Daisuke Aoki

List of Publications by Year
in descending order

99 papers	2,134 citations	185998 28 h-index	288905 40 g-index
103 all docs	103 docs citations	103 times ranked	1267 citing authors

#	Article	IF	Citations
1	Starâ€Polymerâ€"DNA Gels Showing Highly Predictable and Tunable Mechanical Responses. Advanced Materials, 2022, 34, e2108818.	11.1	14
2	Mechanochromic cyclodextrins. Chemical Communications, 2022, 58, 3067-3070.	2.2	7
3	Cyclic Polymers Synthesized by Spontaneous Selective Cyclization Approaches. , 2022, , 319-334.		1
4	Mechanochromic elastomers with different thermo- and mechano-responsive radical-type mechanophores. Soft Matter, 2022, 18, 3218-3225.	1.2	4
5	Enhancement of Mechanophore Activation by Electrostatic Interaction. Bulletin of the Chemical Society of Japan, 2022, 95, 646-651.	2.0	3
6	Structure Reconfigurable Mechanochromic Polymer with Shape Memory and Strain-Monitored Function Enabled by a Covalent Adaptable Network. Macromolecules, 2022, 55, 3948-3957.	2.2	6
7	Polymer-Network Toughening and Highly Sensitive Mechanochromism via a Dynamic Covalent Mechanophore and a Multinetwork Strategy. Macromolecules, 2022, 55, 5795-5802.	2.2	22
8	Isolation of hetero-telechelic polyethylene glycol with groups of different reactivity at the chain ends. Polymer Journal, 2022, 54, 1321-1329.	1.3	1
9	Mechanochromic Polymers That Recognize the Duration of the Mechanical Stimulation via Multiple Mechanochromism. Macromolecular Rapid Communications, 2021, 42, e2000429.	2.0	12
10	A rational entry to cyclic polymers via spontaneous and selective cyclization reactions. Polymer Journal, 2021, 53, 257-269.	1.3	7
11	A Diarylacetonitrile as a Molecular Probe for the Detection of Polymeric Mechanoradicals in the Bulk State through a Radical Chainâ€Transfer Mechanism. Angewandte Chemie, 2021, 133, 2712-2715.	1.6	9
12	A Diarylacetonitrile as a Molecular Probe for the Detection of Polymeric Mechanoradicals in the Bulk State through a Radical Chainâ€Transfer Mechanism. Angewandte Chemie - International Edition, 2021, 60, 2680-2683.	7.2	34
13	Design of Self-healing Polymers and High Value-added Urethane-containing Rubber Materials Based on Dynamic Covalent Chemistry. Nippon Gomu Kyokaishi, 2021, 94, 33-38.	0.0	0
14	Post-polymerization modification of polybenzoxazines with boronic acids supported by Bâ€"N interactions. Polymer Chemistry, 2021, 12, 5266-5270.	1.9	9
15	Fast and Reversible Cross-Linking Reactions of Thermoresponsive Polymers Based on Dynamic Dialkylaminodisulfide Exchange. ACS Applied Polymer Materials, 2021, 3, 888-895.	2.0	12
16	Crystallization-induced mechanofluorescence for visualization of polymer crystallization. Nature Communications, 2021, 12, 126.	5.8	50
17	Enhancement of Mechanophore Activation in Mechanochromic Dendrimers by Functionalization of Their Surface. Macromolecules, 2021, 54, 1725-1731.	2.2	25
18	InnenrÃ¼cktitelbild: Segmented Polyurethane Elastomers with Mechanochromic and Selfâ€Strengthening Functions (Angew. Chem. 15/2021). Angewandte Chemie, 2021, 133, 8639-8639.	1.6	1

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19	Segmented Polyurethane Elastomers with Mechanochromic and Selfâ€Strengthening Functions. Angewandte Chemie, 2021, 133, 8487-8490.	1.6	13
20	Segmented Polyurethane Elastomers with Mechanochromic and Selfâ€Strengthening Functions. Angewandte Chemie - International Edition, 2021, 60, 8406-8409.	7.2	60
