Kenneth S Vecchio

List of Publications by Citations

196 papers	9,813 citations	54 h-index	93 g-index
200 ext. papers	11,712 ext. citations	5.4 avg, IF	6.57 L-index

#	Paper	IF	Citations
196	High-Entropy Metal Diborides: A New Class of High-Entropy Materials and a New Type of Ultrahigh Temperature Ceramics. *Scientific Reports*, **2016**, 6, 37946	4.9	409
195	Influence of temperature and strain rate on the mechanical behavior of three amorphous polymers: Characterization and modeling of the compressive yield stress. *International Journal of Solids and Structures*, **2006**, 43, 2318-2335	3.1	367
194	The influence of stacking fault energy on the mechanical behavior of Cu and Cu-Al alloys: Deformation twinning, work hardening, and dynamic recovery. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2001**, 32, 135-145	2.3	330
193	A new class of high-entropy perovskite oxides. *Scripta Materialia*, **2018**, 142, 116-120	5.6	318
192	Quasi-static and dynamic mechanical response of Haliotis rufescens (abalone) shells. *Acta Materialia*, **2000**, 48, 2383-2398	8.4	299
191	High-entropy high-hardness metal carbides discovered by entropy descriptors. *Nature Communications*, **2018**, 9, 4980	17.4	298
190	Calcium phosphate-bearing matrices induce osteogenic differentiation of stem cells through adenosine signaling. *Proceedings of the National Academy of Sciences of the United States of America* , **2014**, 111, 990-5	11.5	250
189	High-entropy fluorite oxides. *Journal of the European Ceramic Society*, **2018**, 38, 3578-3584	6	223
188	Prediction of carbon nanotube growth success by the analysis of carbonâ□catalyst binary phase diagrams. *Carbon*, **2006**, 44, 267-275	10.4	220
187	Phase stability and mechanical properties of novel high entropy transition metal carbides. *Acta Materialia*, **2019**, 166, 271-280	8.4	213
186	Bacterial toxin-triggered drug release from gold nanoparticle-stabilized liposomes for the treatment of bacterial infection. *Journal of the American Chemical Society*, **2011**, 133, 4132-9	16.4	188
185	Evolution of iridium-based molecular catalysts during water oxidation with ceric ammonium nitrate. *Journal of the American Chemical Society*, **2011**, 133, 19024-7	16.4	179
184	Resistance-curve and fracture behavior of Tiâ□Al3Ti metallicâ□intermetallic laminate (MIL) composites. *Acta Materialia*, **2003**, 51, 2933-2957	8.4	178
183	Modeling and validation of the large deformation inelastic response of amorphous polymers over a wide range of temperatures and strain rates. *International Journal of Solids and Structures*, **2007**, 44, 7938-7954	3.1	172
182	Recrystallization kinetics within adiabatic shear bands. *Acta Materialia*, **1997**, 45, 635-649	8.4	167
181	Conversion of bulk seashells to biocompatible hydroxyapatite for bone implants. *Acta Biomaterialia* , **2007**, 3, 910-8	10.8	164
180	Microstructure evolution in metal-intermetallic laminate (MIL) composites synthesized by reactive foil sintering in air. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2001**, 32, 1493-1505	2.3	144

179	Microstructural evolution in adiabatic shear bands in Ta and Taâ□W alloys. *Acta Materialia*, **2001**, 49, 2905-2917	8.4	142
178	Stimuli-responsive liposome fusion mediated by gold nanoparticles. *ACS Nano*, **2010**, 4, 1935-42	16.7	131
177	Submerged friction stir processing (SFSP): An improved method for creating ultra-fine-grained bulk materials. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2005**, 402, 234-241	5.3	128
176	A unified model for stiffness modulus of amorphous polymers across transition temperatures and strain rates. *Polymer*, **2005**, 46, 8194-8201	3.9	120
175	Synthetic multifunctional metallic-intermetallic laminate composites. *Jom*, **2005**, 57, 25-31	2.1	117
