Kaliat Ramesh

List of Publications by Year
in descending order

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294	14,676	18482 62	24982 109
papers	citations	h-index	g-index

298	298	298	8908
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Effect of nanocrystalline and ultrafine grain sizes on the strain rate sensitivity and activation volume: fcc versus bcc metals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 381, 71-79.	5.6	761
2	Effects of nanocrystalline and ultrafine grain sizes on constitutive behavior and shear bands in iron. Acta Materialia, 2003, 51, 3495-3509.	7.9	474
3	Deformation behavior and plastic instabilities of ultrafine-grained titanium. Applied Physics Letters, 2001, 79, 611-613.	3.3	413
4	The design of accurate micro-compression experiments. Scripta Materialia, 2006, 54, 181-186.	5.2	373
5	The high-strain-rate response of alpha-titanium: experiments, deformation mechanisms and modeling. Acta Materialia, 1998, 46, 1025-1043.	7.9	349
6	Microstructure and mechanical properties of super-strong nanocrystalline tungsten processed by high-pressure torsion. Acta Materialia, 2006, 54, 4079-4089.	7.9	302
7	Evolution and microstructure of shear bands in nanostructured Fe. Applied Physics Letters, 2002, 81, 1240-1242.	3.3	288
8	Strengthening mechanisms in an Alâ€“Mg alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 1292-1298.	5.6	285
9	Thermal fatigue as the origin of regolith on small asteroids. Nature, 2014, 508, 233-236.	27.8	280
10	AlON: A brief history of its emergence and evolution. Journal of the European Ceramic Society, 2009, 29, 223-236.	5.7	260
11	Enhanced plastic strain in Zr-based bulk amorphous alloys. Physical Review B, 2001, 64, .	3.2	255
12	Adiabatic shear banding in ultrafine-grained Fe processed by severe plastic deformation. Acta Materialia, 2004, 52, 1859-1869.	7.9	252
13	Mechanics of Flexible Needles Robotically Steered through Soft Tissue. International Journal of Robotics Research, 2010, 29, 1640-1660.	8.5	251
14	An interacting micro-crack damage model for failure of brittle materials under compression. Journal of the Mechanics and Physics of Solids, 2008, 56, 896-923.	4.8	230
15	High Rates and Impact Experiments. Springer Handbooks, 2008, , 929-960.	0.6	189
16	Microcompression of single-crystal magnesium. Scripta Materialia, 2010, 62, 536-539.	5.2	178
17	Size-independent strength and deformation mode in compression of a Pd-based metallic glass. Acta Materialia, 2008, 56, 5091-5100.	7.9	175
18	Deformation and Failure of Zr₅₇Ti₅Cu₂₀Ni₈Al₁₀ Bulk Metallic Glass Under Quasi-static and Dynamic Compression. Journal of Materials Research, 2002, 17, 1441-1445.	2.6	172

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19	Modeling of Tool-Tissue Interactions for Computer-Based Surgical Simulation: A Literature Review. Presence: Teleoperators and Virtual Environments, 2008, 17, 463-491.	0.6	168
20	Microstructural evolution of pure magnesium under high strain rate loading. Acta Materialia, 2015, 87, 56-67.	7.9	168
21	Mechanical properties of soft human tissues under dynamic loading. Journal of Biomechanics, 2007, 40, 1960-1967.	2.1	154
22	An axonal strain injury criterion for traumatic brain injury. Biomechanics and Modeling in Mechanobiology, 2012, 11, 245-260.	2.8	148
23	The mechanical response of a 6061-T6 Al/Al2O3 metal matrix composite at high rates of deformation. Acta Metallurgica Et Materialia, 1995, 43, 4453-4464.	1.8	142
24	Dynamic strength and fragmentation of hot-pressed silicon carbide under uniaxial compression. Acta Materialia, 2004, 52, 355-367.	7.9	141
25	An enhanced continuum model for size-dependent strengthening and failure of particle-reinforced composites. Acta Materialia, 2009, 57, 5848-5861.	7.9	137
