Nancy R Sottos

List of Publications by Citations

267 papers	26,749 citations	76 h-index	160 g-index
286 ext. papers	29,523 ext. citations	9.6 avg, IF	7.14 L-index

#	Paper	IF	Citations
267	Autonomic healing of polymer composites. *Nature*, **2001**, 409, 794-7	50.4	3147
266	Force-induced activation of covalent bonds in mechanoresponsive polymeric materials. *Nature*, **2009**, 459, 68-72	50.4	1211
265	Self-healing materials with microvascular networks. *Nature Materials*, **2007**, 6, 581-5	27	1198
264	Self-Healing Polymers and Composites. *Annual Review of Materials Research*, **2010**, 40, 179-211	12.8	990
263	Mechanically-induced chemical changes in polymeric materials. *Chemical Reviews*, **2009**, 109, 5755-98	68.1	969
262	Biasing reaction pathways with mechanical force. *Nature*, **2007**, 446, 423-7	50.4	611
261	In situ poly(urea-formaldehyde) microencapsulation of dicyclopentadiene. *Journal of Microencapsulation*, **2003**, 20, 719-730	3.4	581
260	Self-healing structural composite materials. *Composites Part A: Applied Science and Manufacturing*, **2003**, 34, 743-753	8.4	572
259	Microcapsule induced toughening in a self-healing polymer composite. *Journal of Materials Science*, **2004**, 39, 1703-1710	4.3	522
258	Fracture testing of a self-healing polymer composite. *Experimental Mechanics*, **2002**, 42, 372-379	2.6	511
257	Triggered Release from Polymer Capsules. *Macromolecules*, **2011**, 44, 5539-5553	5.5	487
256	Effects of chemical bonding on heat transport across interfaces. *Nature Materials*, **2012**, 11, 502-6	27	458
255	Effect of microcapsule size on the performance of self-healing polymers. *Polymer*, **2007**, 48, 3520-3529	3.9	374
254	Microencapsulation of Isocyanates for Self-Healing Polymers. *Macromolecules*, **2008**, 41, 9650-9655	5.5	358
253	In situ poly(urea-formaldehyde) microencapsulation of dicyclopentadiene. *Journal of Microencapsulation*, **2003**, 20, 719-30	3.4	339
252	Microcapsules filled with reactive solutions for self-healing materials. *Polymer*, **2009**, 50, 990-997	3.9	334
251	Nanocapsules for self-healing materials. *Composites Science and Technology*, **2008**, 68, 978-986	8.6	332

250	Wax-Protected Catalyst Microspheres for Efficient Self-Healing Materials. *Advanced Materials*, **2005**, 17, 205-208	24	332
249	Self-Healing Materials with Interpenetrating Microvascular Networks. *Advanced Materials*, **2009**, 21, 4143-4147	24	305
248	Mechanophore-linked addition polymers. *Journal of the American Chemical Society*, **2007**, 129, 13808-9	16.4	296
247	Biomimetic Self-Healing. *Angewandte Chemie - International Edition*, **2015**, 54, 10428-47	16.4	271
246	Self-healing thermoset using encapsulated epoxy-amine healing chemistry. *Polymer*, **2012**, 53, 581-587	3.9	267
245	Solvent-Promoted Self-Healing Epoxy Materials. *Macromolecules*, **2007**, 40, 8830-8832	5.5	245
244	Autonomic restoration of electrical conductivity. *Advanced Materials*, **2012**, 24, 398-401	24	243
243	Delivery of Two-Part Self-Healing Chemistry via Microvascular Networks. *Advanced Functional Materials*, **2009**, 19, 1399-1405	15.6	233
242	Malleable and Recyclable Poly(urea-urethane) Thermosets bearing Hindered Urea Bonds. *Advanced Materials*, **2016**, 28, 7646-51	24	230
241	Full Recovery of Fracture Toughness Using a Nontoxic Solvent-Based Self-Healing System. *Advanced Functional Materials*, **2008**, 18, 1898-1904	15.6	218
240	Polymers with autonomous life-cycle control. *Nature*, **2016**, 540, 363-370	50.4	215
239	Force-induced redistribution of a chemical equilibrium. *Journal of the American Chemical Society*, **2010**, 132, 16107-11	16.4	213
238	Restoration of large damage volumes in polymers. *Science*, **2014**, 344, 620-3	33.3	198
237	Retardation and repair of fatigue cracks in a microcapsule toughened epoxy composite Part I: Manual infiltration. *Composites Science and Technology*, **2005**, 65, 2466-2473	8.6	190
236	Mechanical Properties of Microcapsules Used in a Self-Healing Polymer. *Experimental Mechanics*, **2006**, 46, 725-733	2.6	179
235	Three-dimensional microvascular fiber-reinforced composites. *Advanced Materials*, **2011**, 23, 3654-8	24	178
234	Catalyst Morphology and Dissolution Kinetics of Self-Healing Polymers. *Chemistry of Materials*, **2006**, 18, 1312-1317	9.6	176
233	Robust, double-walled microcapsules for self-healing polymeric materials. *ACS Applied Materials & Interfaces*, **2010**, 2, 1195-9	9.5	173

