Akira Harada

List of Publications by Year
in descending order

178 papers	20,485 citations	17429 63 h-index	9854 141 g-index
184 all docs	184 docs citations	184 times ranked	11478 citing authors

#	Article	IF	Citations
1	The molecular necklace: a rotaxane containing many threaded Î±-cyclodextrins. Nature, 1992, 356, 325-327.	13.7	1,305
2	Redox-responsive self-healing materials formed from hostâ€"guest polymers. Nature Communications, 2011, 2, 511.	5.8	1,207
3	Complex formation between poly(ethylene glycol) and Î±-cyclodextrin. Macromolecules, 1990, 23, 2821-2823.	2.2	875
4	Polymeric Rotaxanes. Chemical Reviews, 2009, 109, 5974-6023.	23.0	837
5	Cyclodextrin-based supramolecular polymers. Chemical Society Reviews, 2009, 38, 875.	18.7	768
6	Supramolecular Polymeric Materials via Cyclodextrinâ€"Guest Interactions. Accounts of Chemical Research, 2014, 47, 2128-2140.	7.6	751
7	Macroscopic self-assembly through molecular recognition. Nature Chemistry, 2011, 3, 34-37.	6.6	710
8	Expansionâ€"contraction of photoresponsive artificial muscle regulated by hostâ€"guest interactions. Nature Communications, 2012, 3, 1270.	5.8	622
9	Synthesis of a tubular polymer from threaded cyclodextrins. Nature, 1993, 364, 516-518.	13.7	612
10	Preorganized Hydrogel: Selfâ€Healing Properties of Supramolecular Hydrogels Formed by Polymerization of Hostâ€"Guestâ€Monomers that Contain Cyclodextrins and Hydrophobic Guest Groups. Advanced Materials, 2013, 25, 2849-2853.	11.1	540
11	Preparation and properties of inclusion complexes of polyethylene glycol with .alpha.-cyclodextrin. Macromolecules, 1993, 26, 5698-5703.	2.2	466
12	Selfâ€Healing, Expansionâ€"Contraction, and Shapeâ€Memory Properties of a Preorganized Supramolecular Hydrogel through Hostâ€"Guest Interactions. Angewandte Chemie - International Edition, 2015, 54, 8984-8987.	7.2	454
13	Photoswitchable gel assembly based on molecular recognition. Nature Communications, 2012, 3, 603.	5.8	412
14	Photoswitchable Supramolecular Hydrogels Formed by Cyclodextrins and Azobenzene Polymers. Angewandte Chemie - International Edition, 2010, 49, 7461-7464.	7.2	407
15	Double-stranded inclusion complexes of cyclodextrin threaded on poly(ethylene glycol). Nature, 1994, 370, 126-128.	13.7	383
16	Fast response dry-type artificial molecular muscles with [c2]daisy chains. Nature Chemistry, 2016, 8, 625-632.	6.6	366
17	Preparation and Characterization of Inclusion Complexes of Poly(propylene glycol) with Cyclodextrins. Macromolecules, 1995, 28, 8406-8411.	2.2	359
18	Solâ€"Gel Transition during Inclusion Complex Formation between Î±-Cyclodextrin and High Molecular Weight Poly(ethylene glycol)s in Aqueous Solution. Polymer Journal, 1994, 26, 1019-1026.	1.3	304

#	Article	IF	Citations
19	Preparation and Characterization of a Polyrotaxane Consisting of Monodisperse Poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlock 10	6.6	304
20	Chemical Sensors Based on Cyclodextrin Derivatives. Sensors, 2008, 8, 4961-4982.	2.1	255
21	Switchable Hydrogels Obtained by Supramolecular Cross-Linking of Adamantyl-Containing LCST Copolymers with Cyclodextrin Dimers. Angewandte Chemie - International Edition, 2006, 45, 4361-4365.	7.2	247
22	Chemically-Responsive Solâˆ'Gel Transition of Supramolecular Single-Walled Carbon Nanotubes (SWNTs) Hydrogel Made by Hybrids of SWNTs and Cyclodextrins. Journal of the American Chemical Society, 2007, 129, 4878-4879.	6.6	246