21	Self-Strengthening of Cross-Linked Elastomers via the Use of Dynamic Covalent Macrocyclic Mechanophores. ACS Macro Letters, 2021, 10, 558-563.	2.3	20
22	Mechanophore activation enhanced by hydrogen bonding of diarylurea motifs: An efficient supramolecular forceâ€transducing system. Aggregate, 2021, 2, e50.	5.2	15
23	Visualization of the Necking Initiation and Propagation Processes during Uniaxial Tensile Deformation of Crystalline Polymer Films via the Generation of Fluorescent Radicals. ACS Macro Letters, 2021, 10, 623-627.	2.3	19
24	Polystyrene Functionalized with Diarylacetonitrile for the Visualization of Mechanoradicals and Improved Thermal Stability. ACS Macro Letters, 2021, 10, 744-748.	2.3	16
25	Toughening of Polymer Networks by Freezing-induced Monomer Insertion. Chemistry Letters, 2021, 50, 1223-1225.	0.7	1
26	Mechanical Performance and Visual Fracture Warning Function of Mechanochromic Stimuli-Recovery Polymer Networks. Macromolecules, 2021, 54, 8664-8674.	2.2	13
27	Synthetic Strategy for Mechanically Interlocked Cyclic Polymers via the Ring-Expansion Polymerization of Macrocycles with a Bis(hindered amino)disulfide Linker. Macromolecules, 2021, 54, 8154-8163.	2.2	6
28	Non-symmetric mechanophores prepared from radical-type symmetric mechanophores: bespoke mechanofunctional polymers. Chemical Communications, 2021, 57, 2899-2902.	2.2	14
29	Postmodification of Polymer Networks via the Freezing-Induced Generation of Radicals. ACS Applied Polymer Materials, 2021, 3, 594-598.	2.0	12
30	Reversible cyclic-linear topological transformation using a long-range rotaxane switch. Polymer Chemistry, 2021, 12, 6381-6385.	1.9	3
31	Topology Transformation toward Cyclic, Figure-Eight-Shaped, and Cross-Linked Polymers Based on the Dynamic Behavior of a Bis(hindered amino)disulfide Linker. Macromolecules, 2021, 54, 9992-10000.	2.2	10
32	Mechanochemical Reactions of Bis(9-methylphenyl-9-fluorenyl) Peroxides and Their Applications in Cross-Linked Polymers. Journal of the American Chemical Society, 2021, 143, 17744-17750.	6.6	30
33	Topology-transformable block copolymers based on a rotaxane structure: change in bulk properties with same composition. Nature Communications, 2021, 12, 6175.	5.8	10
34	Plastics to fertilizers: chemical recycling of a bio-based polycarbonate as a fertilizer source. Green Chemistry, 2021, 23, 9030-9037.	4.6	12
35	Diarylbiindolinones as Substituentâ€Tunable Mechanochromophores and Their Application in Mechanochromic Polymers. Macromolecular Rapid Communications, 2020, 41, 1900460.	2.0	22
36	A Strategy toward Cyclic Topologies Based on the Dynamic Behavior of a Bis(hindered amino)disulfide Linker. Angewandte Chemie - International Edition, 2020, 59, 4269-4273.	7.2	31

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37	Fusion of Different Crosslinked Polymers Based on Dynamic Disulfide Exchange. Angewandte Chemie - International Edition, 2020, 59, 4294-4298.	7.2	48
38	Effect of Coexisting Covalent Cross-Links on the Properties of Rotaxane-Cross-Linked Polymers. ACS Applied Polymer Materials, 2020, 2, 1061-1064.	2.0	16
39	Visualization and Quantitative Evaluation of Toughening Polymer Networks by a Sacrificial Dynamic Cross-Linker with Mechanochromic Properties. ACS Macro Letters, 2020, 9, 1108-1113.	2.3	36