174	Hopkinson Bar Loaded Fracture Experimental Technique: A Critical Review of Dynamic Fracture Toughness Tests. *Applied Mechanics Reviews*, **2009**, 62,	8.6	114
173	Explosive welding of aluminum to aluminum: analysis, computations and experiments. *International Journal of Impact Engineering*, **2004**, 30, 1333-1351	4	114
172	Mechanical properties and structure of Strombus gigas, Tridacna gigas, and Haliotis rufescens sea shells: A comparative study. *Materials Science and Engineering C*, **2006**, 26, 1380-1389	8.3	108
171	A model for microstructure evolution in adiabatic shear bands. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1998**, 29, 191-203	2.3	105
170	A microstructural investigation of adiabatic shear bands in an interstitial free steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 457, 205-218	5.3	105
169	Thermogravimetric analysis of synthesis variation effects on CVD generated multiwalled carbon nanotubes. *Journal of Physical Chemistry B*, **2006**, 110, 1179-86	3.4	102
168	Effects of ductile phase volume fraction on the mechanical properties of Tiâ□Al3Ti metal-intermetallic laminate (MIL) composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2011**, 528, 3134-3146	5.3	100
167	Response of NiTi shape memory alloy at high strain rate: A systematic investigation of temperature effects on tensionâ□compression asymmetry. *Acta Materialia*, **2006**, 54, 4609-4620	8.4	95
166	Cancer cell migration within 3D layer-by-layer microfabricated photocrosslinked PEG scaffolds with tunable stiffness. *Biomaterials*, **2012**, 33, 7064-70	15.6	94
165	Particle size effect on strength, failure, and shock behavior in polytetrafluoroethylene-Al-W granular composite materials. *Journal of Applied Physics*, **2008**, 104, 103903	2.5	93
164	A high-entropy silicide: (Mo0.2Nb0.2Ta0.2Ti0.2W0.2)Si2. *Journal of Materiomics*, **2019**, 5, 337-343	6.7	90
163	Dynamic fracture of bovine bone. *Materials Science and Engineering C*, **2006**, 26, 1325-1332	8.3	88
162	Growth mechanism of vapor phase CVD-grown multi-walled carbon nanotubes. *Carbon*, **2005**, 43, 2608-2617	10.4	87

161	Influence of peak pressure and temperature on the structure/property response of shock- loaded Ta and Ta-10W. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1995**, 26, 2555-2563	2.3	84
160	Hydrothermal synthesis of hydroxyapatite rods. *Journal of Crystal Growth*, **2007**, 308, 133-140	1.6	82
159	A metallographic and quantitative analysis of the influence of stacking fault energy on shock-hardening in Cu and Cuâ€Al alloys. *Acta Materialia*, **2001**, 49, 427-438	8.4	81
158	The search for high entropy alloys: A high-throughput ab-initio approach. *Acta Materialia*, **2018**, 159, 364-383	8.4	76
157	Influence of Molecular Conformation on the Constitutive Response of Polyethylene: A Comparison of HDPE, UHMWPE, and PEX. *Experimental Mechanics*, **2007**, 47, 381-393	2.6	74
156	Effects of ductile laminate thickness, volume fraction, and orientation on fatigue-crack propagation in Ti-Al3Ti metal-intermetallic laminate composites. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2005**, 36, 1595-1608	2.3	70
155	Effects of age and loading rate on equine cortical bone failure. *Journal of the Mechanical Behavior of Biomedical Materials*, **2011**, 4, 57-75	4.1	69
154	Improved Pulse Shaping to Achieve Constant Strain Rate and Stress Equilibrium in Split-Hopkinson Pressure Bar Testing. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2007**, 38, 2655-2665	2.3	68
153	Templated mineralization of synthetic hydrogels for bone-like composite materials: role of matrix hydrophobicity. *Biomacromolecules*, **2010**, 11, 2060-8	6.9	67
152	Mechanical behavior of ultralong multiwalled carbon nanotube mats. *Journal of Applied Physics*, **2007**, 101, 023512	2.5	66
151	Dislocation-type evolution in quasi-statically compressed polycrystalline nickel. *Acta Materialia*, **2018**, 155, 104-116	8.4	62
