Liping Wang

List of Publications by Citations

99 papers	2,317 citations	27 h-index	43 g-index
107 ext. papers	2,659 ext. citations	3.9 avg, IF	4.41 L-index

#	Paper	IF	Citations
99	A new molybdenum nitride catalyst with rhombohedral MoS2 structure for hydrogenation applications. *Journal of the American Chemical Society*, **2015**, 137, 4815-22	16.4	148
98	New calibration of infrared measurement of dissolved water in rhyolitic glasses. *Geochimica Et Cosmochimica Acta*, **1997**, 61, 3089-3100	5.5	128
97	Thermal equations of state of the □□and □phases of zirconium. *Physical Review B*, **2005**, 71,	3.3	93
96	Diffusion of the hydrous component in pyrope. *American Mineralogist*, **1996**, 81, 706-718	2.9	71
95	In Situ XRD Studies of ZnO/GaN Mixtures at High Pressure and High Temperature: Synthesis of Zn-Rich (Ga1□Znx)(N1□Ox) Photocatalysts. *Journal of Physical Chemistry C*, **2010**, 114, 1809-1814	3.8	66
94	Weakening of calcium iridate during its transformation from perovskite to post-perovskite. *Nature Geoscience*, **2009**, 2, 794-797	18.3	66
93	Reaction mechanism studies towards effective fabrication of lithium-rich anti-perovskites Li3OX (X= Cl, Br). *Solid State Ionics*, **2016**, 284, 14-19	3.3	58
92	Experimental constraints on the phase diagram of elemental zirconium. *Journal of Physics and Chemistry of Solids*, **2005**, 66, 1213-1219	3.9	58
91	Mineral inclusions in pyrope crystals from Garnet Ridge, Arizona, USA: implications for processes in the upper mantle. *Contributions To Mineralogy and Petrology*, **1999**, 135, 164-178	3.5	58
90	New measurements of activation volume in olivine under anhydrous conditions. *Physics of the Earth and Planetary Interiors*, **2009**, 172, 67-73	2.3	57
89	Elasticity of polycrystalline pyrope (Mg3Al2Si3O12) to 9GPa and 1000□C. *Physics of the Earth and Planetary Interiors*, **2006**, 155, 179-190	2.3	57
88	In situ x-ray diffraction study of silicon at pressures up to 15.5 GPa and temperatures up to 1073 K. *Physical Review B*, **2003**, 68,	3.3	54
87	Crystal structures, elastic properties, and hardness of high-pressure synthesized CrB2 and CrB4. *Journal of Superhard Materials*, **2014**, 36, 279-287	0.9	43
86	Experimental invalidation of phase-transition-induced elastic softening in CrN. *Physical Review B*, **2012**, 86,	3.3	42
85	Thermal equations of state for titanium obtained by high pressure□emperature diffraction studies. *Physical Review B*, **2008**, 78,	3.3	42
84	Network rigidity in GeSe2 glass at high pressure. *Physical Review Letters*, **2008**, 100, 115501	7.4	41
83	Vanadium Diboride (VB) Synthesized at High Pressure: Elastic, Mechanical, Electronic, and Magnetic Properties and Thermal Stability. *Inorganic Chemistry*, **2018**, 57, 1096-1105	5.1	39

