

Ghatu Subhash

List of Publications by Year in descending order

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papers

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#	ARTICLE	IF	CITATIONS
1	Critical Appraisal of Limiting Strain Rates for Compression Testing of Ceramics in a Split Hopkinson Pressure Bar. <i>Journal of the American Ceramic Society</i> , 1994, 77, 263-267.	1.9	409
2	Evolution of microstructure and shear-band formation in α -hcp titanium. <i>Mechanics of Materials</i> , 1994, 17, 175-193.	1.7	249
3	A micromechanical model for high strain rate behavior of ceramics. <i>International Journal of Solids and Structures</i> , 1995, 32, 2627-2646.	1.3	214
4	Effects of cell shape and cell wall thickness variations on the elastic properties of two-dimensional cellular solids. <i>International Journal of Solids and Structures</i> , 2005, 42, 1777-1795.	1.3	160
5	Two new expanding cavity models for indentation deformations of elastic strain-hardening materials. <i>International Journal of Solids and Structures</i> , 2006, 43, 2193-2208.	1.3	143
6	A New Analytical Model for Estimation of Scratch-Induced Damage in Brittle Solids. <i>Journal of the American Ceramic Society</i> , 2007, 90, 885-892.	1.9	137
7	Effects of cell shape and strut cross-sectional area variations on the elastic properties of three-dimensional open-cell foams. <i>Journal of the Mechanics and Physics of Solids</i> , 2006, 54, 783-806.	2.3	135
8	The role of plasticity as a limiting factor in the compressive failure of high strength ceramics. <i>Mechanics of Materials</i> , 1998, 29, 205-218.	1.7	132
9	A plasticity-based model of material removal in chemical-mechanical polishing (CMP). <i>IEEE Transactions on Semiconductor Manufacturing</i> , 2001, 14, 406-417.	1.4	129
10	Characterization of uniaxial compressive response of bulk amorphous Zr-Ti-Cu-Ni-Be alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2002, 334, 33-40.	2.6	127
11	Investigation of the overall friction coefficient in single-pass scratch test. <i>Wear</i> , 2002, 252, 123-134.	1.5	121
12	Scratch-induced microplasticity and microcracking in zirconium diboride-silicon carbide composite. <i>Acta Materialia</i> , 2008, 56, 3011-3022.	3.8	112
13	Dynamic Indentation Response of Fine-Grained Boron Carbide. <i>Journal of the American Ceramic Society</i> , 2007, 90, 1850-1857.	1.9	108
14	A phenomenological constitutive model for foams under large deformations. <i>Polymer Engineering and Science</i> , 2004, 44, 463-473.	1.5	106
15	Investigation of shear band evolution in amorphous alloys beneath a Vickers indentation. <i>Acta Materialia</i> , 2005, 53, 3849-3859.	3.8	104
16	Dynamic Vickers indentation of brittle materials. <i>Wear</i> , 2000, 239, 27-35.	1.5	102
17	Measurement of scratch-induced residual stress within SiC grains in ZrB ₂ -SiC composite using micro-Raman spectroscopy. <i>Acta Materialia</i> , 2008, 56, 5345-5354.	3.8	101
18	Enhanced thermal conductivity of uranium dioxide-silicon carbide composite fuel pellets prepared by Spark Plasma Sintering (SPS). <i>Journal of Nuclear Materials</i> , 2013, 433, 66-73.	1.3	96

