Wayne Hayes

List of Publications by Year in descending order

86 papers	5,622 citations	136950 32 h-index	76900 74 g-index
89 all docs	89 docs citations	89 times ranked	6060 citing authors

#	Article	IF	Citations
1	Applications of supramolecular polymer networks. Reactive and Functional Polymers, 2022, 172, 105209.	4.1	23
2	Experimental characterisation and modelling of the strain rate dependent mechanical response of a filled thermo-reversible supramolecular polyurethane. International Journal of Impact Engineering, 2022, 166, 104239.	5.0	1
3	Recent advances in self-immolative linkers and their applications in polymeric reporting systems. Polymer Chemistry, 2022, 13, 3188-3269.	3.9	22
4	Tailoring viscoelastic properties of dynamic supramolecular poly(butadiene)-based elastomers. Materials Today Chemistry, 2022, 26, 101008.	3.5	3
5	A fluoride degradable crosslinker for debond-on-demand polyurethane based crosslinked adhesives. Materials Today Communications, 2021, 26, 101777.	1.9	2
6	The use of diffuse reflectance infrared spectroscopy to monitor the oxidation of UV irradiated and naturally aged bitumen and asphalt. Road Materials and Pavement Design, 2021, 22, 1254-1267.	4.0	6
7	Functionalised PEGs with photo-dimerisable, anthracenyl end-groups: New UV-curable materials for use in inkjet formulations. Progress in Organic Coatings, 2021, 151, 106105.	3.9	4
8	Mechanical characterisation and modelling of a thermoreversible superamolecular polyurethane over a wide range of rates. Polymer, 2021, 221, 123607.	3.8	6
9	Self-Immolative System for Disclosure of Reactive Electrophilic Alkylating Agents: Understanding the Role of the Reporter Group. Journal of Organic Chemistry, 2021, 86, 10263-10279.	3.2	3
10	From Food to Mobility: Investigating a Screening Assay for New Automotive Antioxidants Using the Stable Radical DPPH. ChemistrySelect, 2021, 6, 9179-9184.	1.5	5
11	The effect of chiral end groups on the assembly of supramolecular polyurethanes. Polymer Chemistry, 2021, 12, 4488-4500.	3.9	6
12	A supramolecular glass made from a low molecular weight amino acid derivative. European Polymer Journal, 2021, , 110889.	5.4	1
13	Synthesis, characterisation, and performance evaluation of tri-armed phenolic antioxidants. Tetrahedron Letters, 2020, 61, 152127.	1.4	10
14	A 3D printed drug delivery implant formed from a dynamic supramolecular polyurethane formulation. Polymer Chemistry, 2020, 11, 3453-3464.	3.9	38
15	Fluoride-responsive debond on demand adhesives: Manipulating polymer crystallinity and hydrogen bonding to optimise adhesion strength at low bonding temperatures. European Polymer Journal, 2019, 119, 260-271.	5.4	24
16	Evaluation of thermal and oxidative stability of three generations of phenolic based novel dendritic fuel and lubricant additives. Reactive and Functional Polymers, 2019, 142, 119-127.	4.1	14
17	Increasing the antioxidant capability via the synergistic effect of coupling diphenylamine with sterically hindered phenol. Tetrahedron, 2019, 75, 130759.	1.9	9
18	Composite polyurethane adhesives that debond-on-demand by hysteresis heating in an oscillating magnetic field. European Polymer Journal, 2019, 121, 109264.	5.4	39