150	Reactive flash spark plasma sintering of high-entropy ultrahigh temperature ceramics. *Scripta Materialia*, **2019**, 170, 106-110	5.6	61
149	Dynamic deformation and failure of ultrafine-grained titanium. *Acta Materialia*, **2017**, 125, 210-218	8.4	59
148	The variation of dislocation density as a function of the stacking fault energy in shock-deformed FCC materials. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2002**, 328, 256-266	5.3	57
147	Influence of grain size on the constitutive response and substructure evolution of MONEL 400. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1999**, 30, 1235-1247	2.3	57
146	Three-dimensional scaffolding to investigate neuronal derivatives of human embryonic stem cells. *Biomedical Microdevices*, **2012**, 14, 829-838	3.7	56
145	Damage evolution in Ti6Al4Vâ€Al3Ti metal-intermetallic laminate composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 443, 1-15	5.3	56
144	Superelasticity in a New BioImplant Material: Ni-rich 55NiTi Alloy. *Experimental Mechanics*, **2007**, 47, 365-371	2.6	56

143	Conversion of sea urchin spines to Mg-substituted tricalcium phosphate for bone implants. *Acta Biomaterialia*, **2007**, 3, 785-93	10.8	55
142	Fracture of Ti-Al3Ti metal-intermetallic laminate composites: Effects of lamination on resistance-curve behavior. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2005**, 36, 3217-3236	2.3	54
141	Fracture toughness of Ceramic-Fiber-Reinforced Metallic-Intermetallic-Laminate (CFR-MIL) composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 649, 407-416	5.3	53
140	Crystal symmetry determination in electron diffraction using machine learning. *Science*, **2020**, 367, 564-568	3.3	53
139	Local heating of discrete droplets using magnetic porous silicon-based photonic crystals. *Journal of the American Chemical Society*, **2006**, 128, 7938-46	16.4	53
138	Discovery of high-entropy ceramics via machine learning. *Npj Computational Materials*, **2020**, 6,	10.9	52
137	Modeling solid-particle erosion of ductile alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1999**, 30, 1763-1774	2.3	52
136	Determination of geometrically necessary dislocations in large shear strain localization in aluminum. *Acta Materialia*, **2016**, 118, 383-394	8.4	49
135	Dimensional control of multi-walled carbon nanotubes in floating-catalyst CVD synthesis. *Carbon*, **2009**, 47, 2085-2094	10.4	48
134	Aging effects on hardness and dynamic compressive behavior of Tiâ5Ni (at.%) alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 527, 1665-1676	5.3	48
133	Evaluation of dynamic fracture toughness KId by Hopkinson pressure bar loaded instrumented Charpy impact test. *Engineering Fracture Mechanics*, **2004**, 71, 279-287	4.2	45
132	Conversion of natural marine skeletons as scaffolds for bone tissue engineering. *Frontiers of Materials Science*, **2013**, 7, 103-117	2.5	44
131	Thermal history analysis of friction stir processed and submerged friction stir processed aluminum. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2007**, 465, 165-175	5.3	44
130	Determination of internal stresses in cyclically deformed copper single crystals using convergent-beam electron diffraction and dislocation dipole separation measurements. *Acta Materialia*, **2000**, 48, 4247-4254	8.4	43
129	Thermal conductivity and hardness of three single-phase high-entropy metal diborides fabricated by borocarbothermal reduction and spark plasma sintering. *Ceramics International*, **2020**, 46, 6906-6913	5.1	41
128	Loading rate effects on the R-curve behavior of cortical bone. *Acta Biomaterialia*, **2011**, 7, 724-32	10.8	40
127	Design of non-equiatomic high entropy alloys with heterogeneous lamella structure towards strength-ductility synergy. *Scripta Materialia*, **2018**, 154, 78-82	5.6	40
