## Jin-Song Leng

## List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/47470/publications.pdf

Version: 2024-02-01

15466 22764 16,281 287 65 112 citations h-index g-index papers 293 293 293 8314 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	Shape-memory polymers and their composites: Stimulus methods and applications. Progress in Materials Science, 2011, 56, 1077-1135.	16.0	1,237
2	Shape memory polymers and their composites in aerospace applications: a review. Smart Materials and Structures, 2014, 23, 023001.	1.8	734
3	A Review of Shape Memory Polymers and Composites: Mechanisms, Materials, and Applications. Advanced Materials, 2021, 33, e2000713.	11.1	558
4	Review of electro-active shape-memory polymer composite. Composites Science and Technology, 2009, 69, 2064-2068.	3.8	463
5	Fiber reinforced shape-memory polymer composite and its application in a deployable hinge. Smart Materials and Structures, 2009, 18, 024002.	1.8	373
6	Direct-Write Fabrication of 4D Active Shape-Changing Structures Based on a Shape Memory Polymer and Its Nanocomposite. ACS Applied Materials & Samp; Interfaces, 2017, 9, 876-883.	4.0	351
7	Electroactivate shape-memory polymer filled with nanocarbon particles and short carbon fibers. Applied Physics Letters, 2007, 91, .	1.5	265
8	Morphing aircraft based on smart materials and structures: A state-of-the-art review. Journal of Intelligent Material Systems and Structures, 2016, 27, 2289-2312.	1.4	242
9	Shape memory polymers for composites. Composites Science and Technology, 2018, 160, 169-198.	3.8	211
10	Shape-Memory Polymers—A Class of Novel Smart Materials. MRS Bulletin, 2009, 34, 848-855.	1.7	201
11	Shape memory polymers and their composites in biomedical applications. Materials Science and Engineering C, 2019, 97, 864-883.	3.8	200
12	Mechanisms of multi-shape memory effects and associated energy release in shape memory polymers. Soft Matter, 2012, 8, 5687.	1.2	185
13	4Dâ€Printed Biodegradable and Remotely Controllable Shape Memory Occlusion Devices. Advanced Functional Materials, 2019, 29, 1906569.	7.8	171
14	Direct Ink Writing Based 4D Printing of Materials and Their Applications. Advanced Science, 2020, 7, 2001000.	5.6	168
15	Stimulus methods of multi-functional shape memory polymer nanocomposites: A review. Composites Part A: Applied Science and Manufacturing, 2017, 100, 20-30.	3.8	167
16	4D Printing Auxetic Metamaterials with Tunable, Programmable, and Reconfigurable Mechanical Properties. Advanced Functional Materials, 2020, 30, 2004226.	7.8	152
17	Magnetic programming of 4D printed shape memory composite structures. Composites Part A: Applied Science and Manufacturing, 2019, 125, 105571.	3.8	151
18	Shape-Memory Polymers with Adjustable High Glass Transition Temperatures. Macromolecules, 2015, 48, 3582-3589.	2.2	150

#	Article	IF	Citations
19	The research status and challenges of shape memory polymer-based flexible electronics. Materials Horizons, 2019, 6, 931-944.	6.4	139
20	Significantly improving infrared light-induced shape recovery behavior of shape memory polymeric nanocomposite via a synergistic effect of carbon nanotube and boron nitride. Composites Part B: Engineering, 2014, 62, 256-261.	5.9	137
21	Infrared lightâ€active shape memory polymer filled with nanocarbon particles. Journal of Applied Polymer Science, 2009, 114, 2455-2460.	1.3	134
22	Four-Dimensional Printing Hierarchy Scaffolds with Highly Biocompatible Smart Polymers for Tissue Engineering Applications. Tissue Engineering - Part C: Methods, 2016, 22, 952-963.	1.1	128
23	Personalized 4D printing of bioinspired tracheal scaffold concept based on magnetic stimulated shape memory composites. Composites Science and Technology, 2019, 184, 107866.	3.8	128
24	Recent developments in shape memory polymer nanocomposites: Actuation methods and mechanisms. Coordination Chemistry Reviews, 2016, 320-321, 38-52.	9.5	126
25	Self-heating fiber reinforced polymer composite using meso/macropore carbon nanotube paper and its application in deicing. Carbon, 2014, 66, 154-163.	5.4	125
26	Synergic effect of carbon black and short carbon fiber on shape memory polymer actuation by electricity. Journal of Applied Physics, 2008, 104, .	1.1	120
27	Direct 3D Printing of Hybrid Nanofiber-Based Nanocomposites for Highly Conductive and Shape Memory Applications. ACS Applied Materials & Samp; Interfaces, 2019, 11, 24523-24532.	4.0	119
28	Shape memory polymer/CNT composites and their microwave induced shape memory behaviors. RSC Advances, 2014, 4, 2961-2968.	1.7	116
29	Shape memory behavior and recovery force of 4D printed textile functional composites. Composites Science and Technology, 2018, 160, 224-230.	3.8	115
30	Electrical actuation properties of reduced graphene oxide paper/epoxy-based shape memory composites. Composites Science and Technology, 2015, 106, 20-24.	3.8	111
31	Review of Dielectric Elastomer Actuators and Their Applications in Soft Robots. Advanced Intelligent Systems, 2021, 3, 2000282.	3.3	111
32	Unipolar stroke, electroosmotic pump carbon nanotube yarn muscles. Science, 2021, 371, 494-498.	6.0	110
33	Biopolymers as bone substitutes: a review. Biomaterials Science, 2019, 7, 3961-3983.	2.6	103
34	Direct 3D Printing of Highly Anisotropic, Flexible, Constriction-Resistive Sensors for Multidirectional Proprioception in Soft Robots. ACS Applied Materials & Samp; Interfaces, 2020, 12, 15631-15643.	4.0	103
35	CNT-based electro-responsive shape memory functionalized 3D printed nanocomposites for liquid sensors. Carbon, 2019, 155, 77-87.	5.4	98
36	Effect of a linear monomer on the thermomechanical properties of epoxy shape-memory polymer. Smart Materials and Structures, 2009, 18, 095031.	1.8	97