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19	Compressive strain rate sensitivity of ballistic gelatin. <i>Journal of Biomechanics</i> , 2010, 43, 420-425.	0.9	95
20	Evolution of subsurface plastic zone due to rolling contact fatigue of M-50 NiL case hardened bearing steel. <i>International Journal of Fatigue</i> , 2014, 59, 102-113.	2.8	95
21	Quasistatic and high strain rate uniaxial compressive response of polymeric structural foams. <i>International Journal of Impact Engineering</i> , 2006, 32, 1113-1126.	2.4	91
22	Negative strain rate sensitivity and compositional dependence of fracture strength in Zr/Hf based bulk metallic glasses. <i>Scripta Materialia</i> , 2003, 49, 1087-1092.	2.6	89
23	Influence of lateral confinement on dynamic damage evolution during uniaxial compressive response of brittle solids. <i>Journal of the Mechanics and Physics of Solids</i> , 2003, 51, 1089-1105.	2.3	88
24	Loading path optimization of tube hydroforming process. <i>International Journal of Machine Tools and Manufacture</i> , 2005, 45, 1504-1514.	6.2	88
25	Recent Advances in Dynamic Indentation Fracture, Impact Damage and Fragmentation of Ceramics. <i>Journal of the American Ceramic Society</i> , 2008, 91, 2777-2791.	1.9	88
26	An elastic-plastic-cracking model for finite element analysis of indentation cracking in brittle materials. <i>International Journal of Solids and Structures</i> , 2001, 38, 5893-5913.	1.3	86
27	Mechanical behaviour of a hot pressed aluminum nitride under uniaxial compression. <i>Journal of Materials Science</i> , 1998, 33, 1933-1939.	1.7	76
28	A dynamic damage growth model for uniaxial compressive response of rock aggregates. <i>Mechanics of Materials</i> , 2002, 34, 267-277.	1.7	71
29	Microstructure-sensitive accumulation of plastic strain due to ratcheting in bearing steels subject to Rolling Contact Fatigue. <i>International Journal of Fatigue</i> , 2014, 63, 191-202.	2.8	69
30	Dynamic Stress-Induced Transformation and Texture Formation in Uniaxial Compression of Zirconia Ceramics. <i>Journal of the American Ceramic Society</i> , 1993, 76, 153-165.	1.9	67
31	Densification of uranium dioxide fuel pellets prepared by spark plasma sintering (SPS). <i>Journal of Nuclear Materials</i> , 2013, 435, 1-9.	1.3	67
32	Static and dynamic indentation response of basal and prism plane sapphire. <i>Journal of the European Ceramic Society</i> , 2011, 31, 1713-1721.	2.8	64
33	In search of amorphization-resistant boron carbide. <i>Scripta Materialia</i> , 2016, 123, 158-162.	2.6	64
34	Strain-induced formation of carbon and boron clusters in boron carbide during dynamic indentation. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	63
35	Room-temperature dislocation activity during mechanical deformation of polycrystalline ultra-high-temperature ceramics. <i>Scripta Materialia</i> , 2009, 61, 1075-1078.	2.6	62
36	Damage modes in 3D glass fiber epoxy woven composites under high rate of impact loading. <i>Composites Part B: Engineering</i> , 2009, 40, 584-589.	5.9	60

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37	Experimental investigation of fabric-stress relations in granular materials. <i>Mechanics of Materials</i> , 1991, 11, 87-106.	1.7	58
38	Dynamic Indentation Hardness and Rate Sensitivity in Metals. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 1999, 121, 257-263.	0.8	58
39	Influence of stress state and strain rate on structural amorphization in boron carbide. <i>Journal of Applied Physics</i> , 2012, 111, .	1.1	55
40	Microstructureâ€“Property Relationships in M50-NiL and P675 Case-Hardened Bearing Steels. <i>Tribology Transactions</i> , 2013, 56, 1046-1059.	1.1	55
41	Measurement of microscale residual stresses in multi-phase ceramic composites using Raman spectroscopy. <i>Acta Materialia</i> , 2017, 129, 482-491.	3.8	55
42	Visco-hyperelastic constitutive modeling of strain rate sensitive soft materials. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 135, 103777.	2.3	53
43	Characteristics of residual plastic zone under static and dynamic Vickers indentations. <i>Wear</i> , 1999, 224, 56-67.	1.5	52
44	Consolidation and high strain rate mechanical behavior of nanocrystalline tantalum powder. <i>Scripta Materialia</i> , 1999, 12, 23-28.	0.5	51
45	Master sintering curves for UO ₂ and UO ₂ â€“SiC composite processed by spark plasma sintering. <i>Journal of Nuclear Materials</i> , 2014, 454, 427-433.	1.3	51
46	Characteristics of single-grit rotating scratch with a conical tool on pure titanium. <i>Wear</i> , 2001, 249, 566-581.	1.5	50
47	Evaluation of hardnessâ€“yield strength relationships for bulk metallic glasses. <i>Philosophical Magazine Letters</i> , 2006, 86, 333-345.	0.5	50
48	Measurement of viscoelastic properties in multiple anatomical regions of acute rat brain tissue slices. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 29, 213-224.	1.5	50
49	Grain size dependence of scratch-induced damage in alumina ceramics. <i>Wear</i> , 2008, 265, 612-619.	1.5	49
50	Mechanical behavior of tungsten preform reinforced bulk metallic glass composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005, 403, 134-143.	2.6	48
51	Characterization of the 3-D amorphized zone beneath a Vickers indentation in boron carbide using Raman spectroscopy. <i>Acta Materialia</i> , 2013, 61, 3888-3896.	3.8	48
52	Work hardening response of M50-NiL case hardened bearing steel during shakedown in rolling contact fatigue. <i>Materials Science and Technology</i> , 2012, 28, 34-38.	0.8	47
53	Influence of ultra-high residual compressive stress on the static and dynamic indentation response of a chemically strengthened glass. <i>Journal of the European Ceramic Society</i> , 2012, 32, 1551-1559.	2.8	47
54	Micromechanisms of deformation in high-purity hot-pressed alumina. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2000, 291, 37-45.	2.6	46