126	Semi-solid induction forging of metallic glass matrix composites. *Jom*, **2009**, 61, 11-17	2.1	38

125	Microstructure evolution in Fe-based-aluminide metallicâ€intermetallic laminate (MIL) composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2016**, 649, 325-337	5.3	37
124	Optimizing Bulk Metallic Glasses for Robust, Highly Wear-Resistant Gears . *Advanced Engineering Materials*, **2017**, 19, 1600541	3.5	36
123	Amorphous soft magnetic particles produced by spark erosion. *Journal of Magnetism and Magnetic Materials*, **2003**, 254-255, 1-6	2.8	36
122	Searching for high entropy alloys: A machine learning approach. *Acta Materialia*, **2020**, 198, 178-222	8.4	35
121	Analysis of the dynamic responses for a pre-cracked three-point bend specimen. *International Journal of Fracture*, **2004**, 127, 147-165	2.3	33
120	Dual-phase high-entropy ultra-high temperature ceramics. *Journal of the European Ceramic Society*, **2020**, 40, 5037-5050	6	33
119	The influence of metallic particle size on the mechanical properties of polytetraflouroethylene-Alâ powder composites. *Applied Physics Letters*, **2008**, 92, 031903	3.4	32
118	Microstructural characterization of self-propagating high-temperature synthesis/ dynamically compacted and hot-pressed titanium carbides. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1992**, 23, 87-97		31
117	Modeling the mechanical behavior of tantalum. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1997**, 28, 113-122	2.3	29
116	Deformation behavior and failure mechanisms in particulate reinforced 6061 Al metal-matrix composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1995**, 202, 63-75	5.3	29
115	Numerical Investigation of the Ballistic Performance of Metal-Intermetallic Laminate Composites. *Applied Composite Materials*, **2015**, 22, 437-456	2	27
114	Catalytic Effect of Ni and Fe Addition to Gasifier Bed Material in the Steam Reforming of Producer Gas. *Industrial & Engineering Chemistry Research*, **2014**, 53, 13656-13666	3.9	27
113	Experimental investigation of dynamic effects in a two-bar/three-point bend fracture test. *Review of Scientific Instruments*, **2007**, 78, 063903	1.7	27
112	Investigation of the shear response and geometrically necessary dislocation densities in shear localization in high-purity titanium. *International Journal of Plasticity*, **2017**, 92, 148-163	7.6	26
111	Development of quaternary Fe-based bulk metallic glasses. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2008**, 492, 230-235	5.3	26
110	Aged metastable high-entropy alloys with heterogeneous lamella structure for superior strength-ductility synergy. *Acta Materialia*, **2020**, 199, 602-612	8.4	26
109	Creation of dense hydroxyapatite (synthetic bone) by hydrothermal conversion of seashells. *Materials Science and Engineering C*, **2006**, 26, 1445-1450	8.3	25
108	Crack length calculation for bend specimens under static and dynamic loading. *Engineering Fracture Mechanics*, **2004**, 71, 1971-1985	4.2	25

107	Extraordinary strength-ductility synergy in a heterogeneous-structured Ti alloy through microstructural optimization. *Materials Research Letters*, **2019**, 7, 467-473	7.4	24
106	Behavior of Nicalonâ Fiber-reinforced glass-matrix composites under thermal cycling conditions. *Composites Part A: Applied Science and Manufacturing*, **1998**, 29, 1343-1352	8.4	24
105	Simultaneous oxidation and sigma-phase formation in a stainless steel. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1999**, 30, 355-362	2.3	24
104	Bulk high-entropy nitrides and carbonitrides. *Scientific Reports*, **2020**, 10, 21288	4.9	24
103	Non-equiatomic FeNiCoAl-based high entropy alloys with multiscale heterogeneous lamella structure for strength and ductility. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 743, 361-371	5.3	24
