## Takamasa Sakai

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

67 4,924 154 35 h-index g-index citations papers 167 5.78 5,559 5.3 L-index avg, IF ext. citations ext. papers

#	Paper	IF	Citations
154	Star-Polymer-DNA Gels Showing Highly Predictable and Tunable Mechanical Responses <i>Advanced Materials</i> , <b>2022</b> , e2108818	24	2
153	Tri-branched gels: Rubbery materials with the lowest branching factor approach the ideal elastic limit <i>Science Advances</i> , <b>2022</b> , 8, eabk0010	14.3	1
152	Non-swellability of polyelectrolyte gel in divalent salt solution due to aggregation formation. <i>Polymer</i> , <b>2022</b> , 250, 124894	3.9	
151	Experimental Comparison of Bond Lifetime and Viscoelastic Relaxation in Transient Networks with Well-Controlled Structures ACS Macro Letters, <b>2022</b> , 753-759	6.6	1
150	Temperature Dependence of Polymer Network Diffusion <i>Physical Review Letters</i> , <b>2021</b> , 127, 237801	7.4	1
149	Effect of Nonlinear Elasticity on the Swelling Behaviors of Highly Swollen Polyelectrolyte Gels. <i>Gels</i> , <b>2021</b> , 7,	4.2	4
148	Negative Energy Elasticity in a Rubberlike Gel. <i>Physical Review X</i> , <b>2021</b> , 11,	9.1	2
147	On-demand retrieval of cells three-dimensionally seeded in injectable thioester-based hydrogels <i>RSC Advances</i> , <b>2021</b> , 11, 23637-23643	3.7	2
146	Molecular crystallization directed by polymer size and overlap under dilute and crowded macromolecular conditions. <i>Polymer Journal</i> , <b>2021</b> , 53, 633-642	2.7	2
145	The feasibility of a novel injectable hydrogel for protecting artificial gastrointestinal ulcers after endoscopic resection: an animal pilot study. <i>Scientific Reports</i> , <b>2021</b> , 11, 18508	4.9	1
144	Robust Suture Combination for Rat Flexor Tendon Repair Model <i>Journal of Hand Surgery Global Online</i> , <b>2020</b> , 2, 354-358	0.6	1
143	Relationship between Bulk Physicochemical Properties and Surface Wettability of Hydrogels with Homogeneous Network Structure. <i>Langmuir</i> , <b>2020</b> , 36, 5554-5562	4	8
142	Structural Analysis by Light and Neutron Scattering <b>2020</b> , 173-178		
141	Fracture <b>2020</b> , 205-211		
140	Mass Transport <b>2020</b> , 213-234		
139	Swelling <b>2020</b> , 241-247		0
138	Tetra Gel as a Near-Ideal Polymer Network <b>2020</b> , 151-159		1

## (2020-2020)

Degradation 2020, 249-259 137 Deformation and Fracture 2020, 109-136 136 Swelling and Deswelling 2020, 77-107 135 1 Sol-Gel Transition 2020, 161-171 134 Definition of Polymer Gels and Rubber Elasticity 2020, 45-75 133 2 Elastic Modulus **2020**, 179-182 132 Large Deformation 2020, 183-204 131 130 Polymer Solution **2020**, 23-43 Mass Transport in Polymer Gels 2020, 137-150 129 2 128 Single Polymer Chain 2020, 1-22 Control Over Swelling of Injectable Gel 2020, 261-276 127 Mechanical Regulation Underlies Effects of Exercise on Serotonin-Induced Signaling in the 6.1 126 4 Prefrontal Cortex Neurons. IScience, 2020, 23, 100874 Universal Equation of State Describes Osmotic Pressure throughout Gelation Process. Physical 8 125 7.4 Review Letters, 2020, 125, 267801 Similarity in Linear Viscoelastic Behaviors of Network Formation and Degradation Processes. Nihon 124 0.8 Reoroji Gakkaishi, 2020, 48, 191-198 Cluster growth from a dilute system in a percolation process. Polymer Journal, 2020, 52, 289-297 2.7 8 123 Swelling Behaviors of Hydrogels with Alternating Neutral/Highly Charged Sequences. 122 12 5.5 Macromolecules, 2020, 53, 8244-8254 Mixing and Elastic Contributions to the Diffusion Coefficient of Polymer Networks. Macromolecules 121 5.5 4 , **2020**, 53, 7717-7725 Osmotic Pressure **2020**, 235-240 120

