Reinhold H Dauskardt

List of Publications by Year
in descending order

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209	7,822	36303	64796
papers	citations	51 h-index	79 g-index

209	209	209	7704
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Design and understanding of encapsulated perovskite solar cells to withstand temperature cycling. Energy and Environmental Science, 2018, 11, 144-150.	30.8	314
2	Engineering Stress in Perovskite Solar Cells to Improve Stability. Advanced Energy Materials, 2018, 8, 1802139.	19.5	271
3	Solar UV radiation reduces the barrier function of human skin. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 17111-17116.	7.1	222
4	Improving Cutaneous Scar Formation by Controlling the Mechanical Environment. Annals of Surgery, 2011, 254, 217-225.	4.2	218
5	Mechanical properties of human stratum corneum: Effects of temperature, hydration, and chemical treatment. Biomaterials, 2006, 27, 785-795.	11.4	188
6	Interlayer adhesion in roll-to-roll processed flexible inverted polymer solar cells. Solar Energy Materials and Solar Cells, 2012, 97, 171-175.	6.2	184
7	Cyclic Fatigue-Crack Growth in a SiC-Whisker-Reinforced Alumina Ceramic Composite: Long- and Small-Crack Behavior. Journal of the American Ceramic Society, 1992, 75, 759-771.	3.8	173
8	Adhesion and reliability of copper interconnects with Ta and TaN barrier layers. Journal of Materials Research, 2000, 15, 203-211.	2.6	165
9	Plasticity contributions to interface adhesion in thin-film interconnect structures. Journal of Materials Research, 2000, 15, 2758-2769.	2.6	164
10	Mechanical integrity of solution-processed perovskite solar cells. Extreme Mechanics Letters, 2016, 9, 353-358.	4.1	150
11	Local heating associated with crack tip plasticity in Zrâ€“Tiâ€“Niâ€“Cuâ€“Be bulk amorphous metals. Journal of Materials Research, 1999, 14, 638-643.	2.6	149
12	Controlling Thin-Film Stress and Wrinkling during Perovskite Film Formation. ACS Energy Letters, 2018, 3, 1225-1232.	17.4	148
13	Enhanced toughness due to stable crack tip damage zones in bulk metallic glass. Scripta Materialia, 1999, 41, 937-943.	5.2	142
14	Effect of Cation Composition on the Mechanical Stability of Perovskite Solar Cells. Advanced Energy Materials, 2018, 8, 1702116.	19.5	130
15	Cyclic Fatigue of Ceramics. Journal of the Ceramic Society of Japan, 1991, 99, 1047-1062.	1.3	116
16	Decohesion Kinetics of PEDOT:PSS Conducting Polymer Films. Advanced Functional Materials, 2014, 24, 1325-1332.	14.9	110
17	Fracture and fatigue behavior of a Zrâ€“Tiâ€“Nb ductile phase reinforced bulk metallic glass matrix composite. Scripta Materialia, 2003, 49, 1181-1187.	5.2	108
18	Crack-Tip Transformation Zones in Toughened Zirconia. Journal of the American Ceramic Society, 1990, 73, 2659-2666.	3.8	100

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19	Cohesion and device reliability in organic bulk heterojunction photovoltaic cells. Solar Energy Materials and Solar Cells, 2012, 99, 182-189.	6.2	91
20	Behavior of Cyclic Fatigue Cracks in Monolithic Silicon Nitride. Journal of the American Ceramic Society, 1995, 78, 2291-2300.	3.8	89
21	Moisture-assisted subcritical debonding of a polymer/metal interface. Journal of Applied Physics, 2002, 91, 1293-1303.	2.5	85
22	Computational prediction of the molecular configuration of three-dimensional network polymers. Nature Materials, 2021, 20, 1422-1430.	27.5	84
23	Rapid Open-Air Fabrication of Perovskite Solar Modules. Joule, 2020, 4, 2675-2692.	24.0	78
24	Fracture of nanoporous thin-film glasses. Nature Materials, 2004, 3, 53-57.	27.5	77
25	Scaffold-reinforced perovskite compound solar cells. Energy and Environmental Science, 2017, 10, 2500-2508.	30.8	77
26	Influence of network bond percolation on the thermal, mechanical, electrical and optical properties of high and low-k a-SiC:H thin films. Journal of Non-Crystalline Solids, 2013, 379, 67-79.	3.1	76
