Scott White

List of Articles by Year in descending order

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150 peer-reviewed articles	19,532 peer-reviewed citations	15157 65 peer-reviewed h-index	62628 6.68 score
175 documents	23851 doc citations	15382 70 h-index	21269 citing authors

#	Article	IF	Citations
1	Sunlight-Activated Self-Healing Polymer Coatings. Advanced Engineering Materials, 2020, 22, .	2.2	39
2	Localization of Spiropyran Activation. Langmuir, 2020, 36, 5847-5854.	3.0	13
3	A polarization reconfigurable microstrip patch antenna using liquid metal microfluidics. Smart Materials and Structures, 2020, 29, 045032.	2.4	4
4	Controlling Expansion in Lithium Manganese Oxide Composite Electrodes via Surface Modification. Journal of the Electrochemical Society, 2019, 166, A2357-A2362.	2.2	13
5	Self-healing of impact damage in fiber-reinforced composites. Composites Part B: Engineering, 2019, 173, 106808.	10.5	32
6	Self-healing of fatigue damage in cross-ply glass/epoxy laminates. Composites Science and Technology, 2019, 175, 122-127.	7.0	40
7	Manufacture of carbon-fiber prepreg with thermoplastic/epoxy resin blends and microencapsulated solvent healing agents. Composites Part A: Applied Science and Manufacturing, 2019, 121, 365-375.	6.0	34
8	Strain and stress mapping by mechanochemical activation of spiropyran in poly(methyl methacrylate). Strain, 2019, 55, .	1.4	30
9	Rapid Degradation of Poly(lactic acid) with Organometallic Catalysts. ACS Applied Materials & Interfaces, 2019, 11, 46226-46232.	5.5	31
10	Fully Recyclable Metastable Polymers and Composites. Chemistry of Materials, 2019, 31, 398-406.	4.6	64
11	Processing-dependent mechanical properties of solvent cast cyclic polyphthalaldehyde. Polymer, 2019, 162, 29-34.	3.4	9
12	Multi-objective design of microvascular panels for battery cooling applications. Applied Thermal Engineering, 2018, 135, 145-157.	5.4	31
13	Direct Detection of Manganese Ions in Organic Electrolyte by UV-vis Spectroscopy. Journal of the Electrochemical Society, 2018, 165, A345-A348.	2.2	24
14	Core–Shell Microcapsules Containing Flame Retardant Tris(2-chloroethyl phosphate) for Lithium-Ion Battery Applications. ACS Omega, 2018, 3, 1609-1613.	3.4	64
15	Cyclic Poly(phthalaldehyde): Thermoforming a Bulk Transient Material. ACS Macro Letters, 2018, 7, 47-52.	3.2	47
16	Interfacial Mechanophore Activation Using Laser-Induced Stress Waves. Journal of the American Chemical Society, 2018, 140, 5000-5003.	11.7	53
17	Effect of microchannels on the crashworthiness of fiber-reinforced composites. Composite Structures, 2018, 184, 428-436.	5.5	20
18	Restoration of Impact Damage in Polymers via a Hybrid Microcapsule–Microvascular Self-Healing System. Advanced Functional Materials, 2018, 28, .	11.9	59