23	Contrast Viscosity Changes upon Photoirradiation for Mixtures of Poly(acrylic acid)-Based Î±-Cyclodextrin and Azobenzene Polymers. Journal of the American Chemical Society, 2006, 128, 2226-2227.	6.6	237
24	Photoresponsive Hydrogel System Using Molecular Recognition of Î±-Cyclodextrin. Macromolecules, 2005, 38, 5223-5227.	2.2	216
25	Highly Flexible, Tough, and Selfâ€Healing Supramolecular Polymeric Materials Using Hostâ€"Guest Interaction. Macromolecular Rapid Communications, 2016, 37, 86-92.	2.0	207
26	Complex formation between cyclodextrin and poly(propylene glycol). Journal of the Chemical Society Chemical Communications, 1990, , 1322.	2.0	200
27	Redoxâ€Generated Mechanical Motion of a Supramolecular Polymeric Actuator Based on Hostâ€"Guest Interactions. Angewandte Chemie - International Edition, 2013, 52, 5731-5735.	7.2	199
28	Daisy Chain Necklace:Â Tri[2]rotaxane Containing Cyclodextrins. Journal of the American Chemical Society, 2000, 122, 9876-9877.	6.6	160
29	Complex Formation of Poly(Îµ-caprolactone) with Cyclodextrins. Macromolecules, 2000, 33, 4472-4477.	2.2	159
30	Solvent-Free Photoresponsive Artificial Muscles Rapidly Driven by Molecular Machines. Journal of the American Chemical Society, 2018, 140, 17308-17315.	6.6	156
31	Preparation and characterization of polyrotaxanes containing many threaded .alpha.-cyclodextrins. Journal of Organic Chemistry, 1993, 58, 7524-7528.	1.7	154
32	Formation of Inclusion Complexes of Monodisperse Oligo(ethylene glycol)s with .alpha.-Cyclodextrin. Macromolecules, 1994, 27, 4538-4543.	2.2	147
33	Preparation and Characterization of Inclusion Complexes of Aliphatic Polyesters with Cyclodextrins. Macromolecules, 1997, 30, 7115-7118.	2.2	147
34	Thermal and Photochemical Switching of Conformation of Poly(ethylene glycol)-Substituted Cyclodextrin with an Azobenzene Group at the Chain End. Journal of the American Chemical Society, 2007, 129, 6396-6397.	6.6	146
35	A metalâ€"ion-responsive adhesive material via switching of molecular recognition properties. Nature Communications, 2014, 5, 4622.	5.8	140
36	Preparation and Characterization of Inclusion Complexes of Polyisobutylene with Cyclodextrins. Macromolecules, 1996, 29, 5611-5614.	2.2	139

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37	Cyclodextrin-Containing Polymers. 1. Preparation of Polymers. Macromolecules, 1976, 9, 701-704.	2.2	129
38	An Electric Trap:Â A New Method for Entrapping Cyclodextrin in a Rotaxane Structure. Journal of the American Chemical Society, 2000, 122, 3797-3798.	6.6	124
39	Complex formation between polyisobutylene and cyclodextrins: inversion of chain-length selectivity between .beta.-cyclodextrin and .gamma.-cyclodextrin. Macromolecules, 1993, 26, 5267-5268.	2.2	122
40	Redox-Responsive Hydrogel System Using the Molecular Recognition ofÎ²-Cyclodextrin. Macromolecular Rapid Communications, 2006, 27, 238-241.	2.0	121
41	Self-Healing Materials Formed by Cross-Linked Polyrotaxanes with Reversible Bonds. CheM, 2016, 1, 766-775.	5.8	121
42	Redoxâ€Responsive Macroscopic Gel Assembly Based on Discrete Dual Interactions. Angewandte Chemie - International Edition, 2014, 53, 3617-3621.	7.2	115