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55	Characterization of viscoelastic properties of polymer bar using iterative deconvolution in the time domain. <i>Mechanics of Materials</i> , 2006, 38, 1105-1117.	1.7	46
56	Influence of processing parameters on thermal conductivity of uranium dioxide pellets prepared by spark plasma sintering. <i>Journal of the European Ceramic Society</i> , 2014, 34, 1791-1801.	2.8	45
57	Synthesis of BaTiO_3 $\text{â€}20\text{wt}\%$ CoFeO_2 Nanocomposites via Spark Plasma Sintering. <i>Journal of the American Ceramic Society</i> , 2012, 95, 2504-2509.	1.9	44
58	The rate-dependent fracture toughness of silicon carbide- and boron carbide-based ceramics. <i>Journal of the European Ceramic Society</i> , 2015, 35, 4411-4422.	2.8	44
59	Investigation of Mechanical Properties of Diatom Frustules Using Nanoindentation. <i>Journal of Nanoscience and Nanotechnology</i> , 2005, 5, 50-56.	0.9	42
60	Evolution of shear bands in bulk metallic glasses under dynamic loading. <i>Journal of the Mechanics and Physics of Solids</i> , 2008, 56, 2171-2187.	2.3	42
61	The influence of SiC particle size and volume fraction on the thermal conductivity of spark plasma sintered UO_2 -SiC composites. <i>Journal of Nuclear Materials</i> , 2013, 442, 245-252.	1.3	42
62	Effect of Z-yarns on the stiffness and strength of three-dimensional woven composites. <i>Composites Part B: Engineering</i> , 2009, 40, 540-551.	5.9	41
63	Monotonic and cyclic short beam shear response of 3D woven composites. <i>Composites Science and Technology</i> , 2010, 70, 2190-2197.	3.8	41
64	Localized Tissue Surrogate Deformation due to Controlled Single Bubble Cavitation. <i>Experimental Mechanics</i> , 2016, 56, 97-109.	1.1	41
65	Spark plasma sintering of diamond-reinforced uranium dioxide composite fuel pellets. <i>Nuclear Engineering and Design</i> , 2015, 294, 52-59.	0.8	39
66	Characterization of adhesive interphase between epoxy and cement paste via Raman spectroscopy and mercury intrusion porosimetry. <i>Cement and Concrete Composites</i> , 2018, 88, 187-199.	4.6	39
67	High-pressure deformation and amorphization in boron carbide. <i>Journal of Applied Physics</i> , 2019, 125, .	1.1	39
68	Influence of end-conditions during tube hydroforming of aluminum extrusions. <i>International Journal of Mechanical Sciences</i> , 2004, 46, 1195-1212.	3.6	38
69	Concentration Dependence of Tensile Behavior in Agarose Gel Using Digital Image Correlation. <i>Experimental Mechanics</i> , 2011, 51, 255-262.	1.1	38
70	A New Scratch Resistance Measure for Structural Ceramics. <i>Journal of the American Ceramic Society</i> , 2005, 88, 918-925.	1.9	37
71	Synthesis of $\text{Mg-Al}_2\text{O}_3$ nanocomposites by mechanical alloying. <i>Journal of Alloys and Compounds</i> , 2013, 563, 165-170.	2.8	37
72	Application of data dependent systems approach for evaluation of fracture modes during a single-grit scratching. <i>Mechanics of Materials</i> , 2002, 34, 25-42.	1.7	36