#	Article	IF	CITATIONS
37	Electromechanical stability of dielectric elastomer. Applied Physics Letters, 2009, 94, .	1.5	97
38	Orthogonal photochemistry-assisted printing of 3D tough and stretchable conductive hydrogels. Nature Communications, 2021, 12, 2082.	5.8	96
39	Sodium dodecyl sulfate/epoxy composite: water-induced shape memory effect and its mechanism. Journal of Materials Chemistry A, 2014, 2, 5441.	5.2	92
40	Novel Bending and Helical Extensile/Contractile Pneumatic Artificial Muscles Inspired by Elephant Trunk. Soft Robotics, 2020, 7, 597-614.	4.6	90
41	Remote, fast actuation of programmable multiple shape memory composites by magnetic fields. Journal of Materials Chemistry C, 2015, 3, 11290-11293.	2.7	89
42	Light activated shape memory polymers and composites: A review. European Polymer Journal, 2020, 136, 109912.	2.6	89
43	Synergistic effect of carbon nanofiber and carbon nanopaper on shape memory polymer composite. Applied Physics Letters, 2010, 96, .	1.5	88
44	Shape memory polymers with high and low temperature resistant properties. Scientific Reports, 2015, 5, 14137.	1.6	88
45	4D printing of personalized shape memory polymer vascular stents with negative Poisson's ratio structure: A preliminary study. Science China Technological Sciences, 2020, 63, 578-588.	2.0	88
46	Carbon nanotube chains in a shape memory polymer/carbon black composite: To significantly reduce the electrical resistivity. Applied Physics Letters, 2011, 98, .	1.5	87
47	Shape memory behavior and recovery force of 4D printed laminated Miura-origami structures subjected to compressive loading. Composites Part B: Engineering, 2018, 153, 233-242.	5.9	86
48	Progress of shape memory polymers and their composites in aerospace applications. Smart Materials and Structures, 2019, 28, 103003.	1.8	85
49	4D printed shape memory polymers and their structures for biomedical applications. Science China Technological Sciences, 2020, 63, 545-560.	2.0	85
50	4D printed electro-induced continuous carbon fiber reinforced shape memory polymer composites with excellent bending resistance. Composites Part B: Engineering, 2020, 194, 108034.	5.9	84
51	4D printed multi-stable metamaterials with mechanically tunable performance. Composite Structures, 2020, 252, 112663.	3.1	83
52	Qualitative separation of the effect of the solubility parameter on the recovery behavior of shape-memory polymer. Smart Materials and Structures, 2009, 18, 085003.	1.8	80
53	Mechanical and shapeâ€memory behavior of shapeâ€memory polymer composites with hybrid fillers. Polymer International, 2010, 59, 766-771.	1.6	79
54	Porous bone tissue scaffold concept based on shape memory PLA/Fe3O4. Composites Science and Technology, 2021, 203, 108563.	3.8	77

#	Article	IF	CITATIONS
55	Thermoset shape memory polymers and their composites. Journal of Intelligent Material Systems and Structures, 2016, 27, 2433-2455.	1.4	<b>7</b> 5
56	Shape-memory polymer nanocomposites with a 3D conductive network for bidirectional actuation and locomotion application. Nanoscale, 2016, 8, 18042-18049.	2.8	74
57	Integrative hinge based on shape memory polymer composites: Material, design, properties and application. Composite Structures, 2018, 206, 164-176.	3.1	74
58	Bending shape recovery of unidirectional carbon fiber reinforced epoxy-based shape memory polymer composites. Composites Part A: Applied Science and Manufacturing, 2019, 116, 169-179.	3.8	74
59	Electroactive thermoset shape memory polymer nanocomposite filled with nanocarbon powders. Smart Materials and Structures, 2009, 18, 074003.	1.8	73
60	Study on the activation of styrene-based shape memory polymer by medium-infrared laser light. Applied Physics Letters, 2010, 96, .	1.5	73
61	A phenomenological approach for the chemo-responsive shape memory effect in amorphous polymers. Soft Matter, 2013, 9, 3851.	1.2	73
62	Bistable and Reconfigurable Photonic Crystalsâ€"Electroactive Shape Memory Polymer Nanocomposite for Inkâ€Free Rewritable Paper. Advanced Functional Materials, 2018, 28, 1802430.	7.8	73
63	Mechanical Models, Structures, and Applications of Shape-Memory Polymers and Their Composites. Acta Mechanica Solida Sinica, 2019, 32, 535-565.	1.0	73
64	Electrical properties and shape-memory behavior of self-assembled carbon nanofiber nanopaper incorporated with shape-memory polymer. Smart Materials and Structures, 2010, 19, 075021.	1.8	71
65	Dielectric Elastomer Spring-Roll Bending Actuators: Applications in Soft Robotics and Design. Soft Robotics, 2019, 6, 69-81.	4.6	71
66	Microstructural design for enhanced shape memory behavior of 4D printed composites based on carbon nanotube/polylactic acid filament. Composites Science and Technology, 2019, 181, 107692.	3.8	69
67	Theoretical analysis and experiments of a space deployable truss structure. Composite Structures, 2014, 112, 226-230.	3.1	67
68	Synthesis and characterization of high temperature cyanate-based shape memory polymers with functional polybutadiene/acrylonitrile. Polymer, 2014, 55, 5873-5879.	1.8	66
69	Reversible Humidity Sensitive Clothing for Personal Thermoregulation. Scientific Reports, 2017, 7, 44208.	1.6	66
70	Surface coating of multi-walled carbon nanotube nanopaper on shape-memory polymer for multifunctionalization. Composites Science and Technology, 2011, 71, 1427-1434.	3.8	65
71	Selectively actuated multi-shape memory effect of a polymer multicomposite. Journal of Materials Chemistry A, 2015, 3, 24532-24539.	5.2	64
72	Bending performance and failure behavior of 3D printed continuous fiber reinforced composite corrugated sandwich structures with shape memory capability. Composite Structures, 2021, 262, 113626.	3.1	64