40	Characterization of <i>N</i>-phenylmaleimide-terminated poly(ethylene glycol)s and their application to a tetra-arm poly(ethylene glycol) gel. Soft Matter, 2020, 16, 10869-10875.	1.2	8
41	Energy Dissipation and Mechanoresponsive Color Evaluation of a Poly(<i>n</i>-hexyl Methacrylate) Soft Material Enhanced by a Mechanochromic Cross-Linker with Dynamic Covalent Bonds. Macromolecules, 2020, 53, 9313-9324.	2.2	14
42	Polybutadiene rubbers with urethane linkages prepared by a dynamic covalent approach for tire applications. Polymer, 2020, 202, 122700.	1.8	14
43	Rational Entry to Cyclic Polymers via Thermally Induced Radical Ring-Expansion Polymerization of Macrocycles with One Bis(hindered amino)disulfide Linkage. Macromolecules, 2020, 53, 4670-4677.	2.2	16
44	Synthesis of well-defined mechanochromic polymers based on a radical-type mechanochromophore by RAFT polymerization: living radical polymerization from a polymerization inhibitor. Polymer Chemistry, 2020, 11, 4290-4296.	1.9	3
45	Visualization of the slide-ring effect: a study on movable cross-linking points using mechanochromism. Chemical Communications, 2020, 56, 3361-3364.	2.2	16
46	RÃ¼cktitelbild: Fusion of Different Crosslinked Polymers Based on Dynamic Disulfide Exchange (Angew.) Tj ETQq0 0 0 rgBT /Overlock 10	1.6	0
47	Functionalization of amine-cured epoxy resins by boronic acids based on dynamic dioxazaborocane formation. Polymer Chemistry, 2020, 11, 5356-5364.	1.9	23
48	A Strategy toward Cyclic Topologies Based on the Dynamic Behavior of a Bis(hindered amino)disulfide Linker. Angewandte Chemie, 2020, 132, 4299-4303.	1.6	4
49	Fusion of Different Crosslinked Polymers Based on Dynamic Disulfide Exchange. Angewandte Chemie, 2020, 132, 4324-4328.	1.6	10
50	Quantification for the Mixing of Polymers on Microspheres in Waterborne Latex Films. Langmuir, 2020, 36, 4855-4862.	1.6	5
51	Using the dynamic behavior of macrocyclic monomers with a bis(hindered amino)disulfide linker for the preparation of end-functionalized polymers. Polymer Chemistry, 2020, 11, 3557-3563.	1.9	12
52	Macromolecular [2]Rotaxanes Linked with Polystyrene: Properties and Nanoscale Film Morphologies. Macromolecules, 2019, 52, 5325-5336.	2.2	7
53	Maleimidophenyl isocyanates as postpolymerization modification agents and their applications in the synthesis of block copolymers. Journal of Polymer Science Part A, 2019, 57, 2396-2406.	2.5	7
54	Phase Transition Behaviors and Nanoscale Film Morphologies of Poly(Î´â€valerolactone) Axles Bearing Movable and Fixed Rotaxane Wheels. Macromolecular Rapid Communications, 2019, 40, 1900334.	2.0	3

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55	Investigation of Mechanical Properties of Latex Films Prepared from Poly (Butyl) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 747 Td Gakkaishi, 2019, 47, 51-54.	0.2	4
56	Multicolor Mechanochromism of a Polymer/Silica Composite with Dual Distinct Mechanophores. Journal of the American Chemical Society, 2019, 141, 1898-1902.	6.6	105
57	Network reorganization in cross-linked polymer/silica composites based on exchangeable dynamic covalent carbonâ€“carbon bonds. Polymer, 2019, 177, 10-18.	1.8	8
58	A Vinylic Rotaxane Crossâ€Linker Containing Crown Ether for Hydrophilic and Hard Rotaxaneâ€Networked Polymers. Macromolecular Symposia, 2019, 385, 1800186.	0.4	8
59	Mechanochromic dendrimers: the relationship between primary structure and mechanochromic properties in the bulk. Chemical Communications, 2019, 55, 6831-6834.	2.2	39