26	Influence of particle volume fraction, shape, and aspect ratio on the behavior of particle-reinforced metalâ€“matrix composites at high rates of strain. Acta Materialia, 1998, 46, 5633-5646.	7.9	135
27	Microstructure and mechanical properties of tantalum after equal channel angular extrusion (ECAE). Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 358, 266-272.	5.6	123
28	Plastic flow localization in bulk tungsten with ultrafine microstructure. Applied Physics Letters, 2005, 86, 101907.	3.3	109
29	A Multiscale Computational Approach to Estimating Axonal Damage under Inertial Loading of the Head. Journal of Neurotrauma, 2013, 30, 102-118.	3.4	107
30	Failure mode and dynamic behavior of nanophase iron under compression. Scripta Materialia, 1999, 42, 73-78.	5.2	106
31	The dynamic growth of a single void in a viscoplastic material under transient hydrostatic loading. Journal of the Mechanics and Physics of Solids, 2003, 51, 1-26.	4.8	101
32	A Three-Dimensional Computational Human Head Model That Captures Live Human Brain Dynamics. Journal of Neurotrauma, 2017, 34, 2154-2166.	3.4	99
33	Finite deformations and the dynamic measurement of radial strains in compression Kolsky bar experiments. International Journal of Solids and Structures, 1996, 33, 3723-3738.	2.7	98
34	A cohesive model based fragmentation analysis: effects of strain rate and initial defects distribution. International Journal of Solids and Structures, 2005, 42, 5181-5207.	2.7	98
35	High strain rate response of aluminum 6092/B4C composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 384, 26-34.	5.6	96
36	Bulk and microscale compressive properties of a Pd-based metallic glass. Scripta Materialia, 2007, 57, 517-520.	5.2	96

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37	Dynamic testing at high strain rates of an ultrafine-grained magnesium alloy processed by ECAP. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 517, 24-29.	5.6	96
38	A scaling law for the dynamic strength of brittle solids. Acta Materialia, 2013, 61, 3509-3521.	7.9	95
39	The rate-dependent deformation and localization of fully dense and porous Ti-6Al-4V. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 232, 11-22.	5.6	93
40	Dynamic characterization of layered and graded structures under impulsive loading. International Journal of Solids and Structures, 2001, 38, 6045-6061.	2.7	91
41	Microstructural characterization of boron-rich boron carbide. Acta Materialia, 2017, 136, 202-214.	7.9	91
42	A rigorous assessment of the benefits of miniaturization in the Kolsky bar system. Experimental Mechanics, 2004, 44, 445-454.	2.0	90
43	Micromechanics of deformation of metallic-glassâ€“matrix composites from in situ synchrotron strain measurements and finite element modeling. Acta Materialia, 2005, 53, 1883-1893.	7.9	88
44	Valve-based microfluidic compression platform: single axon injury and regrowth. Lab on A Chip, 2011, 11, 3888.	6.0	87
45	A technique for measuring the dynamic behavior of materials at high temperatures. International Journal of Plasticity, 1998, 14, 1279-1292.	8.8	84
46	Nano-structured vanadium: processing and mechanical properties under quasi-static and dynamic compression. Scripta Materialia, 2004, 50, 359-364.	5.2	83
47	Adiabatic shear localization in Î±-titanium: experiments, modeling and microstructural evolution. Journal of the Mechanics and Physics of Solids, 2004, 52, 1889-1909.	4.8	83
48	The influence of crystal structure on the dynamic behavior of materials at high temperatures. International Journal of Plasticity, 2004, 20, 269-290.	8.8	79
49	A review of mechanisms and models for dynamic failure, strength, and fragmentation. Planetary and Space Science, 2015, 107, 10-23.	1.7	79
50	The thermoviscoplastic response of polycrystalline tungsten in compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 276, 9-21.	5.6	78
