Fumihiko Tanaka

List of Publications by Year
in descending order

104	4,281	109264	114418
papers	citations	35 h-index	63 g-index

105	105	105	3180
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cooperative Hydration, Chain Collapse, and Flat LCST Behavior in Aqueous Poly(N-isopropylacrylamide) Solutions. Macromolecules, 2005, 38, 4465-4471.	2.2	374
2	Temperature-Induced Phase Transition of Well-Defined Cyclic Poly(N-isopropylacrylamide)s in Aqueous Solution. Macromolecules, 2007, 40, 7069-7071.	2.2	302
3	Impact of End-Group Association and Main-Chain Hydration on the Thermosensitive Properties of Hydrophobically Modified Telechelic Poly(N-isopropylacrylamides) in Water. Macromolecules, 2006, 39, 341-348.	2.2	284
4	Temperature-Responsive Polymers in Mixed Solvents: Competitive Hydrogen Bonds Cause Cononsolvency. Physical Review Letters, 2008, 101, 028302.	2.9	223
5	Theory of solvation-induced reentrant phase separation in polymer solutions. Physical Review Letters, 1990, 65, 341-344.	2.9	202
6	Thermoreversible Gelation with Junctions of Variable Multiplicity. Macromolecules, 1994, 27, 3943-3954.	2.2	163
7	Temperature-Dependent Properties of Telechelic Hydrophobically Modified Poly(N-isopropylacrylamides) in Water:Â Evidence from Light Scattering and Fluorescence Spectroscopy for the Formation of Stable Mesoglobules at Elevated Temperatures. Macromolecules, 2006, 39, 3048-3055.	2.2	128
8	Preferential Adsorption and Co-nonsolvency of Thermoresponsive Polymers in Mixed Solvents of Water/Methanol. Macromolecules, 2011, 44, 2978-2989.	2.2	115
9	Temperature- and Tension-Induced Coilâ^'Globule Transition of Poly(N-isopropylacrylamide) Chains in Water and Mixed Solvent of Water/Methanol. Macromolecules, 2009, 42, 1321-1330.	2.2	102
10	Temperature dependent phase behavior of PNIPAM microgels in mixed water/methanol solvents. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 1100-1111.	2.4	87
11	Temperature Response of Self-Assembled Micelles of Telechelic Hydrophobically Modified Poly(2-alkyl-2-oxazoline)s in Water. Macromolecules, 2009, 42, 2204-2214.	2.2	86
12	Hydration and Dynamic Behavior of a Cyclic Poly(N-isopropylacrylamide) in Aqueous Solution: Effects of the Polymer Chain Topology. Macromolecules, 2009, 42, 1400-1403.	2.2	83
13	Theory of thermoreversible gelation. Macromolecules, 1989, 22, 1988-1994.	2.2	82
14	Theoretical Modeling of Associated Structures in Aqueous Solutions of Hydrophobically Modified Telechelic PNIPAM Based on a Neutron Scattering Study. Macromolecules, 2008, 41, 9413-9422.	2.2	79
15	Heat-Induced Phase Transition and Crystallization of Hydrophobically End-Capped Poly(2-isopropyl-2-oxazoline)s in Water. Macromolecules, 2009, 42, 5818-5828.	2.2	76
16	Elastic theory of supercoiled DNA. Journal of Chemical Physics, 1985, 83, 6017-6026.	1.2	70
17	Theoretical Study of Molecular Association and Thermoreversible Gelation in Polymers. Polymer Journal, 2002, 34, 479-509.	1.3	70
18	Thermodynamic theory of network-forming polymer solutions. 1. Macromolecules, 1990, 23, 3784-3789.	2.2	68