119	A Biomechanical Comparison of Three Miniature Locking Plate Systems in a Rabbit Radial and Ulnar Fracture Model. <i>Veterinary and Comparative Orthopaedics and Traumatology</i> , <b>2019</b> , 32, 297-304	1.2	5
118	An ionic liquid gel with ultralow concentrations of tetra-arm polymers: Gelation kinetics and mechanical and ion-conducting properties. <i>Polymer</i> , <b>2019</b> , 166, 38-43	3.9	17
117	TetraPEG Network Formation via a Michael Addition Reaction in an Ionic Liquid: Application to Polymer Gel Electrolyte for Electric Double-layer Capacitors. <i>Chemistry Letters</i> , <b>2019</b> , 48, 704-707	1.7	6
116	Structure-property relationship of a model network containing solvent. <i>Science and Technology of Advanced Materials</i> , <b>2019</b> , 20, 608-621	7.1	18
115	Mechanical properties of doubly crosslinked gels. <i>Polymer Journal</i> , <b>2019</b> , 51, 851-859	2.7	3
114	Connectivity dependence of gelation and elasticity in AB-type polymerization: an experimental comparison of the dynamic process and stoichiometrically imbalanced mixing. <i>Soft Matter</i> , <b>2019</b> , 15, 5017-5025	3.6	15
113	Molecular Technology for Degradable Synthetic Hydrogels for Biomaterials <b>2019</b> , 203-218		
112	Dynamics of Critical Clusters Synthesized by End-Coupling of Four-Armed Poly(ethylene glycol)s. <i>Macromolecules</i> , <b>2019</b> , 52, 5086-5094	5.5	7
111	Gelation Process and Mechanical Properties of Polymer Gels with Well-Defined Network Structure. <i>Nihon Reoroji Gakkaishi</i> , <b>2019</b> , 47, 183-195	0.8	1
110	Diffusion Behavior of Water Molecules in Hydrogels with Controlled Network Structure. <i>Macromolecules</i> , <b>2019</b> , 52, 1923-1929	5.5	14
109	Injectable hydrogel with Controlled Swelling Behavior in vivo. <i>Drug Delivery System</i> , <b>2019</b> , 34, 186-200	Ο	
108	Dilution Effect on the Cluster Growth near the Gelation Threshold. <i>Nihon Reoroji Gakkaishi</i> , <b>2019</b> , 47, 61-66	0.8	5
107	Ability of Nonswelling Polyethylene Glycol-Based Vitreous Hydrogel to Maintain Transparency in the Presence of Vitreous Hemorrhage. <i>Translational Vision Science and Technology</i> , <b>2019</b> , 8, 33	3.3	1
106	Shear Modulus Dependence of the Diffusion Coefficient of a Polymer Network. <i>Macromolecules</i> , <b>2019</b> , 52, 9613-9619	5.5	7
105	Precision polymer network science with tetra-PEG gels decade history and future. <i>Colloid and Polymer Science</i> , <b>2019</b> , 297, 1-12	2.4	29
104	Chemoenzymatic synthesis of polypeptides consisting of periodic di- and tri-peptide motifs similar to elastin. <i>Polymer Chemistry</i> , <b>2018</b> , 9, 2336-2344	4.9	12
103	Three cooperative diffusion coefficients describing dynamics of polymer gels. <i>Chemical Communications</i> , <b>2018</b> , 54, 6784-6787	5.8	10
102	Fracture Process of Double-Network Gels by Coarse-Grained Molecular Dynamics Simulation.		

Gels: From Soft Matter to BioMatter. Industrial & Engineering Chemistry Research, 2018, 57, 1121-1138) 101 25 Enzyme-Catalyzed Bottom-Up Synthesis of Mechanically and Physicochemically Stable Cellulose 100 Hydrogels for Spatial Immobilization of Functional Colloidal Particles. *Biomacromolecules*, **2018**, 19, 126 $^{6.9}$ 275 $^{21}$ Near-Model Amphiphilic Polymer Conetworks Based on Four-Arm Stars of Poly(vinylidene fluoride) 99 5.5 40 and Poly(ethylene glycol): Synthesis and Characterization. Macromolecules, 2018, 51, 2476-2488 Insight into the Microscopic Structure of Module-Assembled Thermoresponsive Conetwork 98 5.5 11 Hydrogels. Macromolecules, 2018, 51, 6645-6652 Network elasticity of a model hydrogel as a function of swelling ratio: from shrinking to extreme 3.6 97 41 swelling states. Soft Matter, 2018, 14, 9693-9701 Dynamics of thermoresponsive conetwork gels composed of poly(ethylene glycol) and poly(ethyl 96 3.9 glycidyl ether-co-methyl glycidyl ether). Polymer, 2018, 155, 75-82 Electrochemical Properties of a TetraPEG-based Gel Electrolyte Containing a Nonflammable 6 95 1.7 Fluorinated Alkyl Phosphate for Safer Lithium-ion Batteries. Chemistry Letters, 2018, 47, 909-912 Surgical sealants with tunable swelling, burst pressures, and biodegradation rates. Journal of 94 3.5 4 Biomedical Materials Research - Part B Applied Biomaterials, 2017, 105, 1602-1611 Enzymatic Synthesis of Cellulose Oligomer Hydrogels Composed of Crystalline Nanoribbon 6.6 38 93 Networks under Macromolecular Crowding Conditions. ACS Macro Letters, 2017, 6, 165-170 Dynamic Covalent Star Poly(ethylene glycol) Model Hydrogels: A New Platform for Mechanically 92 5.5 47 Robust, Multifunctional Materials. Macromolecules, 2017, 50, 2155-2164 Fast-forming hydrogel with ultralow polymeric content as an artificial vitreous body. Nature 91 19 113 Biomedical Engineering, 2017, 1, SANS Study on Critical Polymer Clusters of Tetra-Functional Polymers. Macromolecules, 2017, 50, 3655-3661 90 13 Microscopic Structure of the Nonswellable Thermoresponsive Amphiphilic Conetwork. 89 5.5 24 Macromolecules, 2017, 50, 3388-3395 Silk Resin with Hydrated Dual Chemical-Physical Cross-Links Achieves High Strength and 88 6.9 29 Toughness. *Biomacromolecules*, **2017**, 18, 1937-1946 New design of hydrogels with tuned electro-osmosis: a potential model system to understand 87 8 7.3 electro-kinetic transport in biological tissues. Journal of Materials Chemistry B, 2017, 5, 4526-4534 Probe Diffusion of Solution in an Isorefractive Polymer Solution. *Macromolecules*, **2017**, 86 5.5 17 50, 2916-2922 Defect-free network formation and swelling behavior in ionic liquid-based electrolytes of tetra-arm polymers synthesized using a Michael addition reaction. Physical Chemistry Chemical Physics, 2017, 85 3.6 13 19, 29984-29990 Association Behavior of Poly(ethylene oxide)-Poly(propylene oxide) Alternating Multiblock 84 9 Copolymers in Water toward Thermally Induced Phase Separation. Langmuir, 2017, 33, 14649-14656