51	The mechanical properties of tungsten-based composites at very high strain rates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1995, 203, 140-153.	5.6	76
52	Effects of the initial dislocation density on size effects in single-crystal magnesium. Acta Materialia, 2013, 61, 3808-3818.	7.9	75
53	Needle-tissue interaction forces for bevel-tip steerable needles. , 2008, , 224-231.		74
54	Rate-dependent hardening due to twinning in an ultrafine-grained magnesium alloy. Acta Materialia, 2012, 60, 1818-1826.	7.9	74

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55	Effects of material properties on the fragmentation of brittle materials. International Journal of Fracture, 2006, 139, 169-196.	2.2	73
56	The dynamic strength of an ordinary chondrite. Meteoritics and Planetary Science, 2011, 46, 1653-1669.	1.6	69
57	A nucleation mechanism of deformation twins in pure aluminum. Acta Materialia, 2009, 57, 4500-4507.	7.9	68
58	Microstructural influences on the Dynamic Response of Tungsten Heavy Alloys. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1992, 23, 2625-2630.	1.4	66
59	Predicting variability in the dynamic failure strength of brittle materials considering pre-existing flaws. Journal of the Mechanics and Physics of Solids, 2011, 59, 297-319.	4.8	66
60	The compressive failure of aluminum nitride considered as a model advanced ceramic. Journal of the Mechanics and Physics of Solids, 2011, 59, 1076-1093.	4.8	66
61	Compressive behavior of an electrodeposited nanostructured copper at quasistatic and high strain rates. Scripta Materialia, 2001, 45, 613-620.	5.2	65
62	An elasticâ€“visco-plastic analysis of ductile expanding ring. International Journal of Impact Engineering, 2006, 33, 880-891.	5.0	65
63	Tensile behavior and dynamic failure of aluminum 6092/B4C composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 433, 70-82.	5.6	64
64	A dynamic void growth model governed by dislocation kinetics. Journal of the Mechanics and Physics of Solids, 2014, 70, 262-280.	4.8	64
65	High strain rate deformation of martensitic NiTi shape memory alloy. Scripta Materialia, 1999, 41, 89-95.	5.2	63
66	Dynamic void nucleation and growth in solids: A self-consistent statistical theory. Journal of the Mechanics and Physics of Solids, 2008, 56, 336-359.	4.8	63
67	Strengthening mechanisms in cryomilled ultrafine-grained aluminum alloy at quasi-static and dynamic rates of loading. Scripta Materialia, 2009, 60, 619-622.	5.2	63
68	The importance of organ geometry and boundary constraints for planning of medical interventions. Medical Engineering and Physics, 2009, 31, 195-206.	1.7	62
69	Modeling the constitutive response of bimodal metals. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 2397-2404.	2.2	60
70	Comparison of the plastic deformation and failure of A359/SiC and 6061-T6/Al2O3 metal matrix composites under dynamic tension. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 371, 359-370.	5.6	59
71	Dynamic Compressive Failure of AlON Under Controlled Planar Confinement. Journal of the American Ceramic Society, 2008, 91, 3619-3629.	3.8	56
72	Experimental Observations on Dynamic Response of Selected Transparent Armor Materials. Experimental Mechanics, 2013, 53, 3-29.	2.0	56

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73	Dynamic failure mechanisms in a 6061-T6 Al/Al2O3 metalâ€"matrix composite. International Journal of Solids and Structures, 1995, 32, 2609-2626.	2.7	54
74	Effect of crack growth dynamics on the rate-sensitive behavior of hot-pressed boron carbide. Scripta Materialia, 2007, 57, 481-484.	5.2	54
75	Unraveling the Anomalous Grain Size Dependence of Cavitation. Physical Review Letters, 2016, 117, 215503.	7.8	54
76	The formation of multiple adiabatic shear bands. Journal of the Mechanics and Physics of Solids, 2006, 54, 1376-1400.	4.8	53