232	Programmable microcapsules from self-immolative polymers. *Journal of the American Chemical Society*, **2010**, 132, 10266-8	16.4	172
231	Embedded Shape-Memory Alloy Wires for Improved Performance of Self-Healing Polymers. *Advanced Functional Materials*, **2008**, 18, 2253-2260	15.6	172
230	Continuous self-healing life cycle in vascularized structural composites. *Advanced Materials*, **2014**, 26, 4302-8	24	167
229	Micro- and Nanoscale Deformation Measurement of Surface and Internal Planes via Digital Image Correlation. *Experimental Mechanics*, **2007**, 47, 51-62	2.6	166
228	Proton-coupled mechanochemical transduction: a mechanogenerated acid. *Journal of the American Chemical Society*, **2012**, 134, 12446-9	16.4	163
227	Rapid energy-efficient manufacturing of polymers and composites via frontal polymerization. *Nature*, **2018**, 557, 223-227	50.4	161
226	Thermally stable autonomic healing in epoxy using a dual-microcapsule system. *Advanced Materials*, **2014**, 26, 282-7	24	156
225	Performance of self-healing epoxy with microencapsulated healing agent and shape memory alloy wires. *Polymer*, **2009**, 50, 5533-5538	3.9	151
224	Self-healing of internal damage in synthetic vascular materials. *Advanced Materials*, **2010**, 22, 5159-63	24	150
223	Life extension of self-healing polymers with rapidly growing fatigue cracks. *Journal of the Royal Society Interface*, **2007**, 4, 395-403	4.1	147
222	Shear activation of mechanophore-crosslinked polymers. *Journal of Materials Chemistry*, **2011**, 21, 8381		141
221	Microencapsulation of a Reactive Liquid-Phase Amine for Self-Healing Epoxy Composites. *Macromolecules*, **2010**, 43, 1855-1859	5.5	141
220	Triggered transience of metastable poly(phthalaldehyde) for transient electronics. *Advanced Materials*, **2014**, 26, 7637-42	24	139
219	Autonomic healing of low-velocity impact damage in fiber-reinforced composites. *Composites Part A: Applied Science and Manufacturing*, **2010**, 41, 360-368	8.4	137
218	A self-healing conductive ink. *Advanced Materials*, **2012**, 24, 2578-81, 2509	24	135
217	Masked cyanoacrylates unveiled by mechanical force. *Journal of the American Chemical Society*, **2010**, 132, 4558-9	16.4	134
216	Autonomic Shutdown of Lithium-Ion Batteries Using Thermoresponsive Microspheres. *Advanced Energy Materials*, **2012**, 2, 583-590	21.8	130
215	A new self-healing epoxy with tungsten (VI) chloride catalyst. *Journal of the Royal Society Interface*, **2008**, 5, 95-103	4.1	127