82	Synthesis, Hardness, and Electronic Properties of Stoichiometric VN and CrN. *Crystal Growth and Design*, **2016**, 16, 351-358	3.5	38
81	Precise stress measurements with white synchrotron x rays. *Review of Scientific Instruments*, **2010**, 81, 013903	1.7	37
80	Fe-Mg order-disorder in orthopyroxenes. *Geochimica Et Cosmochimica Acta*, **2005**, 69, 5777-5788	5.5	37
79	Pressure-Induced Amorphization and Phase Transformations in LiAlSiO4. *Chemistry of Materials*, **2005**, 17, 2817-2824	9.6	35
78	Thermal equation of state of rhenium diboride by high pressure-temperature synchrotron x-ray studies. *Physical Review B*, **2008**, 78,	3.3	31
77	Thermomechanics of nanocrystalline nickel under high pressure-temperature conditions. *Nano Letters*, **2007**, 7, 426-32	11.5	31
76	Do Reuss and Voigt bounds really bound in high-pressure rheology experiments?. *Journal of Physics Condensed Matter*, **2006**, 18, S1049-59	1.8	29
75	Elasticity of phase zirconium. *Physical Review B*, **2007**, 76,	3.3	28
74	In situ X-ray diffraction study of germanium at pressures up to 11 GPa and temperatures up to 950K. *Journal of Physics and Chemistry of Solids*, **2003**, 64, 2113-2119	3.9	27
73	Enhanced ionic conductivity with Li7O2Br3 phase in Li3OBr anti-perovskite solid electrolyte. *Applied Physics Letters*, **2016**, 109, 101904	3.4	27
72	Deformation of olivine at subduction zone conditions determined from in situ measurements with synchrotron radiation. *Physics of the Earth and Planetary Interiors*, **2011**, 186, 23-35	2.3	26
71	The strength of moissanite. *American Mineralogist*, **2002**, 87, 1005-1008	2.9	26
70	Constitutive law and flow mechanism in diamond deformation. *Scientific Reports*, **2012**, 2, 876	4.9	25
69	Plastic deformation of silicon between 20 C and 425 C. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2007**, 4, 3110-3114		25
68	Soft and Self-Adhesive Thermal Interface Materials Based on Vertically Aligned, Covalently Bonded Graphene Nanowalls for Efficient Microelectronic Cooling. *Advanced Functional Materials*, **2021**, 31, 2104062	15.6	25
67	Phase-transition induced elastic softening and band gap transition in semiconducting PbS at high pressure. *Inorganic Chemistry*, **2013**, 52, 8638-43	5.1	24
66	Diamond-cBN alloy: A universal cutting material. *Applied Physics Letters*, **2015**, 107, 101901	3.4	23
65	High pressure-high temperature synthesis of lithium-rich Li3O(Cl, Br) and Li3Cax/2OCl anti-perovskite halides. *Inorganic Chemistry Communication*, **2014**, 48, 140-143	3.1	23

64	Structural Studies of the Natural Antimonian Pyrochlores. *Journal of Solid State Chemistry*, **1998**, 141, 562-569	3.3	23
63	The elastic properties of β-Mg2SiO4 from 295 to 660K and implications on the composition of Earth's upper mantle. *Physics of the Earth and Planetary Interiors*, **2007**, 162, 22-31	2.3	23
62	Pressure and temperature dependence of the elasticity of pyrope-majorite [Py60Mj40 and Py50Mj50] garnets solid solution measured by ultrasonic interferometry technique. *Physics of the Earth and Planetary Interiors*, **2009**, 174, 105-112	2.3	22
61	Thermal equation of state of copper studied by high P-T synchrotron x-ray diffraction. *Applied Physics Letters*, **2009**, 94, 071904	3.4	22
60	Synthesis and structure of perovskite ScMnO3. *Inorganic Chemistry*, **2013**, 52, 9692-7	5.1	21
59	Synthesis of Onion-Like δ-MoN Catalyst for Selective Hydrogenation. *Journal of Physical Chemistry C*, **2017**, 121, 19451-19460	3.8	21
58	Thermal equations of state and phase relation of PbTiO3: A high P-T synchrotron x-ray diffraction study. *Journal of Applied Physics*, **2011**, 110, 084103	2.5	21
57	Experimental constraints on the phase diagram of titanium metal. *Journal of Physics and Chemistry of Solids*, **2008**, 69, 2559-2563	3.9	21
56	Kinetics of SiC formation during high P-T reaction between diamond and silicon. *Diamond and Related Materials*, **2005**, 14, 1611-1615	3.5	21
55	Thermal equation of state of silicon carbide. *Applied Physics Letters*, **2016**, 108, 061906	3.4	21
54	Elasticity and sound velocities of polycrystalline grossular garnet (Ca3Al2Si3O12) at simultaneous high pressures and high temperatures. *Physics of the Earth and Planetary Interiors*, **2014**, 228, 80-87	2.3	20
53	Yield strength enhancement of MgO by nanocrystals. *Journal of Materials Science*, **2005**, 40, 5763-5766	4.3	19
52	Revisit of Pressure-Induced Phase Transition in PbSe: Crystal Structure, and Thermoelastic and Electrical Properties. *Inorganic Chemistry*, **2015**, 54, 4981-9	5.1	18
51	Pressure-induced structural and electronic transitions, metallization, and enhanced visible-light responsiveness in layered rhenium disulphide. *Physical Review B*, **2018**, 97,	3.3	18
50	Sulfur-catalyzed phase transition in MoS2 under high pressure and temperature. *Journal of Physics and Chemistry of Solids*, **2014**, 75, 100-104	3.9	18
49	Superhard diamond/tungsten carbide nanocomposites. *Applied Physics Letters*, **2011**, 98, 121914	3.4	17
48	Experimental investigation of the creep behavior of MgO at high pressures. *Physics of the Earth and Planetary Interiors*, **2008**, 170, 170-175	2.3	17
47	Anisotropic elasticity of jarosite: A high-P synchrotron XRD study. *American Mineralogist*, **2010**, 95, 19-23	2.9	16