102	Microstructure evolution in a martensitic 430 stainless steelâ Al metallicâ intermetallic laminate (MIL) composite. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2015**, 643, 72-85	5.3	23
101	Tar and CO2 removal from simulated producer gas with activated carbon and charcoal. *Fuel Processing Technology*, **2013**, 106, 201-208	7.2	23
100	Use of Brazilian disk test to determine properties of metallic-intermetallic laminate composites. *Jom*, **2010**, 62, 35-40	2.1	23
99	Influence of anisotropy (crystallographic and microstructural) on spallation in Zr, Ta, HY-100 steel, and 1080 eutectoid steel. *International Journal of Fracture*, **2010**, 163, 243-258	2.3	23
98	Prediction of glass-forming compositions using liquidus temperature calculations. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 471, 135-143	5.3	23
97	Convergent beam electron diffraction analysis of theT 1 (Al2CuLi) phase in Al-Li-Cu alloys. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1988**, 19, 2885-2891		23
96	Dissolving and stabilizing soft WB2 and MoB2 phases into high-entropy borides via boron-metals reactive sintering to attain higher hardness. *Journal of the European Ceramic Society*, **2020**, 40, 4348-4353	6	23
95	High-entropy monoborides: Towards superhard materials. *Scripta Materialia*, **2020**, 189, 101-105	5.6	23
94	Dynamic Bauschinger effect. *Acta Materialia*, **1996**, 44, 2797-2807	8.4	22
93	A non-icosahedral T2 (Al6Li3Cu) phase. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **1988**, 57, 535-546		22
92	Design, fabrication and characterization of FeAl-based metallic-intermetallic laminate (MIL) composites. *Acta Materialia*, **2019**, 175, 445-456	8.4	20
91	Modeling the amorphous forming ability of Ti-based alloys with wide supercooled liquid regions and high hardness. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 506, 94-100	5.3	20
90	Preparation, characterization and mechanical performance of dense beta-TCP ceramics with/without magnesium substitution. *Journal of Materials Science: Materials in Medicine*, **2008**, 19, 3063-70	4.5	20

89	Growth of well-aligned carbon nanotube structures in successive layers. *Journal of Physical Chemistry B*, **2005**, 109, 12353-7	3.4	20
88	Dislocation microstructure and internal-stress measurements by convergent-beam electron diffraction on creep-deformed Cu and Al. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2002**, 33, 311-317	2.3	20
87	Thick amorphous ferromagnetic coatings via thermal spraying of spark-eroded powder. *Materials Letters*, **2001**, 48, 184-187	3.3	20
86	Multifunctional Non-Equiatomic High Entropy Alloys with Superelastic, High Damping, and Excellent Cryogenic Properties. *Advanced Engineering Materials*, **2019**, 21, 1800941	3.5	20
85	Mechanical Behavior and Microstructural Development of Low-Carbon Steel and Microcomposite Steel Reinforcement Bars Deformed under Quasi-Static and Dynamic Shear Loading. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2009**, 40, 1835-1850	2.3	19
84	Synthesis optimization and characterization of multiwalled carbon nanotubes. *Journal of Electronic Materials*, **2006**, 35, 211-223	1.9	19
83	Evaluation of glass-forming ability in metals using multi-model techniques. *Journal of Alloys and Compounds*, **2009**, 471, 222-240	5.7	18
82	Fracture of Nitinol under Quasistatic and Dynamic Loading. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2007**, 38, 2907-2915	2.3	17
81	Deep Neural Network Enabled Space Group Identification in EBSD. *Microscopy and Microanalysis*, **2020**, 26, 447-457	0.5	16
80	The apparent âfive-foldâ□nature of large T2 (AI6Li3Cu) crystals. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1988**, 19, 2875-2884		16