#	Article	IF	Citations
73	Nano/microstructures of shape memory polymers: from materials to applications. Nanoscale Horizons, 2020, 5, 1155-1173.	4.1	63
74	A rotary joint for a flapping wing actuated by dielectric elastomers: design and experiment. Meccanica, 2015, 50, 2815-2824.	1.2	61
75	Nanocomposites of epoxy-based shape memory polymer and thermally reduced graphite oxide: Mechanical, thermal and shape memory characterizations. Composites Part B: Engineering, 2016, 91, 75-82.	5.9	61
76	Magnetically aligned carbon nanotube in nanopaper enabled shape-memory nanocomposite for high speed electrical actuation. Applied Physics Letters, 2011, 98, .	1.5	60
77	Triple-shape memory effect in a styrene-based shape memory polymer: Characterization, theory and application. Composites Part B: Engineering, 2019, 173, 106905.	5.9	60
78	4D Printing of Bioinspired Absorbable Left Atrial Appendage Occluders: A Proof-of-Concept Study. ACS Applied Materials & Droof-of-Concept Study. ACS Applied Materials & Droof	4.0	60
79	Mechanical properties of shape memory polymer composites enhanced by elastic fibers and their application in variable stiffness morphing skins. Journal of Intelligent Material Systems and Structures, 2015, 26, 2020-2027.	1.4	58
80	Shape memory polymer nanocomposite with multi-stimuli response and two-way reversible shape memory behavior. RSC Advances, 2014, 4, 61847-61854.	1.7	57
81	Thermal mechanical constitutive model of fiber reinforced shape memory polymer composite: Based on bridging model. Composites Part A: Applied Science and Manufacturing, 2014, 64, 132-138.	3.8	57
82	Sensing and actuating capabilities of a shape memory polymer composite integrated with hybrid filler. Smart Materials and Structures, 2010, 19, 065014.	1.8	56
83	Analysis and design of smart mandrels using shape memory polymers. Composites Part B: Engineering, 2014, 59, 230-237.	5.9	55
84	Post microbuckling mechanics of fibre-reinforced shape-memory polymers undergoing flexure deformation. Mechanics of Materials, 2014, 72, 46-60.	1.7	55
85	Microwave synthesis and actuation of shape memory polycaprolactone foams with high speed. Scientific Reports, 2015, 5, 11152.	1.6	54
86	Fabrication of hybrid membrane of electrospun polycaprolactone and polyethylene oxide with shape memory property. Composites Part B: Engineering, 2015, 83, 264-269.	5.9	54
87	Thermosetting epoxy resin/thermoplastic system with combined shape memory and self-healing properties. Smart Materials and Structures, 2016, 25, 015021.	1.8	54
88	Thermoviscoelastic shape memory behavior for epoxy-shape memory polymer. Smart Materials and Structures, 2014, 23, 055025.	1.8	53
89	Switchable Wettability and Adhesion of Micro/Nanostructured Elastomer Surface via Electric Field for Dynamic Liquid Droplet Manipulation. Advanced Science, 2020, 7, 2000772.	5.6	53
90	Active composites based on shape memory polymers: overview, fabrication methods, applications, and future prospects. Journal of Materials Science, 2020, 55, 10975-11051.	1.7	53

#	Article	IF	Citations
91	Comment on "Water-driven programable polyurethane shape memory polymer: Demonstration and mechanism―[Appl. Phys. Lett. 86, 114105 (2005)]. Applied Physics Letters, 2008, 92, 206105.	1.5	52
92	Functionally graded and self-assembled carbon nanofiber and boron nitride in nanopaper for electrical actuation of shape memory nanocomposites. Composites Part B: Engineering, 2014, 62, 1-4.	5.9	52
93	Optically transparent high temperature shape memory polymers. Soft Matter, 2016, 12, 2894-2900.	1.2	52
94	Conductive Shape Memory Microfiber Membranes with Coreâ€"Shell Structures and Electroactive Performance. ACS Applied Materials & Interfaces, 2018, 10, 35526-35532.	4.0	52
95	Comment on "Method to analyze electromechanical stability of dielectric elastomersâ€{Appl. Phys. Lett. 91, 061921 (2007)]. Applied Physics Letters, 2008, 93, .	1.5	51
96	Design considerations for shape memory polymer composites with magnetic particles. Journal of Composite Materials, 2013, 47, 51-63.	1.2	51
97	Tunable hierarchical Fe nanowires with a facile template-free approach for enhanced microwave absorption performance. Journal of Materials Chemistry C, 2016, 4, 7614-7621.	2.7	51
98	Silver particles modified carbon nanotube paper/glassfiber reinforced polymer composite material for high temperature infrared stealth camouflage. Carbon, 2016, 98, 557-566.	5.4	51
99	Conductive Shape Memory Polymer Composite Incorporated with Hybrid Fillers: Electrical, Mechanical, and Shape Memory Properties. Journal of Intelligent Material Systems and Structures, 2011, 22, 369-379.	1.4	50
100	A Biomimetic Soft Lens Controlled by Electrooculographic Signal. Advanced Functional Materials, 2019, 29, 1903762.	7.8	50
101	Remotely and Sequentially Controlled Actuation of Electroactivated Carbon Nanotube/Shape Memory Polymer Composites. Advanced Materials Technologies, 2019, 4, 1900600.	3.0	50
102	4D printing of shape memory polybutylene succinate/polylactic acid (PBS/PLA) and its potential applications. Composite Structures, 2022, 279, 114729.	3.1	50
103	Light-actuated reversible shape memory effect of a polymer composite. Composites Part A: Applied Science and Manufacturing, 2018, 110, 70-75.	3.8	49
104	4D printed anisotropic structures with tailored mechanical behaviors and shape memory effects. Composites Science and Technology, 2020, 186, 107935.	3.8	49
105	A dual-functional polymeric system combining shape memory with self-healing properties. Composites Part B: Engineering, 2015, 83, 7-13.	5.9	48
106	Programmable and Shape-Memorizing Information Carriers. ACS Applied Materials & Samp; Interfaces, 2017, 9, 44792-44798.	4.0	48
107	Thermomechanical constitutive modeling of fiber reinforced shape memory polymer composites based on thermodynamics with internal state variables. Mechanics of Materials, 2019, 130, 9-19.	1.7	48
108	Effect of the $\hat{I}^3$ -radiation on the properties of epoxy-based shape memory polymers. Journal of Intelligent Material Systems and Structures, 2014, 25, 1256-1263.	1.4	47