#	Article	IF	Citations
19	Property enhancement of healable supramolecular polyurethanes. European Polymer Journal, 2019, 118, 88-96.	5.4	11
20	Self-immolative systems for the disclosure of reactive electrophilic alkylating agents. Chemical Communications, 2019, 55, 5219-5222.	4.1	8
21	Exploiting thermally-reversible covalent bonds for the controlled release of microencapsulated isocyanate crosslinkers. Reactive and Functional Polymers, 2019, 135, 23-31.	4.1	12
22	Synthesis and analysis of a healable, poly(propylene glycol)-based supramolecular network. Progress in Organic Coatings, 2019, 127, 260-265.	3.9	2
23	Nitroarylurea-terminated supramolecular polymers that exhibit facile thermal repair and aqueous swelling-induced sealing of defects. Polymer, 2018, 140, 1-9.	3.8	7
24	Self-assembling unsymmetrical bis-ureas. Reactive and Functional Polymers, 2018, 124, 156-161.	4.1	7
25	Mutual Complexation between Ï€â€“Ï€ Stacked Molecular Tweezers. Crystal Growth and Design, 2018, 18, 386-392.	3.0	15
26	Inducing hardening and healability in poly(ethylene-co-acrylic acid) via blending with complementary low molecular weight additives. RSC Advances, 2018, 8, 41445-41453.	3.6	6
27	Enhancement of microphase ordering and mechanical properties of supramolecular hydrogen-bonded polyurethane networks. Polymer Chemistry, 2018, 9, 3406-3414.	3.9	24
28	A dynamic supramolecular polyurethane network whose mechanical properties are kinetically controlled. Polymer, 2017, 133, 143-150.	3.8	17
29	Fluoride degradable and thermally debondable polyurethane based adhesive. Polymer Chemistry, 2017, 8, 7207-7216.	3.9	36
30	An adhesive elastomeric supramolecular polyurethane healable at body temperature. Chemical Science, 2016, 7, 4291-4300.	7.4	65
31	Multifunctional, Biocompatible, Nonâ€peptidic Hydrogels: from Water Purification to Drug Delivery. ChemistrySelect, 2016, 1, 1641-1649.	1.5	5
32	A systematic study of the effect of the hard end-group composition on the microphase separation, thermal and mechanical properties of supramolecular polyurethanes. Polymer, 2016, 107, 368-378.	3.8	19
33	3D Printing of Biocompatible Supramolecular Polymers and their Composites. ACS Applied Materials & Interfaces, 2016, 8, 3115-3122.	8.0	105
34	Self-immolative base-mediated conjugate release from triazolylmethylcarbamates. Organic and Biomolecular Chemistry, 2015, 13, 8703-8707.	2.8	9
35	Supramolecular Approach to New Inkjet Printing Inks. ACS Applied Materials & Interfaces, 2015, 7, 8906-8914.	8.0	40
36	Perylene as an electron-rich moiety in healable, complementary Ï€â€“Ï€ stacked, supramolecular polymer systems. Polymer, 2015, 69, 293-300.	3.8	56

