Dimitris C Lagoudas

List of Publications by Year
in descending order

320 papers	12,672 citations	23500 58 h-index	28224 105 g-index
332 all docs	332 docs citations	332 times ranked	6752 citing authors

#	Article	IF	Citations
1	A thermodynamical constitutive model for shape memory materials. Part I. The monolithic shape memory alloy. International Journal of Plasticity, 1996, 12, 805-842.	4.1	793
2	Micromechanical analysis of the effective elastic properties of carbon nanotube reinforced composites. Mechanics of Materials, 2006, 38, 884-907.	1.7	425
3	Shape memory alloys, Part I: General properties and modeling of single crystals. Mechanics of Materials, 2006, 38, 391-429.	1.7	404
4	Constitutive model for the numerical analysis of phase transformation in polycrystalline shape memory alloys. International Journal of Plasticity, 2012, 32-33, 155-183.	4.1	363
5	Effect of carbon nanotubes on the interfacial shear strength of T650 carbon fiber in an epoxy matrix. Composites Science and Technology, 2009, 69, 898-904.	3.8	358
6	Origami-inspired active structures: a synthesis and review. Smart Materials and Structures, 2014, 23, 094001.	1.8	332
7	Shape memory alloys, Part II: Modeling of polycrystals. Mechanics of Materials, 2006, 38, 430-462.	1.7	303
8	Mechanical properties of surface-functionalized SWCNT/epoxy composites. Carbon, 2008, 46, 320-328.	5.4	250
9	Modeling of transformation-induced plasticity and its effect on the behavior of porous shape memory alloys. Part I: constitutive model for fully dense SMAs. Mechanics of Materials, 2004, 36, 865-892.	1.7	232
10	Thermomechanical Response of Shape Memory Composites. Journal of Intelligent Material Systems and Structures, 1994, 5, 333-346.	1.4	229
11	On thermomechanics and transformation surfaces of polycrystalline NiTi shape memory alloy material. International Journal of Plasticity, 2000, 16, 1309-1343.	4.1	212
12	A constitutive theory for shape memory polymers. Part I. Journal of the Mechanics and Physics of Solids, 2008, 56, 1752-1765.	2.3	212
13	A 3-D constitutive model for shape memory alloys incorporating pseudoelasticity and detwinning of self-accommodated martensite. International Journal of Plasticity, 2007, 23, 1679-1720.	4.1	197
14	Modeling of grapheneâ€“polymer interfacial mechanical behavior using molecular dynamics. Modelling and Simulation in Materials Science and Engineering, 2009, 17, 015002.	0.8	195
15	Hysteresis Modeling of SMA Actuators for Control Applications. Journal of Intelligent Material Systems and Structures, 1998, 9, 432-448.	1.4	194
16	Effective properties of three-phase electro-magneto-elastic composites. International Journal of Engineering Science, 2005, 43, 790-825.	2.7	192
17	Thermomechanical modeling of polycrystalline SMAs under cyclic loading, Part I: theoretical derivations. International Journal of Engineering Science, 1999, 37, 1089-1140.	2.7	190
18	Characterization of electrical and thermal properties of carbon nanotube/epoxy composites. Composites Part B: Engineering, 2014, 56, 611-620.	5.9	184

#	Article	IF	Citations
19	On the numerical evaluation of Eshelby's tensor and its application to elastoplastic fibrous composites. Computational Mechanics, 1990, 7, 13-19.	2.2	181
20	Thermomechanical modeling of polycrystalline SMAs under cyclic loading, Part III: evolution of plastic strains and two-way shape memory effect. International Journal of Engineering Science, 1999, 37, 1175-1203.	2.7	180
21	Influence of cold work and heat treatment on the shape memory effect and plastic strain development of NiTi. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 308, 161-175.	2.6	173
22	A Micromechanics Model for the Electrical Conductivity of Nanotube-Polymer Nanocomposites. Journal of Composite Materials, 2009, 43, 917-941.	1.2	163
23	A UNIFIED THERMODYNAMIC CONSTITUTIVE MODEL FOR SMA AND FINITE ELEMENT ANALYSIS OF ACTIVE METAL MATRIX COMPOSITES. Mechanics of Advanced Materials and Structures, 1996, 3, 153-179.	0.4	160
24	Review and perspectives: shape memory alloy composite systems. Acta Mechanica, 2015, 226, 3907-3960.	1.1	158
25	A constitutive theory for shape memory polymers. Part II. Journal of the Mechanics and Physics of Solids, 2008, 56, 1766-1778.	2.3	156
26	Effect of heat treatment on morphology, crystalline structure and photocatalysis properties of TiO2 nanotubes on Ti substrate and freestanding membrane. Applied Surface Science, 2011, 257, 6451-6461.	3.1	149
27	Three-dimensional modeling and numerical analysis of rate-dependent irrecoverable deformation in shape memory alloys. International Journal of Plasticity, 2010, 26, 1485-1507.	4.1	147
28	Thermomechanical modeling of polycrystalline SMAs under cyclic loading, Part II: material characterization and experimental results for a stable transformation cycle. International Journal of Engineering Science, 1999, 37, 1141-1173.	2.7	143
29	A thermodynamical constitutive model for shape memory materials. Part II. The SMA composite material. International Journal of Plasticity, 1996, 12, 843-873.	4.1	134
30	On the stress-assisted magnetic-field-induced phase transformation in Ni2MnGa ferromagnetic shape memory alloys. Acta Materialia, 2007, 55, 4253-4269.	3.8	134
31	Thermomechanical modeling of polycrystalline SMAs under cyclic loading, Part IV: modeling of minor hysteresis loops. International Journal of Engineering Science, 1999, 37, 1205-1249.	2.7	128
32	Thermomechanical characterization of NiTiCu and NiTi SMA actuators: influence of plastic strains. Smart Materials and Structures, 2000, 9, 640-652.	1.8	123
33	Development of a shape memory alloy actuated biomimetic vehicle. Smart Materials and Structures, 2000, 9, 673-683.	1.8	116
34	A unified thermodynamic constitutive model for SMA and finite element analysis of active metal matrix composites. Mechanics of Advanced Materials and Structures, 1996, 3, 153-179.	0.4	112
35	Processing of TiNi from elemental powders by hot isostatic pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 280, 334-348.	2.6	110
36	Elastoplastic behavior of metal matrix composites based on incremental plasticity and the Mori-Tanaka averaging scheme. Computational Mechanics, 1991, 8, 193-203.	2.2	101