#	Article	lF	CITATIONS
109	The quintuple-shape memory effect in electrospun nanofiber membranes. Smart Materials and Structures, 2013, 22, 085020.	1.8	46
110	Effects of accelerated aging on thermal, mechanical and shape memory properties of cyanate-based shape memory polymer: lÂvacuum ultraviolet radiation. Polymer Degradation and Stability, 2017, 138, 91-97.	2.7	46
111	Shape Memory Polymer Fibers: Materials, Structures, and Applications. Advanced Fiber Materials, 2022, 4, 5-23.	7.9	46
112	Design of 4D printed shape-changing tracheal stent and remote controlling actuation. International Journal of Smart and Nano Materials, 2021, 12, 375-389.	2.0	46
113	Synergistic effect of Ag nanoparticle-decorated graphene oxide and carbon fiber on electrical actuation of polymeric shape memory nanocomposites. Smart Materials and Structures, 2014, 23, 085034.	1.8	45
114	3D printing of shape memory poly( <scp>d</scp> , <scp>l</scp> â€lactideâ€ <i>co</i> àêtrimethylene carbonate) by direct ink writing for shapeâ€changing structures. Journal of Applied Polymer Science, 2019, 136, 48177.	1.3	45
115	World's first spaceflight on-orbit demonstration of a flexible solar array system based on shape memory polymer composites. Science China Technological Sciences, 2020, 63, 1436-1451.	2.0	45
116	Dielectric elastomer energy harvesting: maximal converted energy, viscoelastic dissipation and a wave power generator. Smart Materials and Structures, 2015, 24, 115036.	1.8	43
117	â€Two way' shape memory composites based on electroactive polymer and thermoplastic membrane. Composites Part A: Applied Science and Manufacturing, 2016, 90, 502-509.	3.8	43
118	Carboxyl-Terminated Polybutadiene–Poly(styrene- <i>co</i> -4-vinylpyridine) Supramolecular Thermoplastic Elastomers and Their Shape Memory Behavior. Macromolecules, 2016, 49, 7322-7330.	2.2	42
119	Temperature-dependent mechanical response of 4D printed composite lattice structures reinforced by continuous fiber. Composite Structures, 2022, 280, 114952.	3.1	42
120	Curved Kirigami SILICOMB cellular structures with zero Poisson's ratio for large deformations and morphing. Journal of Intelligent Material Systems and Structures, 2014, 25, 731-743.	1.4	41
121	Thermosetting epoxy reinforced shape memory composite microfiber membranes: Fabrication, structure and properties. Composites Part A: Applied Science and Manufacturing, 2015, 76, 54-61.	3.8	41
122	On 4D printing as a revolutionary fabrication technique for smart structures. Smart Materials and Structures, 2020, 29, 083001.	1.8	41
123	Origami-inspired self-deployment 4D printed honeycomb sandwich structure with large shape transformation. Smart Materials and Structures, 2020, 29, 065015.	1.8	41
124	Constitutive model for shape memory polymer based on the viscoelasticity and phase transition theories. Journal of Intelligent Material Systems and Structures, 2016, 27, 314-323.	1.4	40
125	A constitutive model for amorphous shape memory polymers based on thermodynamics with internal state variables. Mechanics of Materials, 2017, 111, 1-14.	1.7	40
126	A GLASS TRANSITION MODEL FOR SHAPE MEMORY POLYMER AND ITS COMPOSITE. International Journal of Modern Physics B, 2009, 23, 1248-1253.	1.0	39

#	Article	IF	Citations
127	Compression behavior and energy absorption of 3D printed continuous fiber reinforced composite honeycomb structures with shape memory effects. Additive Manufacturing, 2021, 38, 101842.	1.7	38
128	Electrospinning and microwave absorption of polyaniline/polyacrylonitrile/multiwalled carbon nanotubes nanocomposite fibers. Fibers and Polymers, 2014, 15, 2290-2296.	1.1	37
129	Bistable dielectric elastomer minimum energy structures. Smart Materials and Structures, 2016, 25, 075016.	1.8	37
130	An electrical-heating and self-sensing shape memory polymer composite incorporated with carbon fiber felt. Smart Materials and Structures, 2016, 25, 035036.	1.8	37
131	Development of an artificial neural network for source localization using a fiber optic acoustic emission sensor array. Structural Health Monitoring, 2015, 14, 168-177.	4.3	36
132	Fabrication of the silver modified carbon nanotube film/carbon fiber reinforced polymer composite for the lightning strike protection application. Composites Part B: Engineering, 2020, 180, 107563.	5.9	36
133	Multi-performance shape memory epoxy resins and their composites with narrow transition temperature range. Composites Science and Technology, 2021, 213, 108899.	3.8	36
134	Electromechanical stability of a Mooney–Rivlinâ€ŧype dielectric elastomer with nonlinear variable permittivity. Polymer International, 2010, 59, 371-377.	1.6	35
135	Thermo-mechanical behavior prediction of particulate reinforced shape memory polymer composite. Composites Part B: Engineering, 2019, 179, 107455.	5.9	35
136	Design and analysis of smart release devices based on shape memory polymer composites. Composite Structures, 2015, 133, 642-651.	3.1	34
137	Self-sensing properties of smart composite based on embedded buckypaper layer. Structural Health Monitoring, 2015, 14, 127-136.	4.3	34
138	Study on performances of colorless and transparent shape memory polyimide film in space thermal cycling, atomic oxygen and ultraviolet irradiation environments. Smart Materials and Structures, 2017, 26, 095001.	1.8	34
139	4D Pixel Mechanical Metamaterials with Programmable and Reconfigurable Properties. Advanced Functional Materials, 2022, 32, 2107795.	7.8	34
140	Electroactive shape-memory polymer nanocomposites incorporating carbon nanofiber paper. International Journal of Smart and Nano Materials, 2010, 1, 2-12.	2.0	32
141	Active and Deformable Organic Electronic Devices based on Conductive Shape Memory Polyimide. ACS Applied Materials & Devices, 2020, 12, 23236-23243.	4.0	32
142	Synergistic effect of carbon nanofiber and sub-micro filamentary nickel nanostrand on the shape memory polymer nanocomposite. Smart Materials and Structures, 2011, 20, 035017.	1.8	31
143	Deployable morphing structure based on shape memory polymer. Aircraft Engineering and Aerospace Technology, 2015, 87, 218-223.	0.8	31
144	Sustainable self-healing at ultra-low temperatures in structural composites incorporating hollow vessels and heating elements. Royal Society Open Science, 2016, 3, 160488.	1.1	31

