Russell J Varley

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119
papers4,519
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avg, IF5.76
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#	Paper	IF	Citations
119	Morphology, thermal relaxations and mechanical properties of layered silicate nanocomposites based upon high-functionality epoxy resins. <i>Polymer</i> , 2002 , 43, 4365-4373	3.9	358
118	Thermoplastic toughening of epoxy resins: a critical review. <i>Polymers for Advanced Technologies</i> , 1998 , 9, 3-10	3.2	287
117	Thermal stability and water uptake of high performance epoxy layered silicate nanocomposites. <i>European Polymer Journal</i> , 2004 , 40, 187-195	5.2	223
116	Towards an understanding of thermally activated self-healing of an ionomer system during ballistic penetration. <i>Acta Materialia</i> , 2008 , 56, 5737-5750	8.4	210
115	Layered Silicate Nanocomposites Based on Various High-Functionality Epoxy Resins: The Influence of Cure Temperature on Morphology, Mechanical Properties, and Free Volume. <i>Macromolecules</i> , 2003 , 36, 1616-1625	5.5	191
114	Designing green, self-healing coatings for metal protection. NPG Asia Materials, 2010, 2, 143-151	10.3	159
113	Nanocomposites based on a combination of epoxy resin, hyperbranched epoxy and a layered silicate. <i>Polymer</i> , 2003 , 44, 7449-7457	3.9	146
112	Studies on blends of epoxy-functionalized hyperbranched polymer and epoxy resin. <i>Journal of Materials Science</i> , 2003 , 38, 147-154	4.3	112
111	Effect of organo-phosphorus and nano-clay materials on the thermal and fire performance of epoxy resins. <i>Journal of Applied Polymer Science</i> , 2004 , 91, 1233-1253	2.9	111
110	Clay-reinforced epoxy nanocomposites. <i>Polymer International</i> , 2003 , 52, 1403-1407	3.3	107
109	Effect of ionic content on ballistic self-healing in EMAA copolymers and ionomers. <i>Polymer Chemistry</i> , 2013 , 4, 4910	4.9	105
108	Manufacturing Techniques and Surface Engineering of Polymer Based Nanoparticles for Targeted Drug Delivery to Cancer. <i>Nanomaterials</i> , 2016 , 6,	5.4	103
107	Toughening of trifunctional epoxy using an epoxy-functionalized hyperbranched polymer. <i>Journal of Applied Polymer Science</i> , 2003 , 89, 2339-2345	2.9	102
106	The effect of cluster plasticisation on the self healing behaviour of ionomers. <i>Polymer</i> , 2010 , 51, 679-68	16 3.9	99
105	Development of a quasi-static test method to investigate the origin of self-healing in ionomers under ballistic conditions. <i>Polymer Testing</i> , 2008 , 27, 11-19	4.5	93
104	Toughening of epoxy resin systems using low-viscosity additives. <i>Polymer International</i> , 2004 , 53, 78-84	3.3	83
103	Toughening of an epoxy anhydride resin system using an epoxidized hyperbranched polymer. <i>Polymer International</i> , 2004 , 53, 69-77	3.3	78

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102	Understanding the effect of nano-modifier addition upon the properties of fibre reinforced laminates. <i>Composites Science and Technology</i> , 2008 , 68, 718-726	8.6	74
101	Toughening of a trifunctional epoxy system. <i>Polymer</i> , 2001 , 42, 3847-3858	3.9	74
100	Self-healing of delamination cracks in mendable epoxy matrix laminates using poly[ethylene-co-(methacrylic acid)] thermoplastic. <i>Composites Part A: Applied Science and Manufacturing</i> , 2012 , 43, 1301-1307	8.4	72
99	Toughening of a trifunctional epoxy system Part III. Kinetic and morphological study of the thermoplastic modified cure process. <i>Polymer</i> , 2000 , 41, 3425-3436	3.9	68
98	1D/2D Nanomaterials Synergistic, Compressible, and Response Rapidly 3D Graphene Aerogel for Piezoresistive Sensor. <i>Advanced Functional Materials</i> , 2020 , 30, 2003618	15.6	62
97	Phosphorus-containing diamine for flame retardancy of high functionality epoxy resins. Part II. The thermal and mechanical properties of mixed amine systems. <i>Polymer</i> , 2006 , 47, 2091-2098	3.9	61
