

# Liping Wang

## List of Publications by Year in descending order

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102  
papers

3,107  
citations

147566

31  
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189595

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107  
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107  
docs citations

107  
times ranked

3524  
citing authors

#	ARTICLE	IF	CITATIONS
1	A New Molybdenum Nitride Catalyst with Rhombohedral MoS <sub>2</sub> Structure for Hydrogenation Applications. <i>Journal of the American Chemical Society</i> , 2015, 137, 4815-4822.	6.6	195
2	New calibration of infrared measurement of dissolved water in rhyolitic glasses. <i>Geochimica Et Cosmochimica Acta</i> , 1997, 61, 3089-3100.	1.6	147
3	Thermal equations of state of the $\pm 1^2$ , and $\pm 2^2$ phases of zirconium. <i>Physical Review B</i> , 2005, 71, .	1.1	113
4	Diffusion of the hydrous component in pyrope. <i>American Mineralogist</i> , 1996, 81, 706-718.	0.9	105
5	Plastic deformation of silicon between 20 Å°C and 425 Å°C. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2007, 4, 3110-3114.	0.8	104
6	Soft and Self-Adhesive Thermal Interface Materials Based on Vertically Aligned, Covalently Bonded Graphene Nanowalls for Efficient Microelectronic Cooling. <i>Advanced Functional Materials</i> , 2021, 31, 2104062.	7.8	95
7	Reaction mechanism studies towards effective fabrication of lithium-rich anti-perovskites Li <sub>3</sub> OX (X=) <small>Tj ETQq1 1 0.784314 rgBT /Overbor</small>	1.3	89
8	Mineral inclusions in pyrope crystals from Garnet Ridge, Arizona, USA: implications for processes in the upper mantle. <i>Contributions To Mineralogy and Petrology</i> , 1999, 135, 164-178.	1.2	85
9	Experimental constraints on the phase diagram of elemental zirconium. <i>Journal of Physics and Chemistry of Solids</i> , 2005, 66, 1213-1219.	1.9	77
10	Weakening of calcium iridate during its transformation from perovskite to post-perovskite. <i>Nature Geoscience</i> , 2009, 2, 794-797.	5.4	74
11	In Situ XRD Studies of ZnO/GaN Mixtures at High Pressure and High Temperature: Synthesis of Zn-Rich (Ga <sub>1-x</sub> Zn <sub>x</sub> )(N <sub>1-x</sub> O <sub>x</sub> ) Photocatalysts. <i>Journal of Physical Chemistry C</i> , 2010, 114, 1809-1814.	1.5	71
12	Elasticity of polycrystalline pyrope (Mg <sub>3</sub> Al <sub>2</sub> Si <sub>3</sub> O <sub>12</sub> ) to 9GPa and 1000Å°C. <i>Physics of the Earth and Planetary Interiors</i> , 2006, 155, 179-190.	0.7	68
13	Vanadium Diboride (VB <sub>2</sub> ) Synthesized at High Pressure: Elastic, Mechanical, Electronic, and Magnetic Properties and Thermal Stability. <i>Inorganic Chemistry</i> , 2018, 57, 1096-1105.	1.9	64
14	New measurements of activation volume in olivine under anhydrous conditions. <i>Physics of the Earth and Planetary Interiors</i> , 2009, 172, 67-73.	0.7	62
15	In situ x-ray diffraction study of silicon at pressures up to 15.5 GPa and temperatures up to 1073 K. <i>Physical Review B</i> , 2003, 68, .	1.1	61
16	Synthesis, Hardness, and Electronic Properties of Stoichiometric VN and CrN. <i>Crystal Growth and Design</i> , 2016, 16, 351-358.	1.4	50
17	Crystal structures, elastic properties, and hardness of high-pressure synthesized CrB <sub>2</sub> and CrB <sub>4</sub> . <i>Journal of Superhard Materials</i> , 2014, 36, 279-287.	0.5	49
18	Enhanced ionic conductivity with Li <sub>7</sub> O <sub>2</sub> Br <sub>3</sub> phase in Li <sub>3</sub> OBr anti-perovskite solid electrolyte. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	48