#	Article	IF	Citations
37	Constitutive modeling and structural analysis considering simultaneous phase transformation and plastic yield in shape memory alloys. Smart Materials and Structures, 2009, 18, 104017.	1.8	101
38	Title is missing!. Smart Materials and Structures, 1997, 6, 265-277.	1.8	99
39	Computational Micromechanics of Clustering and Interphase Effects in Carbon Nanotube Composites. Mechanics of Advanced Materials and Structures, 2007, 14, 277-294.	1.5	93
40	Modeling the Coupled Strain and Magnetization Response of Magnetic Shape Memory Alloys under Magnetomechanical Loading. Journal of Intelligent Material Systems and Structures, 2009, 20, 143-170.	1.4	89
41	Energy Dissipation Due to Interfacial Slip in Nanocomposites Reinforced with Aligned Carbon Nanotubes. ACS Applied Materials & Interfaces, 2015, 7, 9725-9735.	4.0	87
42	Modeling porous shape memory alloys using micromechanical averaging techniques. Mechanics of Materials, 2002, 34, 1-24.	1.7	85
43	Development of a Shape-Memory-Alloy Actuated Biomimetic Hydrofoil. Journal of Intelligent Material Systems and Structures, 2002, 13, 35-49.	1.4	84
44	Modeling of the thermomechanical behavior of porous shape memory alloys. International Journal of Solids and Structures, 2001, 38, 8653-8671.	1.3	83
45	Processing and Characterization of NiTi Porous SMA by Elevated Pressure Sintering. Journal of Intelligent Material Systems and Structures, 2002, 13, 837-850.	1.4	83
46	Characterization and modeling of the magnetic field-induced strain and work output in magnetic shape memory alloys. Journal of Magnetism and Magnetic Materials, 2007, 312, 164-175.	1.0	83
47	Multi-objective Bayesian materials discovery: Application on the discovery of precipitation strengthened NiTi shape memory alloys through micromechanical modeling. Materials and Design, 2018, 160, 810-827.	3.3	83
48	Time evolution of overstress profiles near broken fibers in a composite with a viscoelastic matrix. International Journal of Solids and Structures, 1989, 25, 45-66.	1.3	82
49	On the role of thermoelectric heat transfer in the design of SMA actuators: theoretical modeling and experiment. Smart Materials and Structures, 1995, 4, 252-263.	1.8	82
50	Dynamic loading of polycrystalline shape memory alloy rods. Mechanics of Materials, 2003, 35, 689-716.	1.7	66
51	Numerical Investigation of an Adaptive Vibration Absorber Using Shape Memory Alloys. Journal of Intelligent Material Systems and Structures, 2011, 22, 67-80.	1.4	66
52	Highly Multifunctional Dopamine-Functionalized Reduced Graphene Oxide Supercapacitors. Matter, 2019, 1, 1532-1546.	5.0	66
53	Modeling of transformation-induced plasticity and its effect on the behavior of porous shape memory alloys. Part II: porous SMA response. Mechanics of Materials, 2004, 36, 893-913.	1.7	64
54	Effective mechanical properties of â€œfuzzy fiberâ€•composites. Composites Part B: Engineering, 2012, 43, 2577-2593.	5.9	64

#	Article	IF	Citations
55	Experimental and microstructural characterization of simultaneous creep, plasticity and phase transformation in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si21.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Ti</mml:mtext></mml:mrow><mml:mrow><mml:mn>50</mm Acta Materialia, 2010, 58, 1618-1628.	3.8	61
56	On the fracture toughness enhancement due to stress-induced phase transformation in shape memory alloys. International Journal of Plasticity, 2013, 50, 158-169.	4.1	59
57	Active flexible rods with embedded SMA fibers. Smart Materials and Structures, 1992, 1, 162-167.	1.8	58
58	Actuation of elastomeric rods with embedded two-way shape memory alloy actuators. Smart Materials and Structures, 1998, 7, 771-783.	1.8	56
59	Thermomechanical transformation fatigue of TiNiCu SMA actuators under a corrosive environment â€“ Part I: Experimental results. International Journal of Fatigue, 2009, 31, 1571-1578.	2.8	53
60	Finite element analysis of the demagnetization effect and stress inhomogeneities in magnetic shape memory alloy samples. Philosophical Magazine, 2011, 91, 4126-4157.	0.7	51
61	Interlaminar fracture toughness of woven fabric composite laminates with carbon nanotube/epoxy interleaf films. Journal of Applied Polymer Science, 2011, 121, 2394-2405.	1.3	51
62	A mode I fracture analysis of a center-cracked infinite shape memory alloy plate under plane stress. International Journal of Fracture, 2012, 175, 151-166.	1.1	50
63	A constitutive model for cyclic actuation of high-temperature shape memory alloys. Mechanics of Materials, 2014, 68, 120-136.	1.7	49
64	Homogenization of aligned â€œfuzzy fiberâ€•composites. International Journal of Solids and Structures, 2011, 48, 2668-2680.	1.3	46
65	Finite strain constitutive modeling for shape memory alloys considering transformation-induced plasticity and two-way shape memory effect. International Journal of Solids and Structures, 2021, 221, 42-59.	1.3	46
66	Electrical and mechanical properties of carbon nanotubeâ€epoxy nanocomposites. Journal of Applied Polymer Science, 2010, 116, 191-202.	1.3	45
67	Impact induced phase transformation in shape memory alloys. Journal of the Mechanics and Physics of Solids, 2000, 48, 275-300.	2.3	44
68	Magnetic field-induced martensitic phase transformation in magnetic shape memory alloys: Modeling and experiments. Journal of the Mechanics and Physics of Solids, 2014, 69, 33-66.	2.3	44
69	Characterizing and modeling the free recovery and constrained recovery behavior of a polyurethane shape memory polymer. Smart Materials and Structures, 2011, 20, 094004.	1.8	43
70	Experimental investigation of simultaneous creep, plasticity and transformation of Ti50.5Pd30Ni19.5 high temperature shape memory alloy during cyclic actuation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 530, 117-127.	2.6	43
71	Raman microscopy of residual strains in carbon nanotube/epoxy composites. Carbon, 2010, 48, 1750-1756.	5.4	42
72	Fracture toughness of NiTiâ€“Towards establishing standard test methods for phase transforming materials. Acta Materialia, 2019, 162, 226-238.	3.8	42