214	Effects of thickness on the piezoelectric and dielectric properties of lead zirconate titanate thin films. *Journal of Applied Physics*, **2000**, 87, 3941-3949	2.5	126
213	Evaluation of Ruthenium Catalysts for Ring-Opening Metathesis Polymerization-Based Self-Healing Applications. *Chemistry of Materials*, **2008**, 20, 3288-3297	9.6	125
212	Thermally triggered degradation of transient electronic devices. *Advanced Materials*, **2015**, 27, 3783-8	24	122
211	Regioisomer-Specific Mechanochromism of Naphthopyran in Polymeric Materials. *Journal of the American Chemical Society*, **2016**, 138, 12328-31	16.4	117
210	Environmental effects on mechanochemical activation of spiropyran in linear PMMA. *Journal of Materials Chemistry*, **2011**, 21, 8443		115
209	Restoration of Conductivity with TTF-TCNQ Charge-Transfer Salts. *Advanced Functional Materials*, **2010**, 20, 1721-1727	15.6	114
208	Fatigue crack propagation in microcapsule-toughened epoxy. *Journal of Materials Science*, **2006**, 41, 6266-6273	4.5	112
207	In Situ Measurements of Strains in Composite Battery Electrodes during Electrochemical Cycling. *Experimental Mechanics*, **2014**, 54, 971-985	2.6	111
206	Exploiting Force Sensitive Spiropyrans as Molecular Level Probes. *Macromolecules*, **2013**, 46, 3746-3752	5.5	109
205	Characterization of Microvascular-Based Self-healing Coatings. *Experimental Mechanics*, **2009**, 49, 707-717	2.6	108
204	Fracture and fatigue response of a self-healing epoxy adhesive. *Polymer*, **2011**, 52, 1628-1634	3.9	96
203	Self-healing kinetics and the stereoisomers of dicyclopentadiene. *Journal of the Royal Society Interface*, **2007**, 4, 389-93	4.1	96
202	Bioinspired Materials for Self-Cleaning and Self-Healing. *MRS Bulletin*, **2008**, 33, 732-741	3.2	93
201	A parametric study of laser induced thin film spallation. *Experimental Mechanics*, **2002**, 42, 74-83	2.6	91
200	Role of Mechanophore Orientation in Mechanochemical Reactions.. *ACS Macro Letters*, **2012**, 1, 163-166	6.6	90
199	A Robust Damage-Reporting Strategy for Polymeric Materials Enabled by Aggregation-Induced Emission. *ACS Central Science*, **2016**, 2, 598-603	16.8	87
198	Electrochemical stiffness in lithium-ion batteries. *Nature Materials*, **2016**, 15, 1182-1187	27	85
197	Torsion fatigue response of self-healing poly(dimethylsiloxane) elastomers. *Polymer*, **2008**, 49, 3136-3145	3.9	84

196	Stress effects in sol-gel derived ferroelectric thin films. *Journal of Applied Physics*, **2004**, 95, 629-634	2.5	82
195	Self-healing of a high temperature cured epoxy using poly(dimethylsiloxane) chemistry. *Polymer*, **2010**, 51, 4063-4068	3.9	81
194	Mechanophore-Functionalized Nanoparticles: Interfacial Force-Focusing Effect in Mechanophore-Linked Nanocomposites (Adv. Sci. 7/2020). *Advanced Science*, **2020**, 7, 2070037	13.6	78
193	Characterizing the mechanochemically active domains in gem-dihalocyclopropanated polybutadiene under compression and tension. *Journal of Materials Chemistry*, **2011**, 21, 8454		78
192	Autonomous Indication of Mechanical Damage in Polymeric Coatings. *Advanced Materials*, **2016**, 28, 2189-94	24	76
191	Fracture behavior of a self-healing, toughened epoxy adhesive. *International Journal of Adhesion and Adhesives*, **2013**, 44, 157-165	3.4	76
190	Accelerated Self-Healing Via Ternary Interpenetrating Microvascular Networks. *Advanced Functional Materials*, **2011**, 21, 4320-4326	15.6	76
189	Mechanical Reactivity of Two Different Spiropyran Mechanophores in Polydimethylsiloxane. *Macromolecules*, **2018**, 51, 9177-9183	5.5	75
188	The Effect of Polymer Chain Alignment and Relaxation on Force-Induced Chemical Reactions in an Elastomer. *Advanced Functional Materials*, **2014**, 24, 1529-1537	15.6	72
187	Cure-dependent Viscoelastic Poisson□ Ratio of Epoxy. *Experimental Mechanics*, **2007**, 47, 237-249	2.6	69
186	Core-shell polymeric microcapsules with superior thermal and solvent stability. *ACS Applied Materials & Interfaces*, **2015**, 7, 10952-6	9.5	68
185	Processing Effects for Integrated PZT: Residual Stress, Thickness, and Dielectric Properties. *Journal of the American Ceramic Society*, **2005**, 88, 2839-2847	3.8	68
184	Microvascular based self-healing polymeric foam. *Polymer*, **2012**, 53, 4231-4240	3.9	66
183	High-affinity DNA base analogs as supramolecular, nanoscale promoters of macroscopic adhesion. *Journal of the American Chemical Society*, **2013**, 135, 7288-95	16.4	66
182	Fracture-induced activation in mechanophore-linked, rubber toughened PMMA. *Polymer*, **2014**, 55, 4164-4171	3.9	65
181	Local displacements and load transfer in shape memory alloy composites. *Experimental Mechanics*, **1997**, 37, 78-86	2.6	65
180	Silica-protected micron and sub-micron capsules and particles for self-healing at the microscale. *Macromolecular Rapid Communications*, **2011**, 32, 82-7	4.8	64
179	Introduction: self-healing polymers and composites. *Journal of the Royal Society Interface*, **2007**, 4, 347-8	4.1	63

