Eric N Brown

List of Publications by Year
in descending order

75 papers	8,954 citations	186209 28 h-index	106281 65 g-index
81 all docs	81 docs citations	81 times ranked	6148 citing authors

#	Article	IF	Citations
1	Contributions to Dynamic Behaviour of Materials Professor John Edwin Field, FRS 1936â€“2020. Journal of Dynamic Behavior of Materials, 2021, 7, 353-382.	1.1	1
2	The Shock Induced Mechanical Response of the Fluorinated Tri-polymer, Viton B. Journal of Dynamic Behavior of Materials, 2021, 7, 436-446.	1.1	1
3	The Trinity High-Explosive Implosion System: The Foundation for Precision Explosive Applications. Nuclear Technology, 2021, 207, S204-S221.	0.7	2
4	Thermomechanical model for monotonic and cyclic loading of PEEK. Mechanics of Materials, 2019, 129, 113-138.	1.7	13
5	Celebrating 75 Years of the Society for Experimental Mechanics and the Study of Dynamic Behavior of Materials. Journal of Dynamic Behavior of Materials, 2018, 4, 1-5.	1.1	3
6	The response of a commercial fluorinated tri-polymer to 1-D shock loading. AIP Conference Proceedings, 2018, , .	0.3	0
7	The Taylor cylinder response of PC and PMMA. AIP Conference Proceedings, 2018, , .	0.3	2
8	Characterization and Modeling of PEEK in Histories with Reverse Loading. Conference Proceedings of the Society for Experimental Mechanics, 2018, , 65-69.	0.3	0
9	On compression and damage evolution in two thermoplastics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20160495.	1.0	3
10	Constitutive modeling of the dynamic-tensile-extrusion test of PTFE. AIP Conference Proceedings, 2017, , .	0.3	1
11	On compression and damage evolution in PTFE and PEEK. AIP Conference Proceedings, 2017, , .	0.3	0
12	The Effects of Changing Chemistry on the Shock Response of Basic Polymers. Journal of Dynamic Behavior of Materials, 2016, 2, 326-336.	1.1	17
13	Mechanical Properties of Low Density Polyethylene. Journal of Dynamic Behavior of Materials, 2016, 2, 411-420.	1.1	77
14	New Developments in Proton Radiography at the Los Alamos Neutron Science Center (LANSCE). Experimental Mechanics, 2016, 56, 111-120.	1.1	18
15	Some Observations on Measuring Sound Speeds in Polymers Using Time-of-Flight. Experimental Techniques, 2016, 40, 1085-1097.	0.9	13
16	Mechanical Characterization and Preliminary Modeling of PEEK. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 209-218.	0.3	1
17	Journal of Dynamic Behavior of Materials: A New Forum for Knowledge Exchange on Dynamic Material Response, High Strain-Rate Effects, Shock, and Materials Under Extreme Loading. Journal of Dynamic Behavior of Materials, 2015, 1, 1-3.	1.1	4
18	In Situ and Postmortem Measures of Damage in Polymers at High Strain-Rates. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 53-59.	0.3	2