43	pH-Responsive Movement of Cucurbit[7]uril in a Diblock Polypseudorotaxane Containing Dimethyl Î²-Cyclodextrin and Cucurbit[7]uril. Organic Letters, 2006, 8, 3159-3162.	2.4	110
44	Complex formation of poly(É›-caprolactone) with cyclodextrin. Macromolecular Rapid Communications, 1997, 18, 535-539.	2.0	109
45	A Cyclodextrin-Based Molecular Shuttle Containing Energetically Favored and Disfavored Portions in Its Dumbbell Component. Organic Letters, 2000, 2, 1353-1356.	2.4	108
46	Supramolecular self-healing materials from non-covalent cross-linking hostâ€"guest interactions. Chemical Communications, 2020, 56, 4381-4395.	2.2	107
47	Recognition of Alkyl Groups on a Polymer Chain by Cyclodextrins. Macromolecules, 1997, 30, 5181-5182.	2.2	104
48	Switching of macroscopic molecular recognition selectivity using a mixed solvent system. Nature Communications, 2012, 3, 831.	5.8	104
49	Highly Elastic Supramolecular Hydrogels Using Hostâ€"Guest Inclusion Complexes with Cyclodextrins. Macromolecules, 2013, 46, 4575-4579.	2.2	102
50	Kinetic Control of Threading of Cyclodextrins onto Axle Molecules. Journal of the American Chemical Society, 2005, 127, 12186-12187.	6.6	100
51	Multifunctional Stimuli-Responsive Supramolecular Materials with Stretching, Coloring, and Self-Healing Properties Functionalized via Hostâ€"Guest Interactions. Macromolecules, 2017, 50, 4144-4150.	2.2	96
52	Photoswitchable Supramolecular Hydrogels Formed by Cyclodextrins and Azobenzene Polymers. Angewandte Chemie, 2010, 122, 7623-7626.	1.6	90
53	Cyclodextrin-Initiated Polymerization of Cyclic Esters in Bulk: Formation of Polyester-Tethered Cyclodextrins. Journal of the American Chemical Society, 2004, 126, 13588-13589.	6.6	84
54	Interaction of Cyclodextrin-Containing Polymers with Fluorescent Compounds. Macromolecules, 1977, 10, 676-681.	2.2	83

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55	Self-Healing Alkyl Acrylate-Based Supramolecular Elastomers Cross-Linked via Hostâ€"Guest Interactions. Macromolecules, 2019, 52, 2659-2668.	2.2	83
56	Formation of Inclusion Complexes of Oligoethylene and Its Derivatives withÎ±-Cyclodextrin. Bulletin of the Chemical Society of Japan, 1994, 67, 2808-2818.	2.0	82
57	Adhesion between Semihard Polymer Materials Containing Cyclodextrin and Adamantane Based on Hostâ€"Guest Interactions. Macromolecules, 2015, 48, 732-738.	2.2	81
58	Switching between Supramolecular Dimer and Nonthreaded Supramolecular Self-Assembly of Stilbene Amide-Î±-Cyclodextrin by Photoirradiation. Journal of the American Chemical Society, 2008, 130, 5024-5025.	6.6	80
59	Self-Assembly of Gels through Molecular Recognition of Cyclodextrins: Shape Selectivity for Linear and Cyclic Guest Molecules. Macromolecules, 2011, 44, 2395-2399.	2.2	76
60	Asymmetric hydrogenation with antibody-achiral rhodium complex. Organic and Biomolecular Chemistry, 2006, 4, 3571.	1.5	74
61	Supramolecular Materials Cross-Linked by Hostâ€"Guest Inclusion Complexes: The Effect of Side Chain Molecules on Mechanical Properties. Macromolecules, 2017, 50, 3254-3261.	2.2	72
62	Complex Formation between Poly(methyl vinyl ether) and Î³-Cyclodextrin. Chemistry Letters, 1993, 22, 237-240.	0.7	71
63	Construction of supramolecular structures from cyclodextrins, polymers. Carbohydrate Polymers, 1997, 34, 183-188.	5.1	67
64	pHâ€Responsive Selfâ€Assembly by Molecular Recognition on a Macroscopic Scale. Macromolecular Rapid Communications, 2013, 34, 1062-1066.	2.0	65