#	Article	IF	CITATIONS
145	Shape Memory Polyurethane Microcapsules with Active Deformation. ACS Applied Materials & Samp; Interfaces, 2020, 12, 47059-47064.	4.0	31
146	Photosensitive Composite Inks for Digital Light Processing Four-Dimensional Printing of Shape Memory Capture Devices. ACS Applied Materials & Samp; Interfaces, 2021, 13, 18110-18119.	4.0	31
147	Shape memory polymer solar cells with active deformation. Advanced Composites and Hybrid Materials, 2021, 4, 957-965.	9.9	31
148	A review on material models for isotropic hyperelasticity. International Journal of Mechanical System Dynamics, 2021, 1, 71-88.	1.3	31
149	4D printing of electroactive shape-changing composite structures and their programmable behaviors. Composites Part A: Applied Science and Manufacturing, 2022, 157, 106925.	3.8	31
150	Influence of cross-linking agent on thermomechanical properties and shape memory effect of styrene shape memory polymer. Journal of Intelligent Material Systems and Structures, 2011, 22, 2147-2154.	1.4	30
151	Dynamic performance of dielectric elastomer balloon incorporating stiffening and damping effect. Smart Materials and Structures, 2018, 27, 105036.	1.8	30
152	Research on high electromagnetic interference shielding effectiveness of a foldable buckypaper/polyacrylonitrile composite film via interface reinforcing. Composites Part A: Applied Science and Manufacturing, 2018, 113, 132-140.	3.8	30
153	Controlled wettability based on reversible micro-cracking on a shape memory polymer surface. Soft Matter, 2016, 12, 2708-2714.	1.2	29
154	A thermoviscoelastic model incorporated with uncoupled structural and stress relaxation mechanisms for amorphous shape memory polymers. Mechanics of Materials, 2018, 124, 18-25.	1.7	29
155	Electrothermal shape memory behavior and recovery force of four-dimensional printed continuous carbon fiber/polylactic acid composite. Smart Materials and Structures, 2021, 30, 025040.	1.8	29
156	Shape memory properties of electrospun nafion nanofibers. Fibers and Polymers, 2014, 15, 534-539.	1.1	28
157	Fast Triggering of Shape Memory Polymers using an Embedded Carbon Nanotube Sponge Network. Scientific Reports, 2016, 6, 24148.	1.6	28
158	Triple-shape memory effects of bismaleimide based thermosetting polymer networks prepared via heterogeneous crosslinking structures. RSC Advances, 2016, 6, 10233-10241.	1.7	28
159	Preliminary test and analysis of an ultralight lenticular tube based on shape memory polymer composites. Composite Structures, 2019, 223, 110936.	3.1	28
160	The compatibility of polylactic acid and polybutylene succinate blends by molecular and mesoscopic dynamics. International Journal of Smart and Nano Materials, 2020, 11, 24-37.	2.0	28
161	Shape memory polymer S-shaped mandrel for composite air duct manufacturing. Composite Structures, 2015, 133, 930-938.	3.1	27
162	A multi-branch thermoviscoelastic model based on fractional derivatives for free recovery behaviors of shape memory polymers. Mechanics of Materials, 2018, 120, 34-42.	1.7	27

#	Article	IF	CITATIONS
163	Modeling the thermomechanical behaviors of short fiber reinforced shape memory polymer composites. International Journal of Mechanical Sciences, 2020, 166, 105212.	3.6	27
164	Shape Memory Epoxy Resin and Its Composites: From Materials to Applications. Research, 2022, 2022, 9767830.	2.8	27
165	Mechanical and shape recovery properties of shape memory polymer composite embedded with cup-stacked carbon nanotubes. Journal of Intelligent Material Systems and Structures, 2014, 25, 1264-1275.	1.4	26
166	Ground and geostationary orbital qualification of a sunlight-stimulated substrate based on shape memory polymer composite. Smart Materials and Structures, 2019, 28, 075023.	1.8	26
167	Stability analysis of dielectric elastomer film actuator. Science in China Series D: Earth Sciences, 2009, 52, 2715-2723.	0.9	25
168	Electrospun nanofiber membranes for electrically activated shape memory nanocomposites. Smart Materials and Structures, 2014, 23, 065020.	1.8	25
169	Preliminary design and analysis of a cubic deployable support structure based on shape memory polymer composite. International Journal of Smart and Nano Materials, 2016, 7, 106-118.	2.0	25
170	Investigation of ultraviolet radiation effects on thermomechanical properties and shape memory behaviour of styrene-based shape memory polymers and its composite. Composites Science and Technology, 2018, 165, 266-273.	3.8	25
171	Comment on "On electromechanical stability of dielectric elastomers―[Appl. Phys. Lett. 93, 101902 (2008)]. Applied Physics Letters, 2009, 94, 096101.	1.5	24
172	Modal Analyses of Deployable Truss Structures Based on Shape Memory Polymer Composites. International Journal of Applied Mechanics, 2016, 08, 1640009.	1.3	24
173	Integrated real-time monitoring system for strain/temperature distribution based on simultaneous wavelength and time division multiplexing technique. Optics and Lasers in Engineering, 2014, 59, 19-24.	2.0	23
174	Characteristics of multi-functional composites using elastomer embedded with Shape Memory Alloy wires. Materials and Design, 2015, 88, 75-81.	3.3	23
175	A novel low colored and transparent shape memory copolyimide and its durability in space thermal cycling environments. Polymer, 2018, 156, 121-127.	1.8	23
176	Shape-memory poly(arylene ether ketone)s with tunable transition temperatures and their composite actuators capable of electric-triggered deformation. Journal of Materials Chemistry C, 2020, 8, 303-309.	2.7	23
177	A macro-mechanical constitutive model of shape memory alloys. Science in China Series G: Physics, Mechanics and Astronomy, 2009, 52, 1382-1391.	0.2	22
178	Novel Programmable Shape Memory Polystyrene Film: A Thermally Induced Beam-power Splitter. Scientific Reports, 2017, 7, 44333.	1.6	22
179	Sesame-cookie topography silver nanoparticles modified carbon nanotube paper for enhancing lightning strike protection. Carbon, 2019, 143, 204-214.	5.4	22
180	Ultra-light release device integrated with screen-printed heaters for CubeSat's deployable solar arrays. Composite Structures, 2020, 232, 111561.	3.1	22

