

William Evans

List of Publications by Year in descending order

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74
papers

2,629
citations

147801

31
h-index

189892

50
g-index

75
all docs

75
docs citations

75
times ranked

2698
citing authors

#	ARTICLE	IF	CITATIONS
1	Intermediate-spin ferrous iron in lowermost mantle post-perovskite and perovskite. <i>Nature Geoscience</i> , 2008, 1, 688-691.	12.9	131
2	Spin state of ferric iron in MgSiO ₃ perovskite and its effect on elastic properties. <i>Earth and Planetary Science Letters</i> , 2010, 289, 68-75.	4.4	129
3	High-energy-density extended CO solid. <i>Nature Materials</i> , 2005, 4, 211-215.	27.5	120
4	Six-fold coordinated carbon dioxide VI. <i>Nature Materials</i> , 2007, 6, 34-38.	27.5	120
5	First-Order Isostructural Mott Transition in Highly Compressed MnO. <i>Physical Review Letters</i> , 2005, 94, 115502.	7.8	106
6	Thermal Signatures of the Kondo Volume Collapse in Cerium. <i>Physical Review Letters</i> , 2008, 101, 165703.	7.8	103
7	Pressure-Induced Polymerization of Carbon Monoxide: Disproportionation and Synthesis of an Energetic Lactonic Polymer. <i>Chemistry of Materials</i> , 2006, 18, 2520-2531.	6.7	92
8	Effects of the Fe ³⁺ spin transition on the properties of aluminous perovskite—New insights for lower-mantle seismic heterogeneities. <i>Earth and Planetary Science Letters</i> , 2011, 310, 293-302.	4.4	84
9	Dynamic diamond anvil cell (dDAC): A novel device for studying the dynamic-pressure properties of materials. <i>Review of Scientific Instruments</i> , 2007, 78, 073904.	1.3	81
10	Transformation of molecular nitrogen to nonmolecular phases at megabar pressures by direct laser heating. <i>Physical Review B</i> , 2007, 76, .	3.2	74
11	Absorption and reflectance in hydrogen up to 230 GPa: Implications for metallization. <i>Physical Review Letters</i> , 1991, 66, 193-196.	7.8	71
12	Equation of state and high-pressure/high-temperature phase diagram of magnesium. <i>Physical Review B</i> , 2014, 90, .	3.2	69
13	Single crystal toroidal diamond anvils for high pressure experiments beyond 5 megabar. <i>Nature Communications</i> , 2018, 9, 3563.	12.8	65
14	Inter-tube thermal conductance in carbon nanotubes arrays and bundles: Effects of contact area and pressure. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	59
15	Electrical conductivity of the lower mantle ferropericlase across the electronic spin transition. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	56
16	Pressure-induced antiferroto-antiferro phase transition in lithium oxide. <i>Physical Review B</i> , 2006, 73, .	3.2	54
17	Crystallization of water in a dynamic diamond-anvil cell: Evidence for ice VII-like local order in supercompressed water. <i>Physical Review B</i> , 2006, 74, .	3.2	52
18	Synthesis and characterization of a nanocrystalline diamond aerogel. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 8550-8553.	7.1	52

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19	Nanocrystalline diamond: Effect of confinement, pressure, and heating on phonon modes. <i>Physical Review B</i> , 1997, 56, 5978-5984.	3.2	51
20	Carbon Monoxide: Spectroscopic Characterization of the High-Pressure Polymerized Phase. <i>Journal of Low Temperature Physics</i> , 1998, 111, 247-256.	1.4	45
21	New Cubic Phase of Li ₃ N: Stability of the N ³⁻ Ion to 200 GPa. <i>Physical Review Letters</i> , 2005, 95, 165503.	7.8	45
22	Experimental method for <i>in situ</i> 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.	1.3	43
23	Atomic structure and phase transformations in Pu alloys. <i>Progress in Materials Science</i> , 2009, 54, 909-943.	32.8	43
24	Structural phase transition in vanadium at high pressure and high temperature: Influence of nonhydrostatic conditions. <i>Physical Review B</i> , 2011, 83, .	3.2	43
25	X-ray diffraction and Raman studies of beryllium: Static and elastic properties at high pressures. <i>Physical Review B</i> , 2005, 72, .	3.2	42
26	Irreversible xenon insertion into a small-pore zeolite at moderate pressures and temperatures. <i>Nature Chemistry</i> , 2014, 6, 835-839.	13.6	42
27	Dynamic pressure-induced dendritic and shock crystal growth of ice VI. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 9178-9181.	7.1	40
28	Ruby at high pressure. III. A pumping scheme for the R lines up to 230 GPa. <i>Physical Review B</i> , 1991, 44, 7202-7208.	3.2	38
29	X-ray Emission Spectroscopy of Cerium Across the γ - β Volume Collapse Transition. <i>Physical Review Letters</i> , 2012, 109, 195705.	7.8	38
30	High-temperature experiments using a resistively heated high-pressure membrane diamond anvil cell. <i>Review of Scientific Instruments</i> , 2013, 84, 095114.	1.3	38
31	Index of refraction, polarizability, and equation of state of solid molecular hydrogen. <i>Physical Review B</i> , 1998, 57, 14105-14109.	3.2	35
32	Raman shift of stressed diamond anvils: Pressure calibration and culet geometry dependence. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	32
33	New dynamic diamond anvil cells for tera-pascal per second fast compression x-ray diffraction experiments. <i>Review of Scientific Instruments</i> , 2019, 90, 065114.	1.3	30
34	Irreversibility in the Galton board via conservative classical and quantum hamiltonian and gaussian dynamics. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1988, 133, 114-120.	2.1	27
35	High-pressure phases of PbF ₂ : A joint experimental and theoretical study. <i>Physical Review B</i> , 1997, 56, 543-551.	3.2	27
36	Melting and phase transitions of nitrogen under high pressures and temperatures. <i>Journal of Chemical Physics</i> , 2014, 140, 244510.	3.0	26