27	Influence of Bulky Organoâ€Ammonium Halide Additive Choice on the Flexibility and Efficiency of Perovskite Lightâ€Emitting Devices. Advanced Functional Materials, 2018, 28, 1802060.	14.9	76
28	Thermalâ€Disrupting Interface Mitigates Intercellular Cohesion Loss for Accurate Topical Antibacterial Therapy. Advanced Materials, 2020, 32, e1907030.	21.0	75
29	Hydrogen effects on the mechanical and fracture behavior of a Zr-Ti-Ni-Cu-Be bulk metallic glass. Scripta Materialia, 2000, 42, 233-240.	5.2	74
30	Cyclic Fatigue Life and Crack-Growth Behavior of Microstructurally Small Cracks in Magnesia-Partially-Stabilized Zirconia Ceramics. Journal of the American Ceramic Society, 1991, 74, 1259-1268.	3.8	69
31	Machine learning with knowledge constraints for process optimization of open-air perovskite solar cell manufacturing. Joule, 2022, 6, 834-849.	24.0	69
32	Superior mechanical properties of dense and porous organic/inorganic hybrid thin films. Journal of Sol-Gel Science and Technology, 2008, 48, 187-193.	2.4	68
33	Molecular Origins of the Mechanical Behavior of Hybrid Glasses. Advanced Functional Materials, 2010, 20, 2884-2892.	14.9	68
34	Toughening of nanoporous glasses using porogen residuals. Nature Materials, 2004, 3, 464-469.	27.5	66
35	Adhesion properties of inverted polymer solarcells: Processing and film structure parameters. Organic Electronics, 2013, 14, 1262-1270.	2.6	66
36	Environmental mechanisms of debonding in photovoltaic backsheets. Solar Energy Materials and Solar Cells, 2014, 120, 87-93.	6.2	66

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37	High Performance Rollâ€toâ€Roll Produced Fullereneâ€Free Organic Photovoltaic Devices via Temperatureâ€Controlled Slot Die Coating. Advanced Functional Materials, 2019, 29, 1805825.	14.9	64
38	Adhesion of benzocyclobutene-passivated silicon in epoxy layered structures. Journal of Materials Research, 2001, 16, 243-255.	2.6	62
39	Atmospheric Plasma Deposited Dense Silica Coatings on Plastics. ACS Applied Materials & Interfaces, 2012, 4, 6587-6598.	8.0	62
40	Rapid Aqueous Spray Fabrication of Robust NiO_x: A Simple and Scalable Platform for Efficient Perovskite Solar Cells. Advanced Energy Materials, 2019, 9, 1803600.	19.5	62
41	Mode II fracture behavior of a Zr-based bulk metallic glass. Journal of the Mechanics and Physics of Solids, 2006, 54, 2418-2435.	4.8	61
42	Molecular-Scale Understanding of Cohesion and Fracture in P3HT:Fullerene Blends. ACS Applied Materials & Interfaces, 2015, 7, 9957-9964.	8.0	60
43	A catalytic alloy approach for graphene on epitaxial SiC on silicon wafers. Journal of Materials Research, 2015, 30, 609-616.	2.6	60
44	The effects of hydrogen on viscoelastic relaxation in Zrâ€“Tiâ€“Niâ€“Cuâ€“Be bulk metallic glasses: implications for hydrogen embrittlement. Acta Materialia, 2002, 50, 537-551.	7.9	59
45	Molecular Intercalation and Cohesion of Organic Bulk Heterojunction Photovoltaic Devices. Advanced Functional Materials, 2013, 23, 2863-2871.	14.9	59
46	Entanglements in <scp>P3HT</scp> and their influence on thinâ€film mechanical properties: Insights from molecular dynamics simulations. Journal of Polymer Science, Part B: Polymer Physics, 2015, 53, 934-942.	2.1	59
47	Fracture of nanoporous methyl silsesquioxane thin-film glasses. Journal of Materials Research, 2006, 21, 882-894.	2.6	58
48	Spatially Resolved Raman Spectroscopy Study of Transformed Zones in Magnesia-Partially-Stabilized Zirconia. Journal of the American Ceramic Society, 1989, 72, 1124-1130.	3.8	55
49	Fracture and deformation of bulk metallic glasses and their composites. Intermetallics, 2004, 12, 1025-1029.	3.9	55
50	Graded delamination behavior of human stratum corneum. Biomaterials, 2006, 27, 5861-5870.	11.4	52
51	Indentation fracture toughness of amorphous steel. Journal of Materials Research, 2005, 20, 783-786.	2.6	51
52	Fatigue damage in bulk metallic glass I: Simulation. Scripta Materialia, 2006, 54, 349-353.	5.2	51
