List of Publications by Year in descending order

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RUI HUANC

| #  | Article  | lF  | CITATIONS |
|----|--|-----|-----------|
| 1  | Two-Dimensional Phonon Transport in Supported Graphene. Science, 2010, 328, 213-216.   | 6.0 | 1,692     |
| 2  | A review on mechanics and mechanical properties of 2D materials—Graphene and beyond. Extreme<br>Mechanics Letters, 2017, 13, 42-77.  | 2.0 | 920       |
| 3  | Elastic Moduli of Ultrathin Amorphous Polymer Films. Macromolecules, 2006, 39, 5095-5099.  | 2.2 | 389       |
| 4  | Elastic bending modulus of monolayer graphene. Journal Physics D: Applied Physics, 2009, 42, 102002.   | 1.3 | 326       |
| 5  | Kinetic wrinkling of an elastic film on a viscoelastic substrate. Journal of the Mechanics and Physics of Solids, 2005, 53, 63-89.   | 2.3 | 280       |
| 6  | Dielectric elastomer actuators under equal-biaxial forces, uniaxial forces, and uniaxial constraint of stiff fibers. Soft Matter, 2012, 8, 6167.   | 1.2 | 237       |
| 7  | Interfacial Sliding and Buckling of Monolayer Graphene on a Stretchable Substrate. Advanced<br>Functional Materials, 2014, 24, 396-402.  | 7.8 | 229       |
| 8  | Impact of Near-Surface Thermal Stresses on Interfacial Reliability of Through-Silicon Vias for 3-D<br>Interconnects. IEEE Transactions on Device and Materials Reliability, 2011, 11, 35-43. | 1.5 | 228       |
| 9  | Wrinkling of a compressed elastic film on a viscous layer. Journal of Applied Physics, 2002, 91, 1135-1142.  | 1.1 | 223       |
| 10 | NONLINEAR MECHANICS OF SINGLE-ATOMIC-LAYER GRAPHENE SHEETS. International Journal of Applied Mechanics, 2009, 01, 443-467.   | 1.3 | 222       |
| 11 | Inhomogeneous deformation in metallic glasses. Journal of the Mechanics and Physics of Solids, 2002, 50, 1011-1027.  | 2.3 | 220       |
| 12 | Buckling modes of elastic thin films on elastic substrates. Applied Physics Letters, 2007, 90, 151902.   | 1.5 | 179       |
| 13 | Internal lattice relaxation of single-layer graphene under in-plane deformation. Journal of the Mechanics and Physics of Solids, 2008, 56, 1609-1623.  | 2.3 | 164       |
| 14 | Concomitant wrinkling and buckle-delamination of elastic thin films on compliant substrates.<br>Mechanics of Materials, 2011, 43, 627-642.   | 1.7 | 159       |
| 15 | Thermo-mechanical reliability of 3-D ICs containing through silicon vias. , 2009, , .  |     | 158       |
| 16 | Measuring Interlayer Shear Stress in Bilayer Graphene. Physical Review Letters, 2017, 119, 036101.   | 2.9 | 155       |
| 17 | Swelling kinetics of polymer gels: comparison of linear and nonlinear theories. Soft Matter, 2012, 8, 8194.  | 1.2 | 146       |
| 18 | Modeling quasi-static crack growth with the extended finite element method Part II: Numerical applications. International Journal of Solids and Structures, 2003, 40, 7539-7552.             | 1.3 | 143       |

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|----|--|-----|-----------|
| 19 | Bending of Multilayer van der Waals Materials. Physical Review Letters, 2019, 123, 116101.   | 2.9 | 139       |
| 20 | Thermomechanics of monolayer graphene: Rippling, thermal expansion and elasticity. Journal of the Mechanics and Physics of Solids, 2014, 66, 42-58.  | 2.3 | 138       |
| 21 | Effects of mismatch strain and substrate surface corrugation on morphology of supported monolayer graphene. Journal of Applied Physics, 2010, 107, .   | 1.1 | 136       |
| 22 | Mechanics of spontaneously formed nanoblisters trapped by transferred 2D crystals. Proceedings of the United States of America, 2018, 115, 7884-7889.  | 3.3 | 130       |
| 23 | Atomistic simulation and continuum modeling of graphene nanoribbons under uniaxial tension.<br>Modelling and Simulation in Materials Science and Engineering, 2011, 19, 054006.                | 0.8 | 121       |
| 24 | Stretch-induced stress patterns and wrinkles in hyperelastic thin sheets. International Journal of<br>Solids and Structures, 2011, 48, 3471-3483.  | 1.3 | 109       |