60	Introducing static cross-linking points into dynamic covalent polymer gels that display freezing-induced mechanofluorescence: enhanced force transmission efficiency and stability. Polymer Chemistry, 2019, 10, 2636-2640.	1.9	32
61	Mechanofluorescent polymer/silsesquioxane composites based on tetraarylsuccinonitrile. Materials Chemistry Frontiers, 2019, 3, 2681-2685.	3.2	19
62	A Guiding Principle for Strengthening Crosslinked Polymers: Synthesis and Application of Mobilityâ€Controlling Rotaxane Crosslinkers. Angewandte Chemie - International Edition, 2019, 58, 2765-2768.	7.2	32
63	A Guiding Principle for Strengthening Crosslinked Polymers: Synthesis and Application of Mobilityâ€Controlling Rotaxane Crosslinkers. Angewandte Chemie, 2019, 131, 2791-2794.	1.6	9
64	Photoinduced Regulation of the Heat Resistance in Polymer Networks with Diarylethene-Conjugated Reversible Covalent Cross-Links. ACS Macro Letters, 2019, 8, 1-6.	2.3	8
65	Sulfur-33 NQR investigation of the electric-field-gradient tensor in an organosulfur compound. Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences, 2019, 74, 421-425.	0.3	3
66	Syntheses and Property of Rotaxane-Cross-linked Polymers: Influence of Coexisted Covalent Cross-link on The Property. Nippon Gomu Kyokaishi, 2019, 92, 101-108.	0.0	0
67	Reactive Polyurethanes with Dynamic Covalent Linkages. Journal of the Adhesion Society of Japan, 2019, 55, 168-174.	0.0	0
68	Multicolor Mechanochromic Polymer Blends That Can Discriminate between Stretching and Grinding. ACS Macro Letters, 2018, 7, 556-560.	2.3	82
69	Which One is Bulkier: The 3,5â€Dimethylphenyl or the 2,6â€Dimethylphenyl Group? Development of Sizeâ€Complementary Molecular and Macromolecular [2]Rotaxanes. Chemistry - an Asian Journal, 2018, 13, 785-789.	1.7	9
70	Mechanochromic Polymers That Turn Green Upon the Dissociation of Diarylbibenzothiophenonyl: The Missing Piece toward Rainbow Mechanochromism. Chemistry - A European Journal, 2018, 24, 3170-3173.	1.7	75
71	Chemoselective Suzuki Coupling of Bromoarenes Catalysed by Palladium(II)â€Complexing Macrocycles in Aqueous Media. ChemistrySelect, 2018, 3, 446-450.	0.7	9
72	Topology-transformable polymers: linearâ€“branched polymer structural transformation via the mechanical linking of polymer chains. Polymer Journal, 2018, 50, 127-147.	1.3	43

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73	Modification of amine-cured epoxy resins by boronic acids based on their reactivity with intrinsic diethanolamine units. Chemical Communications, 2018, 54, 12930-12933.	2.2	14
74	Thermally Stable Radical-Type Mechanochromic Polymers Based on Difluorenylsuccinonitrile. ACS Macro Letters, 2018, 7, 1359-1363.	2.3	57
75	The photoregulation of a mechanochemical polymer scission. Nature Communications, 2018, 9, 3504.	5.8	59
76	Freezing-Induced Mechanoluminescence of Polymer Gels. ACS Macro Letters, 2018, 7, 1087-1091.	2.3	59
77	Repairing and Reprocessing of Cross-linked Polymers Based on Thermally Exchangeable Disulfide Bond. The Proceedings of the Materials and Processing Conference, 2018, 2018.26, 815.	0.0	0
78	Synthesis of rotaxane cross-linked polymers with supramolecular cross-linkers based on Î³-CD and PTHF macromonomers: The effect of the macromonomer structure on the polymer properties. Polymer, 2017, 128, 392-396.	1.8	44
