

# Robert F Cook

## List of Publications by Year in descending order

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195  
papers

8,803  
citations

44042

48  
h-index

49868

87  
g-index

200  
all docs

200  
docs citations

200  
times ranked

6183  
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct Observation and Analysis of Indentation Cracking in Glasses and Ceramics. Journal of the American Ceramic Society, 1990, 73, 787-817.	1.9	935
2	Amorphization and Conductivity of Silicon and Germanium Induced by Indentation. Physical Review Letters, 1988, 60, 2156-2159.	2.9	404
3	Mechanical Behavior of Alumina-Silicon Carbide "Nanocomposites". Journal of the American Ceramic Society, 1993, 76, 503-510.	1.9	335
4	Load-displacement behavior during sharp indentation of viscous-elastic-plastic materials. Journal of Materials Research, 2003, 18, 139-150.	1.2	288
5	Diameter-Dependent Radial and Tangential Elastic Moduli of ZnO Nanowires. Nano Letters, 2007, 7, 3691-3697.	4.5	278
6	Microstructure-Strength Properties in Ceramics: I, Effect of Crack Size on Toughness. Journal of the American Ceramic Society, 1985, 68, 604-615.	1.9	237
7	Mechanical properties of block copolymer vesicle and micelle modified epoxies. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 2444-2456.	2.4	213
8	Micellar structure and mechanical properties of block copolymer-modified epoxies. Journal of Polymer Science, Part B: Polymer Physics, 2001, 39, 2996-3010.	2.4	194
9	A practical guide for analysis of nanoindentation data. Journal of the Mechanical Behavior of Biomedical Materials, 2009, 2, 396-407.	1.5	185
10	Microhardness, toughness, and modulus of Mohs scale minerals. American Mineralogist, 2006, 91, 135-142.	0.9	184
11	A Modified Indentation Toughness Technique. Journal of the American Ceramic Society, 1983, 66, c200-c201.	1.9	167
12	Strength and sharp contact fracture of silicon. Journal of Materials Science, 2006, 41, 841-872.	1.7	167
13	Fracture toughness measurements of YBa <sub>2</sub> Cu <sub>3</sub> O <sub>x</sub> single crystals. Applied Physics Letters, 1987, 51, 454-456.	1.5	133
14	Electrical resistance of metallic contacts on silicon and germanium during indentation. Journal of Materials Research, 1992, 7, 961-972.	1.2	132
15	Crack resistance by interfacial bridging: Its role in determining strength characteristics. Journal of Materials Research, 1987, 2, 345-356.	1.2	121
16	Hardness, toughness, and modulus of some common metamorphic minerals. American Mineralogist, 2007, 92, 281-288.	0.9	105
17	Theory of Fatigue for Brittle Flaws Originating from Residual Stress Concentrations. Journal of the American Ceramic Society, 1983, 66, 314-321.	1.9	99
18	The effect of grain size on microstructure and stress relaxation in polycrystalline Y <sub>1-x</sub> Ba <sub>2x</sub> Cu <sub>3</sub> O <sub>7-δ</sub> . Journal of Materials Research, 1989, 4, 248-256.	1.2	98