| 25 | Interfacial adhesion between graphene and silicon dioxide by density functional theory with van der<br>Waals corrections. Journal Physics D: Applied Physics, 2014, 47, 255301.                | 1.3 | 109       |
| 26 | Instability of a compressed elastic film on a viscous layer. International Journal of Solids and Structures, 2002, 39, 1791-1802.  | 1.3 | 108       |
| 27 | Channel-cracking of thin films with the extended finite element method. Engineering Fracture<br>Mechanics, 2003, 70, 2513-2526.  | 2.0 | 108       |
| 28 | Effect of Thermal Stresses on Carrier Mobility and Keep-Out Zone Around Through-Silicon Vias for 3-D<br>Integration. IEEE Transactions on Device and Materials Reliability, 2012, 12, 255-262. | 1.5 | 106       |
| 29 | Selective Mechanical Transfer of Graphene from Seed Copper Foil Using Rate Effects. ACS Nano, 2015, 9,<br>1325-1335.   | 7.3 | 104       |
| 30 | A nonlinear, transient finite element method for coupled solvent diffusion and large deformation of hydrogels. Journal of the Mechanics and Physics of Solids, 2015, 79, 21-43.                | 2.3 | 102       |
| 31 | Swell-induced surface instability of confined hydrogel layers on substrates. Journal of the<br>Mechanics and Physics of Solids, 2010, 58, 1582-1598.   | 2.3 | 100       |
| 32 | Effect of surface roughness on adhesion of graphene membranes. Journal Physics D: Applied Physics, 2011, 44, 452001.   | 1.3 | 100       |
| 33 | Analytical methods for the mechanics of graphene bubbles. Journal of Applied Physics, 2012, 112, .   | 1.1 | 99        |
| 34 | Dynamics of wrinkle growth and coarsening in stressed thin films. Physical Review E, 2006, 74, 026214.   | 0.8 | 98        |
| 35 | Characterization of thermal stresses in through-silicon vias for three-dimensional interconnects by bending beam technique. Applied Physics Letters, 2012, 100, 041901.                        | 1.5 | 96        |
| 36 | Measurement and analysis of thermal stresses in 3D integrated structures containing through-silicon-vias. Microelectronics Reliability, 2013, 53, 53-62.                                       | 0.9 | 96        |

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|----|---|-----|-----------|
| 37 | Micro-Raman spectroscopy and analysis of near-surface stresses in silicon around through-silicon vias for three-dimensional interconnects. Journal of Applied Physics, 2012, 111, .       | 1.1 | 94        |
| 38 | Anisotropic, Hierarchical Surface Patterns via Surface Wrinkling of Nanopatterned Polymer Films.<br>Nano Letters, 2012, 12, 5995-5999.  | 4.5 | 88        |
| 39 | A blister test for interfacial adhesion of large-scale transferred graphene. Carbon, 2014, 69, 390-400.   | 5.4 | 88        |
| 40 | A Variational Approach and Finite Element Implementation for Swelling of Polymeric Hydrogels Under<br>Geometric Constraints. Journal of Applied Mechanics, Transactions ASME, 2010, 77, . | 1.1 | 86        |
| 41 | Thermal stress induced delamination of through silicon vias in 3-D interconnects. , 2010, , .   |     | 85        |
| 42 | Excess energy and deformation along free edges of graphene nanoribbons. Physical Review B, 2010, 81, .  | 1.1 | 78        |
| 43 | Ultra Long-Range Interactions between Large Area Graphene and Silicon. ACS Nano, 2014, 8, 11234-11242.  | 7.3 | 75        |
| 44 | Wrinkle patterns of anisotropic crystal films on viscoelastic substrates. Journal of the Mechanics and Physics of Solids, 2008, 56, 3315-3330.  | 2.3 | 73        |
| 45 | Swell-induced surface instability of hydrogel layers with material properties varying in thickness direction. International Journal of Solids and Structures, 2013, 50, 578-587.          | 1.3 | 73        |
| 46 | Strain relaxation of SiGe islands on compliant oxide. Journal of Applied Physics, 2002, 91, 9716.   | 1.1 | 70        |
| 47 | Isothermal stress relaxation in electroplated Cu films. I. Mass transport measurements. Journal of<br>Applied Physics, 2005, 97, 103531.  | 1.1 | 70        |