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19	Thermal equations of state for titanium obtained by high pressure-temperature diffraction studies. <i>Physical Review B</i> , 2008, 78, .	1.1	47
20	Experimental invalidation of phase-transition-induced elastic softening in CrN. <i>Physical Review B</i> , 2012, 86, .	1.1	47
21	Network Rigidity in $\text{GeSe}_2$ Glass at High Pressure. <i>Physical Review Letters</i> , 2008, 100, 115501.	2.9	46
22	Precise stress measurements with white synchrotron x rays. <i>Review of Scientific Instruments</i> , 2010, 81, 013903.	0.6	42
23	Fe-Mg order-disorder in orthopyroxenes. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 5777-5788.	1.6	40
24	Pressure-Induced Amorphization and Phase Transformations in $\hat{1}^2$ -LiAlSiO <sub>4</sub> . <i>Chemistry of Materials</i> , 2005, 17, 2817-2824.	3.2	37
25	Simultaneous ultrasonic and synchrotron x-ray studies on pressure induced $\hat{1}^2$ phase transition in zirconium. <i>Journal of Applied Physics</i> , 2008, 104, .	1.1	36
26	Thermal equation of state of rhenium diboride by high pressure-temperature synchrotron x-ray studies. <i>Physical Review B</i> , 2008, 78, .	1.1	35
27	Pressure-induced structural and electronic transitions, metallization, and enhanced visible-light responsiveness in layered rhenium disulphide. <i>Physical Review B</i> , 2018, 97, .	1.1	35
28	Elasticity of $\hat{1}^2$ -phase zirconium. <i>Physical Review B</i> , 2007, 76, .	1.1	34
29	Do Reuss and Voigt bounds really bound in high-pressure rheology experiments?. <i>Journal of Physics Condensed Matter</i> , 2006, 18, S1049-S1059.	0.7	33
30	Thermomechanics of Nanocrystalline Nickel under High Pressure-Temperature Conditions. <i>Nano Letters</i> , 2007, 7, 426-432.	4.5	33
31	High pressure-high temperature synthesis of lithium-rich $\text{Li}_3\text{O}(\text{Cl}, \text{Br})$ and $\text{Li}_3\text{xCa}_x/2\text{OCl}$ anti-perovskite halides. <i>Inorganic Chemistry Communication</i> , 2014, 48, 140-143.	1.8	33
32	Thermal equation of state of silicon carbide. <i>Applied Physics Letters</i> , 2016, 108, .	1.5	33
33	Elasticity and sound velocities of polycrystalline grossular garnet ( $\text{Ca}_3\text{Al}_2\text{Si}_3\text{O}_{12}$ ) at simultaneous high pressures and high temperatures. <i>Physics of the Earth and Planetary Interiors</i> , 2014, 228, 80-87.	0.7	31
34	Deformation of olivine at subduction zone conditions determined from in situ measurements with synchrotron radiation. <i>Physics of the Earth and Planetary Interiors</i> , 2011, 186, 23-35.	0.7	30
35	The strength of moissanite. <i>American Mineralogist</i> , 2002, 87, 1005-1008.	0.9	29
36	Constitutive Law and Flow Mechanism in Diamond Deformation. <i>Scientific Reports</i> , 2012, 2, 876.	1.6	29

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37	Synthesis of Onion-Like $\hat{\Gamma}$ -MoN Catalyst for Selective Hydrogenation. Journal of Physical Chemistry C, 2017, 121, 19451-19460.	1.5	29
38	Structural Studies of the Natural Antimonian Pyrochlores. Journal of Solid State Chemistry, 1998, 141, 562-569.	1.4	28
39	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.	1.9	28
40	Diamond- <i>c</i> /i>BN alloy: A universal cutting material. Applied Physics Letters, 2015, 107, .	1.5	28
41	Experimental constraints on the phase diagram of titanium metal. Journal of Physics and Chemistry of Solids, 2008, 69, 2559-2563.	1.9	27
42	Synthesis and Structure of Perovskite ScMnO <sub>3</sub> . Inorganic Chemistry, 2013, 52, 9692-9697.	1.9	27
43	Phase-Transition Induced Elastic Softening and Band Gap Transition in Semiconducting PbS at High Pressure. Inorganic Chemistry, 2013, 52, 8638-8643.	1.9	27
44	The elastic properties of $\hat{\Gamma}$ -Mg <sub>2</sub> SiO <sub>4</sub> 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.	0.7	26
45	Sulfur-catalyzed phase transition in MoS <sub>2</sub> under high pressure and temperature. Journal of Physics and Chemistry of Solids, 2014, 75, 100-104.	1.9	26
46	Pressure and temperature dependence of the elasticity of pyrope $\hat{\Gamma}$ majorite [Py <sub>60</sub> Mj <sub>40</sub> and Py <sub>50</sub> Mj <sub>50</sub> ] garnets solid solution measured by ultrasonic interferometry technique. Physics of the Earth and Planetary Interiors, 2009, 174, 105-112.	0.7	25
47	Thermal equation of state of copper studied by high P-T synchrotron x-ray diffraction. Applied Physics Letters, 2009, 94, .	1.5	25
48	Revisit of Pressure-Induced Phase Transition in PbSe: Crystal Structure, and Thermoelastic and Electrical Properties. Inorganic Chemistry, 2015, 54, 4981-4989.	1.9	25
49	Strain stiffening, high load-invariant hardness, and electronic anomalies of boron phosphide under pressure. Physical Review B, 2020, 101, .	1.1	24
50	Microstructure, mechanical and tribological properties of Mo-V-N films by reactive magnetron sputtering. Surface and Coatings Technology, 2020, 387, 125532.	2.2	23
51	Yield strength enhancement of MgO by nanocrystals. Journal of Materials Science, 2005, 40, 5763-5766.	1.7	22
52	Kinetics of SiC formation during high P $\hat{\Gamma}$ T reaction between diamond and silicon. Diamond and Related Materials, 2005, 14, 1611-1615.	1.8	22
53	Superhard diamond/tungsten carbide nanocomposites. Applied Physics Letters, 2011, 98, .	1.5	22
54	Thermal equations of state and phase relation of PbTiO <sub>3</sub> : A high P-T synchrotron x-ray diffraction study. Journal of Applied Physics, 2011, 110, 084103.	1.1	22

