polycrystalline boron-doped diamonds based on investigations of microstructure. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 11619-22 11.5 51
- 347 Pressure-induced magnetization in FeO: evidence from elasticity and Mössbauer spectroscopy. *Physical Review Letters*, **2004**, 93, 215502 7.4 51
- 346 Carbonatitic mineralogy of natural diamond-forming fluids. *Earth and Planetary Science Letters*, **2010**, 291, 126-137 5.3 50
- 345 High-Pressure Polymeric Nitrogen Allotrope with the Black Phosphorus Structure. *Physical Review Letters*, **2020**, 124, 216001 7.4 49
- 344 Importance of correlation effects in hcp iron revealed by a pressure-induced electronic topological transition. *Physical Review Letters*, **2013**, 110, 117206 7.4 49
- 343 Effect of iron oxidation state on the electrical conductivity of the Earth's lower mantle. *Nature Communications*, **2013**, 4, 1427 17.4 49
- 342 Sound wave velocities of fcc FeNi alloy at high pressure and temperature by mean of inelastic X-ray scattering. *Physics of the Earth and Planetary Interiors*, **2007**, 164, 83-89 2.3 48

341	Peierls distortion, magnetism, and high hardness of manganese tetraboride. <i>Physical Review B</i> , 2014 , 89,	3.3	47
340	Simultaneous volume measurements of post-perovskite and perovskite in MgSiO ₃ and their thermal equations of state. <i>Earth and Planetary Science Letters</i> , 2008 , 265, 515-524	5.3	46
339	Titanium metal at high pressure: Synchrotron experiments and ab initio calculations. <i>Physical Review B</i> , 2004 , 69,	3.3	46
338	Molecular dynamics of stishovite melting. <i>Geochimica Et Cosmochimica Acta</i> , 1995 , 59, 1883-1889	5.5	46
337	High-Pressure Synthesis of a Nitrogen-Rich Inclusion Compound ReN ₂ xN with Conjugated Polymeric Nitrogen Chains. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 9048-9053	16.4	46
336	Portable double-sided laser-heating system for Mössbauer spectroscopy and X-ray diffraction experiments at synchrotron facilities with diamond anvil cells. <i>Review of Scientific Instruments</i> , 2012 , 83, 124501	1.7	44
335	FCC/BCC phase boundary in lead. <i>Solid State Communications</i> , 2002 , 122, 125-127	1.6	44
334	Charge-ordering transition in iron oxide Fe ₄ O ₅ involving competing dimer and trimer formation. <i>Nature Chemistry</i> , 2016 , 8, 501-8	17.6	44
333	Experimental evidence of superionic conduction in H ₂ O ice. <i>Journal of Chemical Physics</i> , 2012 , 137, 194505	9.5	42
332	A new natural, super-hard, transparent polymorph of carbon from the Popigai impact crater, Russia. <i>Comptes Rendus - Geoscience</i> , 2003 , 335, 889-898	1.4	42
331	Equation of state and thermal expansivity of LiF and NaF. <i>High Pressure Research</i> , 2007 , 27, 483-489	1.6	41
330	High-pressure synthesis of ultraincompressible hard rhenium nitride pernitride Re(N)(N) stable at ambient conditions. <i>Nature Communications</i> , 2019 , 10, 2994	17.4	40
329	Low-spin Fe ²⁺ in silicate perovskite and a possible layer at the base of the lower mantle. <i>Physics of the Earth and Planetary Interiors</i> , 2010 , 180, 215-221	2.3	40
328	Synthesis of magnesium-nitrogen salts of polynitrogen anions. <i>Nature Communications</i> , 2019 , 10, 4515	17.4	39
327	Electron-deficient and polycenter bonds in the high-pressure β 28 phase of boron. <i>Physical Review Letters</i> , 2011 , 106, 215502	7.4	39
326	Thermodynamic data for the phases in the CaSiO ₃ system. <i>Geochimica Et Cosmochimica Acta</i> , 1997 , 61, 1181-1191	5.5	39
325	Effect of non-hydrostatic conditions on the elastic behaviour of magnetite: an in situ single-crystal X-ray diffraction study. <i>Physics and Chemistry of Minerals</i> , 2007 , 34, 627-635	1.6	39
324	High-pressure spectroscopic study of siderite (FeCO ₃) with a focus on spin crossover. <i>American Mineralogist</i> , 2015 , 100, 2670-2681	2.9	38