#	Article	IF	Citations
37	Molecular design of a discrete chain-folding polyimide for controlled inkjet deposition of supramolecular polymers. Polymer Chemistry, 2015, 6, 7342-7352.	3.9	11
38	A Thermoreversible Supramolecular Polyurethane with Excellent Healing Ability at 45 Â°C. Macromolecules, 2015, 48, 6132-6141.	4.8	87
39	Donorâ€“Acceptor Ï€â€“Ï€ Stacking Interactions: From Small Molecule Complexes to Healable Supramolecular Polymer Networks. Advances in Polymer Science, 2015, , 143-166.	0.8	17
40	Hyperbranched polymers containing oxazoline monomers and succinic anhydride: Applications in fast drying, low solvent coating formulations. Progress in Organic Coatings, 2014, 77, 1516-1522.	3.9	6
41	Multivalency in healable supramolecular polymers: the effect of supramolecular cross-link density on the mechanical properties and healing of non-covalent polymer networks. Polymer Chemistry, 2014, 5, 3680-3688.	3.9	75
42	Evolution of supramolecular healable composites: a minireview. Polymer International, 2014, 63, 933-942.	3.1	19
43	Bis amide-aromatic-ureasâ€”highly effective hydro- and organogelator systems. Tetrahedron, 2014, 70, 8303-8311.	1.9	19
44	Synthesis of novel hyperbranched polymers featuring oxazoline linear units and their application in fastâ€drying solventâ€borne coating formulations. Journal of Polymer Science Part A, 2013, 51, 3964-3974.	2.3	5
45	A Microblock Ionomer in Proton Exchange Membrane Electrolysis for the Production of High Purity Hydrogen. Macromolecules, 2013, 46, 1504-1511.	4.8	26
46	Janus PEG-Based Dendrimers for Use in Combination Therapy: Controlled Multi-Drug Loading and Sequential Release. Biomacromolecules, 2013, 14, 564-574.	5.4	46
47	Lightly branched comb polyesters: Application in fast drying solvent-borne coating formulations. Reactive and Functional Polymers, 2013, 73, 619-623.	4.1	7
48	Mutual binding of polymer end-groups by complementary Ï€â€“Ï€-stacking: a molecular â€œRoman Handshakeâ€. Chemical Communications, 2013, 49, 454-456.	4.1	33
49	Molecular recognition between functionalized gold nanoparticles and healable, supramolecular polymer blends â€“ a route to property enhancement. Polymer Chemistry, 2013, 4, 4902.	3.9	55
50	Healable supramolecular polymers. Polymer Chemistry, 2013, 4, 4860.	3.9	138
51	Urea Organogelators â€“ Synthesis and Properties. Macromolecular Symposia, 2013, 329, 118-124.	0.7	2
52	Electrospun supramolecular polymer fibres. European Polymer Journal, 2012, 48, 1249-1255.	5.4	21
53	Selfâ€Assembly Studies of a Chiral Bisureaâ€Based Superhydrogelator. Chemistry - A European Journal, 2012, 18, 14725-14731.	3.3	40
54	Thermoresponsive Supramolecular Polymer Network Comprising Pyrene-Functionalized Gold Nanoparticles and a Chain-Folding Polydiimide. Macromolecules, 2012, 45, 5567-5574.	4.8	33

#	Article	IF	Citations
55	High-Strength, Healable, Supramolecular Polymer Nanocomposites. Journal of the American Chemical Society, 2012, 134, 5362-5368.	13.7	303
56	Structural and morphological studies of the dipeptide based l-Pro-l-Val organocatalytic gels and their rheological behaviour. Soft Matter, 2012, 8, 8865.	2.7	23
57	pHâ€Tunable Hydrogelators for Water Purification: Structural Optimisation and Evaluation. Chemistry - A European Journal, 2012, 18, 2692-2699.	3.3	70
58	A Supramolecular Polymer Based on Tweezer-Type Ï€âˆ’Ï€ Stacking Interactions: Molecular Design for Healability and Enhanced Toughness. Chemistry of Materials, 2011, 23, 6-8.	6.7	222
59	Self-immolative linkers in polymeric delivery systems. Polymer Chemistry, 2011, 2, 773-790.	3.9	131
60	A Healable Supramolecular Polymer Blend Based on Aromatic Ï€âˆ’Ï€ Stacking and Hydrogen-Bonding Interactions. Journal of the American Chemical Society, 2010, 132, 12051-12058.	13.7	779
61	Thermo-responsive microphase separated supramolecular polyurethanes. Polymer Chemistry, 2010, 1, 1263.	3.9	39
62	Hydrogen Bonded Supramolecular Elastomers: Correlating Hydrogen Bonding Strength with Morphology and Rheology. Macromolecules, 2010, 43, 2512-2517.	4.8	101
63	Healable polymeric materials: a tutorial review. Chemical Society Reviews, 2010, 39, 1973.	38.1	389
64	Selective and highly efficient dye scavenging by a pH-responsive molecular hydrogelator. Chemical Communications, 2010, 46, 7960.	4.1	96
65	A self-repairing, supramolecular polymer system: healability as a consequence of donorâ€“acceptor Ï€â€“Ï€ stacking interactions. Chemical Communications, 2009, , 6717.	4.1	475
66	Thermally Responsive Elastomeric Supramolecular Polymers Featuring Flexible Aliphatic Hydrogen-Bonding End-Groups. Australian Journal of Chemistry, 2009, 62, 790.	0.9	25
67	Facile bisurethane supramolecular polymers containing flexible alicyclic receptor units. Soft Matter, 2009, 5, 2000.	2.7	37
68	A novel self-healing supramolecular polymer system. Faraday Discussions, 2009, 143, 251.	3.2	186
69	A carbene insertion approach to functionalised poly(ethylene oxide)-based gels. Reactive and Functional Polymers, 2008, 68, 868-875.	4.1	26
70	Design, synthesis and computational modelling of aromatic tweezer-molecules as models for chain-folding polymer blends. Tetrahedron, 2008, 64, 8346-8354.	1.9	77
71	Synthesis of Hyperbranched Poly(aryl ether)s via Carbene Insertion Processes. Macromolecules, 2007, 40, 939-949.	4.8	26
72	Surface modification of nylon 6,6 using a carbene insertion approach. New Journal of Chemistry, 2006, 30, 53-58.	2.8	34