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19	Design of redundant microvascular cooling networks for blockage tolerance. Applied Thermal Engineering, 2018, 131, 965-976.	5.4	20
20	Mechanical Reactivity of Two Different Spiropyran Mechanophores in Polydimethylsiloxane. Macromolecules, 2018, 51, 9177-9183.	3.7	144
21	Self-Protecting Epoxy Coatings with Anticorrosion Microcapsules. ACS Omega, 2018, 3, 14157-14164.	3.4	32
22	Enhanced Mixing of Microvascular Self-Healing Reagents Using Segmented Gas–Liquid Flow. ACS Applied Materials & Interfaces, 2018, 10, 32659-32667.	5.5	12
23	Accelerated Thermal Depolymerization of Cyclic Polyphthalaldehyde with a Polymeric Thermoacid Generator. Macromolecular Rapid Communications, 2018, 39, .	2.8	14
24	Rapid energy-efficient manufacturing of polymers and composites via frontal polymerization. Nature, 2018, 557, 223-227.	30.7	513
25	Encapsulation of grape seed extract in polylactide microcapsules for sustained bioactivity and time-dependent release in dental material applications. Dental Materials, 2017, 33, 630-636.	2.7	17
26	Silicon Composite Electrodes with Dynamic Ionic Bonding. Advanced Energy Materials, 2017, 7, .	16.3	50
27	Alkyl Phosphite Inhibitors for Frontal Ring-Opening Metathesis Polymerization Greatly Increase Pot Life. ACS Macro Letters, 2017, 6, 609-612.	3.2	132
28	Low-Ceiling-Temperature Polymer Microcapsules with Hydrophobic Payloads via Rapid Emulsion-Solvent Evaporation. ACS Applied Materials & Interfaces, 2017, 9, 20115-20123.	5.5	35
29	Regenerative Polymeric Coatings Enabled by Pressure Responsive Surface Valves. Advanced Engineering Materials, 2017, 19, .	2.2	4
30	A Microvascular System for the Autonomous Regeneration of Large Scale Damage in Polymeric Coatings. Advanced Engineering Materials, 2017, 19, .	2.2	6
31	Time Release of Encapsulated Additives for Enhanced Performance of Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 40244-40251.	5.5	18
32	Manufacturing of unidirectional glass/epoxy prepreg with microencapsulated liquid healing agents. Composites Science and Technology, 2017, 153, 190-197.	7.0	18
33	Repeated healing of delamination damage in vascular composites by pressurized delivery of reactive agents. Composites Science and Technology, 2017, 151, 1-9.	7.0	39
34	Carbon fiber composites with 2D microvascular networks for battery cooling. International Journal of Heat and Mass Transfer, 2017, 115, 513-522.	4.9	74
35	Mechanisms and characterization of impact damage in 2D and 3D woven fiber-reinforced composites. Composites Part A: Applied Science and Manufacturing, 2017, 101, 432-443.	6.0	104
36	Comparison of Compression-After-Impact and Flexure-After-Impact protocols for 2D and 3D woven fiber-reinforced composites. Composites Part A: Applied Science and Manufacturing, 2017, 101, 471-479.	6.0	86

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37	Active cooling of microvascular composites for battery packaging. Smart Materials and Structures, 2017, 26, 105004.	2.4	12
38	Self-healing Polymers and Composites. American Scientist, 2017, 99, 392.	0.1	50
39	Strategies for Volumetric Recovery of Large Scale Damage in Polymers. Advanced Functional Materials, 2016, 26, 4561-4569.	11.9	21
40	Polymers with autonomous life-cycle control. Nature, 2016, 540, 363-370.	30.7	427
41	Survival of actively cooled microvascular polymer matrix composites under sustained thermomechanical loading. Composites Part A: Applied Science and Manufacturing, 2016, 82, 170-179.	6.0	22
42	Regioisomer-Specific Mechanochromism of Naphthopyran in Polymeric Materials. Journal of the American Chemical Society, 2016, 138, 12328-12331.	11.7	236
43	Gradient-based design of actively-cooled microvascular composite panels. International Journal of Heat and Mass Transfer, 2016, 103, 594-606.	4.9	39
44	A Robust Damage-Reporting Strategy for Polymeric Materials Enabled by Aggregation-Induced Emission. ACS Central Science, 2016, 2, 598-603.	7.4	143
45	Malleable and Recyclable Poly(urea-urethane) Thermosets bearing Hindered Urea Bonds. Advanced Materials, 2016, 28, 7646-7651.	17.5	418
46	Effect of Mechanical Stress on Spiropyran-Merocyanine Reaction Kinetics in a Thermoplastic Polymer. ACS Macro Letters, 2016, 5, 1312-1316.	3.2	52
47	Characterization of core-shell microstructure and self-healing performance of electrospun fiber coatings. Polymer, 2016, 107, 263-272.	3.4	77
48	Active Cooling of a Microvascular Shape Memory Alloy-Polymer Matrix Composite Hybrid Material. Advanced Engineering Materials, 2016, 18, 1145-1153.	2.2	22
49	Autonomous Indication of Mechanical Damage in Polymeric Coatings. Advanced Materials, 2016, 28, 2189-2194.	17.5	146
50	Biomimetische Selbstheilung. Angewandte Chemie, 2015, 127, 10572-10593.	0.9	34
51	Thermally Triggered Degradation of Transient Electronic Devices. Advanced Materials, 2015, 27, 3783-3788.	17.5	183
52	Biomimetic Self-Healing. Angewandte Chemie - International Edition, 2015, 54, 10428-10447.	11.6	448
53	Retention of mechanical performance of polymer matrix composites above the glass transition temperature by vascular cooling. Composites Part A: Applied Science and Manufacturing, 2015, 78, 412-423.	6.0	30
54	Repeatable self-healing of an epoxy matrix using imidazole initiated polymerization. Polymer, 2015, 67, 174-184.	3.4	53