53	Fundamental limits of material toughening in molecularly confined polymers. Nature Materials, 2016, 15, 294-298.	27.5	49
54	Adhesion of polymer thin-films and patterned lines. International Journal of Fracture, 2003, 119/120, 475-485.	2.2	48

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55	Effects of open-volume regions on relaxation time scales and fracture behavior of a Zrâ€“Tiâ€“Niâ€“Cuâ€“Be bulk metallic glass. Journal of Non-Crystalline Solids, 2003, 317, 181-186.	3.1	47
56	Scar Zones. Plastic and Reconstructive Surgery, 2012, 129, 1272-1276.	1.4	47
57	Fracture and Subcritical Crackâ€Growth Behavior of Yâ€Siâ€Alâ€Oâ€N Glasses and Si₃N₄ Ceramics. Journal of the American Ceramic Society, 2000, 83, 585-596.	3.8	46
58	Cross-Linkable, Solvent-Resistant Fullerene Contacts for Robust and Efficient Perovskite Solar Cells with Increased J_{SC} and V_{OC}. ACS Applied Materials & Interfaces, 2016, 8, 25896-25904.	8.0	45
59	Understanding age-induced alterations to the biomechanical barrier function of human stratum corneum. Journal of Dermatological Science, 2015, 80, 94-101.	1.9	44
60	Rapid route to efficient, scalable, and robust perovskite photovoltaics in air. Energy and Environmental Science, 2018, 11, 2102-2113.	30.8	43
61	Hole-Transport Layer Molecular Weight and Doping Effects on Perovskite Solar Cell Efficiency and Mechanical Behavior. ACS Applied Materials & Interfaces, 2019, 11, 23757-23764.	8.0	42
62	Mechanical Relaxation Time Scales in a Zrâ€“Tiâ€“Niâ€“Cuâ€“Be Bulk Metallic Glass. Journal of Materials Research, 2002, 17, 1254-1257.	2.6	41
63	A Mechanomodulatory Device to Minimize Incisional Scar Formation. Advances in Wound Care, 2013, 2, 185-194.	5.1	41
64	Understanding mechanical behavior and reliability of organic electronic materials. MRS Bulletin, 2017, 42, 115-123.	3.5	39
65	Improved stability and efficiency of perovskite solar cells with submicron flexible barrier films deposited in air. Journal of Materials Chemistry A, 2017, 5, 22975-22983.	10.3	38
66	Synthesis and use of a hyper-connecting cross-linking agent in the hole-transporting layer of perovskite solar cells. Journal of Materials Chemistry A, 2017, 5, 19267-19279.	10.3	38
67	Comment on â€œLight-induced lattice expansion leads to high-efficiency perovskite solar cellsâ€. Science, 2020, 368, .	12.6	38
68	Quantitative Measurement of Interface Fracture Energy in Multi-Layer Thin Film Structures. Materials Research Society Symposia Proceedings, 1995, 391, 91.	0.1	37
69	Adhesion and debonding kinetics of photovoltaic encapsulation in moist environments. Progress in Photovoltaics: Research and Applications, 2016, 24, 183-194.	8.1	37
70	Effect of cation contamination and hydrated pressure loading on the mechanical properties of proton exchange membranes. Journal of Power Sources, 2011, 196, 3803-3809.	7.8	36
71	Contamination and moisture absorption effects on the mechanical properties of catalyst coated membranes in PEM fuel cells. International Journal of Hydrogen Energy, 2012, 37, 6790-6797.	7.1	36
72	Evidence of a highly compressed nanolayer at the epitaxial silicon carbide interface with silicon. Acta Materialia, 2013, 61, 6533-6540.	7.9	36

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73	Effects of UV cure on glass structure and fracture properties of nanoporous carbon-doped oxide thin films. Journal of Applied Physics, 2008, 104, 043513.	2.5	32
74	Molecular Mobility under Nanometer Scale Confinement. Nano Letters, 2010, 10, 1955-1959.	9.1	32
75	Molecular structure and fracture properties of ZrOX/Epoxysilane hybrid films. Journal of Sol-Gel Science and Technology, 2010, 55, 360-368.	2.4	31
76	Environmentally assisted debonding of copper/barrier interfaces. Acta Materialia, 2012, 60, 2219-2228.	7.9	31
77	Improved Adhesion of Dense Silica Coatings on Polymers by Atmospheric Plasma Pretreatment. ACS Applied Materials & Interfaces, 2013, 5, 8495-8504.	8.0	31
78	Subcritical Crackâ€€Growth Behavior of Borosilicate Glass under Cyclic Loads: Evidence of a Mechanical Fatigue Effect. Journal of the American Ceramic Society, 1997, 80, 773-776.	3.8	30
