

# Daniel E Eakins

## List of Publications by Year in descending order

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Version: 2024-02-01

70  
papers

1,009  
citations

430874

18  
h-index

454955

30  
g-index

72  
all docs

72  
docs citations

72  
times ranked

1079  
citing authors

#	ARTICLE	IF	CITATIONS
1	The mechanical response of commercially pure copper under multiaxial loading at low and high strain rates. <i>International Journal of Mechanical Sciences</i> , 2022, 224, 107340.	6.7	10
2	Ultra-high speed X-ray imaging of dynamic fracturing in cementitious materials under impact. <i>EPJ Web of Conferences</i> , 2021, 250, 01014.	0.3	3
3	In-situ visualisation of dynamic fracture and fragmentation of an L-type ordinary chondrite by combined synchrotron X-ray radiography and microtomography. <i>Icarus</i> , 2021, 359, 114346.	2.5	7
4	Ultra-high-speed x-ray imaging of shock-induced cavity collapse in a solid medium. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	1
5	Collapse dynamics of spherical cavities in a solid under shock loading. <i>Scientific Reports</i> , 2020, 10, 8455.	3.3	19
6	Mechanics of shock induced pore collapse in poly(methyl methacrylate) (PMMA): Comparison of simulations and experiments. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 143, 104075.	4.8	19
7	Effect of texture on elastic precursor decay in magnesium alloy AZ31B. <i>AIP Conference Proceedings</i> , 2020, , .	0.4	1
8	Comparison of Simultaneous Shock Temperature Measurements from Three Different Pyrometry Systems. <i>Journal of Dynamic Behavior of Materials</i> , 2019, 5, 396-408.	1.7	9
9	Hugoniot Measurements Utilizing In Situ Synchrotron X-ray Radiation. <i>Journal of Dynamic Behavior of Materials</i> , 2019, 5, 93-104.	1.7	7
10	Investigating shock processes in bimodal powder compaction through modelling and experiment at the mesoscale. <i>International Journal of Solids and Structures</i> , 2019, 163, 211-219.	2.7	3
11	Insights into local shockwave behavior and thermodynamics in granular materials from tomography-initialized mesoscale simulations. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	6
12	On the dynamic response of additively manufactured 316L. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	0
13	Interrogating heterogeneous compaction of analogue materials at the mesoscale through numerical modeling and experiments. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	0
14	Ultra-high-speed indirect x-ray imaging system with versatile spatiotemporal sampling capabilities. <i>Applied Optics</i> , 2018, 57, 5004.	1.8	26
15	Initial results from a simultaneous pyrometry and reflectivity diagnostic. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	1
16	Ultrafast Imaging of Laser Driven Shock Waves using Betatron X-rays from a Laser Wakefield Accelerator. <i>Scientific Reports</i> , 2018, 8, 11010.	3.3	40
17	High resolution simulations of energy absorption in dynamically loaded cellular structures. <i>Shock Waves</i> , 2017, 27, 221-236.	1.9	5
18	The fracture and fragmentation behaviour of additively manufactured stainless steel 316L. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	3

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19	A single camera three-dimensional digital image correlation system for the study of adiabatic shear bands. <i>Strain</i> , 2017, 53, e12226.	2.4	21
20	The stress and ballistic properties of granular materials. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	2
21	Monte-Carlo modelling to determine optimum filter choices for sub-microsecond optical pyrometry. <i>Review of Scientific Instruments</i> , 2017, 88, 044902.	1.3	2
22	Birefringence measurements in single crystal sapphire and calcite shocked along the a axis. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	3
23	Observations on the nucleation of ice VII in compressed water. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	14
24	Spatially resolved measurements of grain size effects on the shock and spall response of quasi-Taylor wave loaded pure copper. <i>Journal of Applied Physics</i> , 2017, 122, .	2.5	1
25	Probing the early stages of shock-induced chondritic meteorite formation at the mesoscale. <i>Scientific Reports</i> , 2017, 7, 45206.	3.3	21
26	Gas gun driven dynamic fracture and fragmentation of Ti-6Al-4V cylinders at initial temperatures between 150â€¦K and 750â€¦K. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	0
27	Impact-induced compaction of primitive solar system solids: The need for mesoscale modelling and experiments. <i>Procedia Engineering</i> , 2017, 204, 405-412.	1.2	12
28	On the formation of adiabatic shear bands in textured HCP polycrystals. <i>International Journal of Plasticity</i> , 2016, 79, 196-216.	8.8	54
29	Evaluating scintillator performance in time-resolved hard X-ray studies at synchrotron light sources. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 685-693.	2.4	31
30	Picosecond dynamics of a shock-driven displacive phase transformation in Zr. <i>Physical Review B</i> , 2016, 93, .	3.2	14
31	Probing local and electronic structure in Warm Dense Matter: single pulse synchrotron x-ray absorption spectroscopy on shocked Fe. <i>Scientific Reports</i> , 2016, 6, 26402.	3.3	50
32	The Role of Homogeneous Nucleation in Planar Dynamic Discrete Dislocation Plasticity. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2015, 82, .	2.2	16
33	A Method for Studying the Temperature Dependence of Dynamic Fracture and Fragmentation. <i>Journal of Visualized Experiments</i> , 2015, , e52463.	0.3	0
34	Attenuation of the Dynamic Yield Point of Shocked Aluminum Using Elastodynamic Simulations of Dislocation Dynamics. <i>Physical Review Letters</i> , 2015, 114, 174301.	7.8	62
35	VISAR 'cross-hairs': Simultaneous perpendicular line-imaging VISAR. <i>Journal of Physics: Conference Series</i> , 2014, 500, 182044.	0.4	2
36	Technique to measure change in birefringence under shock compression. <i>Journal of Physics: Conference Series</i> , 2014, 500, 192020.	0.4	2