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55	Autonomic healing of PMMA via microencapsulated solvent. Polymer, 2015, 69, 241-248.	3.4	35
56	Core–Shell Polymeric Microcapsules with Superior Thermal and Solvent Stability. ACS Applied Materials & Interfaces, 2015, 7, 10952-10956.	5.5	101
57	Multidimensional Vascularized Polymers using Degradable Sacrificial Templates. Advanced Functional Materials, 2015, 25, 1043-1052.	11.9	65
58	Autonomic Healing of Acrylic Bone Cement. Advanced Healthcare Materials, 2015, 4, 202-207.	6.6	23
59	Deformation of Lithium-Ion Battery Anodes during SEI Formation: a Probe for the Structure of the SEI. ECS Meeting Abstracts, 2015, MA2015-01, 228-228.	0.0	1
60	Thermally Stable Autonomic Healing in Epoxy using a Dual-Microcapsule System. Advanced Materials, 2014, 26, 282-287.	17.5	207
61	A self-healing biomaterial based on free-radical polymerization. Journal of Biomedical Materials Research - Part A, 2014, 102, 3024-3032.	2.8	37
62	Continuous Self-Healing Life Cycle in Vascularized Structural Composites. Advanced Materials, 2014, 26, 4302-4308.	17.5	243
63	Modeling mechanophore activation within a viscous rubbery network. Journal of the Mechanics and Physics of Solids, 2014, 63, 141-153.	4.7	61
64	Tensile properties and damage evolution in vascular 3D woven glass/epoxy composites. Composites Part A: Applied Science and Manufacturing, 2014, 59, 9-17.	6.0	70
65	Rapid Stiffening of a Microfluidic Endoskeleton via Frontal Polymerization. ACS Applied Materials & Interfaces, 2014, 6, 18469-18474.	5.5	38
66	Triggered Transience of Metastable Poly(phthalaldehyde) for Transient Electronics. Advanced Materials, 2014, 26, 7637-7642.	17.5	200
67	Structural reinforcement of microvascular networks using electrostatic layer-by-layer assembly with halloysite nanotubes. Soft Matter, 2014, 10, 544-548.	1.9	36
68	Enhanced autonomic shutdown of Li-ion batteries by polydopamine coated polyethylene microspheres. Journal of Power Sources, 2014, 269, 735-739.	6.1	44
69	Fracture-induced activation in mechanophore-linked, rubber toughened PMMA. Polymer, 2014, 55, 4164-4171.	3.4	93
70	Microencapsulation of gallium–indium (Ga–In) liquid metal for self-healing applications. Journal of Microencapsulation, 2014, 31, 350-354.	2.2	63
71	The Effect of Polymer Chain Alignment and Relaxation on Force-Induced Chemical Reactions in an Elastomer. Advanced Functional Materials, 2014, 24, 1529-1537.	11.9	104
72	Microencapsulated Carbon Black Suspensions for Restoration of Electrical Conductivity. Advanced Functional Materials, 2014, 24, 2947-2956.	11.9	46