96	Understanding the decomposition and fire performance processes in phosphorus and nanomodified high performance epoxy resins and composites. <i>Polymer</i> , 2007 , 48, 2345-2354	3.9	58
95	Toughening of a trifunctional epoxy system: 1. Near infra-red spectroscopy study of homopolymer cure. <i>Polymer</i> , 1995 , 36, 1347-1355	3.9	57
94	Toughening of a carbon fibre reinforced epoxy anhydride composite using an epoxy terminated hyperbranched modifier. <i>Composites Science and Technology</i> , 2005 , 65, 2156-2166	8.6	56
93	Layered silicate nanocomposites based on various high-functionality epoxy resins: The influence of an organoclay on resin cure. <i>Polymer Engineering and Science</i> , 2003 , 43, 850-862	2.3	54
92	Confirmation of the healing mechanism in a mendable EMAABpoxy resin. <i>European Polymer Journal</i> , 2012 , 48, 524-531	5.2	53
91	Self-healing of delamination fatigue cracks in carbon fibre poxy laminate using mendable thermoplastic. <i>Journal of Materials Science</i> , 2012 , 47, 4449-4456	4.3	53
90	Healing of carbon fibrellpoxy composites using thermoplastic additives. <i>Polymer Chemistry</i> , 2013 , 4, 5007	4.9	50
89	Effect of Ultrasonic Dispersion Methods on Thermal and Mechanical Properties of Organoclay Epoxy Nanocomposites. <i>Macromolecular Materials and Engineering</i> , 2007 , 292, 415-427	3.9	45
88	Influence of substituents on the kinetics of epoxy/aromatic diamine resin systems. <i>Journal of Polymer Science Part A</i> , 2004 , 42, 3143-3156	2.5	39
87	Thermoplastic Healing in Epoxy Networks: Exploring Performance and Mechanism of Alternative Healing Agents. <i>Macromolecular Materials and Engineering</i> , 2013 , 298, 1232-1242	3.9	38
86	The effect of surface treatments on the mechanical properties of basalt-reinforced epoxy composites. <i>Polymer Composites</i> , 2013 , 34, 320-329	3	38
85	Mechanical properties of mendable composites containing self-healing thermoplastic agents. <i>Composites Part A: Applied Science and Manufacturing</i> , 2014 , 65, 10-18	8.4	37

84	Use of layered silicates to supplementarily toughen high performance epoxy-carbon fiber composites. <i>Journal of Materials Science Letters</i> , 2003 , 22, 1411-1414		37
83	Toughening of a trifunctional epoxy system. II. Thermal characterization of epoxy/amine cure. <i>Journal of Applied Polymer Science</i> , 1996 , 60, 2251-2263	2.9	37
82	Moisture induced crack filling in barrier coatings containing montmorillonite as an expandable phase. <i>Surface and Coatings Technology</i> , 2008 , 202, 3346-3353	4.4	36
81	Mechanical, Thermal, and Morphological Behavior of Silicone Rubber during Accelerated Aging. <i>Polymer-Plastics Technology and Engineering</i> , 2018 , 57, 1687-1696		35
8o	Thermally activated healing in a mendable resin using a non woven EMAA fabric. <i>Composites Science and Technology</i> , 2012 , 72, 453-460	8.6	35
79	Processing and chemorheology of epoxy resins and their blends with dendritic hyperbranched polymers. <i>Journal of Applied Polymer Science</i> , 2004 , 92, 1604-1610	2.9	34
78	Phosphorus intercalation of halloysite nanotubes for enhanced fire properties of polyamide 6. <i>Polymers for Advanced Technologies</i> , 2012 , 23, 1564-1571	3.2	32
77	A phosphorus-containing diamine for flame-retardant, high-functionality epoxy resins. I. Synthesis, reactivity, and thermal degradation properties. <i>Journal of Applied Polymer Science</i> , 2004 , 92, 2093-2100	2.9	32
76	Dynamic plant-derived polysaccharide-based hydrogels. <i>Carbohydrate Polymers</i> , 2020 , 231, 115743	10.3	30
75	Reaction Kinetics and Phase Transformations During Cure of a Thermoplastic-Modified Epoxy Thermoset. <i>Macromolecular Materials and Engineering</i> , 2007 , 292, 46-61	3.9	29
74	Effect of mendable polymer stitch density on the toughening and healing of delamination cracks in carbon poxy laminates. <i>Composites Part A: Applied Science and Manufacturing</i> , 2013 , 50, 22-30	8.4	27
73	Toughening of a trifunctional epoxy system: IV. Dynamic mechanical relaxational study of the thermoplastic-modified cure process. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1997 , 35, 153-	163	24