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73	Mechanical properties and microstructural characterization of extrusion welds in AA6082-T4. <i>Journal of Materials Science</i> , 2004, 39, 6561-6569.	1.7	35
74	A Parametric Study on Crushability of Open-Cell Structural Polymeric Foams. <i>Journal of Porous Materials</i> , 2005, 12, 233-248.	1.3	35
75	Ratcheting-based microstructure-sensitive modeling of the cyclic hardening response of case-hardened bearing steels subject to Rolling Contact Fatigue. <i>International Journal of Fatigue</i> , 2015, 73, 119-131.	2.8	35
76	Slip-line spacing in ZrB ₂ -based ultrahigh-temperature ceramics. <i>Scripta Materialia</i> , 2010, 62, 839-842.	2.6	34
77	Material-dependent representative plastic strain for the prediction of indentation hardness. <i>Acta Materialia</i> , 2010, 58, 6487-6494.	3.8	34
78	Evolution of Wear Characteristics and Frictional Behavior in MEMS Devices. <i>Tribology Letters</i> , 2011, 41, 177-189.	1.2	34
79	A new reverse analysis to determine the constitutive response of plastically graded case hardened bearing steels. <i>International Journal of Solids and Structures</i> , 2011, 48, 584-591.	1.3	34
80	High-Strain-Rate Brain Injury Model Using Submerged Acute Rat Brain Tissue Slices. <i>Journal of Neurotrauma</i> , 2012, 29, 418-429.	1.7	34
81	Raman spectroscopic investigation of graphitization of diamond during spark plasma sintering of UO ₂ -diamond composite nuclear fuel. <i>Journal of Nuclear Materials</i> , 2016, 475, 1-5.	1.3	34
82	Deformation behavior and amorphization in icosahedral boron-rich ceramics. <i>Progress in Materials Science</i> , 2020, 112, 100664.	16.0	34
83	Finite element analysis of interacting Vickers indentations on brittle materials. <i>Acta Materialia</i> , 2001, 49, 2961-2974.	3.8	33
84	Inelastic deformation under indentation and scratch loads in a ZrB ₂ -SiC composite. <i>Journal of the European Ceramic Society</i> , 2009, 29, 3053-3061.	2.8	33
85	Plastic deformation of CVD textured tungsten. Constitutive response. <i>Acta Metallurgica Et Materialia</i> , 1994, 42, 319-330.	1.9	32
86	Ductile to Brittle Transition Depth During Single-Grit Scratching on Alumina Ceramics. <i>Journal of the American Ceramic Society</i> , 2007, 90, 3704-3707.	1.9	32
87	Determination of constitutive response of plastically graded materials. <i>International Journal of Plasticity</i> , 2011, 27, 728-738.	4.1	32
88	Experimental and numerical investigation of free-bulge formation during hydroforming of aluminum extrusions. <i>Journal of Materials Processing Technology</i> , 2004, 147, 247-254.	3.1	31
89	Mechanical properties of 10mol% Sc ₂ O ₃ -1mol% CeO ₂ -89mol% ZrO ₂ ceramics. <i>Journal of Power Sources</i> , 2010, 195, 2774-2781.	4.0	31
90	Influence of Carbon Nanotube Dispersion in UO ₂ -Carbon Nanotube Ceramic Matrix Composites Utilizing Spark Plasma Sintering. <i>Nuclear Technology</i> , 2015, 189, 258-267.	0.7	31

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91	Damage Mechanisms Perspective on Superior Ballistic Performance of Spinel over Sapphire. <i>Experimental Mechanics</i> , 2013, 53, 31-46.	1.1	30
92	Mechanical properties of ZrB ₂ -SiC ceramic composites: room temperature instantaneous behaviour. <i>Advances in Applied Ceramics</i> , 2013, 112, 9-16.	0.6	30
93	Thermodynamics-based stability criteria for constitutive equations of isotropic hyperelastic solids. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 124, 115-142.	2.3	30
94	Hyperelastic constitutive modeling of hydrogels based on primary deformation modes and validation under 3D stress states. <i>International Journal of Engineering Science</i> , 2020, 154, 103314.	2.7	30
95	Shocked ceramics melt: An atomistic analysis of thermodynamic behavior of boron carbide. <i>Physical Review B</i> , 2020, 101, .	1.1	30
96	Plastic deformation of hafnium under uniaxial compression. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1997, 28, 1479-1487.	1.1	29
97	Micromechanical modeling of tungsten-based bulk metallic glass matrix composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 429, 115-123.	2.6	28
98	Analysis of interacting cracks due to sequential indentations on sapphire. <i>Acta Materialia</i> , 2011, 59, 3528-3536.	3.8	28
99	Amorphization-induced volume change and residual stresses in boron carbide. <i>Journal of the American Ceramic Society</i> , 2018, 101, 2606-2615.	1.9	28
100	Measurement of Residual Stress in Silicon Carbide Fibers of Tubular Composites Using Raman Spectroscopy. <i>Acta Materialia</i> , 2021, 217, 117164.	3.8	28
101	Local heating and viscosity drop during shear band evolution in bulk metallic glasses under quasistatic loading. <i>Journal of Applied Physics</i> , 2007, 102, 043519.	1.1	27
102	An Extended Mohr-Coulomb Model for Fracture Strength of Intact Brittle Materials Under Ultrahigh Pressures. <i>Journal of the American Ceramic Society</i> , 2016, 99, 627-630.	1.9	27
103	Constitutive modeling of textured body-centered-cubic (bcc) polycrystals. <i>International Journal of Plasticity</i> , 1999, 15, 625-645.	4.1	26
104	On-chip laboratory suite for testing of free-standing metal film mechanical properties, Part II Experiments. <i>Acta Materialia</i> , 2008, 56, 3313-3326.	3.8	25
105	Rate Sensitive Indentation Response of a Coarse-Grained Magnesium Aluminate Spinel. <i>Journal of the American Ceramic Society</i> , 2011, 94, 3960-3966.	1.9	25
106	Raman spectroscopy mapping of amorphized zones beneath static and dynamic Vickers indentations on boron carbide. <i>Journal of the European Ceramic Society</i> , 2017, 37, 1945-1953.	2.8	25
107	Controlled single bubble cavitation collapse results in jet-induced injury in brain tissue. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 74, 261-273.	1.5	25
108	Comparison of pressure-sensitive strength models for ceramics under ultrahigh confinement. <i>International Journal of Impact Engineering</i> , 2018, 118, 60-66.	2.4	24

