

L. Catherine Brinson

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165
papers

14,799
citations

59
h-index

120
g-index

174
ext. papers

16,049
ext. citations

6.1
avg, IF

6.57
L-index

#	Paper	IF	Citations
165	Functionalized graphene sheets for polymer nanocomposites. <i>Nature Nanotechnology</i> , 2008 , 3, 327-31	28.7	2899
164	Amino-Functionalized Carbon Nanotubes for Binding to Polymers and Biological Systems. <i>Chemistry of Materials</i> , 2005 , 17, 1290-1295	9.6	860
163	Electrically conductive "alkylated" graphene paper via chemical reduction of amine-functionalized graphene oxide paper. <i>Advanced Materials</i> , 2010 , 22, 892-6	24	524
162	High-Nanofiller-Content Graphene Oxide Polymer Nanocomposites via Vacuum-Assisted Self-Assembly. <i>Advanced Functional Materials</i> , 2010 , 20, 3322-3329	15.6	434
161	Fiber waviness in nanotube-reinforced polymer composites— Modulus predictions using effective nanotube properties. <i>Composites Science and Technology</i> , 2003 , 63, 1689-1703	8.6	384
160	Tuning the mechanical properties of graphene oxide paper and its associated polymer nanocomposites by controlling cooperative intersheet hydrogen bonding. <i>ACS Nano</i> , 2012 , 6, 2008-19	16.7	361
159	Shape memory alloys, Part I: General properties and modeling of single crystals. <i>Mechanics of Materials</i> , 2006 , 38, 391-429	3.3	348
158	Reinforcement mechanisms in MWCNT-filled polycarbonate. <i>Composites Science and Technology</i> , 2006 , 66, 1162-1173	8.6	280
157	Shape memory alloys, Part II: Modeling of polycrystals. <i>Mechanics of Materials</i> , 2006 , 38, 430-462	3.3	267
156	Polymer Engineering Science and Viscoelasticity 2008 ,		259
155	Polymer Graphite Nanocomposites: Effective Dispersion and Major Property Enhancement via Solid-State Shear Pulverization. <i>Macromolecules</i> , 2008 , 41, 1905-1908	5.5	250
154	Bio-inspired borate cross-linking in ultra-stiff graphene oxide thin films. <i>Advanced Materials</i> , 2011 , 23, 3842-6	24	245
153	Effects of nanotube waviness on the modulus of nanotube-reinforced polymers. <i>Applied Physics Letters</i> , 2002 , 80, 4647-4649	3.4	244
152	Functionalized SWNT/polymer nanocomposites for dramatic property improvement. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2005 , 43, 2269-2279	2.6	237
151	Direct Observation of Polymer Sheathing in Carbon Nanotube Polycarbonate Composites. <i>Nano Letters</i> , 2003 , 3, 1593-1597	11.5	232
150	Simulation of interphase percolation and gradients in polymer nanocomposites. <i>Composites Science and Technology</i> , 2009 , 69, 491-499	8.6	222
149	Finite element analysis of the behavior of shape memory alloys and their applications. <i>International Journal of Solids and Structures</i> , 1993 , 30, 3261-3280	3.1	213

