

Joseph Burg

List of Publications by Citations

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160
papers

4,771
citations

37
h-index

65
g-index

176
ext. papers

5,574
ext. citations

9.4
avg, IF

5.89
L-index

| # | Paper | IF | Citations |
|-----|---|------|-----------|
| 160 | An Artificial Solid Electrolyte Interphase with High Li-Ion Conductivity, Mechanical Strength, and Flexibility for Stable Lithium Metal Anodes. <i>Advanced Materials</i> , 2017 , 29, 1605531 | 24 | 581 |
| 159 | A Silica-Aerogel-Reinforced Composite Polymer Electrolyte with High Ionic Conductivity and High Modulus. <i>Advanced Materials</i> , 2018 , 30, e1802661 | 24 | 242 |
| 158 | Design and understanding of encapsulated perovskite solar cells to withstand temperature cycling. <i>Energy and Environmental Science</i> , 2018 , 11, 144-150 | 35.4 | 229 |
| 157 | Interlayer adhesion in roll-to-roll processed flexible inverted polymer solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2012 , 97, 171-175 | 6.4 | 173 |
| 156 | Engineering Stress in Perovskite Solar Cells to Improve Stability. <i>Advanced Energy Materials</i> , 2018 , 8, 1802139 | 21.8 | 148 |
| 155 | Plasticity contributions to interface adhesion in thin-film interconnect structures. <i>Journal of Materials Research</i> , 2000 , 15, 2758-2769 | 2.5 | 145 |
| 154 | Adhesion and reliability of copper interconnects with Ta and TaN barrier layers. <i>Journal of Materials Research</i> , 2000 , 15, 203-211 | 2.5 | 136 |
| 153 | Local heating associated with crack tip plasticity in ZrTiNiCuBe bulk amorphous metals. <i>Journal of Materials Research</i> , 1999 , 14, 638-643 | 2.5 | 135 |
| 152 | Controlling Thin-Film Stress and Wrinkling during Perovskite Film Formation. <i>ACS Energy Letters</i> , 2018 , 3, 1225-1232 | 20.1 | 108 |
| 151 | Mechanical integrity of solution-processed perovskite solar cells. <i>Extreme Mechanics Letters</i> , 2016 , 9, 353-358 | 3.9 | 104 |
| 150 | Broadband Emission with a Massive Stokes Shift from Sulfonium PbBr Hybrids. <i>Chemistry of Materials</i> , 2017 , 29, 7083-7087 | 9.6 | 89 |
| 149 | Cohesion and device reliability in organic bulk heterojunction photovoltaic cells. <i>Solar Energy Materials and Solar Cells</i> , 2012 , 99, 182-189 | 6.4 | 87 |
| 148 | Decohesion Kinetics of PEDOT:PSS Conducting Polymer Films. <i>Advanced Functional Materials</i> , 2014 , 24, 1325-1332 | 15.6 | 85 |
| 147 | Effect of Cation Composition on the Mechanical Stability of Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2018 , 8, 1702116 | 21.8 | 84 |
| 146 | Behavior of Cyclic Fatigue Cracks in Monolithic Silicon Nitride. <i>Journal of the American Ceramic Society</i> , 1995 , 78, 2291-2300 | 3.8 | 79 |
| 145 | Moisture-assisted subcritical debonding of a polymer/metal interface. <i>Journal of Applied Physics</i> , 2002 , 91, 1293-1303 | 2.5 | 71 |
| 144 | An Intrinsically Stretchable High-Performance Polymer Semiconductor with Low Crystallinity. <i>Advanced Functional Materials</i> , 2019 , 29, 1905340 | 15.6 | 63 |