65	Supramolecular Adhesives to Hard Surfaces: Adhesion Between Host Hydrogels and Guest Glass Substrates Through Molecular Recognition. Macromolecular Rapid Communications, 2014, 35, 1646-1652.	2.0	64
66	Recognition of polymer side chains by cyclodextrins. Polymer Chemistry, 2011, 2, 2146.	1.9	62
67	Mechanical stimulation of single cells by reversible host-guest interactions in 3D microscaffolds. Science Advances, 2020, 6, .	4.7	61
68	A Photoresponsive Polymeric Actuator Topologically Cross-Linked by Movable Units Based on a [2]Rotaxane. Macromolecules, 2018, 51, 4688-4693.	2.2	60
69	Cyclodextrin-Based Side-Chain Polyrotaxane with Unidirectional Inclusion in Aqueous Media. Angewandte Chemie - International Edition, 2006, 45, 4605-4608.	7.2	57
70	Temperature-Sensitive Macroscopic Assembly Based on Molecular Recognition. ACS Macro Letters, 2012, 1, 1083-1085.	2.3	56
71	Cyclodextrinâ€Based Rotaxanes: from Rotaxanes to Polyrotaxanes and Further to Functional Materials. European Journal of Organic Chemistry, 2019, 2019, 3344-3357.	1.2	56
72	A Molecular Reel: Shuttling of a Rotor by Tumbling of a Macrocycle. Journal of Organic Chemistry, 2010, 75, 1040-1046.	1.7	55

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73	Interaction of cyclodextrins with side chains of water soluble polymers: A simple model for biological molecular recognition and its utilization for stimuli-responsive systems. Polymer, 2006, 47, 6011-6027.	1.8	54
74	Face-Selective [2]- and [3]Rotaxanes: Kinetic Control of the Threading Direction of Cyclodextrins. Chemistry - A European Journal, 2007, 13, 7091-7098.	1.7	54
75	Movable Cross-Linked Polymeric Materials from Bulk Polymerization of Reactive Polyrotaxane Cross-Linker with Acrylate Monomers. Macromolecules, 2017, 50, 5695-5700.	2.2	54
76	Extremely Rapid Selfâ€Healable and Recyclable Supramolecular Materials through Planetary Ball Milling and Hostâ€“Guest Interactions. Advanced Materials, 2020, 32, e2002008.	11.1	54
77	Reversible self-assembly of gels through metal-ligand interactions. Scientific Reports, 2013, 3, .	1.6	53
78	Switching from <i>altro</i>-Î±-Cyclodextrin Dimer to <i>pseudo</i>[1]Rotaxane Dimer through Tumbling. Organic Letters, 2010, 12, 1284-1286.	2.4	52
79	Complex Formation of Cyclodextrins with Cationic Polymers. Polymer Journal, 1996, 28, 159-163.	1.3	49
80	Non-ionic [2]rotaxanes containing methylated Î±-cyclodextrins. Chemical Communications, 1997, , 1413-1414.	2.2	48
81	Self-Threading of a Poly(ethylene glycol) Chain in a Cyclodextrin-Ring:Â Control of the Exchange Dynamics by Chain Length. Journal of the American Chemical Society, 2006, 128, 8994-8995.	6.6	46
82	Dynamic Mechano-Regulation of Myoblast Cells on Supramolecular Hydrogels Cross-Linked by Reversible Host-Guest Interactions. Scientific Reports, 2017, 7, 7660.	1.6	46
83	Molecular Puzzle Ring: <i>pseudo</i>[1]Rotaxane from a Flexible Cyclodextrin Derivative. Journal of the American Chemical Society, 2008, 130, 17062-17069.	6.6	45
84	Biofunctional hydrogels based on hostâ€“guest interactions. Polymer Journal, 2020, 52, 839-859.	1.3	45
85	Peroxidation of Pyrogallol by Antibodyâˆ’Metalloporphyrin Complexes. Inorganic Chemistry, 1997, 36, 6099-6102.	1.9	44
86	Complex Formation between Polyisoprene and Cyclodextrins. Macromolecular Rapid Communications, 2004, 25, 1159-1162.	2.0	44