148	Graphitic nanofillers in PMMA nanocomposites: An investigation of particle size and dispersion and their influence on nanocomposite properties. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2007 , 45, 2097-2112	2.6	204
147	A three-dimensional phenomenological model for martensite reorientation in shape memory alloys. <i>Journal of the Mechanics and Physics of Solids</i> , 2007 , 55, 2491-2511	5	203
146	Polymer nanocomposites: A small part of the story. <i>Jom</i> , 2007 , 59, 53-60	2.1	192
145	Effect of Cross-Link Density on Interphase Creation in Polymer Nanocomposites. <i>Macromolecules</i> , 2008 , 41, 6752-6756	5.5	190
144	Fiber waviness in nanotube-reinforced polymer compositesII: modeling via numerical approximation of the dilute strain concentration tensor. <i>Composites Science and Technology</i> , 2003 , 63, 1705-1722	8.6	183
143	Reinforcing efficiency of nanoparticles: A simple comparison for polymer nanocomposites. <i>Composites Science and Technology</i> , 2008 , 68, 1502-1512	8.6	181
142	A bioactive titanium foam scaffold for bone repair. <i>Acta Biomaterialia</i> , 2005 , 1, 523-33	10.8	154
141	Evolution of order during vacuum-assisted self-assembly of graphene oxide paper and associated polymer nanocomposites. <i>ACS Nano</i> , 2011 , 5, 6601-9	16.7	140
140	Effects of dispersion and interfacial modification on the macroscale properties of TiO(2) polymer matrix nanocomposites. <i>Composites Science and Technology</i> , 2009 , 69, 1880-1886	8.6	138
139	A Multivariant model for single crystal shape memory alloy behavior. <i>Journal of the Mechanics and Physics of Solids</i> , 1998 , 46, 1379-1409	5	137
138	Viscoelastic interphases in polymermatrix composites: theoretical models and finite-element analysis. <i>Composites Science and Technology</i> , 2001 , 61, 731-748	8.6	134
137	Three-dimensional constitutive model for shape memory alloys based on microplane model. <i>Journal of the Mechanics and Physics of Solids</i> , 2002 , 50, 1051-1077	5	133
136	Computational microstructure characterization and reconstruction: Review of the state-of-the-art techniques. <i>Progress in Materials Science</i> , 2018 , 95, 1-41	42.2	132
135	Phase diagram based description of the hysteresis behavior of shape memory alloys. <i>Acta Materialia</i> , 1998 , 46, 3649-3665	8.4	126
134	Comparison of micromechanics methods for effective properties of multiphase viscoelastic composites. <i>Composite Structures</i> , 1998 , 41, 353-367	5.3	116
133	Additive-free hydrogelation of graphene oxide by ultrasonication. <i>Carbon</i> , 2012 , 50, 3399-3406	10.4	115
132	Effects of physical aging on long term creep of polymers and polymer matrix composites. <i>International Journal of Solids and Structures</i> , 1995 , 32, 827-846	3.1	111
131	Mechanics considerations for microporous titanium as an orthopedic implant material. <i>Journal of Biomedical Materials Research Part B</i> , 2004 , 69, 601-10		110

130	Mechanical properties of thin glassy polymer films filled with spherical polymer-grafted nanoparticles. <i>Nano Letters</i> , 2012 , 12, 3909-14	11.5	108
129	Temperature-induced phase transformation in a shape memory alloy: Phase diagram based kinetics approach. <i>Journal of the Mechanics and Physics of Solids</i> , 1997 , 45, 949-988	5	105
128	Effect of Interfacial Energetics on Dispersion and Glass Transition Temperature in Polymer Nanocomposites. <i>Macromolecules</i> , 2013 , 46, 2833-2841	5.5	104
127	New directions in mechanics. <i>Mechanics of Materials</i> , 2005 , 37, 231-259	3.3	104
126	Numerical modeling of pore size and distribution in foamed titanium. <i>Mechanics of Materials</i> , 2006 , 38, 933-944	3.3	100
125	Effect of particle agglomeration and interphase on the glass transition temperature of polymer nanocomposites. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2011 , 49, 740-748	2.6	98
124	A multivariant micromechanical model for SMAs Part 1. Crystallographic issues for single crystal model. <i>International Journal of Plasticity</i> , 2000 , 16, 1345-1369	7.6	94
123	Sacrificial bonds in stacked-cup carbon nanofibers: biomimetic toughening mechanisms for composite systems. <i>ACS Nano</i> , 2010 , 4, 4256-64	16.7	87
122	Micromechanical quantification of elastic, twinning, and slip strain partitioning exhibited by polycrystalline, monoclinic nickel-titanium during large uniaxial deformations measured via in-situ neutron diffraction. <i>Journal of the Mechanics and Physics of Solids</i> , 2013 , 61, 2302-2330	5	83
121	Characterization of local elastic modulus in confined polymer films via AFM indentation. <i>Macromolecular Rapid Communications</i> , 2015 , 36, 391-7	4.8	81
120	Microstructural Materials Design Via Deep Adversarial Learning Methodology. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2018 , 140,	3	80
119	Physical aging in polymers and polymer composites: An analysis and method for time-aging time superposition. <i>Polymer Engineering and Science</i> , 1997 , 37, 31-44	2.3	77
118	Finite element modeling of porous titanium. <i>International Journal of Solids and Structures</i> , 2007 , 44, 320-335	3.1	77
117	A multivariant micromechanical model for SMAs Part 2. Polycrystal model. <i>International Journal of Plasticity</i> , 2000 , 16, 1371-1390	7.6	74
116	Effect of an interphase region on debonding of a CNT reinforced polymer composite. <i>Composites Science and Technology</i> , 2010 , 70, 2207-2215	8.6	73
115	Effects of Pore Morphology and Bone Ingrowth on Mechanical Properties of Microporous Titanium as an Orthopaedic Implant Material. <i>Materials Transactions</i> , 2004 , 45, 1124-1131	1.3	72
114	Polymer Engineering Science and Viscoelasticity 2015 ,		70
113	Queen Elizabeth's image repair discourse: Insensitive royal or compassionate queen?. <i>Public Relations Review</i> , 1999 , 25, 145-156	4.1	69