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73	In Situ Measurements of Strains in Composite Battery Electrodes during Electrochemical Cycling. Experimental Mechanics, 2014, 54, 971-985.	1.9	173
74	Mechanically triggered heterolytic unzipping of a low-ceiling-temperature polymer. Nature Chemistry, 2014, 6, 623-628.	15.5	244
75	Autonomic Healing of Carbon Fiber/Epoxy Interfaces. ACS Applied Materials & Interfaces, 2014, 6, 6033-6039.	5.5	80
76	Simultaneous Observation of Phase-Stepped Images for Photoelasticity Using Diffraction Gratings. Experimental Mechanics, 2013, 53, 1343-1355.	1.9	11
77	Microfluidically Switched Frequency-Reconfigurable Slot Antennas. IEEE Antennas and Wireless Propagation Letters, 2013, 12, 828-831.	3.2	61
78	Computational analysis of actively-cooled 3D woven microvascular composites using a stabilized interface-enriched generalized finite element method. International Journal of Heat and Mass Transfer, 2013, 65, 153-164.	4.9	46
79	Fracture behavior of a self-healing, toughened epoxy adhesive. International Journal of Adhesion and Adhesives, 2013, 44, 157-165.	2.8	110
80	Multi-physics optimization of three-dimensional microvascular polymeric components. Journal of Computational Physics, 2013, 233, 132-147.	2.9	33
81	Time-Dependent Mechanochemical Response of SP-Cross-Linked PMMA. Macromolecules, 2013, 46, 8917-8921.	3.7	66
82	Self-sealing of mechanical damage in a fully cured structural composite. Composites Science and Technology, 2013, 79, 15-20.	7.0	48
83	Modeling mechanophore activation within a crosslinked glassy matrix. Journal of Applied Physics, 2013, 114, .	1.6	62
84	Pressurized vascular systems for self-healing materials. Journal of the Royal Society Interface, 2012, 9, 1020-1028.	2.1	92
85	Autonomic restoration of electrical conductivity using polymer-stabilized carbon nanotube and graphene microcapsules. Applied Physics Letters, 2012, 101, 043106.	2.3	56
86	Chemical Treatment of Poly(lactic acid) Fibers to Enhance the Rate of Thermal Depolymerization. ACS Applied Materials & Interfaces, 2012, 4, 503-509.	5.5	59
87	Role of Mechanophore Orientation in Mechanochemical Reactions. ACS Macro Letters, 2012, 1, 163-166.	3.2	119
88	Room-Temperature Polydimethylsiloxane-Based Self-Healing Polymers. Chemistry of Materials, 2012, 24, 4209-4214.	4.6	61
89	A Self-healing Conductive Ink. Advanced Materials, 2012, 24, 2578-2581.	17.5	155
90	Proton-Coupled Mechanochemical Transduction: A Mechanogenerated Acid. Journal of the American Chemical Society, 2012, 134, 12446-12449.	11.7	236

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91	Autonomic Shutdown of Lithium-Ion Batteries Using Thermoresponsive Microspheres. Advanced Energy Materials, 2012, 2, 583-590.	16.3	203
92	Computational modeling and design of actively-cooled microvascular materials. International Journal of Heat and Mass Transfer, 2012, 55, 5309-5321.	4.9	44
93	Self-healing thermoset using encapsulated epoxy-amine healing chemistry. Polymer, 2012, 53, 581-587.	3.4	342
94	Autonomic Restoration of Electrical Conductivity. Advanced Materials, 2012, 24, 398-401.	17.5	314
95	Autonomic Healing of Polymers. MRS Bulletin, 2011, 33, 766-769.	3.5	71
96	Environmental effects on mechanochemical activation of spiropyran in linear PMMA. Journal of Materials Chemistry, 2011, 21, 8443.	7.3	156
97	Adhesion Promotion via Noncovalent Interactions in Self-Healing Polymers. ACS Applied Materials & Interfaces, 2011, 3, 3072-3077.	5.5	42
98	Shear activation of mechanophore-crosslinked polymers. Journal of Materials Chemistry, 2011, 21, 8381.	7.3	185
99	Visual Indication of Mechanical Damage Using Core–Shell Microcapsules. ACS Applied Materials & Interfaces, 2011, 3, 4547-4551.	5.5	64
100	Accelerated Self-Healing Via Ternary Interpenetrating Microvascular Networks. Advanced Functional Materials, 2011, 21, 4320-4326.	11.9	97
101	Three-Dimensional Microvascular Fiber-Reinforced Composites. Advanced Materials, 2011, 23, 3654-3658.	17.5	223
102	Structural health management technologies for inflatable/deployable structures: Integrating sensing and self-healing. Acta Astronautica, 2011, 68, 883-903.	2.6	65
103	Multi-physics design of microvascular materials for active cooling applications. Journal of Computational Physics, 2011, 230, 5178-5198.	2.9	19
104	Fracture and fatigue response of a self-healing epoxy adhesive. Polymer, 2011, 52, 1628-1634.	3.4	132
105	Restoration of Conductivity with TTF-TCNQ Charge-Transfer Salts. Advanced Functional Materials, 2010, 20, 1721-1727.	11.9	140
106	Autonomic Recovery of Fiber/Matrix Interfacial Bond Strength in a Model Composite. Advanced Functional Materials, 2010, 20, 3547-3554.	11.9	72
107	Self-Healing of Internal Damage in Synthetic Vascular Materials. Advanced Materials, 2010, 22, 5159-5163.	17.5	193
108	Evaluation of peroxide initiators for radical polymerization-based self-healing applications. Journal of Polymer Science Part A, 2010, 48, 2698-2708.	2.3	70