#	ARTICLE	IF	CITATIONS
19	Stress-Corrosion Cracking of Low-Dielectric-Constant Spin-On-Glass Thin Films. Journal of the Electrochemical Society, 1999, 146, 4439-4448.	1.3	96
20	Fracture strength of micro- and nano-scale silicon components. Applied Physics Reviews, 2015, 2, .	5.5	96
21	Adhesion between Immiscible Polymers Correlated with Interfacial Entanglements. Macromolecules, 2003, 36, 2808-2815.	2.2	94
22	Influence of deposition conditions on mechanical properties of low-pressure chemical vapor deposited low-stress silicon nitride films. Journal of Applied Physics, 2003, 94, 6915-6922.	1.1	85
23	Kinetics of Indentation Cracking in Glass. Journal of the American Ceramic Society, 1993, 76, 1096-1105.	1.9	84
24	Simplified Area Function for Sharp Indenter Tips in Depth-sensing Indentation. Journal of Materials Research, 2002, 17, 1143-1146.	1.2	80
25	The effect of lateral crack growth on the strength of contact flaws in brittle materials. Journal of Materials Research, 1986, 1, 589-600.	1.2	77
26	Calcium Segregation to Grain Boundaries in Alumina. Journal of the American Ceramic Society, 1988, 71, 50-58.	1.9	75
27	Ultimate Bending Strength of Si Nanowires. Nano Letters, 2012, 12, 2599-2604.	4.5	74
28	Probing material properties with sharp indenters: a retrospective. Journal of Materials Science, 2012, 47, 1-22.	1.7	73
29	Comparison of nanoscale measurements of strain and stress using electron back scattered diffraction and confocal Raman microscopy. Applied Physics Letters, 2008, 93, .	1.5	72
30	Elastic and adhesive properties of alkanethiol self-assembled monolayers on gold. Applied Physics Letters, 2009, 94, .	1.5	70
31	Polymeric Organic-Inorganic Hybrid Nanocomposites: Preparation of Polyimide-Modified Poly(silsesquioxane) Using Functionalized Poly(amic acid alkyl ester) Precursors. Macromolecules, 1997, 30, 8512-8515.	2.2	67
32	Mapping the elastic properties of granular Au films by contact resonance atomic force microscopy. Nanotechnology, 2008, 19, 235701.	1.3	67
33	The Compelling Case for Indentation as a Functional Exploratory and Characterization Tool. Journal of the American Ceramic Society, 2015, 98, 2671-2680.	1.9	67
34	Elastic moduli of faceted aluminum nitride nanotubes measured by contact resonance atomic force microscopy. Nanotechnology, 2009, 20, 035706.	1.3	66
35	Lanthanide gallate perovskite-type substrates for epitaxial, high-T <sub>c</sub> superconducting Ba <sub>2</sub> YCu <sub>3</sub> O <sub>7-<math>\delta</math></sub> films. IBM Journal of Research and Development, 1990, 34, 916-926.	3.2	64
36	Stress hysteresis during thermal cycling of plasma-enhanced chemical vapor deposited silicon oxide films. Journal of Applied Physics, 2002, 91, 1988-1992.	1.1	64

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37	Fracture of ferroelectric ceramics. <i>Ferroelectrics</i> , 1983, 50, 267-272.	0.3	62
38	Sharp probes of varying acuity: Instrumented indentation and fracture behavior. <i>Journal of Materials Research</i> , 2004, 19, 165-175.	1.2	60
39	Massive stress changes in plasma-enhanced chemical vapor deposited silicon nitride films on thermal cycling. <i>Thin Solid Films</i> , 2004, 460, 7-16.	0.8	60
40	<i>In Situ</i> Cube-Corner Indentation of Soda-Lime Glass and Fused Silica. <i>Journal of the American Ceramic Society</i> , 2004, 87, 1494-1501.	1.9	59
41	<i>In situ</i> observation of the indentation-induced phase transformation of silicon thin films. <i>Physical Review B</i> , 2012, 85, .	1.1	59
42	Critique of materials-based models of ductile machining in brittle solids. <i>Journal of the American Ceramic Society</i> , 2020, 103, 6096-6100.	1.9	59
43	Mechanical failure of human fetal membrane tissues. <i>Journal of Materials Science: Materials in Medicine</i> , 2004, 15, 651-658.	1.7	58
44	Structural, Electrical, and Mechanical Properties Development during Curing of Low-k Hydrogen Silsesquioxane Films. <i>Journal of the Electrochemical Society</i> , 2002, 149, F9.	1.3	57
45	Uniaxial and biaxial mechanical behavior of human amnion. <i>Journal of Materials Research</i> , 2005, 20, 2902-2909.	1.2	57
46	Microstructural Effects on Grinding of Alumina and Glass-Ceramics. <i>Journal of the American Ceramic Society</i> , 1987, 70, C-139-C-140.	1.9	55
47	Crack propagation thresholds: A measure of surface energy. <i>Journal of Materials Research</i> , 1986, 1, 852-860.	1.2	51
48	Nanoscale mapping of contact stiffness and damping by contact resonance atomic force microscopy. <i>Nanotechnology</i> , 2012, 23, 215703.	1.3	49
49	Mechanical properties and structure of the biological multilayered material system, <i>Atractosteus spatula</i> scales. <i>Acta Biomaterialia</i> , 2013, 9, 5289-5296.	4.1	46
50	Fracture Properties of Polycrystalline $YBa_2Cu_3O_x$ . <i>Advanced Ceramic Materials</i> , 1987, 2, 606-614.	2.3	45
51	Nanomechanical Properties of Thin Films of Type I Collagen Fibrils. <i>Langmuir</i> , 2010, 26, 3629-3636.	1.6	45
52	Surface Stress Effects on Indentation Fracture Sequences. <i>Journal of the American Ceramic Society</i> , 1990, 73, 2619-2627.	1.9	44
53	Depth-sensing indentation at macroscopic dimensions. <i>Journal of Materials Research</i> , 2002, 17, 2679-2690.	1.2	44
54	Depth-sensing indentation response of ordered silica foam. <i>Journal of Materials Research</i> , 2004, 19, 260-271.	1.2	44