46	Thermal equation-of-state of osmium: a synchrotron X-ray diffraction study. *Journal of Physics and Chemistry of Solids*, **2005**, 66, 706-710	3.9	15
45	Strain stiffening, high load-invariant hardness, and electronic anomalies of boron phosphide under pressure. *Physical Review B*, **2020**, 101,	3.3	14
44	Acoustic velocities and elastic properties of pyrite (FeS2) to 9.6 GPa. *Journal of Earth Science (Wuhan, China)*, **2010**, 21, 792-800	2.2	14
43	In situphase transition study of nano- and coarse-grained TiO2under high pressure/temperature conditions. *Journal of Physics Condensed Matter*, **2008**, 20, 125224	1.8	14
42	Elastic, magnetic and electronic properties of iridium phosphide Ir2P. *Scientific Reports*, **2016**, 6, 21787	4.9	14
41	Thermoelasticity of □FeSi to 8 GPa and 1273 K. *American Mineralogist*, **2009**, 94, 1039-1044	2.9	13
40	Microstructure evolution, densification behavior and mechanical properties of nano-HfB2 sintered under high pressure. *Ceramics International*, **2019**, 45, 7885-7893	5.1	13
39	Comparative studies of constitutive properties of nanocrystalline and bulk iron during compressive deformation. *Acta Materialia*, **2011**, 59, 3384-3389	8.4	12
38	Direct observation of immiscibility in pyrope-almandine-grossular garnet. *American Mineralogist*, **2000**, 85, 41-46	2.9	12
37	Density and elasticity of Zr46Cu37.6Ag8.4Al8 bulk metallic glass at high pressure. *Scripta Materialia* , **2011**, 65, 497-500	5.6	11
36	The relative strength of perovskite and post-perovskite NaCoF3. *Mineralogical Magazine*, **2012**, 76, 925-932	1.7	11
35	High pressure synchrotron x-ray diffraction studies of superprotonic transitions in phosphate solid acids. *Solid State Ionics*, **2012**, 213, 58-62	3.3	10
34	Microstructure, mechanical and tribological properties of Mo-V-N films by reactive magnetron sputtering. *Surface and Coatings Technology*, **2020**, 387, 125532	4.4	9
33	Equations of state and phase transformation of depleted uranium DU-238 by high pressure-temperature diffraction studies. *Physical Review B*, **2007**, 75,	3.3	9
32	A new lithium-rich anti-spinel in Li-O-Br system. *Chemical Communications*, **2015**, 51, 9666-9	5.8	8
31	Thermal equation of state of CaIrO3 post-perovskite. *Physics and Chemistry of Minerals*, **2011**, 38, 407-417	1.6	8
30	Compressional and shear wave velocities of Fe2SiO4 spinel at high pressure and high temperature. *High Pressure Research*, **2008**, 28, 405-413	1.6	8
29	Thermal equation of state and thermodynamic Grüneisen parameter of beryllium metal. *Journal of Applied Physics*, **2013**, 114, 173509	2.5	7