323	A hard oxide semiconductor with a direct and narrow bandgap and switchable p-n electrical conduction. <i>Advanced Materials</i> , 2014 , 26, 8185-91	24	38
322	A class of new high-pressure silica polymorphs. <i>Physics of the Earth and Planetary Interiors</i> , 2004 , 143-144, 231-240	2.3	38
321	Equation of state of MgSiO ₃ with the perovskite structure based on experimental measurement. <i>American Mineralogist</i> , 1999 , 84, 226-232	2.9	38
320	Electronic properties and magnetism of iron at the Earth's inner core conditions. <i>Physical Review B</i> , 2013 , 87,	3.3	37
319	Molecular and lattice dynamics study of the MgO-SiO ₂ system using a transferable interatomic potential. <i>Geochimica Et Cosmochimica Acta</i> , 1996 , 60, 1645-1656	5.5	37
318	High-Pressure NiAs-Type Modification of FeN. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 7302-7306	3.06	36
317	Melting and decomposition of MgCO ₃ at pressures up to 84 GPa. <i>Physics and Chemistry of Minerals</i> , 2015 , 42, 73-81	1.6	36
316	Discovery of Fe ₇ O ₉ : a new iron oxide with a complex monoclinic structure. <i>Scientific Reports</i> , 2016 , 6, 32852	4.9	36
315	Pressure-induced hydrogen bond symmetrization in iron oxyhydroxide. <i>Physical Review Letters</i> , 2013 , 111, 175501	7.4	36
314	Letter. Akaogiite: An ultra-dense polymorph of TiO ₂ with the baddeleyite-type structure, in shocked garnet gneiss from the Ries Crater, Germany. <i>American Mineralogist</i> , 2010 , 95, 892-895	2.9	36
313	MELTING CURVE OF WATER STUDIED IN EXTERNALLY HEATED DIAMOND-ANVIL CELL. <i>High Pressure Research</i> , 2003 , 23, 307-311	1.6	36
312	Chemical interaction of Fe and Al ₂ O ₃ as a source of heterogeneity at the Earth's core-mantle boundary. <i>Nature</i> , 2001 , 412, 527-9	50.4	36
311	Magnesium silicate perovskite and effect of iron oxidation state on its bulk sound velocity at the conditions of the lower mantle. <i>Earth and Planetary Science Letters</i> , 2014 , 393, 182-186	5.3	35
310	Structurally hidden magnetic transitions in Fe ₃ C at high pressures. <i>Physical Review B</i> , 2012 , 85,	3.3	35
309	Short-range order and Fe clustering in Mg _{1-x} Fe _x O under high pressure. <i>Physical Review B</i> , 2009 , 80,	3.3	35
308	Disorder-order transitions in the perovskite metal-organic frameworks [(CH ₃) ₂ NH ₂][M(HCOO) ₃] at high pressure. <i>CrystEngComm</i> , 2018 , 20, 3512-3521	3.3	35
307	BbO ₂ -type high-pressure polymorph of GeO ₂ . <i>Physical Review B</i> , 2003 , 67,	3.3	34
306	Oxidized iron in garnets from the mantle transition zone. <i>Nature Geoscience</i> , 2018 , 11, 144-147	18.3	32

305	Disorder and defects are not intrinsic to boron carbide. <i>Scientific Reports</i> , 2016 , 6, 19330	4.9	32
304	The use of ultrasonic cavitation for near-surface structuring of robust and low-cost AlNi catalysts for hydrogen production. <i>Green Chemistry</i> , 2015 , 17, 2745-2749	10	31
303	Lower mantle electrical conductivity based on measurements of Al, Fe-bearing perovskite under lower mantle conditions. <i>Earth and Planetary Science Letters</i> , 2014 , 393, 165-172	5.3	31
302	Local Oxygen-Vacancy Ordering and Twinned Octahedral Tilting Pattern in the Bi _{0.81} Pb _{0.19} FeO _{2.905} Cubic Perovskite. <i>Chemistry of Materials</i> , 2012 , 24, 1378-1385	9.6	31
301	Raman spectroscopy of glassy carbon up to 60 GPa. <i>Applied Physics Letters</i> , 2013 , 102, 121909	3.4	31
300	Stishovite and post-stishovite polymorphs of silica in the shergotty meteorite: their nature, petrographic settings versus theoretical predictions and relevance to Earth's mantle. <i>Journal of Physics and Chemistry of Solids</i> , 2004 , 65, 1597-1608	3.9	30
299	Carbon transport in diamond anvil cells. <i>High Temperatures - High Pressures</i> , 2003 , 35/36, 237-249	1.3	30