87	Complex Formation of Polybutadiene with Cyclodextrins. Macromolecular Rapid Communications, 2001, 22, 763-767.	2.0	43
88	Lightâ€Switchable Janus [2]Rotaxanes Based on Î±â€Cyclodextrin Derivatives Bearing Two Recognition Sites Linked with Oligo(ethylene glycol). Chemistry - an Asian Journal, 2010, 5, 2281-2289.	1.7	42
89	Contraction of Supramolecular Double-Threaded Dimer Formed by Î±-Cyclodextrin with a Long Alkyl Chain. Organic Letters, 2007, 9, 1053-1055.	2.4	41
90	Macroscopic Observations of Molecular Recognition: Discrimination of the Substituted Position on the Naphthyl Group by Polyacrylamide Gel Modified with Î²-Cyclodextrin. Langmuir, 2011, 27, 13790-13795.	1.6	41

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91	Preparation and Characterization of Inclusion Complexes of Poly(propylene glycol) with Methylated Cyclodextrins. Journal of Physical Chemistry B, 1999, 103, 2607-2613.	1.2	40
92	Peroxidase Activity of Cationic Metalloporphyrin-Antibody Complexes. Chemistry - A European Journal, 2004, 10, 6179-6186.	1.7	40
93	Crystal Structure of the Complex of Î²-Cyclodextrin with Bithiophene and Their Oxidative Polymerization in Water. Macromolecules, 2004, 37, 3962-3964.	2.2	40
94	Macroscopic Self-Assembly Based on Molecular Recognition: Effect of Linkage between Aromatics and the Polyacrylamide Gel Scaffold, Amide versus Ester. Macromolecules, 2013, 46, 1939-1947.	2.2	40
95	Preparation and Characterization of Inclusion Complexes of Poly(alkyl vinyl ether) with Cyclodextrins. Bulletin of the Chemical Society of Japan, 1998, 71, 535-542.	2.0	37
96	Formation of Side-Chain Hetero-Polypseudorotaxane Composed of Î±- and Î²-Cyclodextrins with a Water-Soluble Polymer Bearing Two Recognition Sites. Macromolecules, 2010, 43, 1706-1713.	2.2	35
97	Self-Healing Thermoplastic Polyurethane Linked via Host-Guest Interactions. Polymers, 2020, 12, 1393.	2.0	35
98	Mechanical Properties of Supramolecular Polymeric Materials Formed by Cyclodextrins as Host Molecules and Cationic Alkyl Guest Molecules on the Polymer Side Chain. Macromolecules, 2018, 51, 6318-6326.	2.2	34
99	Supramolecular Elastomers with Movable Cross-Linkers Showing High Fracture Energy Based on Stress Dispersion. Macromolecules, 2019, 52, 6953-6962.	2.2	34
100	Design of self-healing and self-restoring materials utilizing reversible and movable crosslinks. NPG Asia Materials, 2022, 14, .	3.8	33
101	The controlled synthesis of polyglucose in one-dimensional coordination nanochannels. Chemical Communications, 2016, 52, 5156-5159.	2.2	32
102	Supramolecular hydrogels formed from poly(viologen) cross-linked with cyclodextrin dimers and their physical properties. Beilstein Journal of Organic Chemistry, 2012, 8, 1594-1600.	1.3	30
103	Redox-responsive supramolecular polymeric networks having double-threaded inclusion complexes. Chemical Science, 2020, 11, 4322-4331.	3.7	30
104	Supramolecular Polymers Based on Cyclodextrins and Their Derivatives. Australian Journal of Chemistry, 2010, 63, 599.	0.5	29
105	Supramolecular Polymeric Materials Containing Cyclodextrins. Chemical and Pharmaceutical Bulletin, 2017, 65, 330-335.	0.6	29
106	Self-healing and shape-memory properties of polymeric materials cross-linked by hydrogen bonding and metalâ€“ligand interactions. Polymer Chemistry, 2019, 10, 4519-4523.	1.9	28