| 48 | Electromechanical phase transition in dielectric elastomers. Proceedings of the Royal Society A:<br>Mathematical, Physical and Engineering Sciences, 2012, 468, 1014-1040.                | 1.0 | 69        |
| 49 | Evolving crack patterns in thin films with the extended finite element method. International Journal of Solids and Structures, 2003, 40, 2343-2354.                                       | 1.3 | 64        |
| 50 | Nonlinear analysis of compressed elastic thin films on elastic substrates: From wrinkling to buckle-delamination. International Journal of Solids and Structures, 2014, 51, 3715-3726.    | 1.3 | 64        |
| 51 | Effect of Surface Properties on Wrinkling of Ultrathin Films. Journal of Aerospace Engineering, 2007, 20, 38-44.  | 0.8 | 63        |
| 52 | Unique Aspects of a Shape Memory Polymer As the Substrate for Surface Wrinkling. ACS Applied<br>Materials & Interfaces, 2012, 4, 598-603.   | 4.0 | 62        |
| 53 | Nonlinear effect of stress and wetting on surface evolution of epitaxial thin films. Physical Review B, 2006, 74, .   | 1.1 | 61        |
| 54 | Viscoelastic properties of confined polymer films measured via thermal wrinkling. Soft Matter, 2009, 5, 4638.   | 1.2 | 61        |

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|----|---|------|-----------|
| 55 | Mechanics at the interfaces of 2D materials: Challenges and opportunities. Current Opinion in Solid<br>State and Materials Science, 2020, 24, 100837.                               | 5.6  | 61        |
| 56 | Numerical Analysis of Circular Graphene Bubbles. Journal of Applied Mechanics, Transactions ASME, 2013, 80, .   | 1.1  | 60        |
| 57 | Pathâ€Guided Wrinkling of Nanoscale Metal Films. Advanced Materials, 2012, 24, 3010-3014.   | 11.1 | 57        |
| 58 | Plasticity mechanism for copper extrusion in through-silicon vias for three-dimensional interconnects. Applied Physics Letters, 2013, 103, .  | 1.5  | 57        |
| 59 | Effect of Solvent Diffusion on Crack-Tip Fields and Driving Force for Fracture of Hydrogels. Journal of Applied Mechanics, Transactions ASME, 2015, 82, .                           | 1.1  | 55        |
| 60 | Cracking of Polycrystalline Graphene on Copper under Tension. ACS Nano, 2016, 10, 9616-9625.  | 7.3  | 53        |
| 61 | Nanostructured block copolymer muscles. Nature Nanotechnology, 2022, 17, 752-758.   | 15.6 | 53        |
| 62 | Influence of interfacial delamination on channel cracking of elastic thin films. International Journal of Fracture, 2007, 148, 331-342.   | 1.1  | 52        |
| 63 | Stretch-induced wrinkling of polyethylene thin sheets: Experiments and modeling. International<br>Journal of Solids and Structures, 2014, 51, 1847-1858.                            | 1.3  | 52        |
| 64 | A comparison of direct and iterative methods for determining traction-separation relations.<br>International Journal of Fracture, 2012, 177, 109-128.                               | 1.1  | 50        |
| 65 | Through-silicon via stress characteristics and reliability impact on 3D integrated circuits. MRS<br>Bulletin, 2015, 40, 248-256.  | 1.7  | 50        |
| 66 | Swelling behavior of nanoscale, shape- and size-specific, hydrogel particles fabricated using imprint<br>lithography. Soft Matter, 2011, 7, 2879.                                   | 1.2  | 49        |
| 67 | Thermal fluctuations and effective bending stiffness of elastic thin sheets and graphene: A nonlinear analysis. Journal of the Mechanics and Physics of Solids, 2017, 107, 294-319. | 2.3  | 49        |
| 68 | Creases and wrinkles on the surface of a swollen gel. Journal of Applied Physics, 2013, 114, .  | 1.1  | 46        |
| 69 | Effect of passivation on stress relaxation in electroplated copper films. Journal of Materials<br>Research, 2006, 21, 1512-1518.  | 1.2  | 44        |
| 70 | On determining mixed-mode traction–separation relations for interfaces. International Journal of<br>Fracture, 2016, 202, 1-19.  | 1.1  | 44        |
| 71 | Loss of constraint on fracture in thin film structures due to creep. Acta Materialia, 2002, 50, 4137-4148.  | 3.8  | 42        |