#	Article	IF	Citations
181	Multifunctional flexible and stretchable graphite-silicone rubber composites. Journal of Materials Research and Technology, 2020, 9, 15621-15630.	2.6	22
182	Smart Solar Array Consisting of Shape-Memory Releasing Mechanisms and Deployable Hinges. AIAA Journal, 2021, 59, 2200-2213.	1.5	22
183	Epoxy shapeâ€memory polymer reinforced by thermally reduced graphite oxide: Influence of processing techniques. Journal of Applied Polymer Science, 2015, 132, .	1.3	21
184	Recent developments in next-generation occlusion devices. Acta Biomaterialia, 2021, 128, 100-119.	4.1	21
185	A macro-mechanical constitutive model for shape memory polymer. Science China: Physics, Mechanics and Astronomy, 2010, 53, 2266-2273.	2.0	20
186	Elastic composite skin for a pure shear morphing wing structures. Journal of Intelligent Material Systems and Structures, 2015, 26, 352-363.	1.4	20
187	Designing tripleâ€shape memory polymers from a miscible polymer pair through dualâ€electrospinning technique. Journal of Applied Polymer Science, 2019, 136, 47471.	1.3	20
188	Bioinspired multimodal soft robot driven by a single dielectric elastomer actuator and two flexible electroadhesive feet. Extreme Mechanics Letters, 2022, 53, 101720.	2.0	20
189	Application and Development of Shape Memory Micro/Nano Patterns. Small, 2022, 18, e2105958.	5.2	20
190	Theory progress and applications of dielectric elastomers. International Journal of Smart and Nano Materials, 2013, 4, 199-209.	2.0	19
191	A new deformation monitoring method for a flexible variable camber wing based on fiber Bragg grating sensors. Journal of Intelligent Material Systems and Structures, 2014, 25, 1644-1653.	1.4	19
192	Temperature dependence of elastic constants in unidirectional carbon fiber reinforced shape memory polymer composites. Mechanics of Materials, 2020, 148, 103518.	1.7	19
193	Harnessing Wrinkling Patterns Using Shape Memory Polymer Microparticles. ACS Applied Materials & Lamp; Interfaces, 2021, 13, 23074-23080.	4.0	19
194	4D printing of multiple shape memory polymer and nanocomposites with biocompatible, programmable and selectively actuated properties. Additive Manufacturing, 2022, 53, 102689.	1.7	19
195	Comment on "Water-driven programmable polyurethane shape memory polymer: Demonstration and mechanism―[Appl. Phys. Lett. 86, 114105 (2005)]. Applied Physics Letters, 2010, 97, 056101.	1.5	18
196	Theoretical investigation on polar dielectric with large electrocaloric effect as cooling devices. Applied Physics Letters, 2011, 99, .	1.5	18
197	A phenomenological formulation for the shape/temperature memory effect in amorphous polymers with multi-stress components. Smart Materials and Structures, 2017, 26, 095011.	1.8	18
198	Experiment and analysis of morphing skin embedded with shape memory polymer composite tube. Journal of Intelligent Material Systems and Structures, 2014, 25, 2052-2059.	1.4	17

#	Article	IF	CITATIONS
199	Implementation of a finite element analysis procedure for structural analysis of shape memory behaviour of fibre reinforced shape memory polymer composites. Smart Materials and Structures, 2017, 26, 125002.	1.8	17
200	Microwave responsive epoxy nanocomposites reinforced by carbon nanomaterials of different dimensions. Journal of Applied Polymer Science, 2018, 135, 45676.	1.3	15
201	Effects of selectively triggered photothermal particles on shape memory polymer composites: An investigation on structural performance, thermomechanical characteristics and photothermal behaviour. Journal of Intelligent Material Systems and Structures, 2019, 30, 3124-3135.	1.4	15
202	Flexible and colorless shape memory polyimide films with high visible light transmittance and high transition temperature. Smart Materials and Structures, 2019, 28, 055031.	1.8	15
203	Metal mesh embedded in colorless shape memory polyimide for flexible transparent electric-heater and actuators. Applied Materials Today, 2020, 21, 100797.	2.3	15
204	A double-layered composite for lightning strike protection via conductive and thermal protection. Composites Communications, 2020, 21, 100403.	3.3	15
205	Mechanical analysis of a tip-loaded deployable truss based on shape memory polymer composite. Composite Structures, 2020, 242, 112196.	3.1	15
206	Effects of accelerated aging on thermal, mechanical, and shape memory properties of a cyanate-based shape memory polymer: Il atomic oxygen. Polymer Degradation and Stability, 2021, 186, 109515.	2.7	15
207	Remote actuation of light activated shape memory polymers via D-shaped optical fibres. Smart Materials and Structures, 2020, 29, 047001.	1.8	14
208	Antagonistic cone dielectric elastomer actuator: Analysis, experiment and application. Extreme Mechanics Letters, 2021, 42, 101134.	2.0	14
209	Voltage-induced deformation in dielectric. Journal of Applied Physics, 2012, 112, 033519.	1.1	13
210	Modeling the strain rate-, hold time-, and temperature-dependent cyclic behaviors of amorphous shape memory polymers. Smart Materials and Structures, 2018, 27, 075050.	1.8	13
211	Study of low earth orbit ultraviolet radiation and vacuum thermal cycling environment effects on epoxy-based shape memory polymer. Journal of Intelligent Material Systems and Structures, 2019, 30, 2688-2696.	1.4	13
212	$\langle i \rangle \hat{I}^3 \langle i \rangle$ -rays radiation resistant shape memory cyanate ester resin and its composites with high transition temperature. Smart Materials and Structures, 2019, 28, 075039.	1.8	13
213	Variable Stiffness Electroadhesion and Compliant Electroadhesive Grippers. Soft Robotics, 2022, 9, 1074-1082.	4.6	13
214	Shapeâ€memory behaviors of electrospun chitosan/poly(ethylene oxide) composite nanofibrous membranes. Journal of Applied Polymer Science, 2015, 132, .	1.3	12
215	Thermal, mechanical, and shapeâ€memory properties of nanorubberâ€toughened, epoxyâ€based shapeâ€memory nanocomposites. Journal of Applied Polymer Science, 2018, 135, 45780.	1.3	12
216	Modeling the thermomechanical behaviors of shape memory polymers and their nanocomposites by a network transition theory. Smart Materials and Structures, 2019, 28, 065018.	1.8	12

