J Michael Winey

List of Publications by Year
in descending order

51 papers	1,635 citations	218381 26 h-index	288905 40 g-index
52 all docs	52 docs citations	52 times ranked	1355 citing authors

#	Article	IF	Citations
1	Near-optimal combination of high performance and insensitivity in a shock compressed high explosive single crystal. Journal of Applied Physics, 2021, 130, .	1.1	7
2	Shock compression of silver to 300 GPa: Wave profile measurements and melting transition. Physical Review B, 2021, 104, .	1.1	7
3	Sound speed measurements in lithium fluoride single crystals shock compressed to 168â€‰GPa along [100]. Journal of Applied Physics, 2021, 130, .	1.1	3
4	Sound speed measurements in silver shock compressed to 300 GPa: Solid-state transition, melting, and liquid-state response. Physical Review B, 2021, 104, .	1.1	3
5	Structural Transformation and Chemical Stability of a Shock-Compressed Insensitive High Explosive Single Crystal: Time-Resolved Raman Spectroscopy. Journal of Physical Chemistry A, 2020, 124, 6521-6527.	1.1	12
6	Transformation of shock-compressed copper to the body-centered-cubic structure at 180 GPa. Physical Review B, 2020, 102, .	1.1	32
7	Shock compression response of an insensitive high explosive single crystal: 1,1-diamino-2,2-dinitroethene (FOX-7). Journal of Applied Physics, 2020, 127, .	1.1	12
8	Shock compression response of diamond single crystals at multimegabar stresses. Physical Review B, 2020, 101, .	1.1	9
9	What Determines the fcc-bcc Structural Transformation in Shock Compressed Noble Metals?. Physical Review Letters, 2020, 124, 235701.	2.9	36
10	Real-Time Observation of Stacking Faults in Gold Shock Compressed to 150ÂGPa. Physical Review X, 2020, 10, .	2.8	14
11	Structural Transformation and Melting in Gold Shock Compressed to 355ÂGPa. Physical Review Letters, 2019, 123, 045702.	2.9	48
12	Sound Velocities in Shockâ€Synthesized Stishovite to 72ÂGPa. Geophysical Research Letters, 2019, 46, 13695-13703.	1.5	7
13	Strength and deformation of shocked diamond single crystals: Orientation dependence. Physical Review B, 2018, 97, .	1.1	17
14	Twinning and Dislocation Evolution during Shock Compression and Release of Single Crystals: Real-Time X-Ray Diffraction. Physical Review Letters, 2018, 120, 265503.	2.9	67
15	Shock compression and release of a-axis magnesium single crystals: Anisotropy and time dependent inelastic response. Journal of Applied Physics, 2017, 121, .	1.1	28
16	Transformation of shock-compressed graphite to hexagonal diamond in nanoseconds. Science Advances, 2017, 3, eaao3561.	4.7	61
17	Complete equation of state for shocked liquid nitrogen: Analytical developments. Journal of Chemical Physics, 2016, 145, 054504.	1.2	3
18	Nonlinear elastic response of strong solids: First-principles calculations of the third-order elastic constants of diamond. Physical Review B, 2016, 93, .	1.1	21