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109	Characterization of Active Cooling and Flow Distribution in Microvascular Polymers. Journal of Intelligent Material Systems and Structures, 2010, 21, 1147-1156.	1.7	38
110	A Self-sealing Fiber-reinforced Composite. Journal of Composite Materials, 2010, 44, 2573-2585.	1.7	68
111	Force-Induced Redistribution of a Chemical Equilibrium. Journal of the American Chemical Society, 2010, 132, 16107-16111.	11.7	256
112	Direct-write assembly of biomimetic microvascular networks for efficient fluid transport. Soft Matter, 2010, 6, 739-742.	1.9	116
113	Autonomic healing of low-velocity impact damage in fiber-reinforced composites. Composites Part A: Applied Science and Manufacturing, 2010, 41, 360-368.	6.0	192
114	Robust, Double-Walled Microcapsules for Self-Healing Polymeric Materials. ACS Applied Materials & Interfaces, 2010, 2, 1195-1199.	5.5	228
115	Programmable Microcapsules from Self-Immolative Polymers. Journal of the American Chemical Society, 2010, 132, 10266-10268.	11.7	202
116	Microencapsulation of a Reactive Liquid-Phase Amine for Self-Healing Epoxy Composites. Macromolecules, 2010, 43, 1855-1859.	3.7	171
117	Masked Cyanoacrylates Unveiled by Mechanical Force. Journal of the American Chemical Society, 2010, 132, 4558-4559.	11.7	162
118	Delivery of Two-Part Self-Healing Chemistry via Microvascular Networks. Advanced Functional Materials, 2009, 19, 1399-1405.	11.9	293
119	Self-Healing Polymer Coatings. Advanced Materials, 2009, 21, 645-649.	17.5	768
120	Self-Healing Materials with Interpenetrating Microvascular Networks. Advanced Materials, 2009, 21, 4143-4147.	17.5	417
121	Stability of Second Generation Grubbs' Alkylidenes to Primary Amines: Formation of Novel Ruthenium-Amine Complexes. Advanced Synthesis and Catalysis, 2009, 351, 1817-1825.	2.5	74
122	Force-induced activation of covalent bonds in mechanoresponsive polymeric materials. Nature, 2009, 459, 68-72.	30.7	1,736
123	Mechanically-Induced Chemical Changes in Polymeric Materials. Chemical Reviews, 2009, 109, 5755-5798.	42.5	1,349
124	Local Strain Concentrations in a Microvascular Network. Experimental Mechanics, 2009, 50, 255-263.	1.9	30
125	Embedded Shape-Memory Alloy Wires for Improved Performance of Self-Healing Polymers. Advanced Functional Materials, 2008, 18, 2253-2260.	11.9	204
126	Full Recovery of Fracture Toughness Using a Nontoxic Solvent-Based Self-Healing System. Advanced Functional Materials, 2008, 18, 1898-1904.	11.9	264