107	Supramolecular Polymers and Materials Formed by Host-Guest Interactions. Bulletin of the Chemical Society of Japan, 2021, 94, 2381-2389.	2.0	28
108	Face selective translation of a cyclodextrin ring along an axle. Chemical Communications, 2009, , 5515.	2.2	27

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109	Citric Acid-Modified Cellulose-Based Tough and Self-Healable Composite Formed by Two Kinds of Noncovalent Bonding. ACS Applied Polymer Materials, 2020, 2, 2274-2283.	2.0	27
110	Mechanical Properties with Respect to Water Content of Hostâ€"Guest Hydrogels. Macromolecules, 2021, 54, 8067-8076.	2.2	27
111	Self-Threading and Dethreading Dynamics of Poly(ethylene glycol)-Substituted Cyclodextrins with Different Chain Lengths. Macromolecules, 2007, 40, 3256-3262.	2.2	26
112	Photochemically Controlled Supramolecular Curdlan/Singleâ€Walled Carbon Nanotube Composite Gel: Preparation of Molecular Distaff by Cyclodextrin Modified Curdlan and Phase Transition Control. European Journal of Organic Chemistry, 2011, 2011, 2801-2806.	1.2	25
113	Preparation of Porous Polysaccharides Templated by Coordination Polymer with Three-Dimensional Nanochannels. ACS Applied Materials & Interfaces, 2017, 9, 11373-11379.	4.0	25
114	Rotaxanes with unidirectional cyclodextrin array. Journal of Physics Condensed Matter, 2006, 18, S1809-S1816.	0.7	24
115	Visible chiral discrimination via macroscopic selective assembly. Communications Chemistry, 2018, 1, .	2.0	23
116	Preparation of Supramolecular Ionic Liquid Gels Based on Hostâ€"Guest Interactions and Their Swelling and Ionic Conductive Properties. Macromolecules, 2019, 52, 2932-2938.	2.2	23
117	Complex Formation of Cyclodextrins with Various Thiophenes and their Polymerization in Water: Preparation of Poly-pseudo-rotaxanes containing Poly(thiophene)s. Journal of Inclusion Phenomena and Macrocyclic Chemistry, 2006, 56, 45-53.	1.6	22
118	Functioning via hostâ€"guest interactions. Journal of Inclusion Phenomena and Macrocyclic Chemistry, 2017, 87, 313-330.	0.9	22
119	Preparation of cyclodextrin-based porous polymeric membrane by bulk polymerization of ethyl acrylate in the presence of cyclodextrin. Polymer, 2019, 177, 208-213.	1.8	22
120	Composite hydrogels reinforced by cellulose-based supramolecular filler. Polymer Degradation and Stability, 2020, 177, 109157.	2.7	22
121	Inclusion Complex Formation and Hydrolysis of Lactones by Cyclodextrins. Chemistry Letters, 2003, 32, 1122-1123.	0.7	20
122	Photoinduced Hydrogen-Evolution System with an Antibodyâ€"Porphyrin Complex as a Photosensitizer. Bulletin of the Chemical Society of Japan, 2009, 82, 1341-1346.	2.0	20
123	Preparation of hydrophilic polymeric materials with movable cross-linkers and their mechanical property. Polymer, 2020, 196, 122465.	1.8	20
124	Design and mechanical properties of supramolecular polymeric materials based on hostâ€"guest interactions: the relation between relaxation time and fracture energy. Polymer Chemistry, 2020, 11, 6811-6820.	1.9	19
125	Monoclonal Antibodies as Tailor-Made Hosts for Porphyrins. Chemistry Letters, 1990, 19, 917-918.	0.7	18
126	Photoregulated Switching of the Recognition Site of Î±â€Cyclodextrin in a Side Chain Polyrotaxane Bearing Two Recognition Sites Linked with Oligo(ethylene glycol). Macromolecular Chemistry and Physics, 2011, 212, 1032-1038.	1.1	18