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| 143 | Molecular Origins of the Mechanical Behavior of Hybrid Glasses. <i>Advanced Functional Materials</i> , 2010 , 20, 2884-2892 | 15.6 | 62 |
| 142 | Superior mechanical properties of dense and porous organic/inorganic hybrid thin films. <i>Journal of Sol-Gel Science and Technology</i> , 2008 , 48, 187-193 | 2.3 | 62 |
| 141 | Environmental mechanisms of debonding in photovoltaic backsheets. <i>Solar Energy Materials and Solar Cells</i> , 2014 , 120, 87-93 | 6.4 | 56 |
| 140 | Adhesion of benzocyclobutene-passivated silicon in epoxy layered structures. <i>Journal of Materials Research</i> , 2001 , 16, 243-255 | 2.5 | 56 |
| 139 | Molecular Intercalation and Cohesion of Organic Bulk Heterojunction Photovoltaic Devices. <i>Advanced Functional Materials</i> , 2013 , 23, 2863-2871 | 15.6 | 55 |
| 138 | Atmospheric plasma deposited dense silica coatings on plastics. <i>ACS Applied Materials & Interfaces</i> , 2012 , 4, 6587-98 | 9.5 | 54 |
| 137 | Fracture of nanoporous methyl silsesquioxane thin-film glasses. <i>Journal of Materials Research</i> , 2006 , 21, 882-894 | 2.5 | 54 |
| 136 | Influence of Bulky Organo-Ammonium Halide Additive Choice on the Flexibility and Efficiency of Perovskite Light-Emitting Devices. <i>Advanced Functional Materials</i> , 2018 , 28, 1802060 | 15.6 | 53 |
| 135 | Scaffold-reinforced perovskite compound solar cells. <i>Energy and Environmental Science</i> , 2017 , 10, 2500-2508 | 15.6 | 50 |
| 134 | Entanglements in P3HT and their influence on thin-film mechanical properties: Insights from molecular dynamics simulations. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2015 , 53, 934-942 | 2.6 | 49 |
| 133 | High Performance Roll-to-Roll Produced Fullerene-Free Organic Photovoltaic Devices via Temperature-Controlled Slot Die Coating. <i>Advanced Functional Materials</i> , 2019 , 29, 1805825 | 15.6 | 49 |
| 132 | Molecular-Scale Understanding of Cohesion and Fracture in P3HT:Fullerene Blends. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 9957-64 | 9.5 | 48 |
| 131 | Rapid Aqueous Spray Fabrication of Robust NiOx: A Simple and Scalable Platform for Efficient Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2019 , 9, 1803600 | 21.8 | 46 |
| 130 | Adhesion of polymer thin-films and patterned lines. <i>International Journal of Fracture</i> , 2003 , 119/120, 475-485 | 2.3 | 44 |
| 129 | A catalytic alloy approach for graphene on epitaxial SiC on silicon wafers. <i>Journal of Materials Research</i> , 2015 , 30, 609-616 | 2.5 | 43 |
| 128 | Indentation fracture toughness of amorphous steel. <i>Journal of Materials Research</i> , 2005 , 20, 783-786 | 2.5 | 43 |
| 127 | Fracture and Subcritical Crack-Growth Behavior of Y-Si-Al-O-N Glasses and Si ₃ N ₄ Ceramics. <i>Journal of the American Ceramic Society</i> , 2004 , 83, 585-596 | 3.8 | 39 |
| 126 | Cross-Linkable, Solvent-Resistant Fullerene Contacts for Robust and Efficient Perovskite Solar Cells with Increased J and V. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 25896-25904 | 9.5 | 39 |