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19	Polymerâ”Surfactant Interaction in Thermoreversible Gels. Macromolecules, 1998, 31, 384-393.	2.2	65
20	Tricriticality in thermoreversible gels. Physical Review Letters, 1989, 62, 2759-2762.	2.9	64
21	Cooperative Hydration Induces Discontinuous Volume Phase Transition of Cross-Linked Poly(N-isopropylacrylamide) Gels in Water. Macromolecules, 2010, 43, 5103-5113.	2.2	61
22	Elastically Effective Chains in Transient Gels with Multiple Junctions. Macromolecules, 1996, 29, 7571-7580.	2.2	59
23	Theory of microphase formation in reversibly associating block copolymer blends. Macromolecules, 1991, 24, 5582-5589.	2.2	55
24	Theoretical Study of the Postgel Regime in Thermoreversible Gelation. Macromolecules, 1997, 30, 3900-3909.	2.2	55
25	Theory of Shear-Thickening in Transient Networks of Associating Polymers. Macromolecular Rapid Communications, 2005, 26, 701-706.	2.0	55
26	New insights into the effects of molecular weight and end group on the temperature-induced phase transition of poly(N-isopropylacrylamide) in water. Science China Chemistry, 2013, 56, 56-64.	4.2	51
27	Junction Multiplicity in Thermoreversible Gelation. Macromolecules, 1996, 29, 3625-3628.	2.2	48
28	Microphase Formation in Mixtures of Associating Polymers. Macromolecules, 1997, 30, 1836-1844.	2.2	48
29	Thermoreversible Gelation Driven by Coil-to-Helix Transition of Polymers. Macromolecules, 2003, 36, 5392-5405.	2.2	48
30	Theory of solvationâ€induced reentrant coilâ€“globule transition of an isolated polymer chain. Journal of Chemical Physics, 1991, 94, 781-786.	1.2	47
31	Thermodynamic theory of network-forming polymer solutions. 2. Equilibrium gelation by conterminous crosslinking. Macromolecules, 1990, 23, 3790-3795.	2.2	46
32	Thermoreversible Gelation Strongly Coupled to Polymer Conformational Transition. Macromolecules, 2000, 33, 4249-4263.	2.2	46
33	Osmotic pressure of ringâ€polymer solutions. Journal of Chemical Physics, 1987, 87, 4201-4206.	1.2	41
34	Stress Buildup under Start-Up Shear Flows in Self-Assembled Transient Networks of Telechelic Associating Polymers. Langmuir, 2009, 25, 8626-8638.	1.6	40
35	Thermoreversible gelation of hydrated polymers. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 2663.	1.7	39
36	Phase formation of associating polymers: gelation, phase separation and microphase formation. Advances in Colloid and Interface Science, 1996, 63, 23-40.	7.0	36

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37	Theoretical Study of Hydrogen-Bonded Supramolecular Liquid Crystals. Macromolecules, 2002, 35, 7460-7472.	2.2	36
38	Theoretical Predictions on Normal Stresses under Shear Flow in Transient Networks of Telechelic Associating Polymers. Macromolecules, 2010, 43, 3052-3060.	2.2	35
39	Thermoreversible Gelation with Two-Component Networks. Macromolecules, 1999, 32, 1271-1283.	2.2	32
40	Nonaffine Transient Network Theory of Associating Polymer Solutions. Macromolecules, 2006, 39, 5913-5920.	2.2	32
41	Thermoreversible gelation of associating polymers. Physica A: Statistical Mechanics and Its Applications, 1998, 257, 245-255.	1.2	31
42	Reentrant volume phase transition of cross-linked poly(N-isopropylacrylamide) gels in mixed solvents of water/methanol. Soft Matter, 2012, 8, 3010.	1.2	29
43	Theory of the second virial coefficients in polymeric solutions below the theta temperature. Journal of Chemical Physics, 1985, 82, 4707-4714.	1.2	24
44	Theoretical Study of Helix Induction on a Polymer Chain by Hydrogen-Bonding Chiral Molecules. Macromolecules, 2004, 37, 605-613.	2.2	22
45	Phase Behavior of Co-Nonsolvent Systems: Poly(N-isopropylacrylamide) in Mixed Solvents of Water and Methanol. Langmuir, 2018, 34, 3003-3009.	1.6	22
46	Hydration, phase separation and nonlinear rheology of temperature-sensitive water-soluble polymers. Journal of Physics Condensed Matter, 2011, 23, 284105.	0.7	21
47	Hydration and phase separation of temperature-sensitive water-soluble polymers. Chinese Journal of Polymer Science (English Edition), 2011, 29, 13-21.	2.0	21
48	Competitive hydrogen-bonding in polymer solutions with mixed solvents. Soft Matter, 2009, 5, 304-307.	1.2	20
49	Concentrationâ€dependent collapse of a large polymer in a solution of incompatible polymers. Journal of Chemical Physics, 1983, 78, 2788-2794.	1.2	19
50	Intramolecular micelles and intermolecular crosslinks in thermoreversible gels of associating polymers. Journal of Non-Crystalline Solids, 2002, 307-310, 688-697.	1.5	18
51	Unified model of association-induced lower critical solution temperature phase separation and its application to solutions of telechelic poly(ethylene oxide) and of telechelic poly(N-isopropylacrylamide) in water. Journal of Chemical Physics, 2006, 125, 244902.	1.2	17
52	LCST phase separation and thermoreversible gelation in aqueous solutions of stereo-controlled poly(N-isopropylacrylamide)s. Reactive and Functional Polymers, 2013, 73, 894-897.	2.0	15
53	Phase formation of two-component physical gels. Physica A: Statistical Mechanics and Its Applications, 1994, 204, 660-672.	1.2	14
54	Theoretical and Computational Study of Thermoreversible Gelation. Bulletin of the Chemical Society of Japan, 2001, 74, 201-215.	2.0	14