77	Microstructural effects on the spall properties of ECAE-processed AZ31B magnesium alloy. International Journal of Impact Engineering, 2016, 98, 34-41.	5.0	53
78	Modelling of non-linear elastic tissues for surgical simulation. Computer Methods in Biomechanics and Biomedical Engineering, 2010, 13, 811-818.	1.6	52
79	The Dynamic Flow and Failure Behavior of Magnesium and Magnesium Alloys. Jom, 2014, 66, 291-304.	1.9	52
80	Viscoplastic deformations and compressive damage in an A359/SiCp metalâ€"matrix composite. Acta Materialia, 2000, 48, 1563-1573.	7.9	51
81	Computational micromechanics of dynamic compressive loading of a brittle polycrystalline material using a distribution of grain boundary properties. Journal of the Mechanics and Physics of Solids, 2008, 56, 2618-2641.	4.8	51
82	Mechanisms of dynamic deformation and dynamic failure in aluminum nitride. Acta Materialia, 2012, 60, 3480-3490.	7.9	51
83	A 3D mechanistic model for brittle materials containing evolving flaw distributions under dynamic multiaxial loading. Journal of the Mechanics and Physics of Solids, 2015, 78, 269-297.	4.8	51
84	The compressive viscoplastic response of an A359/SiCp metalâ€"matrix composite and of the A359 aluminum alloy matrix. International Journal of Solids and Structures, 2000, 37, 7547-7562.	2.7	50
85	Microcompression of nanocrystalline nickel. Applied Physics Letters, 2006, 88, 103112.	3.3	50
86	Effects of interfacial debonding on the rate-dependent response of metal matrix composites. Acta Materialia, 2005, 53, 4687-4700.	7.9	49
87	Analysis of the brittle fragmentation of an expanding ring. Computational Materials Science, 2006, 37, 74-85.	3.0	49
88	Characteristic dislocation substructure in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si8.gif" overflow="scroll"><mml:mfenced open="{" close="}"><mml:mrow><mml:mn>10</mml:mn><mml:mover accent="true"><mml:mn>1</mml:mn><mml:mo stretchy="true">Â¯</mml:mo></mml:mover><mml:mn>2</mml:mn></mml:mrow></mml:mfenced></mml:math> twins in hexagonal metals. Scripta Materialia, 2018, 143, 81-85.	5.2	48
89	The effects of defects on the uniaxial compressive strength and failure of an advanced ceramic. Acta Materialia, 2016, 102, 263-272.	7.9	47
90	On the localization of shearing deformations in tungsten heavy alloys. Mechanics of Materials, 1994, 17, 165-173.	3.2	46

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91	Crystallization and mechanical behavior of (Hf, Zr)â€“Tiâ€“Cuâ€“Niâ€“Al metallic glasses. Journal of Non-Crystalline Solids, 2003, 317, 112-117.	3.1	46
92	A numerical methodology for investigating the formation of adiabatic shear bands. Journal of the Mechanics and Physics of Solids, 2006, 54, 904-926.	4.8	46
93	The effects of thermal softening and heat conduction on the dynamic growth of voids. International Journal of Solids and Structures, 2003, 40, 4461-4478.	2.7	45
94	Spall response of 1100-O aluminum. Journal of Applied Physics, 2012, 111, .	2.5	45
95	Multi-scale defect interactions in high-rate brittle material failure. Part I: Model formulation and application to ALON. Journal of the Mechanics and Physics of Solids, 2016, 86, 117-149.	4.8	45
96	The mechanical response of an A359/SiCp MMC and the A359 aluminum matrix to dynamic shearing deformations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 382, 162-170.	5.6	44
97	Hardness and mechanical anisotropy of hexagonal SiC single crystal polytypes. Journal of Alloys and Compounds, 2019, 770, 158-165.	5.5	44
98	A 3D Computational Head Model Under Dynamic Head Rotation and Head Extension Validated Using Live Human Brain Data, Including the Falx and the Tentorium. Annals of Biomedical Engineering, 2019, 47, 1923-1940.	2.5	44
99	An optical technique for measurement of material properties in the tension Kolsky bar. International Journal of Impact Engineering, 2007, 34, 784-798.	5.0	43