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109	Quasi-static and dynamic response of 3D-printed alumina. Journal of the European Ceramic Society, 2018, 38, 3305-3316.	2.8	24
110	Photoelastic Measurement of High Stress Profiles in Ion-Exchanged Glass. International Journal of Applied Glass Science, 2011, 2, 275-281.	1.0	23
111	Analysis of mode I delamination of z-pinned composites using a non-dimensional analytical model. Composites Part B: Engineering, 2012, 43, 1776-1784.	5.9	23
112	Influence of Initial Residual Stress on Material Properties of Bearing Steel During Rolling Contact Fatigue. Tribology Transactions, 2014, 57, 533-545.	1.1	23
113	Evaluating boron-carbide constituents with simulated Raman spectra. Scripta Materialia, 2017, 138, 32-34.	2.6	23
114	Nanotwinning and amorphization of boron suboxide. Acta Materialia, 2018, 147, 195-202.	3.8	23
115	Extended Hertz Theory of Contact Mechanics for Case-Hardened Steels With Implications for Bearing Fatigue Life. Journal of Tribology, 2018, 140, .	1.0	23
116	The constitutive behavior of refractory metals as a function of strain rate. Jom, 1995, 47, 55-58.	0.9	22
117	Dynamic deformation characteristics of zirconium diboride-silicon carbide under multi-axial confinement. International Journal of Impact Engineering, 2016, 91, 158-169.	2.4	22
118	Crystallographic and spectral equivalence of boron-carbide polymorphs. Scripta Materialia, 2016, 122, 82-85.	2.6	22
119	Sensitivity of Scratch Resistance to Grinding-Induced Damage Anisotropy in Silicon Nitride. Journal of the American Ceramic Society, 2006, 89, 2528-2536.	1.9	21
120	Mechanical properties of PECVD thin ceramic films. Journal of the European Ceramic Society, 2010, 30, 689-697.	2.8	21
121	Rate-Dependent Mechanical Behavior and Amorphization of Ultrafine-Grained Boron Carbide. Journal of the American Ceramic Society, 2016, 99, 3398-3405.	1.9	21
122	Influence of carbon nanotubes as secondary phase addition on the mechanical properties and amorphization of boron carbide. Journal of the European Ceramic Society, 2019, 39, 1974-1983.	2.8	21
123	Quasi-Static and High Strain Rate Simple Shear Characterization of Soft Polymers. Experimental Mechanics, 2019, 59, 733-747.	1.1	21
124	Plastic deformation of CVD textured tungsten-II. Characterization. Acta Metallurgica Et Materialia, 1994, 42, 331-340.	1.9	20
125	AN EXPERIMENTAL TECHNIQUE TO INVESTIGATE THE DYNAMIC INDENTATION HARDNESS OF MATERIALS. Experimental Techniques, 1997, 21, 16-18.	0.9	20
126	A Unified Phenomenological Model for Tensile and Compressive Response of Polymeric Foams. Journal of Engineering Materials and Technology, Transactions of the ASME, 2009, 131, .	0.8	20

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127	Rate-Dependent Indentation Response of Structural Ceramics. Journal of the American Ceramic Society, 2010, 93, 2377-2383.	1.9	20
128	Raman spectroscopic characterization of the core-rim structure in reaction bonded boron carbide ceramics. Applied Physics Letters, 2015, 106, .	1.5	20
129	An improved dynamic expanding cavity model for high-pressure and high-strain rate response of ceramics. International Journal of Solids and Structures, 2017, 125, 77-88.	1.3	20
130	Shear Band Patterns in Metallic Glasses under Static Indentation, Dynamic Indentation, and Scratch Processes. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 2936-2942.	1.1	19
131	Cyclic Constitutive Response and Effective σ - ϵ Diagram of M50 NiL Case-Hardened Bearing Steel Subjected to Rolling Contact Fatigue. Journal of Tribology, 2015, 137, .	1.0	19
132	Role of Unloading in Machining of Brittle Materials. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2000, 122, 452-462.	1.3	18
133	Dynamic indentation response of ZrHf-based bulk metallic glasses. Journal of Materials Research, 2007, 22, 478-485.	1.2	18
134	Transparent Armor Materials. Experimental Mechanics, 2013, 53, 1-2.	1.1	18
135	Wave propagation in ballistic gelatine. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 68, 32-41.	1.5	18
136	Challenging endeavor to integrate gallium and carbon via direct bonding to evolve GaN on diamond architecture. Scripta Materialia, 2018, 142, 138-142.	2.6	18
137	Short note Dynamic compression behaviour of tungsten powders consolidated by plasma pressure compaction. Powder Metallurgy, 1999, 42, 181-182.	0.9	17
138	Mechanical properties of BaTiO ₃ open-porosity foams. Journal of the European Ceramic Society, 2009, 29, 1987-1993.	2.8	17
139	Non-Newtonian Behavior of Ballistic Gelatin at High Shear Rates. Experimental Mechanics, 2012, 52, 551-560.	1.1	17
140	Effect of water concentration on the shock response of polyethylene glycol diacrylate (PEGDA) hydrogels: A molecular dynamics study. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 90, 30-39.	1.5	17
141	Effect of microscopic deformation mechanisms on the dynamic response of soft cellular materials. Mechanics of Materials, 2010, 42, 118-133.	1.7	16
142	Ball Impact Response of Unstrengthened and Chemically Strengthened Glass Bars. Journal of the American Ceramic Society, 2014, 97, 189-197.	1.9	16
143	Uniaxial stress behaviour of Y-TZP. Journal of Materials Science, 1993, 28, 5949-5952.	1.7	15
144	Mechanics of mixed-mode ductile material removal with a conical tool and the size dependence of the specific energy. Journal of the Mechanics and Physics of Solids, 2002, 50, 1269-1296.	2.3	15