178	Pressurized vascular systems for self-healing materials. *Journal of the Royal Society Interface*, **2012**, 9, 1020-8	4.1	62
177	Shockwave loading of mechanochemically active polymer coatings. *ACS Applied Materials & Interfaces*, **2014**, 6, 5350-5	9.5	61
176	Simulation of fiber debonding with friction in a model composite pushout test. *International Journal of Solids and Structures*, **2001**, 38, 8547-8562	3.1	61
175	Autonomic healing of carbon fiber/epoxy interfaces. *ACS Applied Materials & Interfaces*, **2014**, 6, 6033-9	9.5	58
174	Polymer Microvascular Network Composites. *Journal of Composite Materials*, **2010**, 44, 2587-2603	2.7	58
173	Autonomic Recovery of Fiber/Matrix Interfacial Bond Strength in a Model Composite. *Advanced Functional Materials*, **2010**, 20, 3547-3554	15.6	58
172	Self-healing flexible laminates for resealing of puncture damage. *Smart Materials and Structures*, **2009**, 18, 085001	3.4	57
171	Light-triggered thermal conductivity switching in azobenzene polymers. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 5973-5978	11.5	56
170	Evaluation of peroxide initiators for radical polymerization-based self-healing applications. *Journal of Polymer Science Part A*, **2010**, 48, 2698-2708	2.5	55
169	Fluorescent image correlation for nanoscale deformation measurements. *Small*, **2006**, 2, 631-5	11	55
168	Time-Dependent Mechanochemical Response of SP-Cross-Linked PMMA. *Macromolecules*, **2013**, 46, 8917-8921	5.9	53
167	A Self-sealing Fiber-reinforced Composite. *Journal of Composite Materials*, **2010**, 44, 2573-2585	2.7	53
166	Tensile properties and damage evolution in vascular 3D woven glass/epoxy composites. *Composites Part A: Applied Science and Manufacturing*, **2014**, 59, 9-17	8.4	52
165	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	8.4	52
164	Chemical treatment of poly(lactic acid) fibers to enhance the rate of thermal depolymerization. *ACS Applied Materials & Interfaces*, **2012**, 4, 503-9	9.5	51
163	Multidimensional Vascularized Polymers using Degradable Sacrificial Templates. *Advanced Functional Materials*, **2015**, 25, 1043-1052	15.6	48
162	Microencapsulation of gallium-indium (Ga-In) liquid metal for self-healing applications. *Journal of Microencapsulation*, **2014**, 31, 350-4	3.4	48
161	Visual indication of mechanical damage using core-shell microcapsules. *ACS Applied Materials & Interfaces*, **2011**, 3, 4547-51	9.5	48