#	Article	IF	Citations
73	Compressive Failure due to Kinking of Fibrous Composites. Journal of Composite Materials, 1993, 27, 83-106.	1.2	41
74	Buckling instabilities of octadecylamine functionalized carbon nanotubes embedded in epoxy. Composites Science and Technology, 2006, 66, 128-136.	3.8	41
75	Effect of Thermal Interface on Heat Flow in Carbon Nanofiber Composites. ACS Applied Materials & Interfaces, 2014, 6, 1061-1072.	4.0	40
76	On the driving force for crack growth during thermal actuation of shape memory alloys. Journal of the Mechanics and Physics of Solids, 2016, 89, 255-271.	2.3	38
77	Effective thermoelastic properties of composites with periodicity in cylindrical coordinates. International Journal of Solids and Structures, 2012, 49, 2590-2603.	1.3	37
78	<title>Modeling of shape memory alloy pseudoelastic spring elements using Preisach model for passive vibration isolation</title>. , 2002, , .		36
79	Material Characterization of SMA Actuators Under Nonproportional Thermomechanical Loading. Journal of Engineering Materials and Technology, Transactions of the ASME, 1999, 121, 75-85.	0.8	34
80	Bâ€staged epoxy/singleâ€walled carbon nanotube nanocomposite thin films for composite reinforcement. Journal of Applied Polymer Science, 2009, 112, 290-298.	1.3	34
81	A surfactant dispersed SWCNT-polystyrene composite characterized for electrical and mechanical properties. Composites Part A: Applied Science and Manufacturing, 2010, 41, 842-849.	3.8	34
82	Residual deformation of active structures with SMA actuators. International Journal of Mechanical Sciences, 1999, 41, 595-619.	3.6	33
83	On the Fracture Toughness of Pseudoelastic Shape Memory Alloys. Journal of Applied Mechanics, Transactions ASME, 2014, 81, .	1.1	33
84	The cylindrical bending of composite plates with piezoelectric and SMA layers. Smart Materials and Structures, 1994, 3, 309-317.	1.8	32
85	A Micromechanics Model for the Thermal Conductivity of Nanotube-Polymer Nanocomposites. Journal of Applied Mechanics, Transactions ASME, 2008, 75, .	1.1	32
86	Analysis of the finite deformation response of shape memory polymers: I. Thermomechanical characterization. Smart Materials and Structures, 2010, 19, 075005.	1.8	31
87	Analysis of the finite deformation response of shape memory polymers: II. 1D calibration and numerical implementation of a finite deformation, thermoelastic model. Smart Materials and Structures, 2010, 19, 075006.	1.8	31
88	Interfacial Engineering of Reduced Graphene Oxide for Aramid Nanofiberâ€Enabled Structural Supercapacitors. Batteries and Supercaps, 2019, 2, 464-472.	2.4	29
89	Self-foldable origami reflector antenna enabled by shape memory polymer actuation. Smart Materials and Structures, 2020, 29, 115011.	1.8	29
90	Material and spatial gauge theories of solids â€” I. Gauge constructs, geometry, and kinematics. International Journal of Engineering Science, 1989, 27, 411-431.	2.7	27

#	Article	IF	Citations
91	Effective Elastic Properties of Fiberâ€Reinforced Concrete with Random Fibers. Journal of Engineering Mechanics - ASCE, 1991, 117, 2931-2938.	1.6	27
92	<title>Simplified shape memory alloy (SMA) material model for vibration isolation</title>. , 2001, 4326, 452.		27
93	Fatigue life characterization of shape memory alloys undergoing thermomechanical cyclic loading. , 2003, , .		27
94	Design of space systems using shape memory alloys. , 2003, , .		27
95	Phenomenological modeling of ferromagnetic shape memory alloys. , 2004, , .		27
96	On the fracture toughness and stable crack growth in shape memory alloy actuators in the presence of transformation-induced plasticity. International Journal of Fracture, 2018, 209, 117-130.	1.1	27
97	Impact induced propagation of phase transformation in a shape memory alloy rod. International Journal of Plasticity, 2002, 18, 1447-1479.	4.1	26
98	Prediction of Cryogen Leak Rate through Damaged Composite Laminates. Journal of Composite Materials, 2007, 41, 41-71.	1.2	26
99	Lyapunov exponents estimation for hysteretic systems. International Journal of Solids and Structures, 2009, 46, 1269-1286.	1.3	26
100	Micromechanics of precipitated near-equiatomic Ni-rich NiTi shape memory alloys. Acta Mechanica, 2014, 225, 1167-1185.	1.1	26
101	Evolution of internal damage during actuation fatigue in shape memory alloys. International Journal of Fatigue, 2019, 124, 315-327.	2.8	26
102	Identification of energy dissipation mechanisms in CNT-reinforced nanocomposites. Nanotechnology, 2016, 27, 105707.	1.3	25
103	Phase transformation in free-standing SMA nanowires. Acta Materialia, 2011, 59, 1871-1880.	3.8	24
104	Stable Crack Growth During Thermal Actuation of Shape Memory Alloys. Shape Memory and Superelasticity, 2016, 2, 104-113.	1.1	24
105	A stochastic thermodynamic model for the gradual thermal transformation of SMA polycrystals. Smart Materials and Structures, 1997, 6, 235-250.	1.8	22
106	Highly ordered uniform single-crystal Bi nanowires: fabrication and characterization. Nanotechnology, 2007, 18, 395601.	1.3	21
107	Branched aramid nanofiber-polyaniline electrodes for structural energy storage. Nanoscale, 2020, 12, 16840-16850.	2.8	21
108	A validated model for induction heating of shape memory alloy actuators. Smart Materials and Structures, 2016, 25, 045022.	1.8	20