72	Effect of reinforcing fibres on the morphology of a toughened epoxy/amine system. <i>Polymer</i> , 1997 , 38, 1005-1009	3.9	21
71	Time Dependent Structure and Property Evolution in Fibres during Continuous Carbon Fibre Manufacturing. <i>Materials</i> , 2019 , 12,	3.5	20
70	Investigation of thermal and fire performance of novel hybrid geopolymer composites. <i>Journal of Materials Science</i> , 2004 , 39, 4721-4726	4.3	20
69	Synthesis, thermal behavior, and cone calorimetry of organophosphorus epoxy materials. <i>Journal of Applied Polymer Science</i> , 2003 , 90, 3696-3707	2.9	20
68	Microwave Attenuation of Graphene Modified Thermoplastic Poly(Butylene adipateterephthalate) Nanocomposites. <i>Polymers</i> , 2018 , 10,	4.5	19
67	Healing of fatigue delamination cracks in carbon poxy composite using mendable polymer stitching. <i>Journal of Intelligent Material Systems and Structures</i> , 2014 , 25, 75-86	2.3	19

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66	Poly(ethylene- co -methacrylic acid) (EMAA) as an efficient healing agent for high performance epoxy networks using diglycidyl ether of bisphenol A (DGEBA). <i>Polymer</i> , 2016 , 92, 153-163	3.9	19	
65	Different Thucleants and the resultant microstructural, fracture, and tensile properties for filled and unfilled ISO polypropylene. <i>Journal of Applied Polymer Science</i> , 2013 , 128, 619-627	2.9	17	
64	Thermo-reversible healing in a crosslinked polymer network containing covalent and thermo-reversible bonds. <i>Journal of Applied Polymer Science</i> , 2013 , 128, 3743-3750	2.9	17	
63	Recovery of Mode I self-healing interlaminar fracture toughness of fiber metal laminate by modified double cantilever beam test. <i>Composites Communications</i> , 2019 , 16, 25-29	6.7	16	
62	EMAA as a healing agent for mendable high temperature epoxy amine thermosets. <i>Composites Part A: Applied Science and Manufacturing</i> , 2012 , 43, 1073-1080	8.4	16	
61	The role of nanodispersion on the fire performance of organoclaypolyamide nanocomposites. <i>Composites Science and Technology</i> , 2008 , 68, 2882-2891	8.6	16	
60	Development and characterization of a fire retardant epoxy resin using an organo-phosphorus compound. <i>Journal of Materials Science Letters</i> , 2003 , 22, 455-458		16	
59	Double dynamic cellulose nanocomposite hydrogels with environmentally adaptive self-healing and pH-tuning properties. <i>Cellulose</i> , 2020 , 27, 1407-1422	5.5	14	
58	New approaches to bonding thermoplastic and thermoset polymer composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2020 , 133, 105870	8.4	13	
57	Epoxy/Poly(ethylene-co-methacrylic acid) Blends as Thermally Activated Healing Agents in an Epoxy/Amine Network. <i>Macromolecular Materials and Engineering</i> , 2015 , 300, 70-79	3.9	13	
56	Investigation of factors impacting the in-service degradation of aerospace coatings. <i>Progress in Organic Coatings</i> , 2012 , 74, 679-686	4.8	13	
55	Ionomers as Self Healing Polymers. Springer Series in Materials Science, 2007, 95-114	0.9	13	
54	Life Cycle Engineering of Carbon Fibres for Lightweight Structures. <i>Procedia CIRP</i> , 2018 , 69, 43-48	1.8	13	
53	Autonomous damage initiated healing in a thermo-responsive ionomer. <i>Polymer International</i> , 2010 , 59, n/a-n/a	3.3	12	
52	Preparation and characterisation of polyamidepolyimide organoclay nanocomposites. <i>Polymer International</i> , 2008 , 57, 618-625	3.3	12	
51	Fire-retardant unsaturated polyester thermosets: The state-of-the-art, challenges and opportunities. <i>Chemical Engineering Journal</i> , 2022 , 430, 132785	14.7	12	
50	Toughening epoxy resins with polyepichlorohydrin. <i>Journal of Applied Polymer Science</i> , 1993 , 48, 1259-1	269	11	
49	Experimental and simulation study of effect of thickness on performance of (butylene adipate-co-terephthalate) and poly lactide nanocomposites incorporated with graphene as stand-alone electromagnetic interference shielding and metal-backed microwave absorbers.	8.6	11	

