

# Matthew L Whitaker

## List of Publications by Year in descending order

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32  
papers

466  
citations

840776

11  
h-index

713466

21  
g-index

33  
all docs

33  
docs citations

33  
times ranked

628  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Role of Pressure in Producing Compositional Diversity in Intraplate Basaltic Magmas. <i>Journal of Petrology</i> , 2006, 48, 365-393.	2.8	81
2	Can crystallization of olivine tholeiite give rise to potassic rhyolites? An experimental investigation. <i>Bulletin of Volcanology</i> , 2008, 70, 417-434.	3.0	77
3	Thermal equation of state of Mg <sub>3</sub> Al <sub>2</sub> Si <sub>3</sub> O <sub>12</sub> pyrope garnet up to 19 GPa and 1,700 K. <i>Physics and Chemistry of Minerals</i> , 2012, 39, 589-598.	0.8	41
4	Elasticity and sound velocities of polycrystalline Mg <sub>3</sub> Al <sub>2</sub> (SiO <sub>4</sub> ) <sub>3</sub> garnet up to 20 GPa and 1700 K. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	30
5	Deformation T-Cup: A new multi-anvil apparatus for controlled strain-rate deformation experiments at pressures above 18 GPa. <i>Review of Scientific Instruments</i> , 2014, 85, 085103.	1.3	24
6	Melting of the Martian mantle from 1.0 to 4.5 GPa. <i>Journal of Mineralogical and Petrological Sciences</i> , 2013, 108, 201-214.	0.9	23
7	Acoustic velocities and elastic properties of pyrite (FeS <sub>2</sub> ) to 9.6 GPa. <i>Journal of Earth Science (Wuhan)</i> , 2018, 32, 1843-1851. <a href="#">Tj ETQq1 1 0.784314 rgBT / Over</a>	3.2	18
8	Thermoelasticity of $\hat{\mu}$ -FeSi to 8 GPa and 1273 K. <i>American Mineralogist</i> , 2009, 94, 1039-1044.	1.9	17
9	Experimental and theoretical studies on the elasticity of molybdenum to 12 GPa. <i>Journal of Applied Physics</i> , 2009, 106, .	2.5	16
10	Spin transition, substitution, and partitioning of iron in lower mantle minerals. <i>Physics of the Earth and Planetary Interiors</i> , 2014, 228, 186-191.	1.9	14
11	An Experimental Investigation of the Relative Strength of the Silica Polymorphs Quartz, Coesite, and Stishovite. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 1975-1989.	2.5	13
12	Making tissintite: Mimicking meteorites in the multi-anvil. <i>American Mineralogist</i> , 2018, 103, 1516-1519.	1.9	12
13	DIASCoPE: Directly integrated acoustic system combined with pressure experiments A new method for fast acoustic velocity measurements at high pressure. <i>Review of Scientific Instruments</i> , 2017, 88, 034901.	1.3	11
14	Combined in situ synchrotron X-ray diffraction and ultrasonic interferometry study of $\hat{\mu}$ -FeSi at high pressure. <i>High Pressure Research</i> , 2008, 28, 385-395.	1.2	10
15	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.	1.2	10
16	Thermal equation of state of CaIrO <sub>3</sub> post-perovskite. <i>Physics and Chemistry of Minerals</i> , 2011, 38, 407-417.	0.8	9
17	In situ ultrasonic velocity measurements across the olivine-spinel transformation in Fe <sub>2</sub> SiO <sub>4</sub> . <i>American Mineralogist</i> , 2010, 95, 1000-1005.	1.9	8
18	The phase diagram of NiSi under the conditions of small planetary interiors. <i>Physics of the Earth and Planetary Interiors</i> , 2016, 261, 196-206.	1.9	8

#	ARTICLE	IF	CITATIONS
19	Ultrasonic Acoustic Velocities During Partial Melting of a Mantle Peridotite KLBâ€1. Journal of Geophysical Research: Solid Earth, 2018, 123, 1252-1261.	3.4	8
20	Spin transition and substitution of Fe <sup>3+</sup> in Al-bearing post-Mg-perovskite. Physics of the Earth and Planetary Interiors, 2013, 217, 31-35.	1.9	6
21	Unconventional high-pressure Raman spectroscopy study of kinetic and peak pressure effects in plagioclase feldspars. Physics and Chemistry of Minerals, 2020, 47, 1.	0.8	6
22	Stress distribution during cold compression of a quartz aggregate using synchrotron Xâ€ray diffraction: Observed yielding, damage, and grain crushing. Journal of Geophysical Research: Solid Earth, 2017, 122, 2724-2735.	3.4	5
23	Bulk modulus of Fe-rich olivines corrected for non-hydrostaticity. Comptes Rendus - Geoscience, 2019, 351, 86-94.	1.2	5
24	Carbon is not required during crystallization to produce ferrobasalts/ferrodiorites (FTP rocks). American Mineralogist, 2007, 92, 1750-1755.	1.9	4
25	The Elastic Properties of <sup>12</sup> Mg <sub>2</sub> SiO <sub>4</sub> Containing 0.73 wt.% of H <sub>2</sub> O to 10 GPa and 600 K by Ultrasonic Interferometry with Synchrotron X-Radiation. Minerals (Basel, Switzerland), 2020, 10, 209.	2.0	4
26	Equation of state and sound wave velocities of fayalite at high pressures and temperatures: implications for the seismic properties of the martian mantle. European Journal of Mineralogy, 2021, 33, 519-535.	1.3	2
27	Initial Acoustoelastic Measurements in Olivine: Investigating the Effect of Stress on <i>P</i> and <i>S</i> Wave Velocities. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022494.	3.4	2
28	Note: Elastic wave velocity measurement using ultrasonic system with two-reflectors. Review of Scientific Instruments, 2018, 89, 086105.	1.3	1
29	Synthesis of the Candidate Topological Compound Ni <sub>3</sub> Pb <sub>2</sub> . Journal of the American Chemical Society, 2022, 144, 11943-11948.	13.7	1
30	Ultrasonic acoustic wave velocities of neighborite (NaMgF <sub>3</sub> ) across orthorhombic to cubic phase boundary at high P-T. Physics of the Earth and Planetary Interiors, 2018, 283, 38-42.	1.9	0
31	Stress Distribution During Cold Compression of Rocks and Mineral Aggregates Using Synchrotron-based X-Ray Diffraction. Journal of Visualized Experiments, 2018, , .	0.3	0
32	Proton irradiation effects in Molybdenum-Carbide-Graphite composites. Journal of Nuclear Materials, 2021, 553, 153049.	2.7	0