79	Annealing effects on the microstructure and properties of an Fe-based Metallic-Intermetallic Laminate (MIL) composite. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 665, 47-58	5.3	15
78	Enhancement of recrystallization texture in non-equiatomic Fe-Ni-Co-Al-based high entropy alloys by combination of annealing and Cr addition. *Journal of Alloys and Compounds*, **2018**, 768, 277-286	5.7	15
77	The response of carbon nanotube ensembles to fluid flow: Applications to mechanical property measurement and diagnostics. *Journal of Applied Physics*, **2009**, 106, 074304	2.5	15
76	Dynamic Effects in Hopkinson Bar Four-Point Bend Fracture. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2007**, 38, 2896-2906	2.3	15
75	Novel remapping approach for HR-EBSD based on demons registration. *Ultramicroscopy*, **2020**, 208, 112851	3.1	15
74	Microstructure evolution in Ni and Ni-superalloy based metallic-intermetallic laminate (MIL) composites. *Intermetallics*, **2017**, 87, 70-80	3.5	14
73	Phase stability dependence of deformation mode correlated mechanical properties and elastic properties in Ti-Nb gum metal. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 702, 173-183	5.3	14
72	Thermal stability and crystallization phenomena of low cost Ti-based bulk metallic glass. *Journal of Non-Crystalline Solids*, **2011**, 357, 3393-3398	3.9	14

71	Length and the Oxidation Kinetics of Chemical-Vapor-Deposition-Generated Multiwalled Carbon Nanotubes. *Journal of Physical Chemistry C*, **2008**, 112, 10108-10113	3.8	14
70	Aging and loading rate effects on the mechanical behavior of equine bone. *Jom*, **2008**, 60, 39-44	2.1	14
69	Grain boundary precipitation of tantalum and NiAl in superelastic FeNiCoAlTaB alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 743, 372-381	5.3	14
68	Phase Mapping in EBSD Using Convolutional Neural Networks. *Microscopy and Microanalysis*, **2020**, 26, 458-468	0.5	13
67	A study of the dynamic compressive behavior of Elk antler. *Materials Science and Engineering C*, **2011**, 31, 1030-1041	8.3	13
66	Electroplating of Copperâ Alumina Nanocomposite Films with an Impinging Jet Electrode. *Journal of the Electrochemical Society*, **2007**, 154, D394	3.9	13
65	A universal configurational entropy metric for high-entropy materials. *Scripta Materialia*, **2021**, 201, 113974	5.6	13
64	Lightweight Open-Cell Scaffolds from Sea Urchin Spines with Superior Material Properties for Bone Defect Repair. *ACS Applied Materials & Interfaces*, **2017**, 9, 9862-9870	9.5	12
63	Electromigration effect in Fe-Al diffusion couples with field-assisted sintering. *Acta Materialia*, **2020**, 186, 631-643	8.4	12
62	Exchange-spring permanent magnet particles produced by spark-erosion. *Applied Physics Letters*, **2003**, 82, 1574-1576	3.4	12
61	Effect of Grain-Boundary Phase on Dynamic Compression Fatigue in Hot-Pressed Silicon Nitride. *Journal of the American Ceramic Society*, **2005**, 81, 129-139	3.8	12
60	Influence of subsolvus thermomechanical processing on the low-cycle fatigue properties of haynes 230 alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1995**, 26, 673-689	2.3	12
59	Bauschinger effect in haynes 230 alloy: Influence of strain rate and temperature. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1996**, 27, 1739-1748	2.3	12
58	Observations on {332} twinning-induced softening in Ti-Nb Gum metal. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 724, 189-198	5.3	11
57	Fragmentation and constitutive response of tailored mesostructured aluminum compacts. *Journal of Applied Physics*, **2016**, 119, 145903	2.5	11
56	Microstructure evolution in pure Ni and Invar-based Metallic-Intermetallic Laminate (MIL) composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 682, 454-465	5.3	11
55	Influence of cold work and texture on the high-strain-rate response of Nitinol. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 527, 5255-5267	5.3	11