48	Low-molecular-weight thermoplastic modifiers as effective healing agents in mendable epoxy networks. <i>Journal of Intelligent Material Systems and Structures</i> , 2014 , 25, 107-117	2.3	10
47	Investigation of the reaction mechanism of different epoxy resins using a phosphorus-based hardener. <i>Journal of Applied Polymer Science</i> , 2006 , 99, 3288-3299	2.9	10
46	Dynamic nanocellulose hydrogels: Recent advancements and future outlook. <i>Carbohydrate Polymers</i> , 2021 , 270, 118357	10.3	10
45	Effect of aromatic substitution on the kinetics and properties of epoxy cured tri-phenylether amines. <i>Journal of Applied Polymer Science</i> , 2019 , 136, 47383	2.9	9
44	Rational Design of Mussel-Inspired Hydrogels with Dynamic Catecholato-Metal Coordination Bonds. <i>Macromolecular Rapid Communications</i> , 2020 , 41, e2000439	4.8	9
43	The effect of compatibilization on the behavior of a polycarbonate/polymer liquid crystal blend. <i>Polymer Engineering and Science</i> , 1996 , 36, 1038-1046	2.3	9
42	An efficient healing agent for high temperature epoxy composites based upon tetra-glycidyl diamino diphenyl methane. <i>Composites Part A: Applied Science and Manufacturing</i> , 2015 , 78, 201-210	8.4	8
41	Biocompatibility and modification of the protein-based adhesive secreted by the Australian frog Notaden bennetti. <i>Journal of Biomedical Materials Research - Part A</i> , 2010 , 93, 429-41	5.4	8
40	Understanding the Effects of In-Service Temperature and Functional Fluid on the Ageing of Silicone Rubber. <i>Polymers</i> , 2019 , 11,	4.5	7
39	Synthesis and characterisation of new sulphur-containing epoxy networks. <i>High Performance Polymers</i> , 2014 , 26, 420-435	1.6	7
38	Effect of modification of cyclic butylene terephthalate on crystallinity and properties after ring-opening polymerisation. <i>Journal of Materials Science</i> , 2015 , 50, 8073-8088	4.3	7
37	Synthesis of a phosphorus-silicone modifier imparting excellent flame retardancy and improved mechanical properties to a rapid cure epoxy. <i>Reactive and Functional Polymers</i> , 2020 , 157, 104743	4.6	7
36	Modelling and analysis of the energy intensity in polyacrylonitrile (PAN) precursor and carbon fibre manufacturing. <i>Journal of Cleaner Production</i> , 2021 , 303, 127105	10.3	7
35	Carbon fibre waste recycling into hybrid nonwovens for electromagnetic interference shielding and sound absorption. <i>Journal of Cleaner Production</i> , 2021 , 315, 128196	10.3	7
34	Dynamic Nanohybrid-Polysaccharide Hydrogels for Soft Wearable Strain Sensing. <i>Sensors</i> , 2021 , 21,	3.8	6
33	Investigation of the Dual Polymerization of Rapid Curing Organophosphorous Modified Epoxy/Amine Resins and Subsequent Flame Retardancy. <i>Macromolecular Chemistry and Physics</i> , 2021 , 222, 2000342	2.6	6
32	Rapid Cross-Linking of Epoxy Thermosets Induced by Solvate Ionic Liquids. <i>ACS Applied Polymer Materials</i> , 2020 , 2, 2651-2657	4.3	5
31	Subtle variations in the structure of crosslinked epoxy networks and the impact upon mechanical and thermal properties. <i>Journal of Applied Polymer Science</i> , 2020 , 137, 48874	2.9	5

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30	Beyond the ring flip: A molecular signature of the glassflubber transition in tetrafunctional epoxy resins. <i>Polymer</i> , 2020 , 206, 122893	3.9	5
29	A modular LCA/LCC-modelling concept for evaluating material and process innovations in carbon fibre manufacturing. <i>Procedia CIRP</i> , 2021 , 98, 529-534	1.8	5
28	Polymer Coatings for Oilfield Pipelines. Springer Series in Materials Science, 2016, 385-428	0.9	4
27	Effect of boric acid on the stabilisation of cellulose-lignin filaments as precursors for carbon fibres. <i>Cellulose</i> , 2021 , 28, 729-739	5.5	4
26	Study of the acoustic emission response to a core-shell rubber-toughened, high-temperature composite. <i>Journal of Materials Science</i> , 2021 , 56, 5609-5623	4.3	4