298	Observation of nuclear quantum effects and hydrogen bond symmetrisation in high pressure ice. <i>Nature Communications</i> , 2018 , 9, 2766	17.4	29
297	The effect of Fe spin crossovers on its partitioning behavior and oxidation state in a pyrolytic Earth's lower mantle system. <i>Earth and Planetary Science Letters</i> , 2014 , 399, 86-91	5.3	29
296	Carbon polymorphism in shocked meteorites: Evidence for new natural ultrahard phases. <i>Earth and Planetary Science Letters</i> , 2010 , 290, 150-154	5.3	29
295	Structural stability of a golden semiconducting orthorhombic polymorph of Ti ₂ O ₃ under high pressures and high temperatures. <i>Journal of Physics Condensed Matter</i> , 2010 , 22, 375402	1.8	28
294	Compressibility measurements on iridium. <i>Journal of Alloys and Compounds</i> , 2000 , 306, 26-29	5.7	28
293	Laser heating setup for diamond anvil cells for in situ synchrotron and in house high and ultra-high pressure studies. <i>Review of Scientific Instruments</i> , 2019 , 90, 104501	1.7	27
292	Spin-induced multiferroicity in the binary perovskite manganite MnO. <i>Nature Communications</i> , 2018 , 9, 2996	17.4	27
291	High pressure phase transformation of jadeite and stability of NaAlSiO ₄ with calcium-ferrite type structure in the lower mantle conditions. <i>Geophysical Research Letters</i> , 2000 , 27, 2025-2028	4.9	27
290	In situ X-ray study of perovskite (MgSiO ₃): Phase transition and dissociation at mantle conditions. <i>European Journal of Mineralogy</i> , 1998 , 10, 1275-1282	2.2	27
289	Iron oxidation state of FeTiO ₃ under high pressure. <i>Physical Review B</i> , 2009 , 79,	3.3	26
288	Pressure-induced isostructural phase transformation in EB28. <i>Physical Review B</i> , 2010 , 82,	3.3	26

287	Raman spectroscopic study of PbCO ₃ at high pressures and temperatures. <i>Physics and Chemistry of Minerals</i> , 2010 , 37, 45-56	1.6	26
286	Pressure tuning Raman spectroscopy of the spin crossover coordination polymer Fe(C ₅ H ₅ N) ₂ [Ni(CN) ₄]. <i>Journal of Physics Condensed Matter</i> , 2004 , 16, S1129-S1136	1.8	26
285	Revised calibration of the Sm:SrB ₄ O ₇ pressure sensor using the Sm-doped yttrium-aluminum garnet primary pressure scale. <i>Journal of Applied Physics</i> , 2015 , 117, 145902	2.5	25
284	On origin of lower-mantle diamonds and their primary inclusions. <i>Physics of the Earth and Planetary Interiors</i> , 2014 , 228, 176-185	2.3	25
283	Oxidation state of the lower mantle: In situ observations of the iron electronic configuration in bridgmanite at extreme conditions. <i>Earth and Planetary Science Letters</i> , 2015 , 423, 78-86	5.3	25
282	Diamond as a high pressure gauge up to 2.7 Mbar. <i>Applied Physics Letters</i> , 2010 , 97, 251903	3.4	25
281	Structural characterization of the FeTiO ₃ MnTiO ₃ solid solution. <i>Journal of Solid State Chemistry</i> , 2010 , 183, 2483-2489	3.3	25
280	Hydrogenation of C ₆₀ at 2GPa pressure and high temperature. <i>Chemical Physics</i> , 2006 , 325, 445-451	2.3	25
279	Size effects on the structure and phase transition behavior of baddeleyite TiO ₂ . <i>Solid State Communications</i> , 2005 , 134, 541-546	1.6	25
278	Emissivity measurements on some metals and oxides using multiwavelength spectral radiometry. <i>High Temperatures - High Pressures</i> , 1999 , 31, 393-399	1.3	25
277	Stability of Fe,Al-bearing bridgmanite in the lower mantle and synthesis of pure Fe-bridgmanite. <i>Science Advances</i> , 2016 , 2, e1600427	14.3	25
276	Raman study of MgCO ₃ BeCO ₃ carbonate solid solution at high pressures up to 55 GPa. <i>Physics and Chemistry of Minerals</i> , 2014 , 41, 633-638	1.6	24
275	Magnetic flux tailoring through Lenz lenses for ultras-small samples: A new pathway to high-pressure nuclear magnetic resonance. <i>Science Advances</i> , 2017 , 3, eaao5242	14.3	24