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55	Chain conformation in ternary polymer solutions. Macromolecules, 1988, 21, 1041-1046.	2.2	13
56	Gel formation with multiple interunit junctions. II?mixture of different functional molecules. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 2413-2421.	2.4	13
57	Cascade Theory of Substitution Effects in Nonequilibrium Polycondensation Systems. Macromolecules, 2002, 35, 5649-5656.	2.2	12
58	Gel formation with multiple interunit junctions. I?Molecules carrying different functional groups. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 2405-2412.	2.4	12
59	Solvent Effect on Junction Size in Syndiotactic Polystyrene Physical Gel. Polymer Journal, 2005, 37, 294-298.	1.3	12
60	Rheological properties of physical gel formed by hydrophobically modified urethane ethoxylate (HEUR) associative polymers in methanolâ€“water mixtures. Rheologica Acta, 2012, 51, 89-96.	1.1	12
61	New Cascade Theory of Branched Polymers and Its Application to Size Exclusion Chromatography. Macromolecules, 2006, 39, 6643-6652.	2.2	11
62	Theory of Molecular Association and Thermoreversible Gelation. , 2006, , 17-77.		11
63	Relationship between the phase diagram and hysteresis in demixing and remixing for atactic and meso-rich Poly(N-isopropylacrylamide)s in water. Polymer, 2019, 161, 92-100.	1.8	11
64	Internal condensation of a polymer molecule induced by saturating bonds. Journal of Chemical Physics, 1986, 84, 5925-5930.	1.2	10
65	Effect of chain association on the viscosity of dilute ionomer solutions. Macromolecules, 1988, 21, 2189-2195.	2.2	10
66	Elastic Response of Entangled Polymers. Journal of the Physical Society of Japan, 1984, 53, 2205-2214.	0.7	9
67	The polymerâ€induced coilâ€“globule transition. Journal of Chemical Physics, 1985, 82, 2466-2471.	1.2	9
68	Possible phase diagrams for reversibly interpenetrating polymer networks. Physical Review Letters, 1992, 68, 3188-3191.	2.9	9
69	Thermoreversible gelation is a Bose-Einstein condensation. Physical Review E, 2006, 73, 061405.	0.8	9
70	Optical Resolution of Chiral Molecules by Stretching Hydrogen-Bonding Helical Polymers. Macromolecules, 2005, 38, 561-570.	2.2	8
71	Competitive Hydrogen Bonds and Cononsolvency of Poly(N-isopropylacrylamide)s in Mixed Solvents of Water/Methanol. , 2009, , 1-7.		8
72	Nonlinear depression of the lower critical solution temperatures in aqueous solutions of thermoâ€sensitive random copolymers. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 1112-1123.	2.4	8