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19	Some Observations on Measuring Sound Speeds in Polymers Using Time-of-Flight. Experimental Techniques, 2015, 40, n/a-n/a.	0.9	2
20	Characterization of shocked beryllium. Journal of Physics: Conference Series, 2014, 500, 112013.	0.3	2
21	Effect of shock wave duration on dynamic failure of tungsten heavy alloy. Journal of Physics: Conference Series, 2014, 500, 112012.	0.3	3
22	High-density polyethylene damage at extreme tensile conditions. Journal of Physics: Conference Series, 2014, 500, 112011.	0.3	13
23	Three-dimensional characterisation and simulation of deformation and damage during Taylor impact in PTFE. Journal of Physics: Conference Series, 2014, 500, 182035.	0.3	1
24	Phase transition modeling of polytetrafluoroethylene during Taylor impact. Journal of Applied Physics, 2014, 116, .	1.1	19
25	The effect of microstructure on Rayleigh-Taylor instability growth in solids. Journal of Physics: Conference Series, 2014, 500, 112048.	0.3	4
26	Extreme Tensile Damage and Failure in Glassy Polymers via Dynamic-Tensile-Extrusion. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 107-112.	0.3	4
27	Quantitative Visualization of High-Rate Material Response with Dynamic Proton Radiography. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 405-411.	0.3	0
28	The effect of shock-wave profile on dynamic brittle failure. Journal of Applied Physics, 2013, 113, .	1.1	30
29	Timeâ€“temperature equivalence and adiabatic heating at large strains in high density polyethylene and ultrahigh molecular weight polyethylene. Polymer, 2013, 54, 381-390.	1.8	61
30	Incipient and Progressive Damage in Polyethylene Under Extreme Tensile Conditions. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 267-273.	0.3	2
31	Large-Strain Time-Temperature Equivalence and Adiabatic Heating of Polyethylene. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 67-74.	0.3	0
32	Inverse Measurement of Stiffness by the Normalization Technique for J-Integral Fracture Toughness. Conference Proceedings of the Society for Experimental Mechanics, 2013, , 17-21.	0.3	0
33	Dynamic-Tensile-Extrusion for investigating large strain and high strain rate behavior of polymers. Polymer Testing, 2012, 31, 1031-1037.	2.3	28
34	Use of the tapered double-cantilever beam geometry for fracture toughness measurements and its application to the quantification of self-healing. Journal of Strain Analysis for Engineering Design, 2011, 46, 167-186.	1.0	73
35	Constitutive modeling of shock response of polytetrafluoroethylene. Journal of Applied Physics, 2011, 110, 033530.	1.1	20
36	Rate dependent response and failure of a ductile epoxy and carbon fiber reinforced epoxy composite. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 401-402.	0.3	0

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37	Influence of necking propensity on the dynamic-tensile-extrusion response of fluoropolymers. , 2009, , .		5
38	CONSTITUTIVE MODELING OF SHOCK RESPONSE OF PTFE. , 2009, , .		1
39	DYNAMIC-TENSILE-EXTRUSION RESPONSE OF FLUOROPOLYMERS. , 2009, , .		8
40	In-situ Measurement of Crystalline Lattice Strains in Polytetrafluoroethylene. Experimental Mechanics, 2008, 48, 119-131.	1.1	55
41	Shock, release and Taylor impact of the semicrystalline thermoplastic polytetrafluoroethylene. Journal of Applied Physics, 2008, 103, .	1.1	27
42	AN INVESTIGATION OF SURFACE VELOCIMETRY OF SHOCKED POLYETHYLENE USING HETV. AIP Conference Proceedings, 2008, , .	0.3	2
43	INFLUENCE OF POLYETHYLENE MOLECULAR CONFORMATION ON TAYLOR IMPACT MEASUREMENTS: A COMPARISON OF HDPE, UHMWPE, AND PEX. AIP Conference Proceedings, 2008, , .	0.3	3
44	EFFECT OF PULSE DURATION ON POLYTETRAFLUOROETHYLENE SHOCKED ABOVE THE CRYSTALLINE PHASE IIâ€“III TRANSITION. , 2008, , .		0
45	SHEAR STRENGTH AND ITS VARIATION ACCORDING TO STRUCTURE IN SHOCK LOADED POLYETHLYLENE. , 2008, , .		0
46	In situ measurement of crystalline lattice strains in phase IV polytetrafluoroethylene. Journal of Neutron Research, 2007, 15, 139-146.	0.4	11
47	Effect of halogenation on the shock properties of semicrystalline thermoplastics. Journal of Applied Physics, 2007, 102, 063510.	1.1	28
48	Soft recovery of polytetrafluoroethylene shocked through the crystalline phase II-III transition. Journal of Applied Physics, 2007, 101, 024916.	1.1	40
49	Mixed-mode-I/II fracture of polytetrafluoroethylene. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 468-470, 253-258.	2.6	26
50	The mechanical properties of poly(ether-ether-ketone) (PEEK) with emphasis on the large compressive strain response. Polymer, 2007, 48, 598-615.	1.8	290
51	A new strain path to inducing phase transitions in semi-crystalline polymers. Polymer, 2007, 48, 2531-2536.	1.8	43
52	Compressive properties of extruded polytetrafluoroethylene. Polymer, 2007, 48, 4184-4195.	1.8	81
53	Influence of Molecular Conformation on the Constitutive Response of Polyethylene: A Comparison of HDPE, UHMWPE, and PEX. Experimental Mechanics, 2007, 47, 381-393.	1.1	84
54	Mechanics of Organic, Implant, and Bioinspired Materials. Experimental Mechanics, 2007, 47, 301-302.	1.1	3