79	Effect of solution pH on the accelerated cracking of nanoporous thin-film glasses. Journal of Materials Research, 2005, 20, 680-687.	2.6	30
80	Adhesion Measurement of Interfaces in Multilayer Interconnect Structures. Materials Research Society Symposia Proceedings, 1997, 473, 3.	0.1	29
81	Crack-tip plasticity in bulk metallic glasses. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 319-321, 511-515.	5.6	29
82	Controlling Interdiffusion, Interfacial Composition, and Adhesion in Polymer Solar Cells. Advanced Materials Interfaces, 2014, 1, 1400135.	3.7	28
83	Residual stress effects on plastic deformation and interfacial fracture in thin-film structures. Acta Materialia, 2005, 53, 1955-1961.	7.9	27
84	High yield four-point bend thin film adhesion testing techniques. Engineering Fracture Mechanics, 2011, 78, 2390-2398.	4.3	27
85	Highly Transparent Multifunctional Bilayer Coatings on Polymers Using Low-Temperature Atmospheric Plasma Deposition. ACS Nano, 2014, 8, 7186-7191.	14.6	27
86	Beyond Fullerenes: Indacenodithiophene-Based Organic Charge-Transport Layer toward Upscaling of Low-Cost Perovskite Solar Cells. ACS Applied Materials & Interfaces, 2018, 10, 22143-22155.	8.0	27
87	Temperature dependence of positron annihilation in a Zrâ€“Tiâ€“Niâ€“Cuâ€“Be bulk metallic glass. Journal of Materials Research, 2003, 18, 2021-2024.	2.6	25
88	Effect of Corneodesmosome Degradation on the Intercellular Delamination of Human Stratum Corneum. Journal of Investigative Dermatology, 2008, 128, 2345-2347.	0.7	25
89	Depth dependence of ultraviolet curing of organosilicate low-k thin films. Journal of Applied Physics, 2008, 103, .	2.5	25
90	Adhesion and degradation of hard coatings on poly (methyl methacrylate) substrates. Thin Solid Films, 2011, 519, 1907-1913.	1.8	25

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91	Film stresses and electrode buckling in organic solar cells. Solar Energy Materials and Solar Cells, 2012, 103, 80-85.	6.2	25
92	Toward Sustainable Multifunctional Coatings Containing Nanocellulose in a Hybrid Glass Matrix. ACS Nano, 2018, 12, 5495-5503.	14.6	25
93	Open Air Plasma Deposition of Superhydrophilic Titania Coatings. Advanced Functional Materials, 2019, 29, 1806421.	14.9	25
94	Perspectives on intrinsic toughening strategies and passivation of perovskite films with organic additives. Solar Energy Materials and Solar Cells, 2020, 209, 110433.	6.2	25
95	Mechanisms of elevated temperature fatigue crack growth in Zrâ€“Tiâ€“Cuâ€“Niâ€“Be bulk metallic glass. Acta Materialia, 2004, 52, 3525-3533.	7.9	24
96	Surfactant-controlled damage evolution during chemical mechanical planarization of nanoporous films. Acta Materialia, 2009, 57, 4687-4696.	7.9	24
97	Morphology and interdiffusion control to improve adhesion and cohesion properties in inverted polymer solar cells. Solar Energy Materials and Solar Cells, 2015, 132, 443-449.	6.2	24
98	Thermal cycling effect on mechanical integrity of inverted polymer solar cells. Solar Energy Materials and Solar Cells, 2015, 143, 418-423.	6.2	23
99	Tuning depth profiles of organosilicate films with ultraviolet curing. Journal of Applied Physics, 2008, 104, .	2.5	22
100	Open-Air Plasma-Deposited Multilayer Thin-Film Moisture Barriers. ACS Applied Materials & Interfaces, 2020, 12, 26405-26412.	8.0	22
101	Quantitative stress mapping in alumina composites by optical fluorescence imaging. Acta Materialia, 1996, 44, 625-641.	7.9	21
102	The effects of hydrogen on deformation and fracture of a Zrâ€“Tiâ€“Niâ€“Cuâ€“Be bulk metallic glass. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 319-321, 480-483.	5.6	21
103	Fatigue crack growth in micro-machined single-crystal silicon. Journal of Materials Research, 2004, 19, 2635-2640.	2.6	21
104	Hyperconnected molecular glass network architectures with exceptional elastic properties. Nature Communications, 2017, 8, 1019.	12.8	21