54	Effect of Moâ Fe substitution on glass forming ability, thermal stability, and hardness of FeâCâBâMoâCrâN bulk amorphous alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2008**, 490, 221-228	5.3	11

53	On the nature of faults in MoSi2. *Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties*, **1995**, 72, 1-19		11
52	An experimental investigation on the notch toughness of Cu-Zr-based bulk metallic glasses with in-situ crystallization. *Journal of Non-Crystalline Solids*, **2017**, 469, 70-78	3.9	10
51	Development of bioresorbable Mg-substituted tricalcium phosphate scaffolds for bone tissue engineering. *Materials Science and Engineering C*, **2009**, 29, 2003-2010	8.3	10
50	Analysis of modified split Hopkinson pressure bar dynamic fracture test using an inertia model. *International Journal of Fracture*, **2004**, 126, 143-164	2.3	10
49	Microstructure and exchange coupling in nanocrystalline Nd2(FeCo)14Bâ□FeCo particles produced by spark erosion. *Applied Physics Letters*, **2005**, 86, 122507	3.4	10
48	High-entropy rare earth tetraborides. *Journal of the European Ceramic Society*, **2021**, 41, 2968-2973	6	10
47	Application of a novel new multispectral nanoparticle tracking technique. *Measurement Science and Technology*, **2018**, 29, 065002	2	9
46	Automated Reconstruction of Spherical Kikuchi Maps. *Microscopy and Microanalysis*, **2019**, 25, 912-923	0.5	9
45	Quenching and thermal cycling effects in a 1060-Al matrix-10vol.%Al2O3 particulate reinforced metal matrix composite. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1993**, 171, 181-189	5.3	9
44	Experimental conditions affecting coherent bremsstrahlung in X-ray microanalysis. *Journal of Microscopy*, **1987**, 147, 15-35	1.9	9
43	The influence of stacking fault energy on ductile fracture micromorphology. *Journal of Materials Science*, **1988**, 23, 2220-2224	4.3	9
42	Effects of aging and cooling rate on the transformation of nanostructured Ti-50.8Ni. *Journal of Alloys and Compounds*, **2017**, 693, 150-163	5.7	8
41	Dynamic fracture resilience of elk antler: Biomimetic inspiration for improved crashworthiness. *Jom* , **2010**, 62, 41-46	2.1	8
40	Deformation and fracture evolution of FeAl-based metallic-intermetallic laminate (MIL) composites. *Acta Materialia*, **2020**, 194, 496-515	8.4	8
39	Cold-workable refractory complex concentrated alloys with tunable microstructure and good room-temperature tensile behavior. *Scripta Materialia*, **2020**, 188, 16-20	5.6	7
38	Development of ultrahigh-entropy ceramics with tailored oxidation behavior. *Journal of the European Ceramic Society*, **2021**, 41, 5791-5800	6	7
37	Spark erosion as a high-throughput method for producing bimodal nanostructured 316L stainless steel powder. *Powder Technology*, **2018**, 328, 156-166	5.2	6
36	Spark plasma sintering of structure-tailored ultrahigh-temperature components: First step to complex net□shaping. *Journal of the American Ceramic Society*, **2019**, 102, 548-558	3.8	6

35	Optical determination of the flexural rigidity of carbon nanotube ensembles. *Applied Physics Letters*, **2008**, 92, 173106	3.4	6
34	A computer vision approach to study surface deformation of materials. *Measurement Science and Technology*, **2020**, 31, 055602	2	6
33	Efficient few-shot machine learning for classification of EBSD patterns. *Scientific Reports*, **2021**, 11, 8172	4.9	6
32	Enhancing plasticity in high-entropy refractory ceramics via tailoring valence electron concentration. *Materials and Design*, **2021**, 209, 109932	8.1	6
31	Dynamic compressive strength and mechanism of failure of Al-W fiber composite tubes with ordered mesostructure. *International Journal of Impact Engineering*, **2017**, 100, 1-6	4	5
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