79	A vinylic rotaxane cross-linker for toughened network polymers from the radical polymerization of vinyl monomers. Polymer Chemistry, 2017, 8, 1878-1881.	1.9	36
80	Formation of Tough Films by Evaporation of Water from Dispersions of Elastomer Microspheres Crosslinked with Rotaxane Supramolecules. Chemistry - A European Journal, 2017, 23, 8405-8408.	1.7	18
81	A Rational Entry to Cyclic Polymers via Selective Cyclization by Self-Assembly and Topology Transformation of Linear Polymers. Journal of the American Chemical Society, 2017, 139, 6791-6794.	6.6	63
82	Decoupled Thermoâ€•and pHâ€Responsive Hydrogel Microspheres Crossâ€Linked by Rotaxane Networks. Angewandte Chemie - International Edition, 2017, 56, 15393-15396.	7.2	59
83	Mechanically linked supramolecular polymer architectures derived from macromolecular [2]rotaxanes: Synthesis and topology transformation. Polymer, 2017, 128, 276-296.	1.8	30
84	Vinylic Rotaxane Crossâ€Linker Comprising Different Axle Length for the Characterization of Rotaxane Crossâ€linked Polymers. Macromolecular Symposia, 2017, 372, 115-119.	0.4	13
85	Decoupled Thermoâ€•and pHâ€Responsive Hydrogel Microspheres Crossâ€Linked by Rotaxane Networks. Angewandte Chemie, 2017, 129, 15595-15598.	1.6	6
86	Branched/Linear Polymer Topology Transformation Facilitated by Mechanical Linking of Polymer Chains. Nippon Gomu Kyokaishi, 2017, 90, 283-289.	0.0	0
87	Efficient Synthesis of Cyclic Block Copolymers by Rotaxane Protocol by Linear/Cyclic Topology Transformation. Chemistry - A European Journal, 2016, 22, 8759-8762.	1.7	31
88	Effect of Component Mobility on the Properties of Macromolecular [2]Rotaxanes. Angewandte Chemie - International Edition, 2016, 55, 2778-2781.	7.2	29
89	Synthesis and characterization of supramolecular cross-linkers containing cyclodextrin dimer and trimer. Polymer Chemistry, 2016, 7, 3492-3495.	1.9	25
90	Synthesis and Star/Linear Topology Transformation of a Mechanically Linked ABC Terpolymer. ACS Macro Letters, 2016, 5, 699-703.	2.3	32

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91	Effect of Component Mobility on the Properties of Macromolecular [2]Rotaxanes. Angewandte Chemie, 2016, 128, 2828-2831.	1.6	9
92	Star/Linear Polymer Topology Transformation Facilitated by Mechanical Linking of Polymer Chains. Angewandte Chemie - International Edition, 2015, 54, 6770-6774.	7.2	57
93	Effective Approach to Cyclic Polymer from Linear Polymer: Synthesis and Transformation of Macromolecular [1]Rotaxane. ACS Macro Letters, 2015, 4, 343-347.	2.3	55
94	Synthesis of Vinylic Macromolecular Rotaxane Cross-Linkers Endowing Network Polymers with Toughness. ACS Macro Letters, 2015, 4, 598-601.	2.3	76
95	Frequency-swept solid-state 33S NMR of an organosulfur compound in an extremely low magnetic field. Chemical Physics Letters, 2015, 630, 86-90.	1.2	10
96	Novel Topological Cross-Linkers Synthesized for Vinyl Polymer Systems. Kobunshi Ronbunshu, 2015, 72, 93-103.	0.2	0
97	Synthesis and characterization of a mechanically linked transformable polymer. Polymer Journal, 2014, 46, 546-552.	1.3	18
98	Mechanically Linked Block/Graft Copolymers: Effective Synthesis via Functional Macromolecular [2]Rotaxanes. ACS Macro Letters, 2014, 3, 324-328.	2.3	32
99	Macromolecular [2]Rotaxanes: Effective Synthesis and Characterization. ACS Macro Letters, 2013, 2, 461-465.	2.3	37