105	Tearing and reliability of photovoltaic module backsheets. Progress in Photovoltaics: Research and Applications, 2019, 27, 693-705.	8.1	21
106	Elastic and thermal expansion asymmetry in dense molecular materials. Nature Materials, 2016, 15, 974-980.	27.5	20
107	Effects of thermal annealing and Si incorporation on bonding structure and fracture properties of diamond-like carbon films. Diamond and Related Materials, 2009, 18, 615-619.	3.9	19
108	Mechanical durability of proton exchange membranes with catalyst platinum dispersion. Journal of Power Sources, 2011, 196, 8234-8240.	7.8	19

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109	Conductive Transparent TiN_x/TiO₂ Hybrid Films Deposited on Plastics in Air Using Atmospheric Plasma Processing. Advanced Functional Materials, 2014, 24, 3075-3081.	14.9	19
110	Aqueous solution diffusion in hydrophobic nanoporous thin-film glasses. Journal of Materials Research, 2007, 22, 710-718.	2.6	18
111	Tunable Plasticity in Amorphous Silicon Carbide Films. ACS Applied Materials & Interfaces, 2013, 5, 7950-7955.	8.0	18
112	Tailored amorphous silicon carbide barrier dielectrics by nitrogen and oxygen doping. Thin Solid Films, 2013, 531, 552-558.	1.8	18
113	Dual Precursor Atmospheric Plasma Deposition of Transparent Bilayer Protective Coatings on Plastics. ACS Applied Materials & Interfaces, 2015, 7, 17929-17934.	8.0	18
114	Fracture Mechanics and Testing of Interface Adhesion Strength in Multilayered Structures â€“ Application in Advanced Solar PV Materials and Technology. Procedia Engineering, 2016, 139, 47-55.	1.2	18
115	Role of Stress Factors on the Adhesion of Interfaces in R2R Fabricated Organic Photovoltaics. Advanced Energy Materials, 2016, 6, 1501927.	19.5	18
116	Interface Separation in Residually-Stressed Thin-Film Structures. Journal of Materials Science, 2003, 11, 309-317.	1.2	17
117	Toughening Thinâ€Film Structures with Ceramicâ€Like Amorphous Silicon Carbide Films. Small, 2014, 10, 253-257.	10.0	17
118	A stability study of roll-to-roll processed organic photovoltaic modules containing a polymeric electron-selective layer. Solar Energy Materials and Solar Cells, 2016, 152, 133-140.	6.2	16
119	Surfactant Mobility in Nanoporous Glass Films. Nano Letters, 2009, 9, 2427-2432.	9.1	15
120	Effect of glycerin on drying stresses in human stratum corneum. Journal of Dermatological Science, 2011, 61, 129-131.	1.9	15
121	The effect of anneal, solar irradiation and humidity on the adhesion/cohesion properties of P3HT:PCBM based inverted polymer solar cells. , 2012, , .		15
122	Degradation of thermally-cured silicone encapsulant under terrestrial UV. Solar Energy Materials and Solar Cells, 2016, 157, 346-353.	6.2	15
123	The Role of Catalyst Adhesion in ALD-TiO₂ Protection of Water Splitting Silicon Anodes. ACS Applied Materials & Interfaces, 2018, 10, 37103-37109.	8.0	15
124	Time-dependant intercellular delamination of human stratum corneum. Journal of Materials Science, 2007, 42, 8986-8994.	3.7	14
125	Integration Challenges of Nanoporous Low Dielectric Constant Materials. IEEE Transactions on Device and Materials Reliability, 2009, 9, 509-515.	2.0	14
126	Effect of heat, UV radiation, and moisture on the decohesion kinetics of inverted organic solar cells. Solar Energy Materials and Solar Cells, 2017, 170, 239-245.	6.2	14

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127	Crystallization kinetics of rapid spray plasma processed multiple cation perovskites in open air. Journal of Materials Chemistry A, 2020, 8, 169-176.	10.3	14
128	Fatigue crack-growth behavior of materials in viscous fluid environments. Journal of the Mechanics and Physics of Solids, 1999, 47, 1843-1871.	4.8	13
129	DÃ©formation et rupture de verres mÃ©talliques massifs Ã base de zirconium. Annales De Chimie: Science Des Materiaux, 2002, 27, 25-40.	0.4	12
130	Progressive Debonding of Multilayer Interconnect Structures. Materials Research Society Symposia Proceedings, 1997, 473, 21.	0.1	12