274	Effect of high pressure on the crystal structure and electronic properties of magnetite below 25 GPa. <i>American Mineralogist</i> , 2012 , 97, 128-133	2.9	24
273	High-pressure behavior of otavite (CdCO ₃). <i>Journal of Alloys and Compounds</i> , 2010 , 508, 251-257	5.7	24
272	Stability of the high-pressure monoclinic phases in Ce and Pr metals: Comparative diffraction study and phenomenological theory. <i>Physical Review B</i> , 2004 , 70,	3.3	24
271	Metastable silica high pressure polymorphs as structural proxies of deep Earth silicate melts. <i>Nature Communications</i> , 2018 , 9, 4789	17.4	24
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- 269 The high-pressure behaviour of the 10 $\bar{1}$ phase: A spectroscopic and diffractometric study up to 42 GPa. *Earth and Planetary Science Letters*, **2006**, 246, 444-457 5.3 23
- 268 X-ray diffraction under non-hydrostatic conditions in experiments with diamond anvil cell: w $\bar{1}$ ite (FeO) as an example. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2000**, 288, 187-190 5.3 23
- 267 Iron spin state in silicate perovskite at conditions of the Earth's deep interior. *High Pressure Research*, **2013**, 33, 663-672 1.6 22
- 266 High-Pressure Synthesis of Dirac Materials: Layered van der Waals Bonded BeN₄ Polymorph. *Physical Review Letters*, **2021**, 126, 175501 7.4 22
- 265 Experimental evidence of orbital order in $\bar{1}$ 2 and $\bar{1}$ 28 polymorphs of elemental boron. *Physical Review B*, **2013**, 88, 3.3 21
- 264 High-pressure behavior of structural, optical, and electronic transport properties of the golden Th2S3-type Ti2O3. *Physical Review B*, **2013**, 88, 3.3 21
- 263 Novel high pressure monoclinic Fe2O3 polymorph revealed by single-crystal synchrotron X-ray diffraction studies. *High Pressure Research*, **2013**, 33, 534-545 1.6 21
- 262 Hyperfine splitting and room-temperature ferromagnetism of Ni at multimegabar pressure. *Physical Review Letters*, **2013**, 111, 157601 7.4 21
- 261 Investigation into high-pressure behavior of MnTiO3: X-ray diffraction and Raman spectroscopy with diamond anvil cells. *Geoscience Frontiers*, **2011**, 2, 107-114 6 21
- 260 High-pressure high-temperature synthesis of Cr2O3 and Ga2O3. *High Pressure Research*, **2011**, 31, 23-29 1.6 21
- 259 Development of micro-XANES mapping in the diamond anvil cell. *Journal of Synchrotron Radiation*, **2009**, 16, 376-9 2.4 21
- 258 High pressure synthesis of single crystals of $\bar{1}$ boron. *Journal of Crystal Growth*, **2011**, 321, 162-166 1.6 21
- 257 Structural and magnetic properties of polymerized C60 with Fe. *European Physical Journal B*, **2007**, 55, 57-62 1.2 21
- 256 Stability of (Mg_{0.5}Fe_{0.5})O and (Mg_{0.8}Fe_{0.2})O magnesiowustites in the lower mantle. *European Journal of Mineralogy*, **2001**, 13, 857-861 2.2 21
- 255 Experimental and theoretical investigations on eskolaite (Cr2O3) at high pressures. *Journal of Alloys and Compounds*, **2000**, 302, 16-20 5.7 21
- 254 Synthesis of FeN at 180 GPa and its crystal structure from a submicron-sized grain. *Acta Crystallographica Section E: Crystallographic Communications*, **2018**, 74, 1392-1395 0.7 21
- 253 Raman spectroscopy investigation of alpha boron at elevated pressures and temperatures. *Solid State Communications*, **2013**, 154, 34-39 1.6 20
- 252 Hyperspectral EXANES mapping in the diamond-anvil cell: analytical procedure applied to the decomposition of (Mg,Fe)-ringwoodite at the upper/lower mantle boundary. *High Pressure Research*, **2008**, 28, 665-673 1.6 20

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250	Compressional pathways of Cristobalite, structure of cristobalite X-I, and towards the understanding of seifertite formation. <i>Nature Communications</i> , 2017 , 8, 15647	17.4	19
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