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55	Direct observation of immiscibility in pyrope-almandine-grossular garnet. <i>American Mineralogist</i> , 2000, 85, 41-46.	0.9	20
56	Anisotropic elasticity of jarosite: A high-P synchrotron XRD study. <i>American Mineralogist</i> , 2010, 95, 19-23.	0.9	20
57	Microstructure evolution, densification behavior and mechanical properties of nano-HfB <sub>2</sub> sintered under high pressure. <i>Ceramics International</i> , 2019, 45, 7885-7893.	2.3	20
58	Experimental investigation of the creep behavior of MgO at high pressures. <i>Physics of the Earth and Planetary Interiors</i> , 2008, 170, 170-175.	0.7	19
59	Acoustic velocities and elastic properties of pyrite (FeS <sub>2</sub> ) to 9.6 GPa. <i>Journal of Earth Science (Wuhan)</i> , 2018, 30, 118-124.	1.1	18
60	Configuring solid-state batteries to power electric vehicles: a deliberation on technology, chemistry and energy. <i>Chemical Communications</i> , 2021, 57, 12587-12594.	2.2	18
61	Thermal equation-of-state of osmium: a synchrotron X-ray diffraction study. <i>Journal of Physics and Chemistry of Solids</i> , 2005, 66, 706-710.	1.9	17
62	In situ phase transition study of nano- and coarse-grained TiO <sub>2</sub> under high pressure/temperature conditions. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 125224.	0.7	17
63	Thermoelasticity of $\hat{\text{A}}\text{-FeSi}$ to 8 GPa and 1273 K. <i>American Mineralogist</i> , 2009, 94, 1039-1044.	0.9	17
64	Comparative studies of constitutive properties of nanocrystalline and bulk iron during compressive deformation. <i>Acta Materialia</i> , 2011, 59, 3384-3389.	3.8	15
65	Elastic, magnetic and electronic properties of iridium phosphide Ir <sub>2</sub> P. <i>Scientific Reports</i> , 2016, 6, 21787.	1.6	15
66	Pressure effects on phase equilibria and solid solubility in MgO-Y <sub>2</sub> O <sub>3</sub> nanocomposites. <i>Journal of Applied Physics</i> , 2012, 111, .	1.1	14
67	The relative strength of perovskite and post-perovskite NaCoF <sub>3</sub> . <i>Mineralogical Magazine</i> , 2012, 76, 925-932.	0.6	13
68	Density and elasticity of Zr <sub>46</sub> Cu <sub>37.6</sub> Ag <sub>8.4</sub> Al <sub>8</sub> bulk metallic glass at high pressure. <i>Scripta Materialia</i> , 2011, 65, 497-500.	2.6	12
69	High pressure synchrotron x-ray diffraction studies of superprotonic transitions in phosphate solid acids. <i>Solid State Ionics</i> , 2012, 213, 58-62.	1.3	12
70	Equations of state and phase transformation of depleted uranium DU-238 by high pressure-temperature diffraction studies. <i>Physical Review B</i> , 2007, 75, .	1.1	10
71	Combined in situ synchrotron X-ray diffraction and ultrasonic interferometry study of $\hat{\mu}\text{-FeSi}$ at high pressure. <i>High Pressure Research</i> , 2008, 28, 385-395.	0.4	10
72	Compressional and shear wave velocities of Fe <sub>2</sub> SiO <sub>4</sub> spinel at high pressure and high temperature. <i>High Pressure Research</i> , 2008, 28, 405-413.	0.4	10

