Di Chen

List of Publications by Year
in descending order

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51 papers	3,393 citations	257450 24 h-index	206112 48 g-index
53 all docs	53 docs citations	53 times ranked	3358 citing authors

#	Article	IF	Citations
1	Recent advances in shapeâ€“memory polymers: Structure, mechanism, functionality, modeling and applications. Progress in Polymer Science, 2012, 37, 1720-1763.	24.7	1,058
2	A review of stimuli-responsive polymers for smart textile applications. Smart Materials and Structures, 2012, 21, 053001.	3.5	467
3	Rapidly switchable water-sensitive shape-memory cellulose/elastomer nano-composites. Soft Matter, 2012, 8, 2509.	2.7	192
4	Smart polymer fibers with shape memory effect. Smart Materials and Structures, 2006, 15, 1547-1554.	3.5	159
5	Novel moisture-sensitive shape memory polyurethanes containing pyridine moieties. Polymer, 2009, 50, 4424-4428.	3.8	135
6	Development of shape memory polyurethane fiber with complete shape recoverability. Smart Materials and Structures, 2006, 15, 1385-1394.	3.5	108
7	Healable thermoset polymer composite embedded with stimuli-responsive fibres. Journal of the Royal Society Interface, 2012, 9, 3279-3287.	3.4	95
8	Electrospun polyurethane nanofibres having shape memory effect. Materials Letters, 2008, 62, 2074-2076.	2.6	93
9	Morphology, phase separation, thermal and mechanical property differences of shape memory fibres prepared by different spinning methods. Smart Materials and Structures, 2007, 16, 1192-1197.	3.5	88
10	A Spiderâ€Captureâ€Silkâ€Like Fiber with Extremely Highâ€Volume Directional Water Collection. Advanced Functional Materials, 2020, 30, 2002437.	14.9	65
11	Cellulose/Chitosan Composite Multifilament Fibers with Two-Switch Shape Memory Performance. ACS Sustainable Chemistry and Engineering, 2019, 7, 6981-6990.	6.7	62
12	A temperature-regulating fiber made of PEG-based smart copolymer. Solar Energy Materials and Solar Cells, 2008, 92, 1245-1252.	6.2	60
13	Effect of cationic group content on shape memory effect in segmented polyurethane cationomer. Journal of Applied Polymer Science, 2007, 103, 545-556.	2.6	55
14	Memory chromic polyurethane with tetraphenylethylene. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 104-110.	2.1	42
15	Is biopolymer hair a multi-responsive smart material?. Polymer Chemistry, 2017, 8, 283-294.	3.9	38
16	Stress-memory polymeric filaments for advanced compression therapy. Journal of Materials Chemistry B, 2017, 5, 1905-1916.	5.8	37
17	Artificial spider silk is smart like natural one: having humidity-sensitive shape memory with superior recovery stress. Materials Chemistry Frontiers, 2019, 3, 2472-2482.	5.9	34
18	Fourier transform infrared study of supramolecular polyurethane networks containing pyridine moieties for shape memory materials. Polymer International, 2010, 59, 529-538.	3.1	33