25	Synthesis of Tri-Aryl Methane Epoxy Resin Isomers and Their Cure with Aromatic Amines. <i>Macromolecular Materials and Engineering</i> , 2020 , 305, 1900546	3.9	3
24	Cellulose-lignin composite fibers as precursors for carbon fibers: Part 2 - The impact of precursor properties on carbon fibers. <i>Carbohydrate Polymers</i> , 2020 , 250, 116918	10.3	3
23	Adhesives performance of 3-layer PE pipe coatings: Effects of MAH loading, PE particles size, coating interval time and service temperature. <i>Progress in Organic Coatings</i> , 2016 , 99, 157-165	4.8	3
22	The role of Irelaxations in determining the compressive properties of an epoxy amine network modified with POSS and mono-functional epoxy resins. <i>Polymer Testing</i> , 2021 , 93, 106873	4.5	3
21	Polyaryletherketone (PAEK) thermoplastic composites via in-situ ring opening polymerisation. <i>Composites Science and Technology</i> , 2021 , 201, 108534	8.6	3
20	The role of Irelaxations in controlling compressive properties in hyperbranched polymer-modified epoxy networks. <i>Polymer Journal</i> , 2021 , 53, 393-401	2.7	3
19	Effect of aromatic substitution on the cure reaction and network properties of anhydride cured triphenyl ether tetraglycidyl epoxy resins. <i>Polymers for Advanced Technologies</i> , 2019 , 30, 1525-1537	3.2	2
18	Solid-state healing of resins and composites 2015 , 53-99		2
17	Synthesis of tri-aryl ether epoxy resin isomers and their cure with diamino diphenyl sulphone. <i>Journal of Polymer Science</i> , 2020 , 58, 1410-1425	2.4	2
16	Thermal and mechanical characterisation of intercalated epoxy nanocomposites. <i>International Journal of Materials and Product Technology</i> , 2003 , 19, 199	1	2
15	Synthesis of tri-aryl ketone amine isomers and their cure with epoxy resins. <i>Polymers for Advanced Technologies</i> , 2020 , 31, 827-837	3.2	2
14	Water activated healing of thiolene boronic ester coatings. <i>Progress in Organic Coatings</i> , 2020 , 139, 105	5428	2
13	Facile one pot synthesis of strong epoxy/agar hybrid hydrogels. <i>Journal of Polymer Research</i> , 2019 , 26, 1	2.7	2

12	Phosphorus-Based Amino Acid Mimetic for Enhanced Flame-Retardant Properties in an Epoxy Resin. <i>Australian Journal of Chemistry</i> , 2019 , 72, 226	1.2	2
11	In Situ SAXS Measurement and Molecular Dynamics Simulation of Magnetic Alignment of Hexagonal LLC Nanostructures. <i>Membranes</i> , 2018 , 8,	3.8	2
10	A 3D printable dynamic nanocellulose/nanochitin self-healing hydrogel and soft strain sensor. <i>Carbohydrate Polymers</i> , 2022 , 291, 119545	10.3	2
9	Aromatic tetra-glycidyl ether versus tetra-glycidyl amine epoxy networks: Influence of monomer structure and epoxide conversion. <i>Polymer</i> , 2021 , 124401	3.9	1
8	Gas Emission Study of the Polyacrylonitrile-Based Continuous Pilot-Scale Carbon Fiber Manufacturing Process. <i>Industrial & Engineering Chemistry Research</i> ,	3.9	1
7	Cure Kinetics and Network Development of a Very High Tg Naphthalene-Based Epoxy Amine Network. <i>ACS Applied Polymer Materials</i> ,	4.3	1
6	Understanding the influence of key parameters on the stabilisation of cellulose-lignin composite fibres. <i>Cellulose</i> , 2021 , 28, 911-919	5.5	1
5	Carbon fiber polypropylene interphase modification as a route to improved toughness. <i>Composites Part A: Applied Science and Manufacturing</i> , 2022 , 107001	8.4	1
4	Investigation of the processability, thermal, mechanical and flame retardant properties of bisoxazoline composites. <i>Composites Part B: Engineering</i> , 2022 , 232, 109629	10	О
3	Continuous, pilot-scale production of carbon fiber from a textile grade PAN polymer. <i>Materials Today Communications</i> , 2022 , 31, 103231	2.5	Ο
2	Enhancement of ionic conduction and mechanical properties for all-solid-state polymer electrolyte systems through ionic and physical bonding. <i>Materials Today Chemistry</i> , 2022 , 23, 100663	6.2	0
1	A healable polyethylene adhesive using poly(ethylene methacrylic acid) (EMAA) for three-layer pipe coatings. <i>Multifunctional Materials</i> , 2021 , 4, 014001	5.2	