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127	Design of microvascular flow networks using multi-objective genetic algorithms. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 4399-4410.	5.6	66
128	Evaluation of Ruthenium Catalysts for Ring-Opening Metathesis Polymerization-Based Self-Healing Applications. Chemistry of Materials, 2008, 20, 3288-3297.	4.6	143
129	A new self-healing epoxy with tungsten (VI) chloride catalyst. Journal of the Royal Society Interface, 2008, 5, 95-103.	2.1	150
130	Microencapsulation of Isocyanates for Self-Healing Polymers. Macromolecules, 2008, 41, 9650-9655.	3.7	461
131	Peripherally decorated binary microcapsules containing two liquids. Journal of Materials Chemistry, 2008, 18, 5390.	7.3	57
132	Characterization of Microvascular-Based Self-healing Coatings. Experimental Mechanics, 2008, 49, 707-717.	1.9	129
133	Mechanophore-Linked Addition Polymers. Journal of the American Chemical Society, 2007, 129, 13808-13809.	11.7	400
134	Solvent-Promoted Self-Healing Epoxy Materials. Macromolecules, 2007, 40, 8830-8832.	3.7	285
135	Self-healing kinetics and the stereoisomers of dicyclopentadiene. Journal of the Royal Society Interface, 2007, 4, 389-393.	2.1	114
136	Rheological Behavior of Fugitive Organic Inks for Direct-Write Assembly. Applied Rheology, 2007, 17, 10112-1-10112-8.	1.2	62
137	A Self-Healing Poly(Dimethyl Siloxane) Elastomer. Advanced Functional Materials, 2007, 17, 2399-2404.	11.9	395
138	Effect of microcapsule size on the performance of self-healing polymers. Polymer, 2007, 48, 3520-3529.	3.4	480
139	Self-healing materials with microvascular networks. Nature Materials, 2007, 6, 581-585.	23.7	1,578
140	Biasing reaction pathways with mechanical force. Nature, 2007, 446, 423-427.	30.7	842
141	Catalyst Morphology and Dissolution Kinetics of Self-Healing Polymers. Chemistry of Materials, 2006, 18, 1312-1317.	4.6	208
142	Fracture and Fatigue Behavior of a Self-Healing Polymer Composite. Materials Research Society Symposia Proceedings, 2003, 735, .	0.1	11
143	Chaotic mixing in three-dimensional microvascular networks fabricated by direct-write assembly. Nature Materials, 2003, 2, 265-271.	23.7	670
144	Continuous Curing and Induced Thermal Stresses of a Thick Filament Wound Composite Cylinder. Journal of Reinforced Plastics and Composites, 2001, 20, 166-180.	1.6	17

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145	PROCESS-INDUCED RESIDUAL STRESS ANALYSIS OF AS4/3501-6 COMPOSITE MATERIAL. Mechanics of Advanced Materials and Structures, 1998, 5, 153-186.	2.8	184
146	CURE-DEPENDENT VISCOELASTIC RESIDUAL STRESS ANALYSIS OF FILAMENT-WOUND COMPOSITE CYLINDERS. Mechanics of Advanced Materials and Structures, 1998, 5, 327-354.	2.8	28
147	VISCOELASTIC ANALYSIS OF PROCESSING-INDUCED RESIDUAL STRESSES IN THICK COMPOSITE LAMINATES. Mechanics of Advanced Materials and Structures, 1997, 4, 361-387.	2.8	103
148	The Continuous Curing Process for Thermoset Polymer Composites. Part 2: Experimental Results for a Graphite/Epoxy Laminate. Journal of Composite Materials, 1996, 30, 627-647.	1.7	13
149	The Continuous Cuing Process for Thermoset Polymer Composites. Part 1: Modeling and Demonstration. Journal of Composite Materials, 1995, 29, 1222-1253.	1.7	76
150	Anastomotic intimal hyperplasia: Mechanical injury or flow induced. Journal of Vascular Surgery, 1992, 15, 708-717.	1.2	380