#	Article	IF	CITATIONS
217	Shape memory poly (ether ether ketone)s with tunable chain stiffness, mechanical strength and high transition temperatures. International Journal of Smart and Nano Materials, 2022, 13, 1-16.	2.0	12
218	Effects of atomic oxygen on epoxy-based shape memory polymer in low earth orbit. Journal of Intelligent Material Systems and Structures, 2018, 29, 1081-1087.	1.4	11
219	Thermomechanical and electroactive behavior of a thermosetting styreneâ€based carbon black shapeâ€memory composite. Journal of Applied Polymer Science, 2018, 135, 45978.	1.3	11
220	Light-induced microfluidic chip based on shape memory gold nanoparticles/poly (vinyl alcohol) nanocomposites. Smart Materials and Structures, 2018, 27, 105047.	1.8	11
221	An E-shape broadband piezoelectric energy harvester induced by magnets. Journal of Intelligent Material Systems and Structures, 2018, 29, 2477-2491.	1.4	11
222	Bioinspired four-dimensional polymeric aerogel with programmable temporal-spatial multiscale structure and functionality. Composites Science and Technology, 2021, 206, 108677.	3.8	11
223	Shape memory polymer foam: active deformation, simulation and validation of space environment. Smart Materials and Structures, 2022, 31, 035008.	1.8	11
224	Experiment and analysis of fluidic flexible matrix composite (F <sup>2</sup> MC) tube. Journal of Intelligent Material Systems and Structures, 2012, 23, 279-290.	1.4	10
225	Electrochemical Performance of Carbon Onions Fabricated by Electric Arcâ€Discharge Method. Electroanalysis, 2016, 28, 145-150.	1.5	10
226	Preparation and characterization of shape memory composite foams with interpenetrating polymer networks. Smart Materials and Structures, 2016, 25, 035002.	1.8	10
227	Effects of $\hat{I}^3$ -radiation on the performances of optically transparent shape memory polyimides with a low glass transition temperature. Polymer Degradation and Stability, 2018, 156, 245-251.	2.7	10
228	Shape retainability and reusability investigation of bottle-shaped SMP mandrel. Polymer Testing, 2018, 69, 325-331.	2.3	10
229	Experimental and theoretical analysis of a smart transmission mechanism system. Smart Materials and Structures, 2018, 27, 095022.	1.8	10
230	Preparation and characterization of CNT films/silicone rubber composite with improved microwave absorption performance. Materials Research Express, 2019, 6, 075610.	0.8	10
231	Amorphous Bimetallic Nanowires with High-Performance Microwave Absorption: A Case for FeCo Nanowires. Nano, 2019, 14, 1950041.	0.5	10
232	Thermomechanical properties and deformation behavior of a unidirectional carbonâ€fiberâ€reinforced shape memory polymer composite laminate. Journal of Applied Polymer Science, 2020, 137, 48532.	1.3	10
233	Microstructural design of 4D printed angle-ply laminated strips with tunable shape memory properties. Materials Letters, 2021, 285, 129197.	1.3	10
234	Smart Shape Memory Polyurethane with Photochromism and Mechanochromism Properties. Macromolecular Materials and Engineering, 2022, 307, .	1.7	10

#	Article	IF	Citations
235	A viscoelastic constitutive model for shape memory polymer composites: Micromechanical modeling, numerical implementation and application in 4D printing. Mechanics of Materials, 2022, 169, 104301.	1.7	10
236	Shape Memory Supramolecular Polyurea with Adjustable Toughness and Ultrahigh Energy Density. ACS Applied Polymer Materials, 2022, 4, 6092-6102.	2.0	10
237	Failure modeling of folded dielectric elastomer actuator. Science China: Physics, Mechanics and Astronomy, 2014, 57, 263-272.	2.0	9
238	Synergistic effect of self-assembled carbon nanofibers and hexagonal boron nitride for improved electro-activated polymeric shape memory nanocomposite. Journal of Intelligent Material Systems and Structures, 2015, 26, 905-912.	1.4	9
239	Fabrication of low dielectric constant polyimide/TiO2 nanofibers with enhanced UV-light shielding properties. High Performance Polymers, 2019, 31, 986-995.	0.8	9
240	Prediction of effective thermomechanical behavior of shape memory polymer composite with micro-damage interface. Composites Communications, 2021, 25, 100727.	3.3	9
241	Shape memory polyimide composites with high storage modulus and high glass transition temperature. Journal of Intelligent Material Systems and Structures, 2022, 33, 1762-1772.	1.4	9
242	RECENT PROGRESSES IN POLYMERIC SMART MATERIALS. International Journal of Modern Physics B, 2010, 24, 2351-2356.	1.0	8
243	Modified shape memory cyanate polymers with a wide range of high glass transition temperatures. Proceedings of SPIE, 2012, , .	0.8	8
244	Strength property analysis for fiber-reinforced shape memory polymer composite laminate. Journal of Intelligent Material Systems and Structures, 2017, 28, 1627-1639.	1.4	8
245	Electric field induced variation of temperature and entropy in dielectric elastomers. Journal of Mechanical Science and Technology, 2015, 29, 109-114.	0.7	7
246	Morphing thickness in airfoils using pneumatic flexible tubes and Kirigami honeycomb. Journal of Intelligent Material Systems and Structures, 2016, 27, 755-763.	1.4	7
247	Modified Yeoh model with improved equibiaxial loading predictions. Acta Mechanica, 2022, 233, 437-453.	1.1	7
248	Efficient voltage actuators based on rapid heat and electric dual-response poly(aryl ether ketone) shape memory composites reinforced with radially aligned CNTs. Composites Part A: Applied Science and Manufacturing, 2022, 158, 106940.	3.8	7
249	Infrared laser-activated shape memory polymer. Proceedings of SPIE, 2008, , .	0.8	6
250	Monitoring of deployment process of shape memory polymers for morphing structures with embedded fibre Bragg grating sensors. Journal of Intelligent Material Systems and Structures, 2014, 25, 1224-1232.	1.4	6
251	A humidity-driven flexible carbon nitride film with multiple deformations. Smart Materials and Structures, 2019, 28, 105007.	1.8	6
252	Shape Memory Effect in Micro-Sized Shape Memory Polymer Composite Chains. Applied Sciences (Switzerland), 2019, 9, 2919.	1.3	6