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| 125 | Rapid Open-Air Fabrication of Perovskite Solar Modules. <i>Joule</i> , 2020 , 4, 2675-2692 | 27.8 | 38 |
| 124 | Thermal-Disrupting Interface Mitigates Intercellular Cohesion Loss for Accurate Topical Antibacterial Therapy. <i>Advanced Materials</i> , 2020 , 32, e1907030 | 24 | 37 |
| 123 | Mechanical relaxation time scales in a Zr-Ti-Ni-Cu-Be bulk metallic glass. <i>Journal of Materials Research</i> , 2002 , 17, 1254-1257 | 2.5 | 36 |
| 122 | Fundamental limits of material toughening in molecularly confined polymers. <i>Nature Materials</i> , 2016 , 15, 294-8 | 27 | 34 |
| 121 | Understanding age-induced alterations to the biomechanical barrier function of human stratum corneum. <i>Journal of Dermatological Science</i> , 2015 , 80, 94-101 | 4.3 | 32 |
| 120 | Computational prediction of the molecular configuration of three-dimensional network polymers. <i>Nature Materials</i> , 2021 , 20, 1422-1430 | 27 | 32 |
| 119 | Rapid route to efficient, scalable, and robust perovskite photovoltaics in air. <i>Energy and Environmental Science</i> , 2018 , 11, 2102-2113 | 35.4 | 32 |
| 118 | Understanding mechanical behavior and reliability of organic electronic materials. <i>MRS Bulletin</i> , 2017 , 42, 115-123 | 3.2 | 31 |
| 117 | Adhesion and debonding kinetics of photovoltaic encapsulation in moist environments. <i>Progress in Photovoltaics: Research and Applications</i> , 2016 , 24, 183-194 | 6.8 | 30 |
| 116 | Effects of UV cure on glass structure and fracture properties of nanoporous carbon-doped oxide thin films. <i>Journal of Applied Physics</i> , 2008 , 104, 043513 | 2.5 | 30 |
| 115 | Improved stability and efficiency of perovskite solar cells with submicron flexible barrier films deposited in air. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 22975-22983 | 13 | 29 |
| 114 | Topological supramolecular network enabled high-conductivity, stretchable organic bioelectronics.. <i>Science</i> , 2022 , 375, 1411-1417 | 33.3 | 29 |
| 113 | Effect of solution pH on the accelerated cracking of nanoporous thin-film glasses. <i>Journal of Materials Research</i> , 2005 , 20, 680-687 | 2.5 | 28 |
| 112 | Subcritical Crack-Growth Behavior of Borosilicate Glass under Cyclic Loads: Evidence of a Mechanical Fatigue Effect. <i>Journal of the American Ceramic Society</i> , 1997 , 80, 773-776 | 3.8 | 27 |
| 111 | Effects of fatigue loading and PMMA precoating on the adhesion and subcritical debonding of prosthetic-PMMA interfaces. <i>Journal of Biomedical Materials Research Part B</i> , 2000 , 51, 172-83 | | 27 |
| 110 | Molecular structure and fracture properties of ZrOX/Epoxy silane hybrid films. <i>Journal of Sol-Gel Science and Technology</i> , 2010 , 55, 360-368 | 2.3 | 26 |
| 109 | Comment on "Light-induced lattice expansion leads to high-efficiency perovskite solar cells". <i>Science</i> , 2020 , 368, | 33.3 | 26 |
| 108 | Hole-Transport Layer Molecular Weight and Doping Effects on Perovskite Solar Cell Efficiency and Mechanical Behavior. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 23757-23764 | 9.5 | 24 |

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| 107 | Controlling Interdiffusion, Interfacial Composition, and Adhesion in Polymer Solar Cells. <i>Advanced Materials Interfaces</i> , 2014 , 1, 1400135 | 4.6 | 24 |
| 106 | Synthesis and use of a hyper-connecting cross-linking agent in the hole-transporting layer of perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 19267-19279 | 13 | 24 |
| 105 | A Mechanomodulatory Device to Minimize Incisional Scar Formation. <i>Advances in Wound Care</i> , 2013 , 2, 185-194 | 4.8 | 24 |
| 104 | Adhesion and degradation of hard coatings on poly (methyl methacrylate) substrates. <i>Thin Solid Films</i> , 2011 , 519, 1907-1913 | 2.2 | 24 |
| 103 | Highly transparent multifunctional bilayer coatings on polymers using low-temperature atmospheric plasma deposition. <i>ACS Nano</i> , 2014 , 8, 7186-91 | 16.7 | 23 |
| 102 | Adhesion Measurement of Interfaces in Multilayer Interconnect Structures. <i>Materials Research Society Symposia Proceedings</i> , 1997 , 473, 3 | | 22 |
| 101 | Temperature dependence of positron annihilation in a ZrTiNiCuBe bulk metallic glass. <i>Journal of Materials Research</i> , 2003 , 18, 2021-2024 | 2.5 | 22 |
| 100 | Depth dependence of ultraviolet curing of organosilicate low-k thin films. <i>Journal of Applied Physics</i> , 2008 , 103, 064108 | 2.5 | 21 |
| 99 | Beyond Fullerenes: Indacenodithiophene-Based Organic Charge-Transport Layer toward Upscaling of Low-Cost Perovskite Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 22143-22155 | 9.5 | 20 |
| 98 | Toward Sustainable Multifunctional Coatings Containing Nanocellulose in a Hybrid Glass Matrix. <i>ACS Nano</i> , 2018 , 12, 5495-5503 | 16.7 | 20 |
| 97 | Engineering the Mechanical Properties of Polymer Networks with Precise Doping of Primary Defects. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 42217-42224 | 9.5 | 19 |
| 96 | Hyperconnected molecular glass network architectures with exceptional elastic properties. <i>Nature Communications</i> , 2017 , 8, 1019 | 17.4 | 18 |
| 95 | Aqueous solution diffusion in hydrophobic nanoporous thin-film glasses. <i>Journal of Materials Research</i> , 2007 , 22, 710-718 | 2.5 | 18 |
| 94 | Fatigue crack growth in micro-machined single-crystal silicon. <i>Journal of Materials Research</i> , 2004 , 19, 2635-2640 | 2.5 | 18 |
| 93 | Dual Precursor Atmospheric Plasma Deposition of Transparent Bilayer Protective Coatings on Plastics. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 17929-34 | 9.5 | 17 |
| 92 | Conductive Transparent TiNx/TiO2 Hybrid Films Deposited on Plastics in Air Using Atmospheric Plasma Processing. <i>Advanced Functional Materials</i> , 2014 , 24, 3075-3081 | 15.6 | 17 |
| 91 | Interface Separation in Residually-Stressed Thin-Film Structures. <i>Journal of Materials Science</i> , 2003 , 11, 309-317 | | 15 |
| 90 | Open Air Plasma Deposition of Superhydrophilic Titania Coatings. <i>Advanced Functional Materials</i> , 2019 , 29, 1806421 | 15.6 | 14 |