#	Article	IF	Citations
109	Modeling of thermoelectric heat transfer in shape memory alloy actuators: Transient and multiple cycle solutions. International Journal of Engineering Science, 1995, 33, 2345-2364.	2.7	19
110	Shape Memory Alloys. Smart Materials and Structures, 2007, 16, .	1.8	19
111	Transformation characteristics of shape memory alloy composites. Smart Materials and Structures, 2011, 20, 094002.	1.8	19
112	Colloidal microstructures, transport, and impedance properties within interfacial microelectrodes. Applied Physics Letters, 2007, 90, 224102.	1.5	18
113	Structural reduced graphene oxide supercapacitors mechanically enhanced with tannic acid. Sustainable Energy and Fuels, 2020, 4, 2301-2308.	2.5	18
114	Fracture toughness of fiber metal laminates: Carbon nanotube modified Tiâ€"polymerâ€"matrix composite interface. Journal of Composite Materials, 2014, 48, 2697-2710.	1.2	17
115	A coupled layered thermomechanical shape memory alloy beam element with enhanced higher order temperature field approximations. Journal of Intelligent Material Systems and Structures, 2016, 27, 2359-2384.	1.4	17
116	Structural Lithium-Ion Battery Cathodes and Anodes Based on Branched Aramid Nanofibers. ACS Applied Materials & Interfaces, 2021, 13, 34807-34817.	4.0	17
117	<title>Thermodynamical constitutive model for the shape memory effect due to transformation and reorientation</title>. , 1994, , .		16
118	<title>Fuel-powered compact SMA actuator</title>. , 2002, , .		16
119	Modeling and Experimental Study of Simultaneous Creep and Transformation in Polycrystalline High-Temperature Shape Memory Alloys. Journal of Intelligent Material Systems and Structures, 2009, 20, 2257-2267.	1.4	16
120	On the Effect of Latent Heat on the Fracture Toughness of Pseudoelastic Shape Memory Alloys. Journal of Applied Mechanics, Transactions ASME, 2014, 81, .	1.1	16
121	Analytical investigation of structurally stable configurations in shape memory alloy-actuated plates. International Journal of Solids and Structures, 2015, 69-70, 442-458.	1.3	16
122	Stable crack growth in NiTi shape memory alloys: 3D finite element modeling and experimental validation. Smart Materials and Structures, 2019, 28, 064001.	1.8	16
123	Effective elastic moduli of two-phase transversely isotropic composites with aligned clustered fibers. Acta Mechanica, 2000, 145, 65-93.	1.1	15
124	Effects of non-planar geometries and volumetric expansion in the modeling of oxidation in titanium. International Journal of Engineering Science, 2001, 39, 695-714.	2.7	15
125	Modeling size effects on the transformation behavior of shape memory alloy micropillars. Journal of Micromechanics and Microengineering, 2015, 25, 075001.	1.5	15
126	Design, fabrication, and testing of a multiple-actuation shape memory alloy pipe coupler. Journal of Intelligent Material Systems and Structures, 2018, 29, 1165-1182.	1.4	15

#	Article	IF	Citations
127	<title>Thermomechanical transformation fatigue of SMA actuators</title>. , 2000, , .		14
128	Modeling of the magnetic field-induced martensitic variant reorientation and the associated magnetic shape memory effect in MSMAs. , 2005, 5761, 454.		14
129	Processing and Characterization of Epoxy/SWCNT/Woven Fabric Composites. , 2006, , .		14
130	A unified description of mechanical and actuation fatigue crack growth in shape memory alloys. Acta Materialia, 2021, 217, 117155.	3.8	14
131	Dispersion relations for the linearized field equations of dislocation dynamics. International Journal of Engineering Science, 1988, 26, 837-846.	2.7	13
132	Transformation behavior in a thermomechanically cycled TiNiCu alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 2689-2693.	1.1	13
133	Development of a fuel-powered shape memory alloy actuator system: II. Fabrication and testing. Smart Materials and Structures, 2007, 16, S95-S107.	1.8	13
134	Phenomenological modeling of induced transformation anisotropy in shape memory alloy actuators. , 2012, , .		13
135	Mode I fracture toughness of hybrid co-cured Al-CFRP and NiTi-CFRP interfaces: An experimental and computational study. Composites Part A: Applied Science and Manufacturing, 2020, 135, 105925.	3.8	13
136	FATIGUE DAMAGE AND SHAKEDOWN IN METAL MATRIX COMPOSITE LAMINATES. Mechanics of Advanced Materials and Structures, 1994, 1, 171-202.	0.4	12
137	Variational theory of motion of curved, twisted and extensible elastic rods. International Journal of Engineering Science, 1994, 32, 569-577.	2.7	12
138	An experimental investigation of shape memory alloy springs for passive vibration isolation. , 2001, , .		12
139	Thermodynamics of multicomponent, elastic, crystalline solids. Mechanics of Materials, 2005, 37, 121-141.	1.7	12
140	Evolution of stresses in a simple class of oxidation problems. Acta Mechanica, 2006, 181, 231-255.	1.1	12
141	Thermomechanical Characterization and Modeling of Ni60Ti40 SMA for Actuated Chevrons. , 2006, , 281.		12
142	Dynamic magnetic shape memory alloys responses: Eddy current effect and Joule heating. Journal of Magnetism and Magnetic Materials, 2018, 465, 278-289.	1.0	12
143	Effects of a frictional interface on the load diffusion from a broken filament embedded in an elastic medium. International Journal of Solids and Structures, 1991, 27, 833-847.	1.3	11
144	Microtubules as mechanical force sensors. BioSystems, 2007, 88, 137-146.	0.9	11