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73	Effects of added surfactants on thermoreversible gelation of associating polymer solutions. Journal of Polymer Science, Part B: Polymer Physics, 2004, 42, 733-751.	2.4	7
74	Transient Network Theory of Wormlike Micelles: Topological Force Accelerates Relaxation. Langmuir, 2010, 26, 5374-5381.	1.6	7
75	Thermoreversible gelation strongly coupled to coil-to-helix transition of polymers. Colloids and Surfaces B: Biointerfaces, 2004, 38, 111-114.	2.5	6
76	Thermoreversible Gelation with Two-Component Mixed Cross-Link Junctions of Variable Multiplicity in Ternary Polymer Solutions. Gels, 2021, 7, 89.	2.1	6
77	On the Critical Behavior of the Two-Dimensional Heisenberg-Ising Model. Progress of Theoretical Physics, 1973, 50, 1085-1086.	2.0	4
78	Theoretical Modelling of Hierarchically Associated Structures in Hydrophobically Modified PNIPAM Aqueous Solutions on the Basis of a Neutron Scattering Study. Macromolecular Symposia, 2010, 291-292, 177-185.	0.4	4
79	Thermoreversible gelation with ion-binding cross-links of variable multiplicity. Journal of Chemical Physics, 2019, 150, 174904.	1.2	4
80	Stress Growth in Transient Polymer Networks under Startup Shear Flow. , 2009, , 39-45.		4
81	Rate effect in the fracture of rubbers and chemically cross-linked gels. Journal of Chemical Physics, 2014, 141, 134904.	1.2	3
82	Thermoreversible Gelation of Associating Polymers in Hydrogen-Bonding Mixed Solvents. Langmuir, 2022, 38, 5098-5110.	1.6	3
83	Thermoreversible gelation with junctions of variable multiplicity. Macromolecular Symposia, 1994, 81, 171-175.	0.4	2
84	Advanced Fluid Information. Flows in Polymer Networks.. JSME International Journal Series B, 2002, 45, 123-128.	0.3	2
85	Pressure-Controlled Thermoreversible Gelation. Macromolecules, 2006, 39, 8153-8162.	2.2	2
86	Thermoreversible Gelation Interfering with Phase Separation in Multicomponent Mixtures of Associating Polymers. Macromolecules, 0, , .	2.2	2
87	Statistical-Mechanical Analysis of the First-Order Wetting Transition in Polymer Solutions. Journal of the Physical Society of Japan, 1987, 56, 3961-3969.	0.7	1
88	Theoretical Prediction of Complex Polymer Phase Diagram.. Kobunshi, 1994, 43, 421-425.	0.0	1
89	Theory of Transient Polymer Networks Crosslinked by Two Different Associative Groups. Nihon Reoroji Gakkaishi, 2004, 32, 285-293.	0.2	1
90	Thermoreversible gelation strongly coupled to polymer conformational transition. Macromolecular Symposia, 2004, 207, 125-130.	0.4	1

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91	Thermoreversible gelation with hydrogen-bonded zipper-like crosslink junctions. Journal of Polymer Science, Part B: Polymer Physics, 2005, 43, 3331-3336.	2.4	1
92	Topological classification of Brownian orbits. Journal of Chemical Physics, 2012, 137, 104907.	1.2	1
93	Critical Shear Rate for Gelation in Aqueous Solutions of Associating Polymers under Shear Flows. Journal of the Physical Society of Japan, 2018, 87, 074801.	0.7	1
94	Polymer-surfactant interaction in thermoreversible gels. , 1999, , 81-89.		1
95	Study on the polymer-induced coil-globule transition. Intramacromolecular self-quenching rates of anthryl groups attached to a polymer side chain. European Polymer Journal, 1987, 23, 323-326.	2.6	0
96	Thermoreversible Gelation driven by Coil-to-Helix Transition of Polymers. AIP Conference Proceedings, 2004, , .	0.3	0
97	Mechanically Induced Helicity in Chiral Stimuli-Responsive Gels. Macromolecules, 2007, 40, 4703-4709.	2.2	0
98	é«˜å^†åæ•çµ±è¨ˆåŠ›å¦ ãƒ«ãƒ¼ãƒ—ãƒ»ãƒ¬ãƒ—ãƒªã‚«ãƒ»ã‚«ã‚¹ã‚±ãƒ¼ãƒ‰‰. Kobunshi, 2008, 57, 76-80.	0.0	0
99	Time-Dependent Flow Properties of Transient Hydrogels with Temporal Network Junctions. , 2009, , 31-37.		0
100	Thermoreversible gelation. , 0, , 222-246.		0
101	Statistical properties of polymer chains. , 2011, , 1-45.		0
102	Transient Networks of Telechelic Thermo-Sensitive Polymers with Main-Chain Conformational Transition - From Maxwell to Burgers Model -. Nihon Reoroji Gakkaishi, 2013, 41, 179-186.	0.2	0
103	Structure and Dynamics of Transient Gels. Progress of Theoretical Physics Supplement, 2013, 126, 257-260.	0.2	0
104	Statistical Mechanics of Sterically Interacting Ring Polymers. Journal of the Physical Society of Japan, 1984, 53, 1652-1659.	0.7	0