112	Finite element simulation of a self-healing shape memory alloy composite. <i>Mechanics of Materials</i> , 2006 , 38, 525-537	3.3	68
111	Multiresolution analysis for material design. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006 , 195, 5053-5076	5.7	67
110	A Hybrid Numerical-Analytical Method for Modeling the Viscoelastic Properties of Polymer Nanocomposites. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2006 , 73, 758-768	2.7	63
109	Computational modeling of porous shape memory alloys. <i>International Journal of Solids and Structures</i> , 2008 , 45, 5613-5626	3.1	61
108	A new model to simulate the elastic properties of mineralized collagen fibril. <i>Biomechanics and Modeling in Mechanobiology</i> , 2011 , 10, 147-60	3.8	59
107	Mimicking mussel adhesion to improve interfacial properties in composites. <i>Composites Science and Technology</i> , 2008 , 68, 2042-2048	8.6	59
106	Interfacial and Substrate Effects on Local Elastic Properties of Polymers Using Coupled Experiments and Modeling of Nanoindentation. <i>Advanced Engineering Materials</i> , 2011 , 13, 400-404	3.5	56
105	Multi-scale reinforcement of CFRPs using carbon nanofibers. <i>Composites Science and Technology</i> , 2011 , 71, 79-86	8.6	56
104	A Transfer Learning Approach for Microstructure Reconstruction and Structure-property Predictions. <i>Scientific Reports</i> , 2018 , 8, 13461	4.9	54
103	Stalking the Materials Genome: A Data-Driven Approach to the Virtual Design of Nanostructured Polymers. <i>Advanced Functional Materials</i> , 2013 , 23, 5746-5752	15.6	53
102	Young's modulus evolution and texture-based elastic/elastic strain partitioning during large uniaxial deformations of monoclinic nickel/titanium. <i>Acta Materialia</i> , 2013 , 61, 1944-1956	8.4	49
101	Explicit finite element implementation of an improved three dimensional constitutive model for shape memory alloys. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2013 , 257, 17-35	5.7	47
100	Bone-Shaped Nanomaterials for Nanocomposite Applications. <i>Nano Letters</i> , 2003 , 3, 1135-1139	11.5	47
99	Chronic aspartame affects T-maze performance, brain cholinergic receptors and Na ⁺ ,K ⁺ -ATPase in rats. <i>Pharmacology Biochemistry and Behavior</i> , 2004 , 78, 121-7	3.9	46
98	Nanoscale structure and local mechanical properties of fiber-reinforced composites containing MWCNT-grafted hybrid glass fibers. <i>Composites Science and Technology</i> , 2012 , 72, 1705-1710	8.6	45
97	Physical Aging of Single Wall Carbon Nanotube Polymer Nanocomposites: Effect of Functionalization of the Nanotube on the Enthalpy Relaxation. <i>Macromolecules</i> , 2010 , 43, 4247-4252	5.5	41
96	Curved-fiber pull-out model for nanocomposites. Part 1: Bonded stage formulation. <i>Mechanics of Materials</i> , 2009 , 41, 279-292	3.3	40
95	Titanium with aligned, elongated pores for orthopedic tissue engineering applications. <i>Journal of Biomedical Materials Research - Part A</i> , 2008 , 84, 402-12	5.4	39