100	Characteristic fragment size distributions in dynamic fragmentation. Applied Physics Letters, 2006, 88, 261918.	3.3	42
101	Dislocation Configurations in an Extruded ZK60 Magnesium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 2607-2614.	2.2	42
102	Dynamic behaviors of body-centered cubic metals with ultrafine grained and nanocrystalline microstructures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 493, 58-64.	5.6	42
103	Nanomaterials. , 2009, , .		42
104	A computational model of blast loading on the human eye. Biomechanics and Modeling in Mechanobiology, 2014, 13, 123-140.	2.8	42
105	The rate-dependent deformations of porous pure iron. International Journal of Plasticity, 1997, 13, 587-610.	8.8	41
106	Observations and models for needle-tissue interactions. , 2009, , .		41
107	The Effects of Microstructure and Confinement on the Compressive Fragmentation of an Advanced Ceramic. Journal of the American Ceramic Society, 2015, 98, 902-912.	3.8	41
108	Micromechanisms associated with the dynamic compressive failure of hot-pressed boron carbide. Scripta Materialia, 2015, 106, 52-56.	5.2	41

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109	A Pressure-Shear Plate Impact Experiment for Studying the Rheology of Lubricants at High Pressures and High Shearing Rates. Journal of Tribology, 1987, 109, 215-222.	1.9	40
110	High Rate Response and Dynamic Failure of Structural Ceramics. International Journal of Applied Ceramic Technology, 2004, 1, 243-253.	2.1	40
111	Effect of strain rate and dislocation density on the twinning behavior in tantalum. AIP Advances, 2016, 6, .	1.3	40
112	Deformation and failure of Zr57Nb5Al10Cu15.4Ni12.6/W particle composites under quasi-static and dynamic compression. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 3439-3444.	2.2	39
113	Dynamic Behavior of a Rare-Earth-Containing Mg Alloy, WE43B-T5, Plate with Comparison to Conventional Alloy, AM30-F. Jom, 2014, 66, 277-290.	1.9	39
114	Fragmentation of an advanced ceramic under ballistic impact: Mechanisms and microstructure. International Journal of Impact Engineering, 2017, 102, 47-54.	5.0	39
115	Plastic Deformation and Failure in A359 Aluminum and an A359-SiCp MMC under Quasistatic and High-strain-rate Tension. Journal of Composite Materials, 2007, 41, 27-40.	2.4	38
116	The mechanics of dynamic twinning in single crystal magnesium. Journal of the Mechanics and Physics of Solids, 2018, 120, 154-178.	4.8	38
117	Nanoengineering opens a new era for tungsten as well. Jom, 2006, 58, 40-44.	1.9	37
118	On Compressive Brittle Fragmentation. Journal of the American Ceramic Society, 2016, 99, 2159-2169.	3.8	37
119	Mechanical behavior and dynamic failure of high-strength ultrafine grained tungsten under uniaxial compression. Acta Materialia, 2005, , .	7.9	36
120	Effects of high rates of loading on the deformation behavior and failure mechanisms of hexagonal close-packed metals and alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 927-935.	2.2	35
121	Rotational diffusion and grain size dependent shear instability in nanostructured materials. Acta Materialia, 2008, 56, 282-291.	7.9	35
122	A closed-form criterion for dislocation emission in nano-porous materials under arbitrary thermomechanical loading. Journal of the Mechanics and Physics of Solids, 2016, 86, 94-116.	4.8	35
123	The dynamic plasticity and dynamic failure of a magnesium alloy under multiaxial loading. Acta Materialia, 2018, 154, 124-136.	7.9	35
124	An enriched continuum model for the design of a hierarchical composite. Scripta Materialia, 2007, 57, 877-880.	5.2	34
125	Stress-driven grain growth in ultrafine grained Mg thin film. Scripta Materialia, 2013, 68, 424-427.	5.2	34
126	Incipient deformation twinning in dynamically sheared bcc tantalum. Acta Materialia, 2014, 69, 114-125.	7.9	34