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145	Crushability maps for structural polymeric foams in uniaxial loading under rigid confinement. <i>Experimental Mechanics</i> , 2004, 44, 289-294.	1.1	15
146	Determination of Subsurface Hardness Gradients in Plastically Graded Materials via Surface Indentation. <i>Journal of Tribology</i> , 2011, 133, .	1.0	15
147	Edge-on-impact response of a coarse-grained magnesium aluminate spinel rod. <i>International Journal of Impact Engineering</i> , 2012, 40-41, 26-34.	2.4	15
148	A Novel Technique for the Determination of Surface Biaxial Stress under External Confinement Using Raman Spectroscopy. <i>Experimental Mechanics</i> , 2014, 54, 763-774.	1.1	15
149	The Rate-Dependent Response of Pressureless-Sintered and Reaction-bonded Silicon Carbide-Based Ceramics. <i>International Journal of Applied Ceramic Technology</i> , 2015, 12, E207.	1.1	15
150	Interaction of Indentation-Induced Cracks on Single-Crystal Silicon Carbide. <i>Journal of the American Ceramic Society</i> , 2015, 98, 1891-1897.	1.9	15
151	Impact-induced deformation mechanisms in unstrengthened and chemically strengthened glass bars. <i>International Journal of Impact Engineering</i> , 2015, 75, 53-64.	2.4	15
152	Effect of plasticity on the dynamic capacity of modern bearing steels. <i>Tribology International</i> , 2019, 133, 160-171.	3.0	15
153	Simulated blast overpressure induces specific astrocyte injury in an ex vivo brain slice model. <i>PLoS ONE</i> , 2017, 12, e0175396.	1.1	15
154	An approximate upper bound approach for the single-grit rotating scratch with a conical tool on pure metal. <i>Wear</i> , 2002, 252, 911-933.	1.5	14
155	Mechanical behavior of bulk (ZrHf)TiCuNiAl amorphous alloys. <i>Scripta Materialia</i> , 2003, 49, 447-452.	2.6	14
156	Proportional loading of thick-walled cylinders. <i>International Journal of Pressure Vessels and Piping</i> , 2005, 82, 129-135.	1.2	14
157	Loading velocity dependent permeability in agarose gel under compression. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 974-982.	1.5	13
158	A unified model for dwell and penetration during long rod impact on thick ceramic targets. <i>International Journal of Impact Engineering</i> , 2019, 131, 304-316.	2.4	13
159	Finite Element Analysis of Brittle Cracking due to Single Grit Rotating Scratch. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2003, 70, 147-151.	1.1	13
160	Quasistatic and dynamic crushability of polymeric foams in rigid confinement. <i>International Journal of Impact Engineering</i> , 2009, 36, 1303-1311.	2.4	12
161	A Novel Method for Dynamic Short-Beam Shear Testing of 3D Woven Composites. <i>Experimental Mechanics</i> , 2013, 53, 493-503.	1.1	12
162	Transient-State Rheological Behavior of Poly(ethylene glycol) Diacrylate Hydrogels at High Shear Strain Rates. <i>Macromolecules</i> , 2019, 52, 5860-5871.	2.2	12