131	Carbon-Bridge Incorporation in Organosilicate Coatings Using Oxidative Atmospheric Plasma Deposition. ACS Applied Materials & Interfaces, 2016, 8, 1309-1318.	8.0	11
132	Synthesis of Polyimides in Molecular-Scale Confinement for Low-Density Hybrid Nanocomposites. Nano Letters, 2017, 17, 7040-7044.	9.1	11
133	Measurement of the biomechanical function and structure of ex vivo drying skin using raman spectral analysis and its modulation with emollient mixtures. Experimental Dermatology, 2018, 27, 901-908.	2.9	11
134	Design of Ultrastiff Organosilicate Hybrid Glasses. Advanced Functional Materials, 2019, 29, 1904890.	14.9	11
135	Predicting hydration and moisturizer ingredient effects on mechanical behavior of human stratum corneum. Extreme Mechanics Letters, 2021, 46, 101327.	4.1	11
136	Robust, High-Performing Maizeâ€“Perovskite-Based Solar Cells with Improved Stability. ACS Applied Energy Materials, 2021, 4, 11194-11203.	5.1	11
137	Molecularâ€Controlled Fracture and Release of Templated Nanoporous Organosilicate Thin Films. Advanced Materials, 2008, 20, 3159-3164.	21.0	10
138	Atmospheric plasma deposition of transparent semiconducting ZnO films on plastics in ambient air. Organic Electronics, 2014, 15, 775-784.	2.6	10
139	Nanoscale Interfacial Engineering for Flexible Barrier Films. Nano Letters, 2015, 15, 6751-6755.	9.1	10
140	Optically Transparent Protective Coating for Plastics Using Dual Spray and Atmospheric Plasma Deposition. Advanced Materials Interfaces, 2018, 5, 1701433.	3.7	10
141	Degradation of multijunction photovoltaic gridlines induced via thermal cycling. Solar Energy Materials and Solar Cells, 2018, 179, 178-184.	6.2	10
142	Open-air spray plasma deposited UV-absorbing nanocomposite coatings. Nanoscale, 2018, 10, 14525-14533.	5.6	10
143	Lipid Loss Increases Stratum Corneum Stress and Drying Rates. Skin Pharmacology and Physiology, 2020, 33, 180-188.	2.5	10
144	Perspectives of Open-Air Processing to Enable Perovskite Solar Cell Manufacturing. Frontiers in Energy Research, 2021, 9, .	2.3	10

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145	Bilayer metal gate electrodes with tunable work function: Adhesion and interface characterization. Journal of Applied Physics, 2010, 108, .	2.5	9
146	Effects of barrier composition and electroplating chemistry on adhesion and voiding in copper/dielectric diffusion barrier films. Journal of Applied Physics, 2011, 110, 044312.	2.5	9
147	Heterogeneous Solution Deposition of High-Performance Adhesive Hybrid Films. ACS Applied Materials & Interfaces, 2013, 5, 9891-9895.	8.0	9
148	Poly(triarylamine) composites with carbon nanomaterials for highly transparent and conductive coatings. Thin Solid Films, 2018, 646, 61-66.	1.8	9
149	Surface Chemical Functionalization to Achieve Extreme Levels of Molecular Confinement in Hybrid Nanocomposites. Advanced Functional Materials, 2019, 29, 1903132.	14.9	9
150	Mechanical and Microstructural Properties of Stratum Corneum. Materials Research Society Symposia Proceedings, 2002, 724, N2.7.1.	0.1	9
151	Electrical technique for monitoring crack growth in thin-film fracture mechanics specimens. Journal of Materials Research, 2004, 19, 3139-3144.	2.6	8
152	Tailoring UV cure depth profiles for optimal mechanical properties of organosilicate thin films. Applied Physics Letters, 2009, 95, 071902.	3.3	8
153	Moisture-assisted cracking and atomistic crack path meandering in oxidized hydrogenated amorphous silicon carbide films. Journal of Applied Physics, 2013, 113, .	2.5	8
154	Electrically Conductive Copper Coreâ€“Shell Nanowires through Benzenethiol-Directed Assembly. Nano Letters, 2018, 18, 4900-4907.	9.1	8
155	Comprehensive characterization of the structure and properties of human stratum corneum relating to barrier function and skin hydration: modulation by a moisturizer formulation. Experimental Dermatology, 2021, 30, 1352-1357.	2.9	8