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| 89 | Elastic and thermal expansion asymmetry in dense molecular materials. <i>Nature Materials</i> , 2016 , 15, 974-89 | 14 |
| 88 | Role of Stress Factors on the Adhesion of Interfaces in R2R Fabricated Organic Photovoltaics. <i>Advanced Energy Materials</i> , 2016 , 6, 1501927 | 21.8 14 |
| 87 | Toughening thin-film structures with ceramic-like amorphous silicon carbide films. <i>Small</i> , 2014 , 10, 253-711 | 14 |
| 86 | Open-Air Plasma-Deposited Multilayer Thin-Film Moisture Barriers. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 26405-26412 | 9.5 13 |
| 85 | Integration Challenges of Nanoporous Low Dielectric Constant Materials. <i>IEEE Transactions on Device and Materials Reliability</i> , 2009 , 9, 509-515 | 1.6 13 |
| 84 | The Role of Catalyst Adhesion in ALD-TiO Protection of Water Splitting Silicon Anodes. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 37103-37109 | 9.5 13 |
| 83 | Time-dependant intercellular delamination of human stratum corneum. <i>Journal of Materials Science</i> , 2007 , 42, 8986-8994 | 4.3 12 |
| 82 | Perspectives on intrinsic toughening strategies and passivation of perovskite films with organic additives. <i>Solar Energy Materials and Solar Cells</i> , 2020 , 209, 110433 | 6.4 11 |
| 81 | The effect of anneal, solar irradiation and humidity on the adhesion/cohesion properties of P3HT:PCBM based inverted polymer solar cells 2012 , | 11 |
| 80 | Tearing and reliability of photovoltaic module backsheets. <i>Progress in Photovoltaics: Research and Applications</i> , 2019 , 27, 693-705 | 6.8 10 |
| 79 | Nanoscale Interfacial Engineering for Flexible Barrier Films. <i>Nano Letters</i> , 2015 , 15, 6751-5 | 11.5 10 |
| 78 | Effects of an adhesion promoter on the debond resistance of a metal-polymethylmethacrylate interface. <i>Journal of Biomedical Materials Research Part B</i> , 2001 , 54, 419-27 | 10 |
| 77 | High-Throughput Open-Air Plasma Activation of Metal-Oxide Thin Films with Low Thermal Budget. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 37223-37232 | 9.5 10 |
| 76 | Optically Transparent Protective Coating for Plastics Using Dual Spray and Atmospheric Plasma Deposition. <i>Advanced Materials Interfaces</i> , 2018 , 5, 1701433 | 4.6 9 |
| 75 | Progressive Debonding of Multilayer Interconnect Structures. <i>Materials Research Society Symposia Proceedings</i> , 1997 , 473, 21 | 9 |
| 74 | Crystallization kinetics of rapid spray plasma processed multiple cation perovskites in open air. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 169-176 | 13 9 |
| 73 | Carbon-Bridge Incorporation in Organosilicate Coatings Using Oxidative Atmospheric Plasma Deposition. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 1309-18 | 9.5 8 |
| 72 | Moisture-assisted cracking and atomistic crack path meandering in oxidized hydrogenated amorphous silicon carbide films. <i>Journal of Applied Physics</i> , 2013 , 113, 083521 | 2.5 8 |