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37	Plate-impact loading of cellular structures formed by selective laser melting. Modelling and Simulation in Materials Science and Engineering, 2014, 22, 025021.	2.0	28
38	X-ray imaging of subsurface dynamics in high-Z materials at the Diamond Light Source. Review of Scientific Instruments, 2014, 85, 123708.	1.3	20
39	Gas gun driven dynamic fracture and fragmentation of Ti-6Al-4V cylinders. Journal of Physics: Conference Series, 2014, 500, 112037.	0.4	2
40	On the residual yield stress of shocked metals. Journal of Physics: Conference Series, 2014, 500, 112015.	0.4	1
41	Dynamic Discrete Dislocation Plasticity. Advances in Applied Mechanics, 2014, , 93-224.	2.3	10
42	Introduction. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130220.	3.4	5
43	Spatially resolved shock response at dry metallic multi-material interfaces. Journal of Physics: Conference Series, 2014, 500, 112019.	0.4	0
44	Dynamic behavior of a Ce-Al bulk metallic glass. Journal of Physics: Conference Series, 2014, 500, 112016.	0.4	2
45	A dynamic discrete dislocation plasticity method for the simulation of plastic relaxation under shock loading. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2013, 469, 20130141.	2.1	48
46	A gas gun based technique for studying the role of temperature in dynamic fracture and fragmentation. Journal of Applied Physics, 2013, 114, 173508.	2.5	12
47	Towards the role of interfacial shear in shock-induced intermetallic reactions. , 2012, , .		0
48	Index of refraction measurements and window corrections for PMMA under shock compression. AIP Conference Proceedings, 2012, , .	0.4	24
49	Development of the gas gun driven expanding cylinder technique. AIP Conference Proceedings, 2012, , .	0.4	5
50	The influence of particle morphology on the dynamic densification of metal powders. AIP Conference Proceedings, 2012, , .	0.4	3
51	The elastic-plastic response of aluminum films to ultrafast laser-generated shocks. Journal of Applied Physics, 2011, 109, .	2.5	123
52	Shock compression of reactive powder mixtures. International Materials Reviews, 2009, 54, 181-213.	19.3	95
53	MOLECULAR SHOCK RESPONSE OF EXPLOSIVES: ELECTRONIC ABSORPTION SPECTROSCOPY. , 2009, , .		4
54	SINGLE SHOT HUGONIOTS OF TOLUENE AND METHANOL. , 2009, , .		1

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55	Dynamic densification behavior of nanoiron powders under shock compression. Journal of Applied Physics, 2008, 103, .	2.5	23
56	The shock-densification behavior of three distinct Ni+Al powder mixtures. Applied Physics Letters, 2008, 92, .	3.3	28
57	MECHANISTIC ASPECTS OF SHOCK-INDUCED REACTIONS IN NI+AL POWDER MIXTURES. , 2008, , .		0
58	ON THE APPLICABILITY OF ANALYTICAL MODELS TO PREDICT HUGONIOT OF NANO-SIZED POWDER COMPACTS. , 2008, , .		0
59	Shock compression response of nanoiron powder compact. Applied Physics Letters, 2007, 90, 071911.	3.3	13
60	Investigation of Shock-Induced Reactions in a Ni+Al Powder Mixture. AIP Conference Proceedings, 2006, , .	0.4	10
61	Instrumented Taylor anvil-on-rod impact tests for validating applicability of standard strength models to transient deformation states. Journal of Applied Physics, 2006, 100, 073503.	2.5	22
62	Role of Constituent Configuration on Shock-Induced Reactions in a Ni+Al Powder Mixture. Materials Research Society Symposia Proceedings, 2005, 896, 41.	0.1	8
63	An in situ TEM study of phase formation in gold-aluminum couples. Journal of Materials Science, 2004, 39, 165-171.	3.7	14
64	Strength enhancement of single crystal laser components. Journal of Materials Research, 2003, 18, 2537-2539.	2.6	6
65	Electron microscopy of compound oxide laser materials. , 2003, , .		1
66	Application of Electron Microscopy to Problems in the Growth of Laser Crystals. Microscopy and Microanalysis, 2003, 9, 1014-1015.	0.4	1
67	Defect Characterization in Next Generation Laser Crystals. Microscopy and Microanalysis, 2003, 9, 1016-1017.	0.4	0
68	Influence of Structure and Chemistry on Piezoelectric Properties of Pzt in a Mems Power Generation Application. Materials Research Society Symposia Proceedings, 2002, 751, 1.	0.1	1
69	Structural and Mechanical Characteristics of Anodic Oxide Films on Titanium. Corrosion, 2001, 57, 523-531.	1.1	23
70	Relationships between Film Chemistry, Structure, and Mechanical Properties in Titanium Oxide. Materials Research Society Symposia Proceedings, 2000, 654, 3411.	0.1	2