#	Article	IF	CITATIONS
253	Delayed electromechanical instability of a viscoelastic dielectric elastomer balloon. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2019, 475, 20190316.	1.0	6
254	Low length dispersity fiber-like micelles from an A–B–A triblock copolymer with terminal crystallizable poly(ferrocenyldimethylsilane) segments ⟨i⟩via⟨li⟩ living crystallization-driven self-assembly. Polymer Chemistry, 2019, 10, 3973-3982.	1.9	6
255	Improved Carroll's hyperelastic model considering compressibility and its finite element implementation. Acta Mechanica Sinica/Lixue Xuebao, 2021, 37, 785-796.	1.5	6
256	A phenomenological constitutive model for predicting both the moderate and large deformation behavior of elastomeric materials. Mechanics of Materials, 2022, 165, 104179.	1.7	6
257	Programmable and reconfigurable hygro-thermo morphing materials with multifunctional shape transformation. Applied Materials Today, 2022, 27, 101414.	2.3	6
258	An electrical heating shape memory polymer composite incorporated with conductive elastic fabric. Journal of Composite Materials, 2022, 56, 1725-1736.	1.2	6
259	Boron nitride enhanced shape memory poly(aryl ether ketone) actuators with rapid selfâ€deformation and staged responsive behaviors. Polymer Composites, 2022, 43, 3880-3889.	2.3	6
260	Effect of mechanical force field on the electromechanical stability of dielectric elastomers. Science China: Physics, Mechanics and Astronomy, 2012, 55, 94-101.	2.0	5
261	How graphene oxide affects shape memory properties and strength of poly( $\langle i \rangle < c \rangle <  i \rangle $	1.4	5
262	Characterization and nonlinear models of bending extensile/contractile pneumatic artificial muscles. Smart Materials and Structures, 2021, 30, 025024.	1.8	5
263	Wavelength-selective responsive hybrid structures utilizing shape memory poly(aryl ether ketone). European Polymer Journal, 2022, 164, 110955.	2.6	5
264	Harnessing ultra-high programmability and controllability for smart composite architecture using quadruple shape memory poly(aryl ether ketone)s. Composites Science and Technology, 2022, 220, 109246.	3.8	5
265	Non-contact magnetic actuated shape-programmable poly(aryl ether ketone)s and their structural variation during the deformation process. Smart Materials and Structures, 2022, 31, 035035.	1.8	5
266	Distributed sensing based realâ€time process monitoring of shape memory polymer components. Journal of Applied Polymer Science, 2022, 139, .	1.3	5
267	Thermal design and analysis of a flexible solar array system based on shape memory polymer composites. Smart Materials and Structures, 2022, 31, 025021.	1.8	5
268	Enhanced Shape Memory Metal-Coordinated Poly(aryl ether ketone)s with Tunable Gradient-Deformation Behaviors as well as Self-Healing and Reprocessing Abilities. ACS Applied Materials & Diterfaces, 2022, 14, 20032-20041.	4.0	5
269	Zwitterionic Poly(aryl ether ketone) with Water-Actuated, Reshaping-Reconfiguration Ability and Triple Shape Memory Effect. ACS Applied Polymer Materials, 2022, 4, 4286-4297.	2.0	5
270	3D Printed Bioinspired Stents with Photothermal Effects for Malignant Colorectal Obstruction. Research, 2022, 2022, .	2.8	5

#	Article	IF	CITATIONS
271	Time-dependent electromechanical phase transition and bulging propagation in a viscoelastic dielectric elastomer tube. Smart Materials and Structures, 2020, 29, 015005.	1.8	4
272	Thermoelectromechanical instability of dielectric elastomer undergoes polarization saturation and temperature variation. Acta Mechanica Sinica/Lixue Xuebao, 2021, 37, 414-421.	1.5	4
273	Thermal, mechanical and shape fixity behaviors of shape memory cyanate under $\hat{l}^3$ -ray radiation. Smart Materials and Structures, 2022, 31, 045010.	1.8	4
274	Unidirectional Carbon Fiber Reinforced Cyanateâ€Based Shape Polymer Composite with Variable Stiffness. Advanced Engineering Materials, 2022, 24, .	1.6	4
275	Dielectric and Breakdown Properties of MWCNT- and OMMT-Reinforced Epoxy Composites. Journal of Electronic Materials, 2019, 48, 7270-7281.	1.0	3
276	Investigation of the Longâ€Term Storage Stability of Shape Memory Epoxy Prepolymer. Advanced Engineering Materials, 2022, 24, 2101023.	1.6	3
277	Study on shape recovery speed of SMP, SMP composite, and SMP foam. Proceedings of SPIE, 2008, , .	0.8	2
278	Composite Piezoelectric Energy Harvesters with Symmetric Angleâ€Ply Stacking Sequences and Variable Throughâ€theâ€Thickness Poisson's Ratios. Physica Status Solidi (B): Basic Research, 2020, 257, 1900689.	0.7	2
279	Microbuckling behavior of unidirectional fiber-reinforced shape memory polymer composite undergoing compressive deformation. Composite Structures, 2022, 297, 115975.	3.1	2
280	Electrospun shape-memory polymer fibers and their applications. , 2021, , 567-596.		1
281	The shape memory properties of multi-layer graphene reinforced poly(L-lactide-co-ϵ-caprolactone) by an atomistic investigation. Smart Materials and Structures, 2021, 30, 055005.	1.8	1
282	Porous bone tissue scaffold based on shape memory polymer. , 2019, , .		1
283	Fiber Optic Sensors. Journal of Sensors, 2012, 2012, 1-1.	0.6	O
284	Electric Heating Recovery Performance of Shape Memory Polymer Based on Embedded Buckypaper. , 2015, , .		0
285	Design and performance of an ultra-flexible solid state supercapacitor based on thermo-crosslinking carbon nanotube paper/Co <sub>3</sub> O <sub>4</sub> nanowire electrode. Materials Research Express, 2019, 6, 085628.	0.8	0
286	4D printed programmable shape memory left atrial appendage occlusion device. , 2022, , .		0
287	Fabrication and characterization of shape memory auxetic metamaterial. Journal of Intelligent Material Systems and Structures, 0, , 1045389X2210994.	1.4	0