Barbara Lavina

List of Publications by Year in Descending Order

42 papers	853 citations	14 h-index	28 g-index
53 ext. papers	978 ext. citations	3.7 avg, IF	3.86 L-index

#	Paper	IF	Citations
42	Sound velocity and compressibility of melts along the hedenbergite (CaFeSi2O6)-diopside (CaMgSi2O6) join at high pressure: Implications for stability and seismic signature of Fe-rich melts in the mantle. *Earth and Planetary Science Letters*, **2022**, 577, 117250	5.3	1
41	Loss and Isotopic Fractionation of Alkali Elements during Diffusion-Limited Evaporation from Molten Silicate: Theory and Experiments. *ACS Earth and Space Chemistry*, **2021**, 5, 755-784	3.2	6
40	Probing structure–property relationship in chemical vapor deposited hybrid perovskites by pressure and temperature. *Journal of Materials Research*, **2021**, 36, 1805-1812	2.5	1
39	The Water-Fe-Pressure dependent single-crystal elastic properties of wadsleyite: Implications for the seismic anisotropy in the upper Mantle Transition Zone. *Earth and Planetary Science Letters*, **2021**, 565, 116955	5.3	6
38	Synthesis and chemical stability of technetium nitrides. *Chemical Communications*, **2021**, 57, 8079-8082	5.8	1
37	Piezomagnetic switching and complex phase equilibria in uranium dioxide. *Communications Materials*, **2021**, 2,	6	4
36	X-ray diffraction and equation of state of the C-S-H room-temperature superconductor. *Journal of Chemical Physics*, **2021**, 155, 114703	3.9	7
35	Stability of the sc16 polymorph of GaAs. *Journal of Physics and Chemistry of Solids*, **2021**, 159, 110233	3.9	0
34	Thermal Analysis, Compressibility, and Decomposition of Synthetic Bastnäsite-(La) to Lanthanum Oxyfluoride. *Minerals (Basel, Switzerland)*, **2020**, 10, 212	2.4	0
33	Coupling of organic cation and inorganic lattice in methylammonium lead halide perovskites: Insights into a pressure-induced isostructural phase transition. *Physical Review Materials*, **2020**, 4,	3.2	4
32	The novel high-pressure/high-temperature compound CoP determined from synchrotron data. *Acta Crystallographica Section E: Crystallographic Communications*, **2020**, 76, 1665-1668	0.7	1
31	Phosphorus Dimerization in Gallium Phosphide at High Pressure. *Inorganic Chemistry*, **2018**, 57, 2432-2437	5.1	7
30	The Structure of Ferroselite, FeSe2, at Pressures up to 46 GPa and Temperatures down to 50 K: A Single-Crystal Micro-Diffraction Analysis. *Crystals*, **2018**, 8, 289	2.3	6
29	High-pressure structural, elastic, and thermodynamic properties of zircon-type HoPO and TmPO. *Journal of Physics Condensed Matter*, **2017**, 29, 095401	1.8	31
28	High pressure effects on U L3 x-ray absorption in partial fluorescence yield mode and single crystal x-ray diffraction in the heavy fermion compound UCd11. *Journal of Physics Condensed Matter*, **2016**, 28, 105601	1.8	6
27	Equation of state for technetium from X-ray diffraction and first-principle calculations. *Journal of Physics and Chemistry of Solids*, **2016**, 95, 6-11	3.9	4
26	Unraveling the complexity of iron oxides at high pressure and temperature: Synthesis of Fe5O6. *Science Advances*, **2015**, 1, e1400260	14.3	51