94	Preparation and characterization of multiwalled carbon nanotube dispersions in polypropylene: Melt mixing versus solid-state shear pulverization. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2009 , 47, 1426-1436	2.6	37
93	Finite Element Analysis of Multiphase Viscoelastic Solids. <i>Journal of Applied Mechanics, Transactions ASME</i> , 1992 , 59, 730-737	2.7	37
92	Toward the development of a quantitative tool for predicting dispersion of nanocomposites under non-equilibrium processing conditions. <i>Journal of Materials Science</i> , 2016 , 51, 4238-4249	4.3	35
91	Curved-fiber pull-out model for nanocomposites. Part 2: Interfacial debonding and sliding. <i>Mechanics of Materials</i> , 2009 , 41, 293-307	3.3	34
90	Multi-modal magnetic resonance elastography for noninvasive assessment of ovarian tissue rigidity in vivo. <i>Acta Biomaterialia</i> , 2015 , 13, 295-300	10.8	32
89	Utilizing real and statistically reconstructed microstructures for the viscoelastic modeling of polymer nanocomposites. <i>Composites Science and Technology</i> , 2012 , 72, 1725-1732	8.6	32
88	Phase diagram kinetics for shape memory alloys: a robust finite element implementation. <i>Smart Materials and Structures</i> , 2007 , 16, 2102-2115	3.4	32
87	A numerical investigation of the effect of boundary conditions and representative volume element size for porous titanium. <i>Journal of Mechanics of Materials and Structures</i> , 2006 , 1, 1179-1204	1.2	32
86	Exfoliation and reassembly of cobalt oxide nanosheets into a reversible lithium-ion battery cathode. <i>Small</i> , 2012 , 8, 1110-6	11	31
85	Perspective: NanoMine: A material genome approach for polymer nanocomposites analysis and design. <i>APL Materials</i> , 2016 , 4, 053204	5.7	31
84	Identifying interphase properties in polymer nanocomposites using adaptive optimization. <i>Composites Science and Technology</i> , 2018 , 162, 146-155	8.6	30
83	Evolution of load transfer between hydroxyapatite and collagen during creep deformation of bone. <i>Acta Biomaterialia</i> , 2012 , 8, 253-61	10.8	30
82	A Simplified Multivariant SMA Model Based on Invariant Plane Nature of Martensitic Transformation. <i>Journal of Intelligent Material Systems and Structures</i> , 2002 , 13, 795-810	2.3	30
81	Thermorheologically complex behavior of multi-phase viscoelastic materials. <i>Journal of the Mechanics and Physics of Solids</i> , 1991 , 39, 859-880	5	30
80	Influences of granular constraints and surface effects on the heterogeneity of elastic, superelastic, and plastic responses of polycrystalline shape memory alloys. <i>Journal of the Mechanics and Physics of Solids</i> , 2017 , 102, 46-66	5	29
79	A numerical investigation of porous titanium as orthopedic implant material. <i>Mechanics of Materials</i> , 2011 , 43, 420-430	3.3	29
78	Measurement of the critical aspect ratio and interfacial shear strength in MWNT/polymer composites. <i>Composites Science and Technology</i> , 2010 , 70, 599-605	8.6	29
77	Effect of microstructural configurations on the mechanical responses of porous titanium: A numerical design of experiment analysis for orthopedic applications. <i>Mechanics of Materials</i> , 2008 , 40, 708-720	3.3	29