160	Alkyl Phosphite Inhibitors for Frontal Ring-Opening Metathesis Polymerization Greatly Increase Pot Life. *ACS Macro Letters*, **2017**, 6, 609-612	6.6	47
159	Microfluidically Switched Frequency-Reconfigurable Slot Antennas. *IEEE Antennas and Wireless Propagation Letters*, **2013**, 12, 828-831	3.8	47
158	Full recovery of fiber/matrix interfacial bond strength using a microencapsulated solvent-based healing system. *Composites Science and Technology*, **2013**, 79, 1-7	8.6	47
157	Peripherally decorated binary microcapsules containing two liquids. *Journal of Materials Chemistry*, **2008**, 18, 5390		45
156	Characterization of core-shell microstructure and self-healing performance of electrospun fiber coatings. *Polymer*, **2016**, 107, 263-272	3.9	44
155	Autonomic restoration of electrical conductivity using polymer-stabilized carbon nanotube and graphene microcapsules. *Applied Physics Letters*, **2012**, 101, 043106	3.4	44
154	Tensile and mixed-mode strength of a thin film-substrate interface under laser induced pulse loading. *Journal of the Mechanics and Physics of Solids*, **2004**, 52, 999-1022	5	44
153	Adhesion strength measurement of polymer dielectric interfaces using laser spallation technique. *Thin Solid Films*, **2008**, 516, 7627-7635	2.2	43
152	Modeling mechanophore activation within a viscous rubbery network. *Journal of the Mechanics and Physics of Solids*, **2014**, 63, 141-153	5	42
151	Self-healing thermoplastic-toughened epoxy. *Polymer*, **2015**, 74, 254-261	3.9	41
150	Repeatable self-healing of an epoxy matrix using imidazole initiated polymerization. *Polymer*, **2015**, 67, 174-184	3.9	41
149	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	41
148	Laser-induced decompression shock development in fused silica. *Journal of Applied Physics*, **2003**, 93, 9529-9536	2.5	38
147	Application of debond length measurements to examine the mechanics of fiber pushout. *Journal of the Mechanics and Physics of Solids*, **1998**, 46, 1675-1697	5	37
146	Computational modeling and design of actively-cooled microvascular materials. *International Journal of Heat and Mass Transfer*, **2012**, 55, 5309-5321	4.9	36
145	Self-sealing of mechanical damage in a fully cured structural composite. *Composites Science and Technology*, **2013**, 79, 15-20	8.6	36
144	Structural health management technologies for inflatable/deployable structures: Integrating sensing and self-healing. *Acta Astronautica*, **2011**, 68, 883-903	2.9	36
143	Effect of surface treatment on the hydrolytic stability of E-glass fiber bundle tensile strength. *Composites Science and Technology*, **2005**, 65, 129-136	8.6	36

142	Self-healing Polymers and Composites. *American Scientist*, **2011**, 99, 392	2.7	36
141	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	8.4	35
140	Thermally Induced Interfacial Microcracking in Polymer Matrix Composites. *Journal of Composite Materials*, **1993**, 27, 1030-1051	2.7	35
139	Restoration of Impact Damage in Polymers via a Hybrid Microcapsule/Microvascular Self-Healing System. *Advanced Functional Materials*, **2018**, 28, 1704197	15.6	34
138	Cyclic Poly(phthalaldehyde): Thermoforming a Bulk Transient Material. *ACS Macro Letters*, **2018**, 7, 47-52	6.6	33
137	Adhesion promotion via noncovalent interactions in self-healing polymers. *ACS Applied Materials & Interfaces*, **2011**, 3, 3072-7	9.5	33
136	Three-dimensional viscoelastic simulation of woven composite substrates for multilayer circuit boards. *Composites Science and Technology*, **2003**, 63, 1971-1983	8.6	32
135	Silicon Composite Electrodes with Dynamic Ionic Bonding. *Advanced Energy Materials*, **2017**, 7, 1700045	21.8	31
134	Spatially Selective and Density-Controlled Activation of Interfacial Mechanophores. *Journal of the American Chemical Society*, **2019**, 141, 4080-4085	16.4	31
133	Reversible and Irreversible Deformation Mechanisms of Composite Graphite Electrodes in Lithium-Ion Batteries. *Journal of the Electrochemical Society*, **2016**, 163, A1965-A1974	3.9	31
132	Microencapsulated Carbon Black Suspensions for Restoration of Electrical Conductivity. *Advanced Functional Materials*, **2014**, 24, 2947-2956	15.6	31
131	The influence of interphase regions on local thermal displacements in composites. *Composites Science and Technology*, **1992**, 44, 319-332	8.6	31
130	Fully Recyclable Metastable Polymers and Composites. *Chemistry of Materials*, **2019**, 31, 398-406	9.6	31
129	Effect of Mechanical Stress on Spiropyran-Merocyanine Reaction Kinetics in a Thermoplastic Polymer. *ACS Macro Letters*, **2016**, 5, 1312-1316	6.6	30
128	Interfacial adhesion of photodefinable polyimide films on passivated silicon. *Thin Solid Films*, **2014**, 552, 116-123	2.2	29
127	Improving hydrostatic performance of 1-3 piezocomposites. *Journal of Applied Physics*, **1995**, 77, 4595-4603	2.5	29
126	Fast, reversible mechanochromism of regioisomeric oxazine mechanophores: Developing in situ responsive force probes for polymeric materials. *CheM*, **2021**, 7, 1080-1091	16.2	28
125	Enhanced autonomic shutdown of Li-ion batteries by polydopamine coated polyethylene microspheres. *Journal of Power Sources*, **2014**, 269, 735-739	8.9	27