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55	Effect of crystallographic orientation on phase transformations during indentation of silicon. Journal of Materials Research, 2009, 24, 1172-1183.	1.2	44
56	Microstructure-Strength Properties in Ceramics: II, Fatigue Relations. Journal of the American Ceramic Society, 1985, 68, 616-623.	1.9	43
57	Force measurement using an ac atomic force microscope. Journal of Applied Physics, 1990, 67, 4045-4052.	1.1	41
58	Instrumentation of a conventional hardness tester for load-displacement measurement during indentation. Journal of Materials Research, 1990, 5, 847-851.	1.2	41
59	Surface effects on the elastic modulus of Te nanowires. Applied Physics Letters, 2008, 92, 241908.	1.5	40
60	Sigmoidal Indentation-Strength Characteristics of Polycrystalline Alumina. Journal of the American Ceramic Society, 1994, 77, 303-314.	1.9	39
61	Indentation crack initiation in ion-exchanged aluminosilicate glass. Journal of Materials Science, 2004, 39, 2399-2410.	1.7	39
62	Four-point bend adhesion measurements of copper and permalloy systems. Engineering Fracture Mechanics, 2004, 71, 245-261.	2.0	39
63	Compressive Stress Effect on the Radial Elastic Modulus of Oxidized Si Nanowires. Nano Letters, 2010, 10, 2031-2037.	4.5	38
64	Indentation responses of time-dependent films on stiff substrates. Journal of Materials Research, 2004, 19, 2487-2497.	1.2	37
65	Radial Fracture During Indentation by Acute Probes: I, Description by an Indentation Wedging Model. International Journal of Fracture, 2005, 136, 237-264.	1.1	37
66	Organosilicate Spin-on Glasses. Journal of the Electrochemical Society, 2004, 151, F37.	1.3	36
67	Stress hysteresis and mechanical properties of plasma-enhanced chemical vapor deposited dielectric films. Journal of Applied Physics, 2004, 95, 967-976.	1.1	35
68	Phase-Separated Inorganic-Organic Hybrids for Microelectronic Applications. MRS Bulletin, 1997, 22, 44-48.	1.7	35
69	Uniaxial stressâ€“relaxation and stressâ€“strain responses of human amnion. Journal of Materials Science: Materials in Medicine, 2004, 15, 619-624.	1.7	33
70	Origin of Adhesion in Humid Air. Langmuir, 2008, 24, 1873-1877.	1.6	33
71	Elastic modulus of low- <i>k</i> dielectric thin films measured by load-dependent contact-resonance atomic force microscopy. Journal of Materials Research, 2009, 24, 2960-2964.	1.2	33
72	Etching Process Effects on Surface Structure, Fracture Strength, and Reliability of Single-Crystal Silicon Theta-Like Specimens. Journal of Microelectromechanical Systems, 2013, 22, 589-602.	1.7	33