76	Local and global strains and strain ratios in shape memory alloys using digital image correlation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 568, 134-142	5.3	28
75	Mechanical response of linear viscoelastic composite laminates incorporating non-isothermal physical aging effects. <i>Composites Science and Technology</i> , 1999 , 59, 1411-1427	8.6	28
74	In Situ Neutron Diffraction Studies of Large Monotonic Deformations of Superelastic Nitinol. <i>Shape Memory and Superelasticity</i> , 2015 , 1, 252-267	2.8	23
73	Simulations of tensile failure in glassy polymers: effect of cross-link density. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2010 , 18, 055005	2	23
72	Bridged crack models for the toughness of composites reinforced with curved nanotubes. <i>Journal of the Mechanics and Physics of Solids</i> , 2011 , 59, 1938-1952	5	23
71	The variant selection criteria in single-crystal CuAlNi shape memory alloys. <i>Smart Materials and Structures</i> , 2000 , 9, 571-581	3.4	23
70	In situ, 3D characterization of the deformation mechanics of a superelastic NiTi shape memory alloy single crystal under multiscale constraint. <i>Acta Materialia</i> , 2018 , 144, 748-757	8.4	23
69	Stiffness Gradients in Glassy Polymer Model Nanocomposites: Comparisons of Quantitative Characterization by Fluorescence Spectroscopy and Atomic Force Microscopy. <i>Macromolecules</i> , 2017 , 50, 5447-5458	5.5	22
68	Neutron diffraction studies and multivariant simulations of shape memory alloys: Empirical texture development/mechanical response relations of martensitic nickel-titanium. <i>Acta Materialia</i> , 2011 , 59, 2841-2849	8.4	22
67	Measurement of elastic constants of monoclinic nickel-titanium and validation of first principles calculations. <i>Applied Physics Letters</i> , 2013 , 102, 211908	3.4	20
66	Measuring interphase stiffening effects in styrene-based polymeric thin films. <i>Polymer</i> , 2015 , 75, 161-167	3.9	19
65	Micro and Macromechanical Investigations of CuAlNi Single Crystal and CuAlMnZn Polycrystalline Shape Memory Alloys. <i>Journal of Intelligent Material Systems and Structures</i> , 2002 , 13, 761-772	2.3	19
64	Determination of Mechanical Properties of Polymer Interphase Using Combined Atomic Force Microscope (AFM) Experiments and Finite Element Simulations. <i>Macromolecules</i> , 2018 , 51, 8229-8240	5.5	19
63	Computational analysis of particle reinforced viscoelastic polymer nanocomposites: Statistical study of representative volume element. <i>Journal of the Mechanics and Physics of Solids</i> , 2018 , 114, 55-74	5	18
62	Understanding competing mechanisms for glass transition changes in filled elastomers. <i>Composites Science and Technology</i> , 2016 , 127, 88-94	8.6	18
61	Microstructure reconstruction and structural equation modeling for computational design of nanodielectrics. <i>Integrating Materials and Manufacturing Innovation</i> , 2015 , 4, 209-234	2.9	18
60	Use of electrical resistance testing to redefine the transformation kinetics and phase diagram for shape-memory alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2006 , 37, 579-587	2.3	18
59	Microstructure and mechanical properties of as-cast quasibinary NiTiNb eutectic alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 627, 360-368	5.3	17

58	NanoMine schema: An extensible data representation for polymer nanocomposites. <i>APL Materials</i> , 2018 , 6, 111108	5.7	17
57	A Deep Adversarial Learning Methodology for Designing Microstructural Material Systems 2018 ,		17
56	Characterization and modeling of three-dimensional self-healing shape memory alloy-reinforced metal-matrix composites. <i>Mechanics of Materials</i> , 2016 , 103, 1-10	3.3	16
55	A continuous test data method to determine a reference curve and shift rate for isothermal physical aging. <i>Polymer Engineering and Science</i> , 1999 , 39, 211-235	2.3	16
54	Junction-Controlled Elasticity of Single-Walled Carbon Nanotube Dispersions in Acrylic Copolymer Gels and Solutions. <i>Macromolecules</i> , 2008 , 41, 4340-4346	5.5	15
53	Internal strain gradients quantified in bone under load using high-energy X-ray scattering. <i>Journal of Biomechanics</i> , 2011 , 44, 291-6	2.9	14
52	Effect of machined feature size relative to the microstructural size on the superelastic performance in polycrystalline NiTi shape memory alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 706, 227-235	5.3	13
51	NiTi with 3D-interconnected microchannels produced by liquid phase sintering and electrochemical dissolution of steel tubes. <i>Journal of Materials Processing Technology</i> , 2014 , 214, 1895-1899	5.3	13
50	Mining structure-property relationships in polymer nanocomposites using data driven finite element analysis and multi-task convolutional neural networks. <i>Molecular Systems Design and Engineering</i> , 2020 , 5, 962-975	4.6	12
49	Predicting the breakdown strength and lifetime of nanocomposites using a multi-scale modeling approach. <i>Journal of Applied Physics</i> , 2017 , 122, 065101	2.5	12
48	Neutron diffraction studies and multivariant simulations of shape memory alloys: Concurrent verification of texture development and mechanical response predictions. <i>Acta Materialia</i> , 2011 , 59, 5924-5937	8.4	12
47	Finite Element Analysis of Adaptive-Stiffening and Shape-Control SMA Hybrid Composites. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2006 , 128, 285	1.8	12
46	Recovering Nonisothermal Physical Aging Shift Factors Via Continuous Test Data: Theory and Experimental Results. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 1997 , 119, 233-241	1.8	11
45	Model for high-strain-rate deformation of uranium-bismuth alloys. <i>Journal of Applied Physics</i> , 2003 , 93, 9644-9654	2.5	11
44	Effect of high-energy X-ray irradiation on creep mechanisms in bone and dentin. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013 , 21, 17-31	4.1	10
43	Hierarchical Structure and Properties of Graphene Oxide Papers. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2013 , 80,	2.7	10
42	Thermomechanical properties and deformation of coarse-grained models of hard-soft block copolymers. <i>Physical Review E</i> , 2013 , 88, 022602	2.4	10
41	Modeling mechanical aging shift factors in glassy polymers during nonisothermal physical aging. I. Experiments and KAHR-ate model prediction. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2009 , 47, 340-352	2.6	10