| 72 | Relaxation of compressed elastic islands on a viscous layer. Acta Materialia, 2002, 50, 2933-2944.  | 3.8  | 41        |

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|----|---|------|-----------|
| 73 | Show of adhesive strength. Nature Nanotechnology, 2011, 6, 537-538.   | 15.6 | 41        |
| 74 | Mixed-mode traction-separation relations between graphene and copper by blister tests. International<br>Journal of Solids and Structures, 2016, 84, 147-159.                                    | 1.3  | 39        |
| 75 | Effect of surface tension on swell-induced surface instability of substrate-confined hydrogel layers.<br>Soft Matter, 2010, 6, 5736.  | 1.2  | 38        |
| 76 | Electromechanical coupling in piezoelectric nanobeams due to the flexoelectric effect. Smart<br>Materials and Structures, 2017, 26, 095025.   | 1.8  | 37        |
| 77 | Isothermal stress relaxation in electroplated Cu films. II. Kinetic modeling. Journal of Applied Physics, 2005, 97, 103532.   | 1.1  | 33        |
| 78 | Buckling suppression of SiGe islands on compliant substrates. Journal of Applied Physics, 2003, 94,<br>6875-6882.   | 1.1  | 32        |
| 79 | SWELLING-INDUCED INSTABILITY OF SUBSTRATE-ATTACHED HYDROGEL LINES. International Journal of Applied Mechanics, 2011, 03, 219-233.   | 1.3  | 32        |
| 80 | A multiscale cohesive zone model for rate-dependent fracture of interfaces. Journal of the Mechanics and Physics of Solids, 2020, 145, 104142.  | 2.3  | 30        |
| 81 | Steady-state crack growth in polymer gels: A linear poroelastic analysis. Journal of the Mechanics and Physics of Solids, 2018, 118, 15-39.   | 2.3  | 29        |
| 82 | Fabrication and Characterization of Patterned Single-Crystal Silicon Nanolines. Nano Letters, 2008, 8,<br>92-98.  | 4.5  | 28        |
| 83 | Very thin solid-on-liquid structures: the interplay of flexural rigidity, membrane force, and interfacial force. Thin Solid Films, 2003, 429, 273-281.  | 0.8  | 27        |
| 84 | Salt-Induced Swelling and Volume Phase Transition of Polyelectrolyte Gels. Journal of Applied<br>Mechanics, Transactions ASME, 2017, 84, .  | 1.1  | 27        |
| 85 | Extensional, thickness-stretch and symmetric thickness-shear vibrations of piezoceramic disks. IEEE<br>Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2002, 49, 1507-1515. | 1.7  | 25        |
| 86 | Mixed-Mode Interactions Between Graphene and Substrates by Blister Tests. Journal of Applied<br>Mechanics, Transactions ASME, 2015, 82, .   | 1.1  | 25        |
| 87 | Characterizing Interfacial Sliding of Through-Silicon-Via by Nano-Indentation. IEEE Transactions on<br>Device and Materials Reliability, 2017, 17, 355-363.                                     | 1.5  | 25        |
| 88 | Thermomechanical Failure Analysis of Through-Silicon Via Interface Using a Shear-Lag Model With Cohesive Zone. IEEE Transactions on Device and Materials Reliability, 2014, 14, 318-326.        | 1.5  | 23        |
| 89 | Rate-dependent traction-separation relations for a silicon/epoxy interface informed by experiments and bond rupture kinetics. Journal of the Mechanics and Physics of Solids, 2019, 131, 1-19.  | 2.3  | 23        |
| 90 | Simultaneous extraction of tensile and shear interactions at interfaces. Journal of the Mechanics and Physics of Solids, 2019, 125, 225-254.  | 2.3  | 22        |

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|-----|---|-----|-----------|
| 91  | Vibrations and static responses of asymmetric bimorph disks of piezoelectric ceramics. IEEE<br>Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2000, 47, 706-715.                 | 1.7 | 21        |
| 92  | A State Space Method for Surface Instability of Elastic Layers With Material Properties Varying in<br>Thickness Direction. Journal of Applied Mechanics, Transactions ASME, 2014, 81, .               | 1.1 | 21        |
| 93  | Effects of a liquid layer on thickness-shear vibrations of rectangular AT-cut quartz plates. IEEE<br>Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2002, 49, 604-611.           | 1.7 | 20        |