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55	The influence of temperature and strain rate on the tensile and compressive constitutive response of four fluoropolymers. European Physical Journal Special Topics, 2006, 134, 935-940.	0.2	28
56	Shock and Recovery of Polytetrafluoroethylene Above and Below the Phase II to Phase III Transition. AIP Conference Proceedings, 2006, , .	0.3	3
57	The effect of crystallinity on the fracture of polytetrafluoroethylene (PTFE). Materials Science and Engineering C, 2006, 26, 1338-1343.	3.8	89
58	The influence of temperature and strain rate on the constitutive and damage responses of polychlorotrifluoroethylene (PCTFE, Kel-F 81). Polymer, 2006, 47, 7506-7518.	1.8	66
59	Fatigue crack propagation in microcapsule-toughened epoxy. Journal of Materials Science, 2006, 41, 6266-6273.	1.7	142
60	The Taylor Impact and Large Strain Response of Poly(Ether-Etherketone) (PEEK). AIP Conference Proceedings, 2006, , .	0.3	1
61	The properties of poly(tetrafluoroethylene) (PTFE) in tension. Polymer, 2005, 46, 8128-8140.	1.8	184
62	Retardation and repair of fatigue cracks in a microcapsule toughened epoxy compositeâ€"Part II: In situ self-healing. Composites Science and Technology, 2005, 65, 2474-2480.	3.8	351
63	Wax-Protected Catalyst Microspheres for Efficient Self-Healing Materials. Advanced Materials, 2005, 17, 205-208.	11.1	364
64	Effect of surface treatment on the hydrolytic stability of E-glass fiber bundle tensile strength. Composites Science and Technology, 2005, 65, 129-136.	3.8	43
65	Retardation and repair of fatigue cracks in a microcapsule toughened epoxy composite â€“ Part I: Manual infiltration. Composites Science and Technology, 2005, 65, 2466-2473.	3.8	217
66	The role of crystalline phase on fracture and microstructure evolution of polytetrafluoroethylene (PTFE). Polymer, 2005, 46, 3056-3068.	1.8	185
67	Pressure-induced phase change in poly(tetrafluoroethylene) at modest impact velocities. Journal of Applied Physics, 2005, 98, 063521.	1.1	52
68	Microcapsule induced toughening in a self-healing polymer composite. Journal of Materials Science, 2004, 39, 1703-1710.	1.7	603
69	In situpoly(urea-formaldehyde) microencapsulation of dicyclopentadiene. Journal of Microencapsulation, 2003, 20, 719-730.	1.2	644
70	In situ poly(urea-formaldehyde) microencapsulation of dicyclopentadiene. Journal of Microencapsulation, 2003, 20, 719-730.	1.2	398
71	Fracture and Fatigue Behavior of a Self-Healing Polymer Composite. Materials Research Society Symposia Proceedings, 2002, 735, 11221.	0.1	10
72	Interdisciplinary Research: A Student's Perspective. Journal of Chemical Education, 2002, 79, 13.	1.1	9

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73	Fracture testing of a self-healing polymer composite. Experimental Mechanics, 2002, 42, 372-379.	1.1	567
74	Fracture Testing of a Self-Healing Polymer Composite. Experimental Mechanics, 2002, 42, 372-379.	1.1	53
75	Autonomic healing of polymer composites. Nature, 2001, 409, 794-797.	13.7	3,747