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73	Mechanical measurements of heterogeneity and length scale effects in PEG-based hydrogels. <i>Soft Matter</i> , 2015, 11, 7191-7200.	1.2	33
74	Nanoindentation behavior and mechanical properties measurement of polymeric materials. <i>International Journal of Materials Research</i> , 2007, 98, 370-378.	0.1	31
75	Direct observation of phase transformation anisotropy in indented silicon studied by confocal Raman spectroscopy. <i>Physical Review B</i> , 2011, 83, .	1.1	31
76	Lateral Cracks and Microstructural Effects in the Indentation Fracture of Yttria. <i>Journal of the American Ceramic Society</i> , 1990, 73, 1873-1878.	1.9	30
77	Rapid measurement of static and dynamic surface forces. <i>Applied Physics Letters</i> , 1990, 56, 2408-2410.	1.5	30
78	Trapped cracks at indentations. <i>Journal of Materials Science</i> , 1994, 29, 2133-2142.	1.7	30
79	High resolution surface morphology measurements using EBSD cross-correlation techniques and AFM. <i>Ultramicroscopy</i> , 2011, 111, 1206-1213.	0.8	29
80	Bending manipulation and measurements of fracture strength of silicon and oxidized silicon nanowires by atomic force microscopy. <i>Journal of Materials Research</i> , 2012, 27, 562-570.	1.2	29
81	Technique for estimating fracture resistance of cultured neocartilage. <i>Journal of Materials Science: Materials in Medicine</i> , 2001, 12, 327-332.	1.7	28
82	Mechanical and thermal properties of physical vapour deposited alumina films Part II Elastic, plastic, fracture, and adhesive behaviour. <i>Journal of Materials Science</i> , 2004, 39, 4809-4819.	1.7	28
83	Radial Fracture During Indentation by Acute Probes: II, Experimental Observations of Cube-corner and Vickers Indentation. <i>International Journal of Fracture</i> , 2005, 136, 265-284.	1.1	28
84	Stress development kinetics in plasma-enhanced chemical-vapor-deposited silicon nitride films. <i>Journal of Applied Physics</i> , 2005, 97, 114914.	1.1	28
85	Strength distribution of single-crystal silicon theta-like specimens. <i>Scripta Materialia</i> , 2010, 63, 422-425.	2.6	27
86	Mechanism of nanoparticle manipulation by scanning tunnelling microscopy. <i>Nanotechnology</i> , 2006, 17, 5519-5524.	1.3	26
87	Measurement of residual stress field anisotropy at indentations in silicon. <i>Scripta Materialia</i> , 2010, 63, 512-515.	2.6	25
88	<i>In situ</i> spectroscopic study of the plastic deformation of amorphous silicon under nonhydrostatic conditions induced by indentation. <i>Physical Review B</i> , 2015, 92, .	1.1	25
89	Porous Organosilicates for On-Chip Dielectric Applications. <i>Materials Research Society Symposia Proceedings</i> , 1999, 565, 3.	0.1	23
90	Mechanisms Active during Fracture under Constraint. <i>MRS Bulletin</i> , 2002, 27, 45-51.	1.7	23

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91	Organosilicate Spin-On Glasses. Journal of the Electrochemical Society, 2004, 151, F45.	1.3	23
92	Deformation and fracture of single-crystal silicon theta-like specimens. Journal of Materials Research, 2011, 26, 2575-2589.	1.2	23
93	Surface-engineered nanomaterials as X-ray absorbing adjuvant agents for Auger-mediated chemo-radiation. Nanoscale, 2013, 5, 5252.	2.8	22
94	Multi-Scale Effects in the Strength of Ceramics. Journal of the American Ceramic Society, 2015, 98, 2933-2947.	1.9	22
95	Designing a standard for strain mapping: HR-EBSD analysis of SiGe thin film structures on Si. Ultramicroscopy, 2015, 148, 94-104.	0.8	22
96	Predicting strength distributions of MEMS structures using flaw size and spatial density. Microsystems and Nanoengineering, 2019, 5, 49.	3.4	22
97	Dynamic fatigue of brittle materials containing indentation line flaws. Journal of Materials Science, 1983, 18, 1306-1314.	1.7	21
98	Elastic, Adhesive, and Charge Transport Properties of a Metal-Molecule-Metal Junction: The Role of Molecular Orientation, Order, and Coverage. Langmuir, 2010, 26, 1688-1699.	1.6	21
99	Nanomechanical Properties of Polyethylene Glycol Brushes on Gold Substrates. Journal of Physical Chemistry B, 2012, 116, 3138-3147.	1.2	21
100	In situ observation of the spatial distribution of crystalline phases during pressure-induced transformations of indented silicon thin films. Journal of Materials Research, 2015, 30, 390-406.	1.2	21
101	Stress-corrosion cracking in silicon. Applied Physics Letters, 1990, 56, 1962-1964.	1.5	20
102	Indentation fracture of low-dielectric constant films: Part I. Experiments and observations. Journal of Materials Research, 2008, 23, 2429-2442.	1.2	20
103	Indentation device for <i>in situ</i> Raman spectroscopic and optical studies. Review of Scientific Instruments, 2012, 83, 125106.	0.6	20
104	Material Flaw Populations and Component Strength Distributions in the Context of the Weibull Function. Experimental Mechanics, 2019, 59, 279-293.	1.1	20
105	Contact-resonance atomic force microscopy for nanoscale elastic property measurements: Spectroscopy and imaging. Ultramicroscopy, 2009, 109, 929-936.	0.8	19
106	Stress mapping of micromachined polycrystalline silicon devices via confocal Raman microscopy. Applied Physics Letters, 2014, 104, .	1.5	19
107	Influence of crack velocity thresholds on stabilized nonequilibrium fracture. Journal of Applied Physics, 1989, 65, 1902-1910.	1.1	18
108	Grain-size effects in the indentation fracture of MgO. Journal of Materials Science, 1992, 27, 4751-4761.	1.7	18