| 94  | Thermomechanical reliability of through-silicon vias in 3D interconnects. , 2011, , .   |     | 20        |
| 95  | Wrinkling and folding of thin films by viscous stress. Soft Matter, 2015, 11, 1814-1827.  | 1.2 | 19        |
| 96  | Entropic effects of thermal rippling on van der Waals interactions between monolayer graphene and a<br>rigid substrate. Journal of Applied Physics, 2016, 119, .                                      | 1.1 | 18        |
| 97  | Peeling and sliding of graphene nanoribbons with periodic van der Waals interactions. Journal of the<br>Mechanics and Physics of Solids, 2022, 158, 104698.   | 2.3 | 18        |
| 98  | Onset of swell-induced surface instability of hydrogel layers with depth-wise graded material properties. Mechanics of Materials, 2017, 105, 138-147.   | 1.7 | 17        |
| 99  | Mechanical effects of electrodes on the vibrations of quartz crystal plates. IEEE Transactions on<br>Ultrasonics, Ferroelectrics, and Frequency Control, 2002, 49, 612-625.                           | 1.7 | 16        |
| 100 | Thermal Stresses Analysis of 3-D Interconnect. , 2009, , .  |     | 16        |
| 101 | Wet adhesion of graphene. Extreme Mechanics Letters, 2015, 3, 130-140.  | 2.0 | 16        |
| 102 | Study of Stresses and Plasticity in Through-Silicon Via Structures for 3D Interconnects by X-Ray<br>Micro-Beam Diffraction. IEEE Transactions on Device and Materials Reliability, 2014, 14, 698-703. | 1.5 | 15        |
| 103 | Stress-Induced Delamination Of Through Silicon Via Structures. AIP Conference Proceedings, 2011, , .  | 0.3 | 14        |
| 104 | Effect of elastic anisotropy on surface pattern evolution of epitaxial thin films. International Journal of Solids and Structures, 2009, 46, 2822-2833.   | 1.3 | 13        |
| 105 | Initiation and propagation of interfacial delamination in integrated thin-film structures. , 2010, , .  |     | 13        |
| 106 | Snap Transitions of Pressurized Graphene Blisters. Journal of Applied Mechanics, Transactions ASME, 2016, 83, .   | 1.1 | 13        |
| 107 | Rateâ€Dependent Decohesion Modes in Grapheneâ€Sandwiched Interfaces. Advanced Materials Interfaces,<br>2019, 6, 1901217.  | 1.9 | 13        |
| 108 | Electrically induced surface instability of a conductive thin film on a dielectric substrate. Applied Physics Letters, 2005, 87, 151911.  | 1.5 | 12        |

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|-----|---|------|-----------|
| 109 | A Linear Poroelastic Analysis of Time-Dependent Crack-Tip Fields in Polymer Gels. Journal of Applied<br>Mechanics, Transactions ASME, 2018, 85, .                                 | 1.1  | 12        |
| 110 | Rate dependent fracture along a silicon/epoxy interface under mixed-mode loading conditions.<br>International Journal of Solids and Structures, 2022, 257, 111129.                | 1.3  | 12        |
| 111 | Poroelastic Effects on the Time- and Rate-Dependent Fracture of Polymer Gels. Journal of Applied<br>Mechanics, Transactions ASME, 2020, 87, .                                     | 1.1  | 12        |
| 112 | A fast simulation framework for full-chip thermo-mechanical stress and reliability analysis of through-silicon-via based 3D ICs. , 2011, , .                                      |      | 11        |
| 113 | Cavitation of water by volume-controlled stretching. Extreme Mechanics Letters, 2017, 11, 59-67.  | 2.0  | 11        |
| 114 | Torsional vibrations of circular elastic plates with thickness steps. IEEE Transactions on Ultrasonics,<br>Ferroelectrics, and Frequency Control, 2006, 53, 349-359.              | 1.7  | 10        |
| 115 | Thermomechanical Reliability Challenges For 3D Interconnects With Through-Silicon Vias. AIP<br>Conference Proceedings, 2010, , .  | 0.3  | 10        |
| 116 | Temperature-dependent thermal stress determination for through-silicon-vias (TSVs) by combining beam technique with finite element analysis. , 2011, , .                          |      | 10        |