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127	Dynamics of the Topological Network Formed by Movable Crosslinks: Effect of Sliding Motion on Dielectric and Viscoelastic Relaxation Behavior. Macromolecules, 2021, 54, 3321-3333.	2.2	16
128	Molecular Recognition: Preparation of Polyrotaxan and Tubular Polymer from Cyclodextrin. Polymers for Advanced Technologies, 1997, 8, 241-249.	1.6	15
129	A Macroscopic Reaction: Direct Covalent Bond Formation between Materials Using a Suzuki-Miyaura Cross-Coupling Reaction. Scientific Reports, 2014, 4, 6348.	1.6	15
130	Toward a translational molecular ratchet: face-selective translation coincident with deuteration in a pseudo-rotaxane. Scientific Reports, 2018, 8, 8950.	1.6	15
131	Direct covalent bond formation between materials using copper(<scp>i</scp>)-catalyzed azide alkyne cycloaddition reactions. RSC Advances, 2015, 5, 56130-56135.	1.7	14
132	Supramolecular Biocomposite Hydrogels Formed by Cellulose and Hostâ€“Guest Polymers Assisted by Calcium Ion Complexes. Biomacromolecules, 2020, 21, 3936-3944.	2.6	14
133	Physical and Adhesion Properties of Supramolecular Hydrogels Cross-linked by Movable Cross-linking Molecule and Host-guest Interactions. Chemistry Letters, 2018, 47, 1387-1390.	0.7	13
134	Control of the threading ratio of cyclic molecules in polyrotaxanes consisting of poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 46	2.2	13
135	Linear viscoelastic studies on a transient network formed by hostâ€“guest interaction. Journal of Polymer Science, Part B: Polymer Physics, 2018, 56, 1109-1117.	2.4	13
136	Precise synthesis of polyrotaxane and preparation of supramolecular materials based on its mobility. Polymer Journal, 2021, 53, 505-513.	1.3	13
137	Cellulose Nanofiber Composite Polymeric Materials with Reversible and Movable Cross-links and Evaluation of their Mechanical Properties. ACS Applied Polymer Materials, 2022, 4, 403-412.	2.0	13
138	A palladium-catalyst stabilized in the chiral environment of a monoclonal antibody in water. Chemical Communications, 2020, 56, 1605-1607.	2.2	12
139	Bulk Copolymerization of Hostâ€“Guest Monomers with Liquid-Type Acrylamide Monomers for Supramolecular Materials Applications. ACS Applied Polymer Materials, 2020, 2, 1553-1560.	2.0	12
140	Thermal ring-opening polymerization of an unsymmetrical silicon-bridged [1]ferrocenophane in coordination nanochannels. Chemical Communications, 2017, 53, 6945-6948.	2.2	12
141	Palladium nanoparticle loaded Î²-cyclodextrin monolith as a flow reactor for concentration enrichment and conversion of pollutants based on molecular recognition. Chemical Communications, 2020, 56, 14408-14411.	2.2	12
142	Stereoselective Complex Formation between Polybutadiene and Cyclodextrins in Bulk. Macromolecular Rapid Communications, 2008, 29, 910-913.	2.0	11
143	Mechano-Responsive Hydrogels Driven by the Dissociation of a Hostâ€“Guest Complex. ACS Macro Letters, 2021, 10, 971-977.	2.3	11
144	Synergetic improvement in the mechanical properties of polyurethanes with movable crosslinking and hydrogen bonds. Soft Matter, 2022, 18, 5027-5036.	1.2	11

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145	Functionalized Antibodies as Biosensing Materials and Catalysts. Chemistry Letters, 2008, 37, 1184-1189.	0.7	10