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109	Rheological and mechanical behavior of blends of styrene-butadiene rubber with polypropylene. <i>Polymer Engineering and Science</i> , 2005, 45, 1487-1497.	1.5	18
110	Micro-scale measurement and modeling of stress in silicon surrounding a tungsten-filled through-silicon via. <i>Journal of Applied Physics</i> , 2011, 110, 073517.	1.1	18
111	Assessing strain mapping by electron backscatter diffraction and confocal Raman microscopy using wedge-indented Si. <i>Ultramicroscopy</i> , 2016, 163, 75-86.	0.8	18
112	Probing the Nanoscale. <i>Science</i> , 2010, 328, 183-184.	6.0	17
113	Fracture sequences during elastic-plastic indentation of brittle materials. <i>Journal of Materials Research</i> , 2019, 34, 1633-1644.	1.2	17
114	Trapped cracks at indentations. <i>Journal of Materials Science</i> , 1994, 29, 2192-2204.	1.7	16
115	Indentation fracture of low-dielectric constant films: Part II. Indentation fracture mechanics model. <i>Journal of Materials Research</i> , 2008, 23, 2443-2457.	1.2	16
116	Toughness-Curve Behavior of an Alumina-Mullite Composite. <i>Journal of the American Ceramic Society</i> , 1998, 81, 2613-2623.	1.9	15
117	Orientation, stress, and strain in an (001) barium titanate single crystal with 90° lamellar domains determined using electron backscatter diffraction. <i>Journal of Materials Science</i> , 2014, 49, 2213-2224.	1.7	15
118	Mapping viscoelastic and plastic properties of polymers and polymer-nanotube composites using instrumented indentation. <i>Journal of Materials Research</i> , 2016, 31, 2347-2360.	1.2	15
119	Quantitative mapping of stress heterogeneity in polycrystalline alumina using hyperspectral fluorescence microscopy. <i>Acta Materialia</i> , 2016, 106, 272-282.	3.8	15
120	Fracture mechanics of sharp scratch strength of polycrystalline alumina. <i>Journal of the American Ceramic Society</i> , 2017, 100, 1146-1160.	1.9	15
121	Properties Development During Curing of Low Dielectric-Constant Spin-On Glasses. <i>Materials Research Society Symposia Proceedings</i> , 1998, 511, 33.	0.1	14
122	Toughening of an Alumina-Mullite Composite by Unbroken Bridging Elements. <i>Journal of the American Ceramic Society</i> , 2000, 83, 833-840.	1.9	14
123	Determination of residual stress distributions in polycrystalline alumina using fluorescence microscopy. <i>Materials and Design</i> , 2016, 107, 478-490.	3.3	14
124	In situ observations of Berkovich indentation induced phase transitions in crystalline silicon films. <i>Scripta Materialia</i> , 2016, 120, 19-22.	2.6	14
125	Deformation and Fracture by Sharp Rolling Contacts. <i>Journal of the American Ceramic Society</i> , 1994, 77, 1263-1273.	1.9	13
126	Hydrogen diffusion as the rate-limiting mechanism of stress development in dielectric films. <i>Applied Physics Letters</i> , 2004, 85, 404-406.	1.5	13