| 117 | Phonon interaction with ripples and defects in thin layered molybdenum disulfide. Applied Physics Letters, 2019, 114, .   | 1.5  | 10        |
| 118 | Analytical Electromechanical Modeling of Nanoscale Flexoelectric Energy Harvesting. Applied Sciences (Switzerland), 2019, 9, 2273.  | 1.3  | 10        |
| 119 | Mechanics of relaxing SiGe islands on a viscous glass. Acta Mechanica Sinica/Lixue Xuebao, 2002, 18, 441-456.   | 1.5  | 9         |
| 120 | Impact of Process Induced Stresses and Chip-Packaging Interaction on Reliability of Air-gap<br>Interconnects. , 2008, , .   |      | 9         |
| 121 | Bifurcation of surface pattern in epitaxial thin films under anisotropic stresses. Journal of Applied Physics, 2007, 101, 023519.   | 1.1  | 8         |
| 122 | Bending with slip. Nature Materials, 2020, 19, 259-260.   | 13.3 | 8         |
| 123 | Poroelastic effects on steady state crack growth in polymer gels under plane stress. Mechanics of<br>Materials, 2020, 143, 103320.  | 1.7  | 8         |
| 124 | Linear and nonlinear poroelastic analysis of swelling and drying behavior of gelatin-based hydrogels.<br>International Journal of Solids and Structures, 2020, 195, 43-56.        | 1.3  | 8         |
| 125 | Impact of Grain Structure and Material Properties on Via Extrusion in 3D Interconnects. Journal of Microelectronics and Electronic Packaging, 2015, 12, 118-122.                  | 0.8  | 8         |
| 126 | Processing Effect on Via Extrusion for TSVs in Three-Dimensional Interconnects: A Comparative Study.<br>IEEE Transactions on Device and Materials Reliability, 2016, 16, 465-469. | 1.5  | 7         |

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|-----|---|-----|-----------|
| 127 | Rate-dependent wrinkling and subsequent bifurcations of an elastic thin film on a viscoelastic layer.<br>International Journal of Solids and Structures, 2022, 257, 111592.                     | 1.3 | 7         |
| 128 | Effect of a cap layer on morphological stability of a strained epitaxial film. Journal of Applied Physics, 2005, 97, 113537.  | 1.1 | 6         |
| 129 | Trapped torsional vibrations in elastic plates. Applied Physics Letters, 2005, 87, 201911.  | 1.5 | 6         |
| 130 | Effects of Passivation Layer on Stress Relaxation and Mass Transport in Electroplated Cu Films. AIP Conference Proceedings, 2004, , .   | 0.3 | 5         |
| 131 | Characterization of plasticity and stresses in TSV structures in stacked dies using synchrotron x-ray microdiffraction. , 2013, , .   |     | 5         |
| 132 | Impact of material and microstructure on thermal stresses and reliability of through-silicon via (TSV) structures. , 2013, , .  |     | 5         |
| 133 | Material characterization and failure analysis of through-silicon vias. , 2014, , .   |     | 5         |
| 134 | Energy-Trapping Torsional-Mode Resonators for Liquid Sensing. , 2006, , .   |     | 4         |
| 135 | Wrinkling of Ultrathin Polymer Films. Materials Research Society Symposia Proceedings, 2006, 924, 1.  | 0.1 | 4         |
| 136 | Characterization of thermal stresses and plasticity in through-silicon via structures for three-dimensional integration. AIP Conference Proceedings, 2014, , .                                  | 0.3 | 4         |
| 137 | Effect of high temperature storage on the stress and reliability of 3D stacked chip. , 2014, , .  |     | 4         |
| 138 | Finite element modeling of stress variation in multilayer thin-film specimens for in situ transmission electron microscopy experiments. Journal of Materials Research, 2007, 22, 2737-2741.     | 1.2 | 3         |
| 139 | Buckling of Single-Crystal Silicon Nanolines under Indentation. Journal of Nanomaterials, 2008, 2008, 1-11.   | 1.5 | 3         |
| 140 | Interfacial Delamination Between Through Silicon Vias (TSVs) and Silicon Matrix. , 2010, , .  |     | 3         |
| 141 | Measurement and analysis of thermal stresses in 3-D integrated structures containing through-silicon-vias. , 2012, , .  |     | 3         |