40	Plastic and transformation interactions of pores in shape memory alloy plates. <i>Smart Materials and Structures</i> , 2014 , 23, 104008	3.4	9
39	Comparison of Three-Dimensional Shape Memory Alloy Constitutive Models: Finite Element Analysis of Actuation and Superelastic Responses of a Shape Memory Alloy Tube 2013 ,		9
38	AFM-based Dynamic Scanning Indentation (DSI) Method for Fast, High-resolution Spatial Mapping of Local Viscoelastic Properties in Soft Materials. <i>Macromolecules</i> , 2018 , 51, 8964-8978	5.5	9
37	Influence of Structure and Microstructure on Deformation Localization and Crack Growth in NiTi Shape Memory Alloys. <i>Shape Memory and Superelasticity</i> , 2018 , 4, 285-293	2.8	8
36	Models for nanoindentation of compliant films on stiff substrates. <i>Journal of Materials Research</i> , 2015 , 30, 1747-1760	2.5	8
35	A numerical study of the coupling of elastic and transformation fields in pore arrays in shape memory alloy plates to advance porous structure design and optimization. <i>Smart Materials and Structures</i> , 2013 , 22, 094009	3.4	8
34	Metalized polyamide heterostructure as a moisture-responsive actuator for multimodal adaptive personal heat management.. <i>Science Advances</i> , 2021 , 7, eabj7906	14.3	8
33	Temperature effects on the nanoindentation characterization of stiffness gradients in confined polymers. <i>Soft Matter</i> , 2019 , 15, 359-370	3.6	7
32	Polymer Nanocomposite Data: Curation, Frameworks, Access, and Potential for Discovery and Design. <i>ACS Macro Letters</i> , 2020 , 9, 1086-1094	6.6	7
31	Rethinking interphase representations for modeling viscoelastic properties for polymer nanocomposites. <i>Materialia</i> , 2019 , 6, 100277	3.2	6
30	Dielectric spectroscopy analysis using viscoelasticity-inspired relaxation theory with finite element modeling. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2017 , 24, 3776-3785	2.3	6
29	Deconvolution of Stress Interaction Effects from Atomic Force Spectroscopy Data across PolymerParticle Interfaces. <i>Macromolecules</i> , 2019 , 52, 8940-8955	5.5	6
28	Comments to the paper Differential and integrated form consistency in 1-D phenomenological models for shape memory alloy constitutive behavior [By V.R. Buravalla and A. Khandelwal [Int. J. Solids and Struct. 44 (2007) 4369-4381]. <i>International Journal of Solids and Structures</i> , 2009 , 46, 217-220	3.1	5
27	Mechanical properties of hard-soft block copolymers calculated from coarse-grained molecular dynamics models. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2018 , 56, 1552-1566	2.6	5
26	Fast evaluation of local elastic constants and its application to nanosized structures. <i>Physical Review B</i> , 2015 , 91,	3.3	4
25	The materials tetrahedron has a digital twin [MRS Bulletin,1	3.2	4
24	Data centric nanocomposites design via mixed-variable Bayesian optimization. <i>Molecular Systems Design and Engineering</i> , 2020 , 5, 1376-1390	4.6	4
23	Investigating the effect of surface modification on the dispersion process of polymer nanocomposites. <i>Nanocomposites</i> , 2020 , 6, 111-124	3.4	4