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127	A critical evaluation of indentation crack lengths in air. Journal of the American Ceramic Society, 2020, 103, 2278-2295.	1.9	13
128	Mechanical Properties of Low Dielectric-Constant Organic-Inorganic Hybrids. Materials Research Society Symposia Proceedings, 1999, 576, 301.	0.1	12
129	Indentation-induced deformation at ultramicroscopic and macroscopic contacts. Journal of Materials Research, 2004, 19, 124-130.	1.2	12
130	Accurate spring constant calibration for very stiff atomic force microscopy cantilevers. Review of Scientific Instruments, 2013, 84, 113706.	0.6	12
131	Review: Coefficients for Stress, Temperature, and Composition Effects in Fluorescence Measurements of Alumina. Journal of Research of the National Institute of Standards and Technology, 2017, 122, 1-26.	0.4	12
132	Effective-medium theory for the fracture of fractal porous media. Physical Review B, 1989, 39, 2811-2814.	1.1	11
133	Determination of ceramic flaw populations from component strengths. Journal of the American Ceramic Society, 2019, 102, 4794-4808.	1.9	11
134	Mechanical and thermal properties of physical vapour deposited alumina films Part I Thermal stability. Journal of Materials Science, 2004, 39, 4799-4807.	1.7	10
135	Toughening of a Cordierite Glass-Ceramic by Compressive Surface Layers. Journal of the American Ceramic Society, 2005, 88, 2798-2808.	1.9	10
136	Quantitative Scanning Probe Microscopy for Nanomechanical Forensics. Experimental Mechanics, 2017, 57, 1045-1055.	1.1	10
137	Exploring the Relationship of Scratch Resistance, Hardness, and other Physical Properties of Minerals using Mohs Scale Minerals. Journal of Geoscience Education, 2007, 55, 56-61.	0.8	9
138	Mechanical and electrical coupling at metal-insulator-metal nanoscale contacts. Applied Physics Letters, 2008, 93, 203102.	1.5	9
139	Prototype cantilevers for quantitative lateral force microscopy. Review of Scientific Instruments, 2011, 82, 093706.	0.6	9
140	Development of a precision nanoindentation platform. Review of Scientific Instruments, 2013, 84, 075110.	0.6	9
141	Interfacial Mechanical Properties of $\text{Si-Si-alkylsilane}$ Monolayers on Silicon Substrates. Journal of Microelectromechanical Systems, 2013, 22, 34-43.	1.7	9
142	Strength of brittle materials in moderately corrosive environments. Journal of the American Ceramic Society, 2018, 101, 1684-1695.	1.9	9
143	Cone Crack Nucleation at Sharp Contacts. Journal of the American Ceramic Society, 1992, 75, 2877-2880.	1.9	8
144	Chemical vapor deposition of an aluminum nitride-diamond composite in a triple torch plasma reactor. Journal of Materials Research, 2001, 16, 469-477.	1.2	8