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127	Rate dependence of deformation mechanisms in a shape memory alloy. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 2461-2473.	0.6	33
128	On the Occurrence of Portevinâ€“Le ChÃ¢telier Instabilities in Ultrafine-Grained 5083 Aluminum Alloys. Experimental Mechanics, 2009, 49, 207-218.	2.0	33
129	Effect of low-temperature rolling on the propensity to adiabatic shear banding of commercial purity tungsten. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 578, 394-401.	5.6	33
130	Kinetics of a fast moving twin boundary in nickel. Acta Materialia, 2014, 68, 82-92.	7.9	33
131	Damage evolution of hot-pressed boron carbide under confined dynamic compression. International Journal of Impact Engineering, 2017, 99, 75-84.	5.0	33
132	Finite deformations of metal cylinders subjected to electromagnetic fields and mechanical forces. Journal of the Mechanics and Physics of Solids, 2005, 53, 525-544.	4.8	32
133	Inelastic behavior and fracture of high modulus polymeric fiber bundles at high strain-rates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 500, 216-224.	5.6	31
134	Measurement of the Dynamic Bulk and Shear Response of Soft Human Tissues. Experimental Mechanics, 2007, 47, 439-449.	2.0	30
135	High strain rate deformation and resultant damage mechanisms in ultrafine-grained aluminum matrix composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 5990-5996.	5.6	30
136	Visualization of the failure of quartz under quasiâ€static and dynamic compression. Journal of Geophysical Research, 2010, 115, .	3.3	30
137	The rate-dependent deformation of a tungsten heavy alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 145, 159-166.	5.6	29
138	Effects of high rates of loading on the deformation behavior and failure mechanisms of hexagonal close-packed metals and alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 927-935.	2.2	29
139	The Short-Time Compressibility of Elastohydrodynamic Lubricants. Journal of Tribology, 1991, 113, 361-370.	1.9	28
140	Mechanical characterization of active poly(vinyl alcohol)â€“poly(acrylic acid) gel. Materials Science and Engineering C, 2001, 14, 25-34.	7.3	28
141	Stability Map for Nanocrystalline and Amorphous Materials. Physical Review Letters, 2008, 101, 025501.	7.8	28
142	Time-resolved x-ray diffraction techniques for bulk polycrystalline materials under dynamic loading. Review of Scientific Instruments, 2014, 85, 093901.	1.3	28
143	Spall response and failure mechanisms associated with a hot-extruded AMX602 Mg alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 707, 725-731.	5.6	28
144	The Rheology of Lubricants at High Shear Rates. Journal of Tribology, 1993, 115, 640-647.	1.9	27

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145	Yield criteria and strain-rate behavior of Zr57.4Cu16.4Ni8.2Ta8Al10 metallic-glass-matrix composites. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 3251-3258.	2.2	27
146	Interplay of dislocation slip and deformation twinning in tantalum at high strain rates. Scripta Materialia, 2013, 69, 709-712.	5.2	27
147	The origins of Asteroidal rock disaggregation: Interplay of thermal fatigue and microstructure. Icarus, 2018, 304, 172-182.	2.5	27
148	Laser-Driven Flyers and Nanosecond-Resolved Velocimetry for Spall Studies in Thin Metal Foils. Experimental Mechanics, 2019, 59, 611-628.	2.0	27
149	Dynamic behavior of a boron carbide aluminum cermet: experiments and observations. Mechanics of Materials, 1990, 10, 19-29.	3.2	25
150	Dynamic response of transparent ceramic MgAl2O4 spinel. Scripta Materialia, 2011, 65, 830-833.	5.2	25
151	Dynamic behavior of an ordinary chondrite: The effects of microstructure on strength, failure and fragmentation. Icarus, 2015, 260, 308-319.	2.5	24