#	Article	IF	Citations
145	<title>Thermodynamic constitutive model for cyclic loading of shape memory alloy materials with application to two-way training</title>. , 1995, , .		10
146	<title>Intelligent design optimization of a shape-memory-alloy-actuated reconfigurable wing</title>. , 2000, 3984, 338.		10
147	In situdisplacement measurements and numerical predictions of embedded SMA transformation. Smart Materials and Structures, 2000, 9, 701-710.	1.8	10
148	Design of shape memory alloy pipe couplers: modeling and experiments. , 2012, , .		10
149	Reversible phase transformations in a shape memory alloy Inâ€"Tl nanowires observed by in situ transmission electron microscopy. Materials Letters, 2012, 70, 109-112.	1.3	10
150	Engineering design tools for shape memory alloy actuators: CASMART collaborative best practices and case studies. Journal of Intelligent Material Systems and Structures, 2019, 30, 2808-2830.	1.4	10
151	Micromechanics modeling of the elastic moduli of rGO/ANF nanocomposites. Acta Mechanica, 2019, 230, 265-280.	1.1	10
152	A gauge theory of defects in media with microstructure. International Journal of Engineering Science, 1989, 27, 237-249.	2.7	9
153	Modeling of oxidation and its effect on crack growth in titanium alloys. Computer Methods in Applied Mechanics and Engineering, 2000, 183, 35-50.	3.4	9
154	Effect of Processing and Loading on Equiatomic NiTi Fatigue Life and Localized Failure Mechanisms. , 2013, , .		9
155	Fabrication, characterization and micromechanics modeling of the electrical conductivity of reduced graphene oxide/aramid nanofiber nanocomposites. Smart Materials and Structures, 2019, 28, 094001.	1.8	9
156	A gauge theory of damage. International Journal of Engineering Science, 1991, 29, 597-606.	2.7	8
157	Solution Behavior of the Transient Heat Transfer Problem in Thermoelectric Shape Memory Alloy Actuators. SIAM Journal on Applied Mathematics, 1997, 57, 34-52.	0.8	8
158	Thermomechanical Characterization of SMA Actuators Under Cyclic Loading. , 2003, , 211.		8
159	Arrays of micro-electrodes and electromagnets for processing of electro-magneto-elastic multifunctional composite materials. , 2003, , .		8
160	Nonlinear Vibration of a One-Degree of Freedom Shape Memory Alloy Oscillator: A Numerical-experimental Investigation. , 2005, , .		8
161	Application of a magnetic SMA constitutive model in the analysis of magnetomechanical boundary value problems. , 2006, , .		8
162	Characterization and 3-D modeling of Ni60Ti SMA for actuation of a variable geometry jet engine chevron. , 2007, , .		8

#	Article	IF	Citations
163	Thermomechanical cyclic loading and fatigue life characterization of nickel rich NiTi shape-memory alloy actuators. Proceedings of SPIE, 2008, , .	0.8	8
164	Thermomechanical characterization of the nonlinear rate-dependent response of shape memory polymers. Proceedings of SPIE, 2008, , .	0.8	8
165	Influence of the Latent Heat of Transformation and Thermomechanical Coupling on the Performance of Shape Memory Alloy Actuators. , 2012, , .		8
166	A Finite Strain Constitutive Model for Martensitic Transformation in Shape Memory Alloys Based on Logarithmic Strain. , 2017, , .		8
167	Predictive Modeling of the Constitutive Response of Precipitation Hardened Ni-Rich NiTi. Shape Memory and Superelasticity, 2017, 3, 9-23.	1.1	8
168	Null Lagrangians, admissible tractions, and finite element methods. International Journal of Solids and Structures, 1986, 22, 659-672.	1.3	7
169	A domain transformation technique in oxygen diffusion problems with moving oxidation fronts on unbounded domains. International Journal for Numerical Methods in Engineering, 1998, 42, 361-384.	1.5	7
170	Influence of Heat Treatment on the Mechanical Properties and Damage Development in a SiC/Ti-15-3 MMC. Journal of Engineering Materials and Technology, Transactions of the ASME, 2000, 122, 74-79.	0.8	7
171	COMPUTATIONAL AND EXPERIMENTAL STUDIES OF AN ACTIVE SKIN FOR TURBULENT DRAG REDUCTION. , 2002, , .		7
172	Thermoelectric SMA actuator: preliminary prototype testing. , 2003, , .		7
173	Analytical Predictions and Experimental Measurements of Hydrogen Permeability in a Microcrack Damaged Composite. , 2005, , .		7
174	(Student Paper) Micromechanics Modeling of Functionally Graded Interphase Regions in Carbon Nanotube-Polymer Composites. , 2006, , .		7
175	Single crystal anisotropy and coupled stability analysis for variant reorientation in Magnetic Shape Memory Alloys. European Journal of Mechanics, A/Solids, 2015, 54, 53-73.	2.1	7
176	A Gradient-Based Constitutive Model for Shape Memory Alloys. Shape Memory and Superelasticity, 2017, 3, 84-108.	1.1	7
177	Finite Strain Constitutive Modelling of Shape Memory Alloys Considering Partial Phase Transformation with Transformation-Induced Plasticity. Shape Memory and Superelasticity, 2021, 7, 206-221.	1.1	7
178	Small-scale crack blunting at a bimaterial interface with Coulomb friction. International Journal of Fracture, 1991, 52, 293-306.	1.1	7
179	Tuning of shape memory polymer properties by controlling 3D printing strategy. CIRP Annals - Manufacturing Technology, 2020, 69, 213-216.	1.7	7
180	Effects of microstructure and composition on constitutive response of high temperature shape memory alloys: Micromechanical modeling using 3-D reconstructions with experimental validation. Acta Materialia, 2022, 232, 117929.	3.8	7