28	Comparative studies of yield strength and elastic compressibility between nanocrystalline and bulk cobalt. *Journal of Applied Physics*, **2012**, 111, 113506	2.5	7
27	Thermal equation of state of TiC: A synchrotron x-ray diffraction study. *Journal of Applied Physics*, **2010**, 107, 113517	2.5	7
26	In situ ultrasonic velocity measurements across the olivine-spinel transformation in Fe2SiO4. *American Mineralogist*, **2010**, 95, 1000-1005	2.9	7
25	Combined in situ synchrotron X-ray diffraction and ultrasonic interferometry study of ?-FeSi at high pressure. *High Pressure Research*, **2008**, 28, 385-395	1.6	7
24	Carmichaelite, a new hydroxyl-bearing titanate from Garnet Ridge, Arizona. *American Mineralogist*, **2000**, 85, 792-800	2.9	7
23	Thermal equation of state of CaGeO3 perovskite. *American Mineralogist*, **2008**, 93, 745-750	2.9	6
22	Pressure effects on phase equilibria and solid solubility in MgO-Y2O3 nanocomposites. *Journal of Applied Physics*, **2012**, 111, 053506	2.5	5
21	High-pressure phase transformations in MgO-Y2O3 nanocomposites. *Applied Physics Letters*, **2011**, 99, 141915	3.4	4
20	Structural and Physical Properties of ZrSi under High Pressure: Experimental Study and First-Principles Calculations. *Inorganic Chemistry*, **2019**, 58, 405-410	5.1	4
19	Thermal equation of state of a natural kyanite up to 8.55 GPa and 1273 K. *Matter and Radiation at Extremes*, **2016**, 1, 269-276	4.7	3
18	Phase transformations in hypereutectic MgO-Y2O3 nanocomposites at 5.5 GPa. *Journal of Applied Physics*, **2013**, 113, 203520	2.5	3
17	Observation of anomalous phonons in orthorhombic rare-earth manganites. *Applied Physics Letters*, **2010**, 97, 262905	3.4	3
16	High-Pressure Research at the National Synchrotron Light Source. *Synchrotron Radiation News*, **2010**, 23, 24-30	0.6	3
15	An exploratory study of the viscoelasticity of phase-transforming material. *Physics of the Earth and Planetary Interiors*, **2009**, 174, 174-180	2.3	3
14	Elastic softening of peridotite due to the presence of melt phases at high pressure. *Physics of the Earth and Planetary Interiors*, **2008**, 170, 176-180	2.3	3
13	Structural disorder, sublattice melting, and thermo-elastic properties of anti-perovskite Li3OBr under high pressure and temperature. *Applied Physics Letters*, **2020**, 117, 081904	3.4	3
12	Configuring solid-state batteries to power electric vehicles: a deliberation on technology, chemistry and energy. *Chemical Communications*, **2021**, 57, 12587-12594	5.8	2
11	Density measurements of molten materials at high pressure using synchrotron X-ray radiography: melting volume of FeS **2005**, 185-194		2

10	Novel Nitride Materials Synthesized at High Pressure. *Crystals*, **2021**, 11, 614	2.3	2
9	Equation of state and thermodynamic Grüneisen parameter of monoclinic 1,1-diamino-2,2-dinitroethylene. *Journal of Physics Condensed Matter*, **2016**, 28, 395402	1.8	2
8	Three-dimensional visualization of lithium metal anode via low-dose cryogenic electron microscopy tomography. *IScience*, **2021**, 24, 103418	6.1	2
7	Strength measurement of boron suboxide B6O at high pressure and temperature using in situ synchrotron X-ray diffraction. *High Pressure Research*, **2008**, 28, 423-430	1.6	1
6	Strain-driven structural selection and amorphization during first-order phase transitions in nanocrystalline Ho2O3 under pressure. *Physical Review B*, **2021**, 103,	3.3	1
5	Concurrent Pressure-Induced Spin-State Transitions and Jahn□Teller Distortions in MnTe. *Chemistry of Materials*, **2022**, 34, 3931-3940	9.6	1
4	Strengthening Superhard Materials by Nanostructure Engineering. *Journal of Superhard Materials*, **2021**, 43, 307-329	0.9	0
3	High-Pressure and High-Temperature Synthesis and In Situ High-Pressure Synchrotron X-ray Diffraction Study of HfSi. *Inorganic Chemistry*, **2021**, 60, 15215-15222	5.1	0
2	Operation of large-volume cubic press above 8 GPa and 2500□C with a centimeter-sized cell volume using an optimized hybrid assembly. *High Pressure Research*, **2021**, 41, 132-141	1.6	0
1	Compressibility and thermoelasticity of CrN. *High Pressure Research*, **2020**, 40, 423-433	1.6	