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145	Near-theoretical fracture strengths in native and oxidized silicon nanowires. Nanotechnology, 2016, 27, 31LT02.	1.3	8
146	Long-term ceramic reliability analysis including the crack-velocity threshold and the bathtub-curve. Journal of the American Ceramic Society, 2018, 101, 5732-5744.	1.9	8
147	On the failure and fracture of hydrogels for cartilage replacement. JPhys Materials, 2021, 4, 021001.	1.8	8
148	High-throughput bend-strengths of ultra-small polysilicon MEMS components. Applied Physics Letters, 2021, 118, 201601.	1.5	8
149	Reply to "Comment on 'Role of Grain Size in the Strength and R-Curve Properties of Alumina'". Journal of the American Ceramic Society, 1993, 76, 1900-1901.	1.9	7
150	Stress-Corrosion Cracking of Spin-on Glass Thin Films. Materials Research Society Symposia Proceedings, 1998, 511, 171.	0.1	7
151	Indentation Fracture Toughness Measurements of Low Dielectric Constant Materials. Materials Research Society Symposia Proceedings, 2003, 766, 931.	0.1	6
152	Structure-property relationships for methyl-terminated alkyl self-assembled monolayers. Chemical Physics Letters, 2011, 512, 243-246.	1.2	6
153	Shoulder fillet effects in strength distributions of microelectromechanical system components. Journal of Micromechanics and Microengineering, 2020, 30, 125013.	1.5	6
154	Effects of Curing Temperature on the Mechanical Reliability of Low Dielectric-Constant Spin-on-Glasses. Materials Research Society Symposia Proceedings, 2000, 612, 541.	0.1	5
155	Alumina Agglomerate Effects on Toughness-Curve Behavior of Alumina-Mullite Composites. Journal of the American Ceramic Society, 2000, 83, 3089-3094.	1.9	5
156	Stable dielectric fracture at interconnects from electromigration stresses. Acta Materialia, 2002, 50, 2627-2637.	3.8	5
157	Stress stability and thermo-mechanical properties of reactively sputtered alumina films. Journal of Materials Science, 2005, 40, 6345-6355.	1.7	5
158	Two-dimensional strain-mapping by electron backscatter diffraction and confocal Raman spectroscopy. Journal of Applied Physics, 2017, 122, 205101.	1.1	5
159	Thermal activation effects in crack propagation and reliability of fused silica. Journal of the American Ceramic Society, 2019, 102, 7575-7583.	1.9	5
160	Universal fatigue curves for ceramics using indentation flaws. Journal of Materials Science Letters, 1983, 2, 683-684.	0.5	4
161	Stress Hysteresis and Mechanical Characterization of Plasma-Enhanced Chemical Vapor Deposited Dielectrics. Materials Research Society Symposia Proceedings, 2001, 695, 1.	0.1	4
162	Advances in metrology for the determination of Young's modulus for low-k dielectric thin films. , 2012, , .		4

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163	Decoupling small-scale roughness and long-range features on deep reactive ion etched silicon surfaces. <i>Journal of Applied Physics</i> , 2013, 114, 113506.	1.1	4
164	On the bending strength of single-crystal silicon theta-like specimens Rebecca Kirkpatrick. <i>MRS Communications</i> , 2013, 3, 113-117.	0.8	4
165	Stress and strain mapping of micro-domain bundles in barium titanate using electron backscatter diffraction. <i>Journal of Materials Science</i> , 2017, 52, 12608-12623.	1.7	4
166	Irreversible Tensile Stress Development in PECVD Silicon Nitride Films. <i>Materials Research Society Symposia Proceedings</i> , 2003, 795, 235.	0.1	3
167	Stress Stability of PECVD Silicon Nitride Films During Device Fabrication. <i>Materials Research Society Symposia Proceedings</i> , 2003, 766, 631.	0.1	3
168	Effect of storage in aqueous environments on polymer-metal interfacial fracture. <i>Journal of Materials Research</i> , 2004, 19, 557-567.	1.2	3
169	Strength and Fracture Measurements at the Nano Scale. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	3
170	Frictional properties of native and functionalized type I collagen thin films. <i>Applied Physics Letters</i> , 2013, 103, 143703.	1.5	3
171	Stochastic behavior of nanoscale dielectric wall buckling. <i>Journal of Applied Physics</i> , 2016, 119, .	1.1	3
172	A flexible model for instrumented indentation of viscoelastic-plastic materials. <i>MRS Communications</i> , 2018, 8, 586-590.	0.8	3
173	Effect of Changes in Grain Boundary Toughness on the Strength of Alumina. <i>Materials Research Society Symposia Proceedings</i> , 1986, 78, 199.	0.1	2
174	Load-Displacement Behavior During Sharp Indentation of Viscous-Elastic-Plastic Materials. <i>Materials Research Society Symposia Proceedings</i> , 2000, 649, 151.	0.1	2
175	Model for instrumented indentation of brittle open-cell foam. <i>MRS Communications</i> , 2018, 8, 1267-1273.	0.8	2
176	Residual stress in polycrystalline alumina: Comparison of two-dimensional maps and integrated scans in fluorescence-based measurements. <i>Acta Materialia</i> , 2018, 159, 309-319.	3.8	2
177	Lamellar and bundled domain rotations in barium titanate. <i>Journal of Materials Science</i> , 2019, 54, 116-129.	1.7	2
178	Mechanical Properties of One-Dimensional Nanostructures. <i>Nanoscience and Technology</i> , 2010, , 571-611.	1.5	2
179	In situ Analysis of Materials Under Mechanical Stress: A Novel Instrument for Simultaneous Nanoindentation and Raman Spectroscopy. , 2013, , .		2
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