124	Polymer mechanochemistry: Flex, release and repeat. *Nature Chemistry*, **2014**, 6, 381-3	17.6	27
123	Sol–gel derived Pb(Zr,Ti)O3 thin films: Residual stress and electrical properties. *Journal of the European Ceramic Society*, **2005**, 25, 2247-2251	6	27
122	Interfacial Mechanophore Activation Using Laser-Induced Stress Waves. *Journal of the American Chemical Society*, **2018**, 140, 5000-5003	16.4	26
121	Structural reinforcement of microvascular networks using electrostatic layer-by-layer assembly with halloysite nanotubes. *Soft Matter*, **2014**, 10, 544-8	3.6	26
120	Mixed-mode failure of thin films using laser-generated shear waves. *Experimental Mechanics*, **2003**, 43, 323-330	2.6	26
119	Local Strain Concentrations in a Microvascular Network. *Experimental Mechanics*, **2010**, 50, 255-263	2.6	25
118	Transformation of Embedded Shape Memory Alloy Ribbons. *Journal of Intelligent Material Systems and Structures*, **1998**, 9, 379-390	2.3	25
117	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	8.4	24
116	Autonomic healing of PMMA via microencapsulated solvent. *Polymer*, **2015**, 69, 241-248	3.9	24
115	Dynamic delamination of patterned thin films. *Applied Physics Letters*, **2008**, 93, 261902	3.4	24
114	Robust sacrificial polymer templates for 3D interconnected microvasculature in fiber-reinforced composites. *Composites Part A: Applied Science and Manufacturing*, **2017**, 100, 361-370	8.4	23
113	Mitigation of fatigue damage in self-healing vascular materials. *Polymer*, **2012**, 53, 5575-5581	3.9	23
112	Creep and relaxation behavior of woven glass/epoxy substrates for multilayer circuit board applications. *Polymer Composites*, **1998**, 19, 567-578	3	23
111	Autonomous Damage Detection in Multilayered Coatings via Integrated Aggregation-Induced Emission Luminogens. *ACS Applied Materials & Interfaces*, **2018**, 10, 40361-40365	9.5	23
110	A comparison of calculated and measured debond lengths from fiber push-out tests. *Composites Science and Technology*, **1998**, 58, 1727-1739	8.6	22
109	Viscoelastic response of woven composite substrates. *Composites Science and Technology*, **2005**, 65, 621-634	8.6	22
108	Low-Ceiling-Temperature Polymer Microcapsules with Hydrophobic Payloads via Rapid Emulsion-Solvent Evaporation. *ACS Applied Materials & Interfaces*, **2017**, 9, 20115-20123	9.5	21
107	Biomimetische Selbstheilung. *Angewandte Chemie*, **2015**, 127, 10572-10593	3.6	21