#	ARTICLE	IF	CITATIONS
163	Validated tensile characterization of the strain rate dependence in soft materials. International Journal of Impact Engineering, 2021, 156, 103949.	2.4	12
164	Strain-rate effects in high-purity alumina. Jom, 1995, 47, 60-63.	0.9	11
165	Influence of strain-rate on the uniaxial compressive behavior of 2-D braided textile composites. Composites Part A: Applied Science and Manufacturing, 2001, 32, 1583-1591.	3.8	11
166	Exploration of Viability of Spark Plasma Sintering for Commercial Fabrication of Nuclear Fuel Pellets. Nuclear Technology, 2017, 200, 144-158.	0.7	10
167	Raman Spectroscopy Methods to Characterize the Mechanical Response of Soft Biomaterials. Biomacromolecules, 2020, 21, 3485-3497.	2.6	10
168	Icosahedral superstrength at the nanoscale. Physical Review Materials, 2018, 2, .	0.9	10
169	Extraction and Testing of Miniature Compression Specimens From Bearing Balls Subjected to Rolling Contact Fatigue. Journal of Tribology, 2014, 136, .	1.0	9
170	Microscopic and spectroscopic investigation of phase evolution within static and dynamic indentations in single-crystal silicon. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 673, 321-331.	2.6	9
171	Coupled Electro-Thermo-Mechanical Simulation for Multiple Pellet Fabrication Using Spark Plasma Sintering. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2018, 140, .	1.3	9
172	Determination of residual stress fields beneath a Vickers indentation using photoelasticity. Experimental Mechanics, 1999, 39, 227-230.	1.1	8
173	Anisotropic grain growth with pore drag under applied loads. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 412, 271-278.	2.6	8
174	Determination of post-yield hardening response in a ZrB ₂ ceramic. Scripta Materialia, 2011, 65, 962-965.	2.6	8
175	Effect of Loop Defects on the High Strain Rate Behavior of PEGDA Hydrogels: A Molecular Dynamics Study. Journal of Physical Chemistry B, 2020, 124, 2029-2039.	1.2	8
176	Influence of cold rolling and strain rate on plastic response of powder metallurgy and chemical vapor deposition rhenium. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 2641-2648.	1.1	7
177	Optimization of Material Properties and Process Parameters for Tube Hydroforming of Aluminum Extrusions. Journal of Engineering Materials and Technology, Transactions of the ASME, 2007, 129, 233-241.	0.8	7
178	Recent Progress in Zr(Hf)B ₂ Based Ultrahigh Temperature Ceramics. , 2013, , 267-299.		7
179	Influence of Residual Stress and Temperature on the Cyclic Hardening Response of M50 High-Strength Bearing Steel Subjected to Rolling Contact Fatigue. Journal of Engineering Materials and Technology, Transactions of the ASME, 2016, 138, .	0.8	7
180	Analysis of Nanoindentation Response of Diatom Frustules. Journal of Nanoscience and Nanotechnology, 2007, 7, 4465-4472.	0.9	6

#	ARTICLE	IF	CITATIONS
181	An optical technique for determination of rheological properties of gelatin. <i>Journal of Rheology</i> , 2011, 55, 951-964.	1.3	6
182	Analysis of failure modes in three-dimensional woven composites subjected to quasi-static indentation. <i>Journal of Composite Materials</i> , 2014, 48, 2473-2491.	1.2	6
183	Influence of porosity and pellet dimensions on temperature and stress inhomogeneities during spark plasma sintering of ceramic fuel. <i>Ceramics International</i> , 2019, 45, 7376-7384.	2.3	6
184	Effect of curvature on extensional stiffness matrix of 2-D braided composite tubes. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021, 147, 106422.	3.8	6
185	Shock response of single-crystal boron carbide along orientations with the highest and lowest elastic moduli. <i>Physical Review B</i> , 2021, 104, .	1.1	6
186	A nonlocal formulation based on a novel averaging scheme applicable to nanostructured materials. <i>Mechanics of Materials</i> , 2003, 35, 281-294.	1.7	5
187	A generalized cohesive element technique for arbitrary crack motion. <i>Finite Elements in Analysis and Design</i> , 2009, 45, 501-510.	1.7	5
188	Oxidation of the polycrystalline copper-graphene nanocomposite. <i>JPhys Materials</i> , 2019, 2, 025005.	1.8	5
189	Intrinsic hardness of boron carbide: Influence of polymorphism and stoichiometry. <i>Journal of the American Ceramic Society</i> , 2020, 103, 7127-7134.	1.9	5
190	Behavior of a Novel Iterative Deconvolution Algorithm for System Identification. <i>JVC/Journal of Vibration and Control</i> , 2005, 11, 985-1003.	1.5	4
191	Experimental and Numerical Modeling of Surface Indentation Response of Plastically Graded Materials. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2013, 135, .	0.8	4
192	Mechanical properties, spectral vibrational response, and flow-field analysis of the aragonite skeleton of the staghorn coral (<i>Acropora cervicornis</i>). <i>Coral Reefs</i> , 2020, 39, 1779-1792.	0.9	4
193	Characterization of BAM-B4C composites prepared by spark plasma sintering. <i>Ceramics International</i> , 2021, 47, 11738-11747.	2.3	4
194	Label-free quantification of soft tissue alignment by polarized Raman spectroscopy. <i>Acta Biomaterialia</i> , 2021, 136, 363-374.	4.1	4
195	Scratch Resistance and Residual Stresses in Longitudinally and Transversely Ground Silicon Nitride. , 0, , 285-292.		4
196	Damage zone interaction due to non-oriented Vickers indentations on brittle materials. <i>Journal of Materials Science</i> , 2003, 38, 1185-1194.	1.7	3
197	On shockwave propagation and attenuation in poly(ethylene glycol) diacrylate hydrogels. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021, 118, 104423.	1.5	3
198	A New Approach Towards Life Prediction of Case Hardened Bearing Steels Subjected to Rolling Contact Fatigue. <i>Materials Performance and Characterization</i> , 2017, 6, 656-677.	0.2	3