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73	High-pressure phase transformations in MgO-Y2O3 nanocomposites. Applied Physics Letters, 2011, 99, .	1.5	10
74	Phase transformations in hypereutectic MgO-Y2O3 nanocomposites at 5.5â€‰GPa. Journal of Applied Physics, 2013, 113, .	1.1	10
75	Thermal equation of state and thermodynamic Grüneisen parameter of beryllium metal. Journal of Applied Physics, 2013, 114, .	1.1	10
76	Carmichaelite, a new hydroxyl-bearing titanate from Garnet Ridge, Arizona. American Mineralogist, 2000, 85, 792-800.	0.9	9
77	Thermal equation of state of CaIrO3 post-perovskite. Physics and Chemistry of Minerals, 2011, 38, 407-417.	0.3	9
78	A new lithium-rich anti-spinel in Liâ€‰Oâ€‰Br system. Chemical Communications, 2015, 51, 9666-9669.	2.2	9
79	Thermal equation of state of CaGeO3 perovskite. American Mineralogist, 2008, 93, 745-750.	0.9	8
80	Thermal equation of state of TiC: A synchrotron x-ray diffraction study. Journal of Applied Physics, 2010, 107, .	1.1	8
81	In situ ultrasonic velocity measurements across the olivine-spinel transformation in Fe2SiO4. American Mineralogist, 2010, 95, 1000-1005.	0.9	8
82	Structural and Physical Properties of ZrSi2 under High Pressure: Experimental Study and First-Principles Calculations. Inorganic Chemistry, 2019, 58, 405-410.	1.9	8
83	Comparative studies of yield strength and elastic compressibility between nanocrystalline and bulk cobalt. Journal of Applied Physics, 2012, 111, .	1.1	7
84	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.	1.5	7
85	Structural disorder, sublattice melting, and thermo-elastic properties of anti-perovskite Li3OBr under high pressure and temperature. Applied Physics Letters, 2020, 117, .	1.5	7
86	Novel Nitride Materials Synthesized at High Pressure. Crystals, 2021, 11, 614.	1.0	6
87	Density measurements of molten materials at high pressure using synchrotron X-ray radiography: melting volume of FeS. , 2005, , 185-194.		6
88	Three-dimensional visualization of lithium metal anode via low-dose cryogenic electron microscopy tomography. IScience, 2021, 24, 103418.	1.9	6
89	Concurrent Pressure-Induced Spin-State Transitions and Jahnâ€‰Teller Distortions in MnTe. Chemistry of Materials, 2022, 34, 3931-3940.	3.2	6
90	An exploratory study of the viscoelasticity of phase-transforming material. Physics of the Earth and Planetary Interiors, 2009, 174, 174-180.	0.7	4

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91	Strain-driven structural selection and amorphization during first-order phase transitions in nanocrystalline $\text{Ho}_2\text{O}_3$ under pressure. <i>Physical Review B</i> , 2021, 103, .	1.2	3
92	Elastic softening of peridotite due to the presence of melt phases at high pressure. <i>Physics of the Earth and Planetary Interiors</i> , 2008, 170, 176-180.	0.7	3
93	Observation of anomalous phonons in orthorhombic rare-earth manganites. <i>Applied Physics Letters</i> , 2010, 97, 262905.	1.5	3
94	High-Pressure Research at the National Synchrotron Light Source. <i>Synchrotron Radiation News</i> , 2010, 23, 24-30.	0.2	3
95	Equation of state and thermodynamic Grüneisen parameter of monoclinic 1,1-diamino-2,2-dinitroethylene. <i>Journal of Physics Condensed Matter</i> , 2016, 28, 395402.	0.7	3
96	Operation of large-volume cubic press above 8â€¦GPa and 2500Â°C with a centimeter-sized cell volume using an optimized hybrid assembly. <i>High Pressure Research</i> , 2021, 41, 132-141.	0.4	3
97	High-Pressure and High-Temperature Synthesis and In Situ High-Pressure Synchrotron X-ray Diffraction Study of $\text{HfSi}_2$ . <i>Inorganic Chemistry</i> , 2021, 60, 15215-15222.	1.9	3
98	Compressibility and thermoelasticity of CrN. <i>High Pressure Research</i> , 2020, 40, 423-433.	0.4	2
99	Strengthening Superhard Materials by Nanostructure Engineering. <i>Journal of Superhard Materials</i> , 2021, 43, 307-329.	0.5	2
100	$sp^2$ -to- $sp^3$ transitions in graphite during cold-compression. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 10561-10566.	1.3	2
101	Strength measurement of boron suboxide $\text{B}_6\text{O}$ at high pressure and temperature using in situ synchrotron X-ray diffraction. <i>High Pressure Research</i> , 2008, 28, 423-430.	0.4	1
102	Pressure-Induced Amorphization and Phase Transformations in $\hat{1}^2$ - $\text{LiAlSiO}_4$ . <i>ChemInform</i> , 2005, 36, no.	0.1	0