#	Article	IF	Citations
73	Synthesis and Characterization of Fluorescent Poly(aromatic amide) Dendrimers. Journal of Organic Chemistry, 2005, 70, 63-78.	3.2	18
74	Development and application of diazirines in biological and synthetic macromolecular systems. Soft Matter, 2005, 1, 178.	2.7	127
75	Chiral Poly(aromatic amide ester) Dendrimers Bearing an Amino Acid DerivedC3-Symmetric Coreâ˜† Synthesis and Properties. European Journal of Organic Chemistry, 2004, 2004, 4148-4157.	2.4	12
76	Synthesis and applications of hyperbranched polymers. European Polymer Journal, 2004, 40, 1257-1281.	5.4	501
77	Polymer-supported nitroxyl catalysts for selective oxidation of alcohols. Green Chemistry, 2004, 6, 310.	9.0	64
78	Synthesis and Properties of Polyaromatic Dendrimers Possessing a Repetitive Amideâ€”Ester Coupling Sequence.. ChemInform, 2003, 34, no.	0.0	0
79	Dendrimers: a new class of nanoscopic containers and delivery devices. European Polymer Journal, 2003, 39, 1741-1771.	5.4	390
80	Synthesis of a novel class of chiral polyaromatic amide dendrimers bearing an amino acid derived C3-symmetric core. Tetrahedron Letters, 2003, 44, 37-40.	1.4	10
81	Synthesis and properties of polyaromatic dendrimers possessing a repetitive amideâ€“ester coupling sequence. Tetrahedron, 2003, 59, 3975-3988.	1.9	11
82	Synthesis and characterization of hyperbranched polyesters incorporating the AB2 monomer 3,5-bis(3-hydroxylprop-1-ynyl)benzoic acid. European Polymer Journal, 2003, 39, 1955-1963.	5.4	28
83	Synthesis and evaluation of a solid supported molecular tweezer type receptor for cholesterolElectronic supplementary information (ESI) available: synthetic procedures and analytical data for compounds 3â€“8. See http://www.rsc.org/suppdata/jm/b2/b210427j/. Journal of Materials Chemistry, 2003, 13, 758-766.	6.7	19
84	An Improved Sonogashira Coupling Procedure for the Construction of Rigid Aromatic Multifunctional Monomers Bearing 1,3-Substituted Acetylenic Units. Synlett, 2002, 2002, 0251-0254.	1.8	4
85	Chiral dendrimersâ€”from architecturally interesting hyperbranched macromolecules to functional materials. Journal of Materials Chemistry, 2002, 12, 767-799.	6.7	88
86	One-pot synthesis of multivalent arrays of mannose mono- and disaccharides. Tetrahedron Letters, 2002, 43, 7683-7685.	1.4	6