156	Benchmarking Four Point Bend Adhesion Testing: The Effect of Test Parameters On Adhesion Energy. AIP Conference Proceedings, 2005, , .	0.4	7
157	Pore size scaling for enhanced fracture resistance of nanoporous polymer thin films. Acta Materialia, 2008, 56, 5946-5953.	7.9	7
158	Low-temperature Alâ€“Ge bonding for 3D integration. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, .	1.2	7
159	Molecular Design for Moisture Insensitivity of Compositionally Graded Hybrid Films. ACS Applied Materials & Interfaces, 2015, 7, 6812-6818.	8.0	7
160	Using Unentangled Oligomers To Toughen Materials. ACS Applied Materials & Interfaces, 2018, 10, 27549-27554.	8.0	7
161	Mechanical Fatigue of Hybrid Glasses. Small, 2010, 6, 1892-1896.	10.0	6
162	Molecular design of confined organic network hybrids with controlled deformation rate sensitivity and moisture resistance. Acta Materialia, 2018, 142, 162-171.	7.9	6

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163	Scalable open-air deposition of compact ETL TiO_xon perovskite for fullerene-free solar cells. Journal of Materials Chemistry A, 2020, 8, 22858-22866.	10.3	6
164	Multiaxial Lenticular Stress-Strain Relationship of Native Myocardium is Preserved by Infarct-Induced Natural Heart Regeneration in Neonatal Mice. Scientific Reports, 2020, 10, 7319.	3.3	6
165	Low temperature open-air plasma deposition of amorphous tin oxide for perovskite solar cells. Thin Solid Films, 2021, 730, 138708.	1.8	6
166	Role of friction and loading parameters in four-point bend adhesion measurements. Journal of Materials Research, 2008, 23, 87-96.	2.6	5
167	Selective Deposition of Compositionally Graded Hybrid Adhesive Films. Advanced Materials Interfaces, 2015, 2, 1500262.	3.7	5
168	Organothiolâ€Based Hybridâ€Layer Strategy for Highâ€Performance Copper Adhesion and Stressâ€Migration via Simultaneous Oxide Reduction. Advanced Materials Interfaces, 2016, 3, 1600118.	3.7	5
169	Role of Carbon Bridge Length of Organosilicate Precursors on the Atmospheric Plasma Deposition of Transparent Bilayer Protective Coatings on Plastics. Plasma Processes and Polymers, 2016, 13, 1053-1060.	3.0	5
170	Low-temperature sprayed SnO_x nanocomposite films with enhanced hole blocking for efficient large area perovskite solar cells. Journal of Materials Chemistry A, 2021, 9, 21332-21339.	10.3	5
171	Effect of Moisture and Graded-Layer Mechanical Properties on Deformation and Interfacial Adhesion. Materials Research Society Symposia Proceedings, 2003, 778, 751.	0.1	4
172	Hybrid coupling layers for bulk metallic glass adhesion. Journal of Materials Research, 2013, 28, 3164-3169.	2.6	4
173	Effect of Mechanical Constraint on Tearing Energy of Polymer Membranes. Macromolecular Materials and Engineering, 2016, 301, 1096-1103.	3.6	4
174	Multi-Scale Simulations of Interfacial Fracture of Nanoscale Thin-Film Structures: Effect of Length Scales and Residual Stresses. Materials Research Society Symposia Proceedings, 2003, 778, 931.	0.1	3
175	Stress and Slurry Chemistry Effects on CMP Damage of Ultra-Low-k Dielectrics. , 2007, , .		3
176	Assessing the Effect of Die Sealing in Cu/Low-k Structures. , 2007, , .		3
177	Bondability of Cu wire on Cu substrate with Sn plating by ultrasonic. Yosetsu Gakkai Ronbunshu/Quarterly Journal of the Japan Welding Society, 2010, 28, 362-368.	0.5	3
178	Effects of e-beam curing on glass structureand mechanical properties of nanoporous organosilicate thin films. International Journal of Materials Research, 2010, 101, 228-235.	0.3	3
179	Biomechanics of the Barrier Function of Human Stratum Corneum. , 2012, , 233-254.		3
180	Moisture-assisted failure mechanisms in underfill epoxy/silicon systems for microelectronic packaging. , 2014, , .		3

#	Article	IF	Citations
181	Optical properties of metal oxynitride thin films grown with atmospheric plasma deposition. Journal Physics D: Applied Physics, 2016, 49, 395302.	2.8	3