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19	Hydrogen-Bonding Interactions in Hard Segments of Shape Memory Polyurethane: Toluene Diisocyanates and 1,6-Hexamethylene Diisocyanate. A Theoretical and Comparative Study. Journal of Physical Chemistry A, 2014, 118, 12241-12255.	2.5	33
20	Collagen incorporation into waterborne polyurethane improves breathability, mechanical property, and self-healing ability. Composites Part A: Applied Science and Manufacturing, 2020, 133, 105854.	7.6	33
21	An Innovative Solventâ€Responsive Coilingâ€“Expanding Stent. Advanced Materials, 2021, 33, e2101005.	21.0	33
22	Design of a Smart Nerve Conduit Based on a Shapeâ€Memory Polymer. Advanced Materials Technologies, 2016, 1, 1600015.	5.8	31
23	Collagen skin, a water-sensitive shape memory material. Journal of Materials Chemistry B, 2018, 6, 5144-5152.	5.8	28
24	A skin inspired bio-smart composite with water responsive shape memory ability. Materials Chemistry Frontiers, 2019, 3, 1128-1138.	5.9	28
25	A smart orthopedic compression device based on a polymeric stress memory actuator. Materials and Design, 2016, 97, 222-229.	7.0	27
26	The influence of heat treatment on the properties of shape memory fibers. II. Tensile properties, dimensional stability, recovery force relaxation, and thermomechanical cyclic properties. Journal of Applied Polymer Science, 2009, 111, 1156-1164.	2.6	24
27	Stress memory polymers. Journal of Polymer Science, Part B: Polymer Physics, 2015, 53, 893-898.	2.1	24
28	Self-adaptive water vapor permeability and its hydrogen bonding switches of bio-inspired polymer thin films. Materials Chemistry Frontiers, 2017, 1, 2027-2030.	5.9	22
29	In-Situ Incorporation of Alkyl-Grafted Silica into Waterborne Polyurethane with High Solid Content for Enhanced Physical Properties of Coatings. Polymers, 2018, 10, 514.	4.5	22
30	Recent advances in skin collagen: functionality and non-medical applications. Journal of Leather Science and Engineering, 2021, 3, .	6.0	20
31	Stress memory materials and their fundamental platform. Journal of Materials Chemistry A, 2017, 5, 503-511.	10.3	19
32	Polyurethane: A Shape Memory Polymer (SMP). , 2017, , .		19
33	Bioinspired Fabrication of Polyurethane/Regenerated Silk Fibroin Composite Fibres with Tubuliform Silk-Like Flat Stressâ€“Strain Behaviour. Polymers, 2018, 10, 333.	4.5	19
34	Designing of advanced smart medical stocking using stress-memory polymeric filaments for pressure control and massaging. Materials Science and Engineering C, 2018, 91, 263-273.	7.3	18
35	Spider Silk: A Smart Biopolymer with Water Switchable Shape Memory Effects -Unraveling the Mystery of Superconraction. Research Journal of Textile and Apparel, 2013, 17, 1-9.	1.1	16
36	Modular Assembly of a Conserved Repetitive Sequence in the Spider Eggcase Silk: From Gene to Fiber. ACS Biomaterials Science and Engineering, 2018, 4, 2748-2757.	5.2	15

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37	Shape Memory-Enhanced Electrical Self-Healing of Stretchable Electrodes. Applied Sciences (Switzerland), 2018, 8, 392.	2.5	13
38	Mechanically strong shape memory polyurethane for water vapour permeable membranes. Polymer International, 2018, 67, 1386-1392.	3.1	12
39	Mechanically Robust, Responsive Composite Membrane for a Thermoregulating Textile. ACS Omega, 2020, 5, 3899-3907.	3.5	12
40	Isocyanate Modified GO Shape-Memory Polyurethane Composite. Polymers, 2020, 12, 118.	4.5	12
41	Tea-polyphenol treated skin collagen owns coalesced adaptive-hydration, tensile strength and shape-memory property. International Journal of Biological Macromolecules, 2020, 158, 1-8.	7.5	12
42	Fibers Made of Recombinant Spidroinsâ€"A Brief Review. AATCC Journal of Research, 2019, 6, 37-40.	0.6	11
43	Tailor-made spider-eggcase-silk spheres for efficient lysosomal drug delivery. RSC Advances, 2018, 8, 9394-9401.	3.6	10
44	Constituent analysis of stress memory in semicrystalline polyurethane. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 941-947.	2.1	9
45	A Single Polymer Artificial Muscle Having Dualâ€Mode Contractibility, Temperature Sensibility, and Trainability through Enthalpy Change. Advanced Materials Technologies, 2019, 4, 1900017.	5.8	9
46	Achieving coalesced breathability, mechanical and shape memory properties of collagen fibrous matrix through complexing with chromium (III). Materials and Design, 2020, 186, 108206.	7.0	9
47	Spidroin-Based Biomaterials in Tissue Engineering: General Approaches and Potential Stem Cell Therapies. Stem Cells International, 2021, 2021, 1-16.	2.5	9
48	Stimuli-responsive polymers in coating and laminating for functional textile. , 2019, , 155-173.		8
49	A titin inspired stress-memory polymer acts as a muscle. Materials Chemistry Frontiers, 2019, 3, 2463-2471.	5.9	5
50	Smart behavior of collagen skin: water-sensitive shape memory. Materials Today: Proceedings, 2019, 16, 1415-1422.	1.8	3
51	Microscopy of Shape Memory Polymers, Polymer Blends, and Composites. Advanced Structured Materials, 2020, , 95-127.	0.5	0