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| 71 | Bilayer metal gate electrodes with tunable work function: Adhesion and interface characterization. <i>Journal of Applied Physics</i> , 2010 , 108, 053704 | 2.5 | 8 |
| 70 | Effects of barrier composition and electroplating chemistry on adhesion and voiding in copper/dielectric diffusion barrier films. <i>Journal of Applied Physics</i> , 2011 , 110, 044312 | 2.5 | 8 |
| 69 | Molecular-Controlled Fracture and Release of Templated Nanoporous Organosilicate Thin Films. <i>Advanced Materials</i> , 2008 , 20, 3159-3164 | 24 | 8 |
| 68 | Measurement of the biomechanical function and structure of ex vivo drying skin using raman spectral analysis and its modulation with emollient mixtures. <i>Experimental Dermatology</i> , 2018 , 27, 901-908 | 10.8 | 8 |
| 67 | Heterogeneous solution deposition of high-performance adhesive hybrid films. <i>ACS Applied Materials & Interfaces</i> , 2013 , 5, 9891-5 | 9.5 | 7 |
| 66 | Tailoring UV cure depth profiles for optimal mechanical properties of organosilicate thin films. <i>Applied Physics Letters</i> , 2009 , 95, 071902 | 3.4 | 7 |
| 65 | Synthesis of Polyimides in Molecular-Scale Confinement for Low-Density Hybrid Nanocomposites. <i>Nano Letters</i> , 2017 , 17, 7040-7044 | 11.5 | 6 |
| 64 | Molecular design for moisture insensitivity of compositionally graded hybrid films. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 6812-8 | 9.5 | 6 |
| 63 | Multiaxial Lenticular Stress-Strain Relationship of Native Myocardium is Preserved by Infarct-Induced Natural Heart Regeneration in Neonatal Mice. <i>Scientific Reports</i> , 2020 , 10, 7319 | 4.9 | 6 |
| 62 | Electrical technique for monitoring crack growth in thin-film fracture mechanics specimens. <i>Journal of Materials Research</i> , 2004 , 19, 3139-3144 | 2.5 | 6 |
| 61 | Del1 Knockout Mice Developed More Severe Osteoarthritis Associated with Increased Susceptibility of Chondrocytes to Apoptosis. <i>PLoS ONE</i> , 2016 , 11, e0160684 | 3.7 | 6 |
| 60 | Mechanical and Microstructural Properties of Stratum Corneum. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 724, N2.7.1 | | 6 |
| 59 | Lipid Loss Increases Stratum Corneum Stress and Drying Rates. <i>Skin Pharmacology and Physiology</i> , 2020 , 33, 180-188 | 3 | 6 |
| 58 | Design of Ultrastiff Organosilicate Hybrid Glasses. <i>Advanced Functional Materials</i> , 2019 , 29, 1904890 | 15.6 | 5 |
| 57 | Molecular design of confined organic network hybrids with controlled deformation rate sensitivity and moisture resistance. <i>Acta Materialia</i> , 2018 , 142, 162-171 | 8.4 | 5 |
| 56 | Open-air spray plasma deposited UV-absorbing nanocomposite coatings. <i>Nanoscale</i> , 2018 , 10, 14525-14533 | 15.3 | 5 |
| 55 | Role of friction and loading parameters in four-point bend adhesion measurements. <i>Journal of Materials Research</i> , 2008 , 23, 87-96 | 2.5 | 5 |
| 54 | Benchmarking Four Point Bend Adhesion Testing: The Effect of Test Parameters On Adhesion Energy. <i>AIP Conference Proceedings</i> , 2005 , | 0 | 5 |