| 142 | Effect of microstructure on via extrusion profile and reliability implication for copper through-silicon vias (TSVs) structures. , 2014, , .  |     | 3         |
| 143 | A kinetic decomposition process for air-gap interconnects and induced deformation instability of a low-k dielectric cap layer. Journal of Mechanical Science and Technology, 2014, 28, 255-261. | 0.7 | 3         |
| 144 | Thermal stress characteristics and impact on device keep-out zone for 3-D ICs containing through-silicon-vias. , 2012, , .  |     | 2         |

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|-----|---|-----|-----------|
| 145 | Thermomechanical characterization and modeling for TSV structures. , 2014, , .  |     | 2         |
| 146 | Effect of Cu grain boundary sliding on TSV extrusion. , 2015, , .   |     | 2         |
| 147 | The effect of moisture on the nonlinearly viscoelastic behavior of an epoxy. Mechanics of<br>Time-Dependent Materials, 2020, 24, 435-461.   | 2.3 | 2         |
| 148 | A Kinetics Approach to Surface Wrinkling of Elastic Thin Films. , 2013, , 69-109.   |     | 2         |
| 149 | Influence of Interfacial Delamination on Channel Cracking of Brittle Thin Films. Materials Research<br>Society Symposia Proceedings, 2007, 990, 1.  | 0.1 | 1         |
| 150 | Fracture, delamination, and buckling of elastic thin films on compliant substrates. Intersociety<br>Conference on Thermal and Thermomechanical Phenomena in Electronic Systems, 2008, , . | 0.0 | 1         |
| 151 | Indentation of single-crystal silicon nanolines: Buckling and contact friction at nanoscales. Journal of Applied Physics, 2009, 105, 073510.  | 1.1 | 1         |
| 152 | Nanoindentation of Si Nanostructures: Buckling and Friction at Nanoscales. , 2009, , .  |     | 1         |
| 153 | "Mechanical Behavior of Nanostructured Materials― Metallurgical and Materials Transactions A:<br>Physical Metallurgy and Materials Science, 2010, 41, 777-777.                            | 1.1 | 1         |
| 154 | Disparate tendency of stress evolution of thin and thick electroplated Cu films at room temperature. , 2010, , .  |     | 1         |
| 155 | Nonlinear Mechanical Properties of Graphene Nanoribbons. Materials Research Society Symposia<br>Proceedings, 2011, 1284, 165.   | 0.1 | 1         |
| 156 | Thermal stress characteristics and reliability impact on 3-D ICs containing through-silicon-vias. , 2012, , .   |     | 1         |
| 157 | Investigation of thermo-mechanical stresses and reliability of 3D die-stack structures by synchrotron x-ray micro-diffraction. , 2015, , .  |     | 1         |
| 158 | Morphological Instability of Solid-on-Liquid Thin Film Structures. Materials Research Society<br>Symposia Proceedings, 2002, 749, 1.  | 0.1 | 0         |
| 159 | Trapped Torsional Vibrations in Elastic Plates. , 2006, , .   |     | 0         |
| 160 | Pattern Evolution of Self-Assembled Quantum Dots Under Biaxial Stresses. Materials Research Society<br>Symposia Proceedings, 2006, 921, 1.  | 0.1 | 0         |
| 161 | Mechanical Characterization of High Aspect Ratio Silicon Nanolines. Materials Research Society<br>Symposia Proceedings, 2008, 1086, 1.  | 0.1 | 0         |
| 162 | Thermal Stress in 3-D Packaging. , 2014, , 5208-5217.   |     | 0         |

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|-----|--|-----|-----------|
| 163 | Impact of Grain Structure and Material Properties on Via Extrusion in 3-D Interconnects.<br>International Symposium on Microelectronics, 2014, 2014, 000008-000012.    | 0.3 | 0         |
| 164 | Direct and Simultaneous Extraction of Mixed-Mode Traction-Separation Relations. Conference<br>Proceedings of the Society for Experimental Mechanics, 2018, , 79-84.    | 0.3 | 0         |
| 165 | Characterizing Traction-Separation Relations of TSV/SI Interfaces by Nanoindentation. Conference Proceedings of the Society for Experimental Mechanics, 2018, , 41-46. | 0.3 | 0         |
| 166 | Analytical and finite element study on warpage and stress of 2.5D chip-package structures. , 2021, , .   |     | 0         |