#	Article	IF	Citations
181	Wave propagation in shape memory alloy rods under impulsive loads. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 3871-3892.	1.0	6
182	Nonlinear dynamics of a SMA passive vibration damping device. , 2006, 6169, 240.		6
183	Active skin for turbulent drag reduction. Smart Materials and Structures, 2008, 17, 035004.	1.8	6
184	Stability Analysis of Magnetostatic Boundary Value Problems for Magnetic SMAs. Journal of Intelligent Material Systems and Structures, 2010, 21, 1103-1116.	1.4	6
185	Special Issue of Composites Part B: Homogenization and Micromechanics of Smart and Multifunctional Materials. Composites Part B: Engineering, 2012, 43, 2493-2494.	5.9	6
186	Nonlinear dynamics of a SMA large-scale space structure. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2012, 34, 401-412.	0.8	6
187	Modeling and Design of Shape Memory Alloy-based Origami Structures with Smooth Folds. , 2017, , .		6
188	Effect of Specimen Thickness on the Fracture Toughness of a NiTi Shape Memory Alloy. Shape Memory and Superelasticity, 2021, 7, 90-100.	1.1	6
189	<title>Transformation of embedded shape memory alloy ribbons</title>. , 1997, , .		6
190	Surface Damage Modeling of Oxidized Metal Matrix Composite Laminates under Axial and Transverse Tension. International Journal of Damage Mechanics, 1998, 7, 209-237.	2.4	5
191	<title>Modeling of thermomechanical response of porous shape memory alloys</title>. , 2000, , .		5
192	Thermomechanical characterization of high temperature SMA actuators. , 2006, 6170, 306.		5
193	Nonlinear dynamics and chaos in a shape memory alloy pseudoelastic oscillator. , 2007, , .		5
194	The influence of stress and temperature on the residual strain generated during pseudoelastic cycling of NiTi SMA wires. Proceedings of SPIE, 2011, , .	0.8	5
195	Modeling fluid structure interaction with shape memory alloy actuated morphing aerostructures. , 2012, , .		5
196	Mechanical characterization in laminated composite for cryogenic application. Polymer Composites, 2013, 34, 607-615.	2.3	5
197	Effect of insulation layer for thermal shock in cryogenic composite laminates. Polymer Composites, 2013, 34, 531-536.	2.3	5
198	Characterization and Modeling of Thermo-Mechanical Fatigue in Equiatomic NiTi Actuators. , 2014, , .		5

#	Article	IF	Citations
199	Thermally activated energy dissipation in semi-crystalline polymer nanocomposites. Composites Science and Technology, 2016, 134, 275-286.	3.8	5
200	Effect of stress redistribution during thermal actuation of shape memory alloys in notched cylindrical bars. Journal of Intelligent Material Systems and Structures, 2018, 29, 2149-2163.	1.4	5
201	A Three-Dimensional Constitutive Modeling for Shape Memory Alloys Considering Two-Way Shape Memory Effect and Transformation-Induced Plasticity. , 2019, , .		5
202	Loading influence on the corrosion assessment during stress-induced martensite reorientation in nickel-titanium SMA. Smart Materials and Structures, 2020, 29, 035013.	1.8	5
203	Multiscale Modeling of Multifunctional Fuzzy Fibers Based on Multi-Walled Carbon Nanotubes. Springer Series in Materials Science, 2014, , 135-176.	0.4	5
204	Effect of tension-compression asymmetry and partial transformation on the response of shape memory alloy beam structures. , 2020, , .		5
205	Finite element implementation of the gauge theory of damage. International Journal of Engineering Science, 1994, 32, 1877-1888.	2.7	4
206	<title>Identification of the transient response of SMA embedded flexible rods</title>. , 1995, , .		4
207	Numerical computation of metal oxidation problems on bounded domains. International Journal of Engineering Science, 1998, 36, 367-381.	2.7	4
208	Fabrication, modeling, and characterization of porous shape memory alloys. , 2001, , .		4
209	<title>Effect of transformation induced plasticity on the mechanical behavior of porous SMAs</title>. , 2002, , .		4
210	<title>Active skin for turbulent drag reduction</title>. , 2002, , .		4
211	<title>Fabrication and testing of a shape memory alloy actuated reconfigurable wing</title>. , 2002, , .		4
212	MEMS-based active skin for turbulent drag reduction. , 2003, , .		4
213	Development of a fuel-powered shape memory alloy actuator system: I. Numerical analysis. Smart Materials and Structures, 2007, 16, S81-S94.	1.8	4
214	Experimentally validated numerical analysis of aerostructures incorporating shape memory alloys. , 2008, , .		4
215	Analysis of Clustering and Interphase Region Effects on the Electrical Conductivity of Carbon Nanotube-Polymer Nanocomposites via Computational Micromechanics. , 2008, , .		4
216	Influence of test procedures on the thermomechanical properties of a 55NiTi shape memory alloy. , 2008, , .		4

#	Article	IF	Citations
217	Adaptive Hysteresis Compensation for SMA Actuators with Stress-Induced Variations in Hysteresis. Journal of Intelligent Material Systems and Structures, 1999, 10, 845-854.	1.4	4
218	<title>Design of flexible rods with embedded SMA actuators</title>. , 1993, , .		4
219	Effective properties of three-phase electro-magneto-elastic multifunctional composite materials. , 2003, , .		3
220	Modeling of Shape Memory Alloy Wire Meshes Using Effective Lamina Properties for Improved Analysis Efficiency. , 2013, , .		3
221	Folding patterns and shape optimization using SMA-based self-folding laminates. , 2014, , .		3
222	Modeling of thermo-mechanical fatigue and damage in shape memory alloy axial actuators. Proceedings of SPIE, 2015, , .	0.8	3
223	Predicting the constitutive response of precipitation hardened NiTiHf. , 2017, , .		3
224	A simplified model for high-rate actuation of shape memory alloy torque tubes using induction heating. Journal of Intelligent Material Systems and Structures, 2018, 29, 1088-1101.	1.4	3
225	Structural Mechanics and Design of Active Origami Structures. , 2019, , 331-409.		3
226	Effects of Testing Parameters on the Fatigue Performance NiTiHf High Temperature Shape Memory Alloys. , 2019, , .		3
227	Quantification of Shape Memory Alloy Damping Capabilities Through the Prediction of Inherent Behavioral Aspects. Shape Memory and Superelasticity, 2021, 7, 7-29.	1.1	3
228	Corrosion monitoring of NiTi alloy with small-amplitude potential intermodulation technique. , 2018, , .		3
229	ASMADAâ€"A tool for automatic analysis of shape memory alloy thermal cycling data under constant stress. Smart Materials and Structures, 2021, 30, 125003.	1.8	3
230	<title>Deformations and thermal response of active flexible rods with embedded shape memory alloy actuators</title>. , 1994, 2190, 495.		2
231	<title>Thermo-electro-mechanical modeling and structural response of a flexible beam with external SMA actuators</title>. , 1995, , .		2
232	Modeling of oxidation and its effect on the crack growth resistance of titanium alloys. Studies in Applied Mechanics, 1998, 46, 421-440.	0.4	2
233	<title>Behavior of SMA actuators under nonproportional thermomechanical loading</title>. , 1998, 3323, 312.		2
234	Parametric Study and Experimental Correlation of an SMA Based Damping and Passive Vibration Isolation Device. , 2002, , 13.		2