182	Quantitative adhesion characterization of antireflective coatings in multijunction photovoltaics. Solar Energy Materials and Solar Cells, 2016, 153, 78-83.	6.2	3
183	The Effects of Terminal Groups on Elastic Asymmetries in Hybrid Molecular Materials. Journal of Physical Chemistry B, 2017, 121, 9753-9759.	2.6	3
184	Mechanically reliable hybrid organosilicate glasses for advanced interconnects. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2020, 38, 060601.	1.2	3
185	Ectoine disperses keratin and alters hydration kinetics in stratum corneum. Biochemistry and Biophysics Reports, 2021, 28, 101134.	1.3	3
186	Polyimide Hybrid Nanocomposites with Controlled Polymer Filling and Polymerâ€“Matrix Interaction. ACS Applied Materials & Interfaces, 2022, 14, 28239-28246.	8.0	3
187	Environmental and Stress State Effects on Fracture and Fatigue Crack-Growth in Zr-Ti-Ni-Cu-Be Bulk Amorphous Metals. Materials Research Society Symposia Proceedings, 1998, 554, 355.	0.1	2
188	Fracture Properties of Porous MSSQ Films: Impact of Porogen Loading and Burnout. Materials Research Society Symposia Proceedings, 2006, 914, 1.	0.1	2
189	Solution chemistry effects on cracking and damage evolution during chemical-mechanical planarization. Journal of Materials Research, 2010, 25, 1904-1909.	2.6	2
190	Interface Structure of Cu Wire Bonding on Cu Substrate with Sn Plating. Materials Transactions, 2012, 53, 2091-2096.	1.2	2
191	Controlling kinetics of heterogeneous solâ€“gel solution for high-performance adhesive hybrid films. Journal of Sol-Gel Science and Technology, 2016, 77, 620-626.	2.4	2
192	Study of Crack Propagation at an Oxide/Polymer Interface Under Varying Loading Conditions. Materials Research Society Symposia Proceedings, 1999, 594, 407.	0.1	1
193	Effect of Composition and Bead Settling on Debonding of Underfill Layers. Materials Research Society Symposia Proceedings, 2001, 682, 1.	0.1	1
194	The Effect of Atomic-Scale Open-Volume on Flow and Fracture Processes in a Zr-Ti-Ni-Cu-Be Bulk Metallic Glass. Materials Research Society Symposia Proceedings, 2002, 754, 1.	0.1	1
195	Mechanical properties of hydrogenated amorphous silicon carbide thin films. , 2010, , .		1
196	Degradation of silicone encapsulants in CPV optics. , 2016, , .		1
197	Thermomechanical asymmetries in ULK dielectric glasses. , 2016, , .		1
198	Self-aligned concentrating immersion-lens arrays for patterning and efficiency recovery in scaffold-reinforced perovskite solar cells. Applied Materials Today, 2020, 20, 100704.	4.3	1

#	Article	IF	Citations
199	Insights into the Mechanical Properties of Ultrathin Perfluoropolyetherâ€“Silane Coatings. Langmuir, 2022, 38, 6435-6442.	3.5	1
200	Gas cluster etching for the universal preparation of polymer composites for nano chemical and mechanical analysis with AFM. Applied Surface Science, 2022, 599, 153954.	6.1	1
201	The Role of Nanoscale Confinement of Adhesion Promoting Molecules on the Adhesion and Resistance to Moisture Attack at the Polymer/Silicon Nitride Interface. Materials Research Society Symposia Proceedings, 2006, 924, 1.	0.1	0
202	Can understanding the effect of solar UV radiation on skinâ€™s biomechanical function help prevent skin damage?. Expert Review of Dermatology, 2013, 8, 5-6.	0.3	0
203	Interface Structure of Cu Wire Bonding on Cu Substrate with Sn Plating. Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals, 2014, 78, 177-182.	0.4	0
204	Low-cost, single-step hybrid bond/barrier films for Cu bondlines in advanced packaging. , 2015, , .		0
205	Adhesion of antireflective coatings in multijunction photovoltaics. , 2016, , .		0
206	Spray deposition of compositionally graded hybrid layers for high-performance adhesion. , 2016, , .		0
207	Spray Plasma Processing of Barrier Films Deposited in Air for Improved stability of Flexible Electronic Devices. , 2018, , .		0
208	Open-Air Plasma-Deposited Multilayer Thin Film Moisture Barriers for Perovskite Solar Cells. , 2020, , .		0
209	Design of Mechanically Reliable ULK Glasses. , 2020, , .		0