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| 53 | Scalable open-air deposition of compact ETL TiOx on perovskite for fullerene-free solar cells. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 22858-22866 | 13 | 5 |
| 52 | Role of Carbon Bridge Length of Organosilicate Precursors on the Atmospheric Plasma Deposition of Transparent Bilayer Protective Coatings on Plastics. <i>Plasma Processes and Polymers</i> , 2016 , 13, 1053-1060 | 3.4 | 5 |
| 51 | Low temperature open-air plasma deposition of amorphous tin oxide for perovskite solar cells. <i>Thin Solid Films</i> , 2021 , 730, 138708 | 2.2 | 5 |
| 50 | Selective Deposition of Compositionally Graded Hybrid Adhesive Films. <i>Advanced Materials Interfaces</i> , 2015 , 2, 1500262 | 4.6 | 4 |
| 49 | Surface Chemical Functionalization to Achieve Extreme Levels of Molecular Confinement in Hybrid Nanocomposites. <i>Advanced Functional Materials</i> , 2019 , 29, 1903132 | 15.6 | 3 |
| 48 | A graphene platform on silicon for the Internet of Everything 2018 , | | 3 |
| 47 | Electrically Conductive Copper Core-Shell Nanowires through Benzenethiol-Directed Assembly. <i>Nano Letters</i> , 2018 , 18, 4900-4907 | 11.5 | 3 |
| 46 | Moisture-assisted failure mechanisms in underfill epoxy/silicon systems for microelectronic packaging 2014 , | | 3 |
| 45 | Hybrid coupling layers for bulk metallic glass adhesion. <i>Journal of Materials Research</i> , 2013 , 28, 3164-3169 | 6.5 | 3 |
| 44 | Effects of e-beam curing on glass structure and mechanical properties of nanoporous organosilicate thin films. <i>International Journal of Materials Research</i> , 2010 , 101, 228-235 | 0.5 | 3 |
| 43 | Fatigue Processes in Silicon MEMS Devices. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 682, 1 | | 3 |
| 42 | Adhesion and Progressive Debonding of Polymer/Metal Interfaces: Effects of Temperature and Environment. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 563, 263 | | 3 |
| 41 | Effect of Mechanical Constraint on Tearing Energy of Polymer Membranes. <i>Macromolecular Materials and Engineering</i> , 2016 , 301, 1096-1103 | 3.9 | 3 |
| 40 | Optical properties of metal oxynitride thin films grown with atmospheric plasma deposition. <i>Journal Physics D: Applied Physics</i> , 2016 , 49, 395302 | 3 | 3 |
| 39 | Low-temperature sprayed SnOx nanocomposite films with enhanced hole blocking for efficient large area perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 21332-21339 | 13 | 3 |
| 38 | Controlling kinetics of heterogeneous sol-gel solution for high-performance adhesive hybrid films. <i>Journal of Sol-Gel Science and Technology</i> , 2016 , 77, 620-626 | 2.3 | 2 |
| 37 | Using Unentangled Oligomers To Toughen Materials. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 27549-27554 | 9.5 | 2 |
| 36 | The Effects of Terminal Groups on Elastic Asymmetries in Hybrid Molecular Materials. <i>Journal of Physical Chemistry B</i> , 2017 , 121, 9753-9759 | 3.4 | 2 |