#	Article	IF	Citations
235	Development of the fuel-powered compact SMA actuator: second-generation actuator. , 2003, , .		2
236	Accurate Interpretation of Magnetic Shape Memory Alloy Experiments Utilizing Coupled Magnetostatic Analysis. , 2006, , 311.		2
237	Thermomechanical characterization of a TiPdNi high temperature SMA under tension. , 2007, , .		2
238	Micromechanics Modeling of Polymer Nanocomposites for Use as Multifunctional Materials. , 2008, , .		2
239	Simultaneous transformation and plastic deformation in shape memory alloys. Proceedings of SPIE, 2008, , .	0.8	2
240	Creep behavior in TiPdNi high temperature shape memory alloy. Proceedings of SPIE, 2009, , .	0.8	2
241	Parametric study and characterization of the isobaric thermomechanical transformation fatigue of nickel-rich NiTi SMA actuators. Proceedings of SPIE, 2009, , .	0.8	2
242	Computational Micromechanics Analysis of the Effects of Interphase Regions and Bundle Packing on the Effective Electrical Properties of Carbon Nanotube-Polymer Nanocomposites. , 2009, , .		2
243	Characterizing and Modeling the Free Recovery and Constrained Recovery Behavior of a Polyurethane Shape Memory Polymer. , 2010, , .		2
244	Analysis and optimization of improved hybrid SMA flexures for high rate actuation. Proceedings of SPIE, 2011, , .	0.8	2
245	Effective behavior of composite structures made of thermoelastic constituents with cylindrical periodicity. Procedia Engineering, 2011, 10, 3602-3607.	1.2	2
246	A Study of Actuation Fatigue of Shape Memory Alloy. , 2012, , .		2
247	Modeling Rate Dependent Response of Shape Memory Alloys Using a Thermo-Mechanical Continuum Phase Field Approach. , 2015, , .		2
248	Fracture toughness of shape memory alloy actuators: effect of transformation-induced plasticity. Proceedings of SPIE, 2016, , .	0.8	2
249	Preliminary Design and Numerical Investigation of SMA Torsion Tubes for the Actuation of Articulated Adaptive Panels. , 2021, , .		2
250	Transformation Induced Cyclic Behavior and Fatigue Properties of Nickel Rich NiTi Shape Memory Alloy Actuators. , 0, , 199-206.		2
251	Experimental determination of the compressive piezoresistive response of a free-standing film with application to reduced graphene oxide. Journal of Applied Physics, 2022, 131, .	1.1	2
252	Boundary tractions in the gauge theory of dislocations and disclinations. International Journal of Engineering Science, 1986, 24, 933-937.	2.7	1

#	Article	IF	Citations
253	Numerical studies of wave propagation in polycrystalline shape memory alloy rods. , 2003, 5053, 294.		1
254	Modeling of the Stress- and Magnetic Field-Induced Variant Reorientation in MSMAs. , 2006, , .		1
255	Electrical and Thermal Conductivities of Carbon Nanotube-Epoxy Composites: Modeling and Characterization. , 2007, , 245.		1
256	Constitutive Modeling of Magnetic Field-Induced Phase Transformation in NiMnCoIn Magnetic Shape Memory Alloys. , 2009, , .		1
257	Asymptotic Expansion Homogenization Method for Carbon Fiber Composite Structures Reinforced With Carbon Nanotubes. , 2009, , .		1
258	Three-Dimensional Modeling of Rate-Dependent Deformation in Shape Memory Alloys at High Temperatures. , 2009, , .		1
259	Coexistense of Creep and Transformation in High Temperature Shape Memory Alloys. , 2009, , .		1
260	3D finite element analysis of indentation recovery due to the shape memory effect. Proceedings of SPIE, 2010, , .	0.8	1
261	Microstructural Effects on Actuation Fatigue Life of Ni-rich NiTi Shape Memory Alloy Actuators. , 2011, , .		1
262	Analysis of a nano-porous multi-layer film for thermal radiation barrier coatings. Applied Nanoscience (Switzerland), 2011, 1, 173-188.	1.6	1
263	Virtual Processing of Hybrid Shape Memory Alloy Composites. , 2011, , .		1
264	Design of a Multiple-Actuation Shape Memory Alloy Pipe Coupler: Material Development and Characterization. , 2012, , .		1
265	Multilevel Optimization of a Morphing Structure Incorporating Shape Memory Alloy Wires. , 2013, , .		1
266	Numerical Evaluation of the Effect of Ni4Ti3 Precipitates on the Overall Thermo-Mechanical Response of NiTi Shape Memory Alloys. , 2013, , .		1
267	On the Energy Release Rate During Global Thermo-Mechanically-Induced Phase Transformation in Shape Memory Alloys. , 2013, , .		1
268	Finite Element Analysis of Precipitation Effects on Ni-Rich NiTi Shape Memory Alloy Response. Materials Science Forum, 0, 792, 65-71.	0.3	1
269	Effect of Triaxiality on Phase Transformation in NI50.8TI Notched Cylindrical Bars. , 2017, , .		1
270	Phase Transformation Characteristics of High-Temperature Shape Memory Alloy under Tension, Compression, and Bending Actuation Cycling. , 2020, , .		1