#	Article	IF	Citations
19	Sound velocities in highly oriented pyrolytic graphite shocked to 18â€‰GPa: Orientational order dependence and elastic instability. Journal of Applied Physics, 2015, 118, .	1.1	7
20	Shock wave compression and release of hexagonal-close-packed metal single crystals: Inelastic deformation of c-axis magnesium. Journal of Applied Physics, 2015, 117, .	1.1	41
21	Shock wave compression of hexagonal-close-packed metal single crystals: Time-dependent, anisotropic elastic-plastic response of beryllium. Journal of Applied Physics, 2014, 116, 033505.	1.1	12
22	Shock-compressed graphite to diamond transformation on nanosecond time scales. Physical Review B, 2013, 87, .	1.1	18
23	Shock compression of pyrolytic graphite to 18â€‰GPa: Role of orientational order. Journal of Applied Physics, 2013, 114, .	1.1	7
24	Inelastic deformation in shocked sapphire single crystals. Journal of Applied Physics, 2013, 113, 226102.	1.1	5
25	Unloading and reloading response of shocked aluminum single crystals: Time-dependent anisotropic material description. Journal of Applied Physics, 2012, 112, .	1.1	27
26	Elastic anisotropy of shocked aluminum single crystals: Use of molecular dynamics simulations. Physical Review B, 2011, 83, .	1.1	24
27	Anisotropic material model and wave propagation simulations for shocked pentaerythritol tetranitrate single crystals. Journal of Applied Physics, 2010, 107, .	1.1	44
28	Determination of second-order elastic constants of cyclotetramethylene tetranitramine (Î²-HMX) using impulsive stimulated thermal scattering. Journal of Applied Physics, 2009, 106, .	1.1	56
29	Elastic wave amplitudes in shock-compressed thin polycrystalline aluminum samples. Journal of Applied Physics, 2009, 106, .	1.1	30
30	A thermodynamic approach to determine accurate potentials for molecular dynamics simulations: thermoelastic response of aluminum. Modelling and Simulation in Materials Science and Engineering, 2009, 17, 055004.	0.8	92
31	Large elastic wave amplitude and attenuation in shocked pure aluminum. Journal of Applied Physics, 2009, 105, .	1.1	39
32	Photoacoustic measurements to determine acoustic velocities in shocked condensed materials: Application to liquid benzene. Applied Physics Letters, 2008, 92, 101926.	1.5	3
33	Spectroscopic Study of Shock-Induced Decomposition in Ammonium Perchlorate Single Crystals. Journal of Physical Chemistry A, 2008, 112, 3947-3952.	1.1	10
34	Density Functional Theory Calculations of Pressure Effects on the Vibrational Structure of Î±-RDX. Journal of Physical Chemistry A, 2008, 112, 12228-12234.	1.1	31
35	Second-order elastic constants of pentaerythritol tetranitrate and cyclotrimethylene trinitramine using impulsive stimulated thermal scattering. Journal of Applied Physics, 2008, 104, .	1.1	50
36	First-principles calculations of second- and third-order elastic constants for single crystals of arbitrary symmetry. Physical Review B, 2007, 75, .	1.1	210

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37	Raman Spectra of Shock Compressed Pentaerythritol Tetranitrate Single Crystals:Â Anisotropic Response. Journal of Physical Chemistry B, 2006, 110, 20948-20953.	1.2	27
38	Nonlinear anisotropic description for the thermomechanical response of shocked single crystals: Inelastic deformation. Journal of Applied Physics, 2006, 99, 023510.	1.1	62
39	Anisotropic Modeling for Shocked Single Crystals. AIP Conference Proceedings, 2006, , .	0.3	1
40	Response of a Zr-based bulk amorphous alloy to shock wave compression. Journal of Applied Physics, 2006, 100, 063522.	1.1	30
41	Nonlinear anisotropic description for shocked single crystals: Thermoelastic response and pure mode wave propagation. Journal of Applied Physics, 2004, 96, 1993-1999.	1.1	45
42	Compressive shock wave response of a Zr-based bulk amorphous alloy. Applied Physics Letters, 2004, 84, 1692-1694.	1.5	37
43	Elastic Properties of Molecular Crystals Using Density Functional Calculations. AIP Conference Proceedings, 2004, , .	0.3	7
44	Thermomechanical model and temperature measurements for shocked ammonium perchlorate single crystals. Journal of Applied Physics, 2002, 91, 5650-5656.	1.1	16
45	Second-order elastic constants for pentaerythritol tetranitrate single crystals. Journal of Applied Physics, 2001, 90, 1669-1671.	1.1	35
46	r-axis sound speed and elastic properties of sapphire single crystals. Journal of Applied Physics, 2001, 90, 3109-3111.	1.1	57
47	Equation of state and temperature measurements for shocked ammonium perchlorate. AIP Conference Proceedings, 2000, , .	0.3	1
48	Equation of state and temperature measurements for shocked nitromethane. Journal of Chemical Physics, 2000, 113, 7492-7501.	1.2	51
49	Shock-Induced Chemical Changes in Neat Nitromethane:â€‰ Use of Time-Resolved Raman Spectroscopy. Journal of Physical Chemistry B, 1997, 101, 10733-10743.	1.2	73
50	UVâˆ'Visible Absorption Spectroscopy To Examine Shock-Induced Decomposition in Neat Nitromethane. Journal of Physical Chemistry A, 1997, 101, 9333-9340.	1.1	61
51	UV/Visible Absorption Spectra of Shocked Nitromethane and Nitromethane-Amine Mixtures up to a Pressure of 14 GPa. The Journal of Physical Chemistry, 1994, 98, 7767-7776.	2.9	39