22	Best practices and recommendations for accurate nanomechanical characterization of heterogeneous polymer systems with atomic force microscopy. <i>Progress in Polymer Science</i> , 2021 , 119, 101420	29.6	4
21	Evolution of Phase Strains During Tensile Loading of Bovine Cortical Bone. <i>Advanced Engineering Materials</i> , 2013 , 15, 238-249	3.5	3
20	Planar aqueous electrode technique for polymer impedance spectroscopy. <i>Polymer Engineering and Science</i> , 2009 , 49, 441-453	2.3	3
19	SMA texture and reorientation: simulations and neutron diffraction studies 2005 , 5764, 715		3
18	Micro and macromechanical observation of polycrystalline NiTi using in situ optical microscopy. <i>European Physical Journal Special Topics</i> , 2003 , 112, 655-658		3
17	Open-source micro-tensile testers via additive manufacturing for the mechanical characterization of thin films and papers. <i>PLoS ONE</i> , 2018 , 13, e0197999	3.7	2
16	A combination optimisation method for the estimation of material parameters for viscoelastic solids. <i>International Journal of Computing Science and Mathematics</i> , 2014 , 5, 325	0.8	2
15	NanoMine: A Knowledge Graph for Nanocomposite Materials Science. <i>Lecture Notes in Computer Science</i> , 2020 , 144-159	0.9	2
14	ChemProps: A RESTful API enabled database for composite polymer name standardization. <i>Journal of Cheminformatics</i> , 2021 , 13, 22	8.6	2
13	Vanishing Cantilever Calibration Error with Magic Ratio Atomic Force Microscopy. <i>Advanced Theory and Simulations</i> , 2020 , 3, 2000090	3.5	1
12	Light-Weight, Fast-Cycling, Shape-Memory Actuation Structures 2011 ,		1
11	Model and Simulation of an SMA Enhanced Lip Seal. <i>Journal of Materials Engineering and Performance</i> , 2011 , 20, 570-578	1.6	1
10	Experimental Study of Viscoelastic Effects and Aging on Elevated Temperature Damage and Failure in Polymer Composites. <i>Mechanics of Time-Dependent Materials</i> , 2003 , 7, 1-19	1.2	1
9	Finite element analysis of adaptive-stiffening and shape-control SMA hybrid composites 2005 ,		1
8	SMA single-crystal experiments and micromechanical modeling for complex thermomechanical loading 2000 , 3992, 516		1
7	Data-Driven Multiscale Science for Tire Compounding: Methods and Future Directions. <i>Springer Series in Materials Science</i> , 2021 , 281-312	0.9	1
6	Tapered Polymer Whiskers to Enable Three-Dimensional Tactile Feature Extraction. <i>Soft Robotics</i> , 2021 , 8, 44-58	9.2	1
5	Comment on: A Correction to the Brinson's Evolution Kinetics for Shape Memory Alloys. <i>Journal of Intelligent Material Systems and Structures</i> , 2008 , 19, 1113-1113	2.3	0

4	Heterogeneity and inelasticity of deformation in a notched martensitic NiTi shape memory alloy specimen. <i>Acta Materialia</i> , 2020 , 194, 49-59	8.4	o
3	Distribution of rubber particles in the weld zone of fused filament fabricated acrylonitrile butadiene styrene and the impact on weld strength. <i>Additive Manufacturing</i> , 2021 , 41, 101964	6.1	o
2	Special Issue on Characterization and Modeling of Polymeric Material Systems. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 1997 , 119, 197-197	1.8	
1	Direct evidence of interfacial crystallization preventing weld formation during fused filament fabrication of poly(ether ether ketone). <i>Additive Manufacturing</i> , 2022 , 51, 102604	6.1	