25	Chemical composition, crystal structure, and their relationships with the intrinsic properties of spinel-type crystals based on bond valences. *Inorganic Chemistry*, **2014**, 53, 5986-92	5.1	27
24	Modern X-ray Diffraction Methods in Mineralogy and Geosciences. *Reviews in Mineralogy and Geochemistry*, **2014**, 78, 1-31	7.1	26
23	Nuclear forward scattering and first-principles studies of the iron oxide phase Fe4O5. *Physical Review B*, **2014**, 90,	3.3	7
22	Synthesis and microdiffraction at extreme pressures and temperatures. *Journal of Visualized Experiments*, **2013**,	1.6	4
21	Magneto-elastic coupling in compressed Fe7C3 supports carbon in Earth's inner core. *Geophysical Research Letters*, **2012**, 39,	4.9	53
20	Structural and electronic evolution of Cr2O3 on compression to 55 GPa. *Journal of Solid State Chemistry*, **2011**, 184, 3040-3049	3.3	21
19	Discovery of the recoverable high-pressure iron oxide Fe4O5. *Proceedings of the National Academy of Sciences of the United States of America*, **2011**, 108, 17281-5	11.5	94
18	Pressure-induced development of bonding in NiAs type compounds and polymorphism of NiP. *Journal of Solid State Chemistry*, **2011**, 184, 1997-2003	3.3	13
17	High-pressure X-ray diffraction and X-ray emission studies on iron-bearing silicate perovskite under high pressures. *High Pressure Research*, **2010**, 30, 230-237	1.6	7
16	Structure of siderite FeCO3 to 56 GPa and hysteresis of its spin-pairing transition. *Physical Review B* , **2010**, 82,	3.3	59
15	Effect of dilution on the spin pairing transition in rhombohedral carbonates. *High Pressure Research*, **2010**, 30, 224-229	1.6	24
14	Closure temperatures of intracrystalline ordering in anatectic and metamorphic hercynite, Fe2+Al2O4. *American Mineralogist*, **2009**, 94, 657-665	2.9	11
13	Siderite at lower mantle conditions and the effects of the pressure-induced spin-pairing transition. *Geophysical Research Letters*, **2009**, 36,	4.9	67
12	Structure and behavior of the barringerite Ni end-member, Ni2P, at deep Earth conditions and implications for natural Fe-Ni phosphides in planetary cores. *Journal of Geophysical Research*, **2009**, 114,		14
11	High-pressure polymorphism of Fe2P and its implications for meteorites and Earth's core. *Geophysical Research Letters*, **2008**, 35,	4.9	48
10	Investigation of synthetic Mg1.3V1.7O4 spinel with MgO inclusions: Case study of a spinel with an apparently occupied interstitial site. *American Mineralogist*, **2007**, 92, 1031-1037	2.9	6
9	Tyrrellite, Cu(Co0.68Ni0.32)2Se4, isostructural with spinel. *Acta Crystallographica Section C: Crystal Structure Communications*, **2007**, 63, i73-4		0
8	An experimental study of the oxidation state of vanadium in spinel and basaltic melt with implications for the origin of planetary basalt. *American Mineralogist*, **2006**, 91, 1643-1656	2.9	65

7	The crystal structure of dissakisite-(La) and structural variations after annealing of radiation damage. *American Mineralogist*, **2006**, 91, 104-110	2.9	8
6	Controlled time-temperature oxidation reaction in a synthetic Mg-hercynite. *Physics and Chemistry of Minerals*, **2005**, 32, 83-88	1.6	11
5	Single-crystal X-ray diffraction of spinels from the San Carlos Volcanic Field, Arizona: Spinel as a geothermometer. *American Mineralogist*, **2005**, 90, 1900-1908	2.9	23
4	Structure modelling and cation partitioning of spinel solid solutions at high T,P conditions. *Physics and Chemistry of Minerals*, **2004**, 31, 45-51	1.6	1
3	Cation distribution and cooling rates of Cr-substituted Mg-Al spinel from the Olkhon metamorphic complex, Russia. *European Journal of Mineralogy*, **2003**, 15, 435-441	2.2	7
2	Crystal chemistry of some Mg, Cr, V normal spinels from Sludyanka (Lake Baikal, Russia): the influence of V3+ on structural stability. *Physics and Chemistry of Minerals*, **2003**, 30, 599-605	1.6	5
1	Cation distribution and structure modelling of spinel solid solutions. *Physics and Chemistry of Minerals*, **2002**, 29, 10-18	1.6	114