#	Article	IF	Citations
271	On the Fracture Response of Shape Memory Alloy Actuators. , 2015, , 165-180.		1
272	Constitutive response of precipitation hardened Ni-Ti-Hf shape memory alloys through micromechanical modeling. , 2018, , .		1
273	Damage evolution during actuation fatigue in shape memory alloys (SPIE Best Student Paper Award). , 2018, , .		1
274	Representative volume size in micromechanical modeling of precipitated SMAs. , 2019, , .		1
275	Toward a self-consistent theory of elastoelectromagnetic neumann boundary value problems. International Journal of Engineering Science, 1986, 24, 1629-1636.	2.7	0
276	Plane harmonic waves in the linearized gauge theory of dislocations. International Journal of Engineering Science, 1987, 25, 1323-1335.	2.7	0
277	On equivalence between the classical theory of dislocations and the gauge theory of defects. International Journal of Engineering Science, 1989, 27, 737-738.	2.7	0
278	Damage modeling of metal matrix composite laminates with cracked oxide surface layers. Studies in Applied Mechanics, 1996, , 57-80.	0.4	0
279	DOMAIN TRANSFORMATION PROBLEMS IN 2-D OXIDATION. Journal of the Mechanical Behavior of Materials, 2000, 11, 275-294.	0.7	0
280	Oscillatory forced-convection-cooled compact SMA actuator. , 2003, , .		0
281	A non-reflecting layer method for non-linear wave-type equations on unbounded domains with applications to shape memory alloy rods. International Journal for Numerical Methods in Engineering, 2005, 62, 2053-2085.	1.5	0
282	Characterization of Thermo-Electric Interface Material with Carbon Nanotubes. Materials Research Society Symposia Proceedings, 2007, 1056, 1.	0.1	0
283	Nonlinear Dynamics in a Pseudoelastic Oscillator: Non-isothermal Oscillations. , 2007, , .		0
284	Magneto-Mechanical Finite Element Analysis of Magnetic Shape Memory Alloys With Body Force and Body Couple. , 2008, , .		0
285	Numerically Implemented Constitutive Model for SMA Applications Experiencing General Loads Resulting in Plastic Deformation and Large Rotations. , 2008, , .		0
286	Active Length Control of Shape Memory Alloy Wires Via Reinforcement Learning. , 2009, , .		0
287	Size Effect on the Phase Transformation of In-21at%Tl Nanowires. , 2009, , .		0
288	Experimental investigation and 3-D modeling of rate-dependent irrecoverable deformation in shape memory alloys. Proceedings of SPIE, 2009, , .	0.8	0

#	Article	IF	Citations
289	A constitutive model for high temperature SMAs exhibiting viscoplastic behavior. , 2009, , .		0
290	Modeling of Stress Concentrations in SMA Components Considering Plastic and Viscoplastic Yielding. , 2009, , .		0
291	Numerical Prediction of Effective Transformation Properties of Hybrid SMA-Ceramic Composites. , 2010, , .		0
292	Stability of the magnetomechanical problem in magnetic shape memory alloys. , 2010, , .		0
293	Constitutive modeling of magneto-mechanical coupling response of magnetic field-induced phase transformations in NiMnCoIn magnetic shape memory alloys. Proceedings of SPIE, 2010, , .	0.8	0
294	Phase transformation and creep behavior in Ti 50 Pd 30 Ni 20 high temperature shape memory alloy in compression. , 2010, , .		0
295	Synthesis and Characterization of Multifunctional Nanocomposites of Toughened Epoxy Reinforced with Carbon Nanotubes. , 2010, , .		0
296	Experimental and Modeling study of Simultaneous Creep, Plasticity and Transformation of High Temperature Shape Memory Alloys during Cyclic Actuation. , 2010, , .		0
297	Analysis of a Microstructure for Highly Reflective Thermal Radiation Barrier Coatings. , 2011, , .		0
298	On the Path-Dependency of the J-Integral in a Pseudoelastic Shape Memory Alloy. , 2011, , .		0
299	Model predictions of strain and magnetization responses under magneto-thermo-mechanical loading paths in magnetic shape memory alloys. Proceedings of SPIE, 2011, , .	0.8	0
300	Virtual processing of hybrid SMA composites through martensitic transformation. , 2011, , .		0
301	Computational Micromechanical Modeling of Ceramic-SMA Composites. , 2012, , .		0
302	Mode I Steady Crack-Growth in Superelastic Shape Memory Alloys. , 2012, , .		0
303	A Finite Element Study of Stable Crack-Growth in Superelastic Shape Memory Alloys. , 2012, , .		0
304	Modeling of Residual Stresses in Shape Memory Alloy - Ceramic Composites. , 2013, , .		0
305	Experimental Validation of a Shape Memory Alloy Constitutive Model by Heterogeneous Thermal Loading Using Infrared Thermography and Digital Image Correlation. , 2013, , .		0
306	Modeling of the Effective Actuation Response of SMA-MAX Phase Composites With Partially Transforming NiTi. , 2013, , .		0

#	Article	IF	Citations
307	The importance of interfacial resistance on the thermal behavior of carbon nanofiber/epoxy composites. , 2014, , .		0
308	Biography of the Prager Medalist: Professor George Weng. Acta Mechanica, 2014, 225, 967-977.	1.1	0
309	Preface to the Special Issue in Honor of Professor George J. Weng, the 2013 Prager Medalist. Acta Mechanica, 2014, 225, 965-966.	1.1	0
310	Constitutive Modeling of Near-Equiatomic NiTi Shape Memory Alloys Considering Composition and Heat Treatment. Materials Science Forum, 0, 856, 78-84.	0.3	0
311	Micromechanical Modeling of Precipitation Hardened NiTiHf. Materials Science Forum, 0, 915, 147-156.	0.3	0
312	Modeling of Internal Damage Evolution During Actuation Fatigue in Shape Memory Alloys. , 2018, , .		0
313	Two-dimensional finite element analysis of frictional sliding between a rigid cylinder and a shape memory alloy half-space. Mechanics of Materials, 2020, 143, 103306.	1.7	0
314	Special Issue Focus Mechanics and Physics of Active Materials and Systems. Shape Memory and Superelasticity, 2021, 7, 5-6.	1.1	0
315	Strength and Fracture of a Multifunctional Polystyrene Nanocomposite. , 2006, , .		0
316	Multifunctional Multi-Scale Carbon-Fiber/Epoxy Matrix Composites Reinforced With Carbon Nanotubes. , 2009, , .		0
317	Analytical Solution for Pseudoelastic Response of a Shape Memory Alloy Thick-Walled Cylinder Under Internal Pressure. , 2012, , .		0
318	Modeling of Hybrid Shape Memory Alloy Composites Incorporating MAX Phase Ceramics. , 2012, , .		0
319	Lie symmetry and conservation laws for magneto-static magnetic shape memory alloys system. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200168.	1.0	0
320	Surface Crack Development in Transformation Induced Fatigue of SMA Actuators. , 2006, , 1309-1310.		0