106	Hybrid spectral/finite element analysis of dynamic delamination of patterned thin films. *Engineering Fracture Mechanics*, **2008**, 75, 4217-4233	4.2	21
105	Rapid Synthesis of Elastomers and Thermosets with Tunable Thermomechanical Properties. *ACS Macro Letters*, **2020**, 9, 819-824	6.6	21
104	Frontal polymerization of unidirectional carbon-fiber-reinforced composites. *Composites Part A: Applied Science and Manufacturing*, **2020**, 130, 105689	8.4	21
103	Strain Evolution in Lithium Manganese Oxide Electrodes. *Experimental Mechanics*, **2018**, 58, 561-571	2.6	20
102	Digital Image Correlation for Improved Detection of Basal Cell Carcinoma. *Experimental Mechanics*, **2010**, 50, 813-824	2.6	20
101	Self-Protecting Epoxy Coatings with Anticorrosion Microcapsules. *ACS Omega*, **2018**, 3, 14157-14164	3.9	20
100	Molecular tailoring of interfacial failure. *Langmuir*, **2014**, 30, 11096-102	4	19
99	A NURBS-based interface-enriched generalized finite element method for problems with complex discontinuous gradient fields. *International Journal for Numerical Methods in Engineering*, **2015**, 101, 950-964	2.4	19
98	Electrochemical Stiffness Changes in Lithium Manganese Oxide Electrodes. *Advanced Energy Materials*, **2017**, 7, 1601778	21.8	18
97	Self-healing of fatigue damage in cross-ply glass/epoxy laminates. *Composites Science and Technology*, **2019**, 175, 122-127	8.6	18
96	Dynamic delamination of patterned thin films: a numerical study. *International Journal of Fracture*, **2010**, 162, 77-90	2.3	18
95	Relationship Between Interphase Composition, Material Properties, and Residual Thermal Stresses in Composite Materials **1995**, 52, 101-113		18
94	Damage-Responsive Microcapsules for Amplified Photoacoustic Detection of Microcracks in Polymers. *Chemistry of Materials*, **2018**, 30, 2198-2202	9.6	17
93	Active Cooling of a Microvascular Shape Memory Alloy-Polymer Matrix Composite Hybrid Material . *Advanced Engineering Materials*, **2016**, 18, 1145-1153	3.5	17
92	Autonomic healing of acrylic bone cement. *Advanced Healthcare Materials*, **2015**, 4, 202-7	10.1	16
91	Mixed-mode interfacial adhesive strength of a thin film on an anisotropic substrate. *Journal of the Mechanics and Physics of Solids*, **2009**, 57, 51-66	5	16
90	Sunlight-Activated Self-Healing Polymer Coatings. *Advanced Engineering Materials*, **2020**, 22, 1901223	3.5	16
89	Strain and stress mapping by mechanochemical activation of spiropyran in poly(methyl methacrylate). *Strain*, **2019**, 55, e12310	1.7	16

88	Manufacturing of unidirectional glass/epoxy prepreg with microencapsulated liquid healing agents. *Composites Science and Technology*, **2017**, 153, 190-197	8.6	15
87	Core-Shell Microcapsules Containing Flame Retardant Tris(2-chloroethyl phosphate) for Lithium-Ion Battery Applications. *ACS Omega*, **2018**, 3, 1609-1613	3.9	15
86	Repeated healing of delamination damage in vascular composites by pressurized delivery of reactive agents. *Composites Science and Technology*, **2017**, 151, 1-9	8.6	15
85	Strategies for Volumetric Recovery of Large Scale Damage in Polymers. *Advanced Functional Materials*, **2016**, 26, 4561-4569	15.6	15
84	A Robust Patterning Technique for Electron Microscopy-Based Digital Image Correlation at Sub-Micron Resolutions. *Experimental Mechanics*, **2019**, 59, 1063-1073	2.6	14
83	Interfacial Force-Focusing Effect in Mechanophore-Linked Nanocomposites. *Advanced Science*, **2020**, 7, 1903464	13.6	14
82	The effect of residual stresses and sample preparation on progressive debonding during the fiber push-out test. *Composites Science and Technology*, **1998**, 58, 1741-1751	8.6	14
81	A NURBS-based generalized finite element scheme for 3D simulation of heterogeneous materials. *Journal of Computational Physics*, **2016**, 318, 373-390	4.1	14
80	Survival of actively cooled microvascular polymer matrix composites under sustained thermomechanical loading. *Composites Part A: Applied Science and Manufacturing*, **2016**, 82, 170-179	8.4	14
79	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	8.4	13
78	Shock Wave Energy Dissipation in Catalyst-Free Poly(dimethylsiloxane) Vitrimers. *Macromolecules*, **2020**, 53, 4741-4747	5.5	13
77	Effect of microchannels on the crashworthiness of fiber-reinforced composites. *Composite Structures*, **2018**, 184, 428-436	5.3	13
76	A hybrid experimental/numerical approach to characterize interfacial adhesion in multilayer low- thin film specimens. *Thin Solid Films*, **2010**, 519, 337-344	2.2	13
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