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55	Cryogenic loading of large volume presses for high-pressure experimentation and synthesis of novel materials. <i>Review of Scientific Instruments</i> , 2005, 76, 053903.	1.3	9
56	In situ X-ray diffraction study of the Γ to Γ_2' isothermal martensitic transformation kinetics in a Pu-Ga alloy. <i>Journal of Nuclear Materials</i> , 2011, 412, 327-333.	2.7	9
57	Time-resolved x-ray diffraction across water-ice-VI/III transformations using the dynamic-DAC. <i>Journal of Physics: Conference Series</i> , 2014, 500, 142006.	0.4	9
58	Phosphorus Dimerization in Gallium Phosphide at High Pressure. <i>Inorganic Chemistry</i> , 2018, 57, 2432-2437.	4.0	9
59	Pressure-induced loss of electronic interlayer state and metallization in the ionic solid $\text{Li}_3\text{Mg}_2\text{S}_8$. Experiment and theory. <i>Physical Review B</i> , 2008, 78, .	3.2	8
60	Persistent Fe moments in the normal-state collapsed-tetragonal phase of the pressure-induced superconductor $\text{Ca}_{0.67}\text{Sr}_{0.33}\text{Fe}_2\text{As}_2$. <i>Physical Review B</i> , 2014, 90, .	3.2	8
61	A versatile medium-resolution x-ray emission spectrometer for diamond anvil cell applications. <i>Review of Scientific Instruments</i> , 2013, 84, 083908.	1.3	7
62	Vibrational Spectroscopy at High Pressures in CF_4 : Implications to the Phase Diagram. <i>Journal of Low Temperature Physics</i> , 2001, 122, 279-290.	1.4	6
63	Ammonium salicylate: a synchrotron study. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2009, 65, o2062-o2062.	0.2	6
64	In situ electrical conductivity and Raman study of C_{60} tetragonal polymer at high pressures up to 30 GPa. <i>Physica Status Solidi (B): Basic Research</i> , 2010, 247, 3068-3071.	1.5	6
65	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.	0.4	5
66	Equation of state measurements by radiography provide evidence for a liquid-liquid phase transition in cerium. <i>Journal of Physics: Conference Series</i> , 2014, 500, 032011.	0.4	5
67	A simple and portable multi-channel pyrometer allowing temperature measurements down to 800 K on the microsecond scale. <i>Review of Scientific Instruments</i> , 2018, 89, 125117.	1.3	4
68	Wavemeter for lead-salt diode laser calibration. <i>Applied Optics</i> , 1986, 25, 2867.	2.1	3
69	Hybrid Bridgman anvil design: an optical window for in situ spectroscopy in large volume presses. <i>High Pressure Research</i> , 2005, 25, 205-210.	1.2	3
70	Plasma etching of cavities into diamond anvils for experiments at high pressures and high temperatures. <i>High Pressure Research</i> , 2011, 31, 191-198.	1.2	3
71	Simultaneous imaging and diffraction in the dynamic diamond anvil cell. <i>Review of Scientific Instruments</i> , 2022, 93, 053903.	1.3	3
72	An Experimental and Theoretical Multi-Mbar Study of Ti-6Al-4V. <i>Materials Research Society Symposia Proceedings</i> , 2011, 1369, 1.	0.1	2

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73	Anomalous Molecular Phase of Nitrogen: Implications to the Phase Diagram. High Pressure Research, 2002, 22, 5-8.	1.2	1
74	The pressure-temperature phase diagram of URu ₂ Si ₂ under hydrostatic conditions. Materials Research Society Symposia Proceedings, 2010, 1264, 1.	0.1	0