152	MR Imaging of Human Brain Mechanics In Vivo: New Measurements to Facilitate the Development of Computational Models of Brain Injury. Annals of Biomedical Engineering, 2021, 49, 2677-2692.	2.5	24
153	Rate-dependent behavior of hierarchical Al matrix composites. Scripta Materialia, 2008, 59, 1139-1142.	5.2	23
154	Orientation dependence of the nucleation and growth of partial dislocations and possible twinning mechanisms in aluminum. Journal of the Mechanics and Physics of Solids, 2012, 60, 277-294.	4.8	23
155	On the shock stress, substructure evolution, and spall response of commercially pure 1100-O aluminum. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 618, 596-604.	5.6	23
156	Effect of bulk modulus on deformation of the brain under rotational accelerations. Shock Waves, 2018, 28, 127-139.	1.9	23
157	The efficiency of thermal fatigue in regolith generation on small airless bodies. Icarus, 2019, 333, 356-370.	2.5	23
158	Plastic flow of a tungsten-based composite under quasi-static compression. Acta Metallurgica Et Materialia, 1993, 41, 2711-2719.	1.8	22
159	Technique for the continuous measurement of projectile velocities in plate impact experiments. Review of Scientific Instruments, 1995, 66, 3034-3036.	1.3	22
160	Grain size dependent shear instabilities in body-centered and face-centered cubic materials. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 493, 65-70.	5.6	22
161	The coupled effects of plastic strain gradient and thermal softening on the dynamic growth of voids. International Journal of Solids and Structures, 2003, 40, 6633-6651.	2.7	21
162	The effects of cold rolling on the microstructural and spall response of 1100 aluminum. Journal of Applied Physics, 2013, 114, .	2.5	21

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163	Acoustic Emission of Deformation Twinning in Magnesium. Materials, 2016, 9, 662.	2.9	21
164	Multi-scale defect interactions in high-rate failure of brittle materials, Part II: Application to design of protection materials. Journal of the Mechanics and Physics of Solids, 2016, 86, 237-258.	4.8	21
165	A multi-mechanism constitutive model for the dynamic failure of quasi-brittle materials. Part I: Amorphization as a failure mode. Journal of the Mechanics and Physics of Solids, 2019, 130, 370-392.	4.8	21
166	Recovery Experiments for Adiabatic Shear Localization: A Novel Experimental Technique. Journal of Applied Mechanics, Transactions ASME, 1999, 66, 10-20.	2.2	20
167	Dynamic deformation of shape-memory alloys: Evidence of domino detwinning?. Philosophical Magazine Letters, 2002, 82, 511-517.	1.2	20
168	Superlightweight Nanoengineered Aluminum for Strength under Impact. Advanced Engineering Materials, 2007, 9, 355-359.	3.5	20
169	Statistically informed dynamics of void growth in rate dependent materials. International Journal of Impact Engineering, 2009, 36, 1242-1249.	5.0	20
170	Quantitative In Situ Studies of Dynamic Fracture in Brittle Solids Using Dynamic X-ray Phase Contrast Imaging. Experimental Mechanics, 2018, 58, 1423-1437.	2.0	20
171	Direct Observation of the Dynamic Compressive Failure of a Transparent Polycrystalline Ceramic (AlON). Journal of the American Ceramic Society, 2006, 89, 060427083300003-???.	3.8	19
172	Twinning in single crystal Mg under microsecond impact along the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0002.gif" overflow="scroll"><mml:mrow><mml:mo stretchy="false">ã€ˆ</mml:mo><mml:mi>a</mml:mi><mml:mo stretchy="false">ã€‰</mml:mo></mml:mrow></mml:math> axis. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 693, 22-25.	5.6	19
173	A Simple Dual-Beam Time-Multiplexed Photon Doppler Velocimeter for Pressure-Shear Plate Impact Experiments. Experimental Mechanics, 2019, 59, 41-49.	2.0	18
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