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| 35 | Solution chemistry effects on cracking and damage evolution during chemical-mechanical planarization. <i>Journal of Materials Research</i> , 2010 , 25, 1904-1909 | 2.5 | 2 |
| 34 | Quantitative Roadmap for Optimizing CMP of Ultra-Low-k Dielectrics 2008 , | | 2 |
| 33 | Assessing the Effect of Die Sealing in Cu/Low-k Structures 2007 , | | 2 |
| 32 | Fracture Properties of Porous MSSQ Films: Impact of Porogen Loading and Burnout. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 914, 1 | | 2 |
| 31 | Multi-Scale Simulations of Interfacial Fracture of Nanoscale Thin-Film Structures: Effect of Length Scales and Residual Stresses. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 778, 931 | | 2 |
| 30 | The Effect of Fatigue on the Adhesion and Subcritical Debonding of Benzocyclobutene/Silicon Dioxide Interfaces. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 612, 131 | | 2 |
| 29 | Environmental and Stress State Effects on Fracture and Fatigue Crack-Growth in Zr-Ti-Ni-Cu-Be Bulk Amorphous Metals. <i>Materials Research Society Symposia Proceedings</i> , 1998 , 554, 355 | | 2 |
| 28 | Mechanically reliable hybrid organosilicate glasses for advanced interconnects. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2020 , 38, 060601 | 1.3 | 2 |
| 27 | Quantitative adhesion characterization of antireflective coatings in multijunction photovoltaics. <i>Solar Energy Materials and Solar Cells</i> , 2016 , 153, 78-83 | 6.4 | 2 |
| 26 | Photovoltaic Devices: High Performance Roll-to-Roll Produced Fullerene-Free Organic Photovoltaic Devices via Temperature-Controlled Slot Die Coating (Adv. Funct. Mater. 6/2019). <i>Advanced Functional Materials</i> , 2019 , 29, 1970037 | 15.6 | 1 |
| 25 | Self-aligned concentrating immersion-lens arrays for patterning and efficiency recovery in scaffold-reinforced perovskite solar cells. <i>Applied Materials Today</i> , 2020 , 20, 100704 | 6.6 | 1 |
| 24 | Thermomechanical asymmetries in ULK dielectric glasses 2016 , | | 1 |
| 23 | Mechanical properties of hydrogenated amorphous silicon carbide thin films 2010 , | | 1 |
| 22 | Effect of Moisture and Graded-Layer Mechanical Properties on Deformation and Interfacial Adhesion. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 778, 751 | | 1 |
| 21 | Debonding Under Fatigue Loading at Polymer/Inorganic Interfaces. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 821, 99 | | 1 |
| 20 | Effect of Composition and Bead Settling on Debonding of Underfill Layers. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 682, 1 | | 1 |
| 19 | Adhesion Mechanisms of Silane Adhesion Promoters in Microelectronic Packaging. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 682, 1 | | 1 |
| 18 | Study of Crack Propagation at an Oxide/Polymer Interface Under Varying Loading Conditions. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 594, 407 | | 1 |

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| 17 | Comprehensive characterization of the structure and properties of human stratum corneum relating to barrier function and skin hydration: modulation by a moisturizer formulation. <i>Experimental Dermatology</i> , 2021 , 30, 1352-1357 | 4 | 1 |
| 16 | Perspectives of Open-Air Processing to Enable Perovskite Solar Cell Manufacturing. <i>Frontiers in Energy Research</i> , 2021 , 9, | 3.8 | 1 |
| 15 | Organothioliol-Based Hybrid-Layer Strategy for High-Performance Copper Adhesion and Stress-Migration via Simultaneous Oxide Reduction. <i>Advanced Materials Interfaces</i> , 2016 , 3, 1600118 | 4.6 | 1 |
| 14 | Ectoine disperses keratin and alters hydration kinetics in stratum corneum. <i>Biochemistry and Biophysics Reports</i> , 2021 , 28, 101134 | 2.2 | 1 |
| 13 | Biomechanical Analysis of the Ross Procedure in an Ex Vivo Left Heart Simulator.. <i>World Journal for Pediatric & Congenital Heart Surgery</i> , 2022 , 13, 166-174 | 1.1 | 1 |
| 12 | The Role of Nanoscale Confinement of Adhesion Promoting Molecules on the Adhesion and Resistance to Moisture Attack at the Polymer/Silicon Nitride Interface. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 924, 1 | | |
| 11 | A Novel Bonding Technique Using Metal-Induced Crystallization of Amorphous Silicon. <i>Materials Research Society Symposia Proceedings</i> , 2007 , 989, 1 | | |
| 10 | Transient Fatigue Crack-Growth Behavior and Damage Zones in Zr-Based Bulk Metallic Glass. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 806, 286 | | |
| 9 | Unusual fracture behavior of nanoporous polymeric thin-films. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 880, 1 | | |
| 8 | Elevated Temperature Fatigue Crack Propagation of a Zr-Ti-Cu-Ni-Be Bulk Metallic Glass. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 754, 1 | | |
| 7 | Effects of Hydrogen on the Internal Time Scales in Zr-Ti-Ni-Cu-Be Bulk Metallic Glasses. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 644, 1031 | | |
| 6 | Fracture and Fatigue Crack Growth of Bulk Metallic Glass Alloys and their Composites. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 644, 951 | | |
| 5 | Atomic Force Microscopy Studies of Fracture Surfaces From Oxide / Polymer Interfaces. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 654, 271 | | |
| 4 | Adhesion of Pressure Sensitive Adhesives with Applications in Transdermal Drug Delivery. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 662, 1 | | |
| 3 | Studies of Silane Adhesion Promoters on Silica Filler Particles for use in Microelectronic Packaging. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 710, 1 | | |
| 2 | Design of Mechanically Reliable ULK Glasses | | |
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