#	ARTICLE	IF	CITATIONS
199	Failure Mechanisms of Ceramics Under Quasi-static and Dynamic Loads: Overview. , 2022, , 579-607.		3
200	Dynamic Indentation Hardness of Metals. , 1999, , 447-456.		2
201	Static and Dynamic Indentation Response of Fine Grained Boron Carbide. , 0, , 29-44.		2
202	The Impact Response of Coquina: Unlocking the Mystery Behind the Endurance of the Oldest Fort in the United States. Journal of Dynamic Behavior of Materials, 2015, 1, 397-408.	1.1	2
203	Structural and mechanical properties of staghorn coral (<i>Acropora cervicornis</i>) CaCO ₃ aragonite skeletons, cleaned by chemical bleaching and biological processes. Advances in Applied Ceramics, 2020, 119, 434-438.	0.6	2
204	Intrinsic hardness of covalent crystals: a unified multiparametric framework. Journal of Materials Science, 2021, 56, 11711-11722.	1.7	2
205	Micro-Raman Spectroscopic Evaluation of Residual Microstresses in Reaction Bonded Boron Carbide Ceramics. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 39-43.	0.3	2
206	Fatigue crack propagation in aluminum nitride ceramics under cyclic compression. Journal of Materials Science, 1999, 34, 4645-4652.	1.7	1
207	Dynamic Fracture and Strain Rate Behavior of Aggregates Used in Transportation. International Journal of Geomechanics, 2008, 8, 82-90.	1.3	1
208	Fabrication Strategies and Thermal Conductivity Assessment of High Density UO ₂ Pellet Incorporated with SiC. Materials Research Society Symposia Proceedings, 2012, 1444, 9.	0.1	1
209	Measurement of Residual Stresses in B ₄ C-SiC-Si Ceramics Using Raman Spectroscopy. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 341-345.	0.3	1
210	The Influence of Pre-forming on Hydroforming of Extruded Aluminum Tubes. International Journal of Forming Processes, 2006, 9, 97-119.	0.3	1
211	A Novel Rotating Flexure-Test Technique for Brittle Materials with Circular Geometries. Experimental Techniques, 0, , 1.	0.9	1
212	Active space garnering by leaves of a rosette plant. Current Biology, 2022, 32, R352-R353.	1.8	1
213	Defect evolution during machining of brittle materials. Studies in Applied Mechanics, 1997, , 89-98.	0.4	0
214	Indentation of Strain-Hardening Materials: A New Expanding Cavity Model. , 2005, , .		0
215	High Shear Rate Behavior of Gelatin. , 2010, , .		0
216	Quasistatic and Dynamic Compressive Behavior of Gelatin. , 2010, , .		0

#	ARTICLE	IF	CITATIONS
217	Micro-architecture embedding ultra-thin interlayer to bond diamond and silicon via direct fusion. Applied Physics Letters, 2018, 112, 211601.	1.5	0
218	Non-Newtonian Fluid-Like Behavior of Poly(Ethylene Glycol) Diacrylate Hydrogels Under Transient Dynamic Shear. Conference Proceedings of the Society for Experimental Mechanics, 2021, , 17-23.	0.3	0
219	Static and Dynamic Mechanical Characterization of a Spark Plasma Sintered B6Oâ€“B4C Composite. Conference Proceedings of the Society for Experimental Mechanics, 2021, , 79-88.	0.3	0
220	Scratch-Induced Deformation and Residual Stress in a Zirconium Diboride-Silicon Carbide Composite. Ceramic Engineering and Science Proceedings, 0, , 51-63.	0.1	0
221	Damage Mechanisms of Chemically Strengthened Glass Bars Due to High-Velocity Ball Impact. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 197-200.	0.3	0
222	Determination of Surface Bi-Axial Stresses Using Raman Spectroscopy. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 167-174.	0.3	0
223	Which One Has More Influence on Fracture Strength of Ceramics: Pressure or Strain Rate?. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 195-202.	0.3	0
224	An extrapolation method to remove spurious stress concentration in micromechanical analyses of composites using pixel-based meshes. Composite Structures, 2022, 290, 115522.	3.1	0