146	Direct Adhesion of Dissimilar Materials Using Sonogashira Cross-coupling Reaction. Chemistry Letters, 2016, 45, 1250-1252.	0.7	10
147	Adhesion of Dissimilar Materials through Host-Guest Interactions and Its Re-adhesion Properties. Chemistry Letters, 2018, 47, 1255-1257.	0.7	10
148	Photoresponsive polymeric actuator cross-linked by an 8-armed polyhedral oligomeric silsesquioxane. European Polymer Journal, 2020, 134, 109806.	2.6	10
149	Behavior of supramolecular cross-links formed by host-guest interactions in hydrogels responding to water contents. , 2022, 1, 100001.		10
150	Preparation of dual-cross network polymers by the knitting method and evaluation of their mechanical properties. NPG Asia Materials, 2022, 14, .	3.8	10
151	Enhancement of Photoinduced Electron Transfer from Porphyrin to Methyl Viologen by Binding of an Antibody for Porphyrin. Chemistry Letters, 2006, 35, 1126-1127.	0.7	9
152	Supramolecular complex formation of polysulfide polymers and cyclodextrins. Chemical Communications, 2020, 56, 13619-13622.	2.2	9
153	Heatâ€induced Supramolecular Crosslinking of Dumbbellâ€shaped PEG with Î²â€CD Dimer Based on Reversible Looseâ€fit Rotaxanation. Macromolecular Chemistry and Physics, 2011, 212, 211-215.	1.1	8
154	Manual control of catalytic reactions: Reactions by an apoenzyme gel and a cofactor gel. Scientific Reports, 2015, 5, 16254.	1.6	8
155	Mechanical and self-recovery properties of supramolecular ionic liquid elastomers based on hostâ€"guest interactions and correlation with ionic liquid content. RSC Advances, 2019, 9, 22295-22301.	1.7	8
156	Control of microenvironment around enzymes by hydrogels. Chemical Communications, 2020, 56, 6723-6726.	2.2	8
157	Fabrication and mechanical properties of knitted dissimilar polymeric materials with movable cross-links. Molecular Systems Design and Engineering, 2022, 7, 733-745.	1.7	8
158	Preparation of Loose-fit Polyrotaxane Composed of Î²-Cyclodextrin and Poly(ethylene glycol) Derivatives through the Slippingâ€"Expanding Protocol. Chemistry Letters, 2010, 39, 892-893.	0.7	7
159	Reinforced polystyrene through host-guest interactions using cyclodextrin as an additive. European Polymer Journal, 2020, 134, 109807.	2.6	7
160	Material Adhesion through Direct Covalent Bond Formation Assisted by Noncovalent Interactions. ACS Applied Polymer Materials, 2021, 3, 2189-2196.	2.0	7
161	Mechanical properties of supramolecular polymeric materials cross-linked by donorâ€"acceptor interactions. Chemical Communications, 2019, 55, 3809-3812.	2.2	6
162	Modulation of reversible self-assembling of dumbbell-shaped poly(ethylene glycol)s and Î²-cyclodextrins: precipitation and heat-induced supramolecular crosslinking. Polymer Journal, 2011, 43, 893-900.	1.3	5

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163	Direct Chiral Separation of Binaphthyl Derivatives Using Atroposelective Antibodies. ChemistrySelect, 2017, 2, 2622-2625.	0.7	5
164	Effect of Host-Guest Interaction on Swelling Behavior and Equilibrium Swollen State of Host-Guest Gel. Nihon Reoroji Gakkaishi, 2019, 47, 99-104.	0.2	5
165	One-Step Synthesis of Gelatin-Conjugated Supramolecular Hydrogels for Dynamic Regulation of Adhesion Contact and Morphology of Myoblasts. ACS Applied Polymer Materials, 2022, 4, 2595-2603.	2.0	5
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