83	Permeation of Water through Hydrogels with Controlled Network Structure. <i>Macromolecules</i> , <b>2017</b> , 50, 9411-9416	5.5	19
82	Experimental Observation of Two Features Unexpected from the Classical Theories of Rubber Elasticity. <i>Physical Review Letters</i> , <b>2017</b> , 119, 267801	7.4	25
81	Co-lyophilized Aspirin with Trehalose Causes Less Injury to Human Gastric Cells and Gastric Mucosa of Rats. <i>Digestive Diseases and Sciences</i> , <b>2016</b> , 61, 2242-2251	4	O
80	Fabrication and Structural Characterization of Module-Assembled Amphiphilic Conetwork Gels. <i>Macromolecules</i> , <b>2016</b> , 49, 4940-4947	5.5	29
79	Kinetics-dominated structure and stimuli-responsiveness in the assembly of colloidal nanotubes. <i>RSC Advances</i> , <b>2016</b> , 6, 52950-52956	3.7	6
78	Sol-gel transition behavior near critical concentration and connectivity. <i>Polymer Journal</i> , <b>2016</b> , 48, 629-	6 <b>3</b> 47	35
77	Yielding Criteria of Double Network Hydrogels. <i>Macromolecules</i> , <b>2016</b> , 49, 1865-1872	5.5	95
76	Nearly Ideal Polymer Network Ion Gel Prepared in pH-Buffering Ionic Liquid. <i>Macromolecules</i> , <b>2016</b> , 49, 344-352	5.5	37
75	Non-Osmotic Hydrogels: A Rational Strategy for Safely Degradable Hydrogels. <i>Angewandte Chemie - International Edition</i> , <b>2016</b> , 55, 9282-6	16.4	43
74	Non-Osmotic Hydrogels: A Rational Strategy for Safely Degradable Hydrogels. <i>Angewandte Chemie</i> , <b>2016</b> , 128, 9428-9432	3.6	9
73	High-performance gel electrolytes with tetra-armed polymer network for Li ion batteries. <i>Journal of Power Sources</i> , <b>2015</b> , 286, 470-474	8.9	33
72	Design of Hydrogels for Biomedical Applications. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 2360-74	10.1	75
71	Gelation mechanism of tetra-armed poly(ethylene glycol) in aprotic ionic liquid containing nonvolatile proton source, protic ionic liquid. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 4795-801	3.4	14
70	Slope-Dependent Cell Motility Enhancements at the Walls of PEG-Hydrogel Microgroove Structures. <i>Langmuir</i> , <b>2015</b> , 31, 10215-22	4	12
69	Supercoiling transformation of chemical gels. Soft Matter, 2015, 11, 7101-8	3.6	3
68	Probing the cross-effect of strains in non-linear elasticity of nearly regular polymer networks by pure shear deformation. <i>Journal of Chemical Physics</i> , <b>2015</b> , 142, 174908	3.9	12
67	Hydrogels: Reliable Hydrogel with Mechanical Euse Linklin an Aqueous Environment (Adv. Mater. 45/2015). <i>Advanced Materials</i> , <b>2015</b> , 27, 7250-7250	24	1
66	Biomaterials: Design of Hydrogels for Biomedical Applications (Adv. Healthcare Mater. 16/2015). <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 2598-2598	10.1	3

## (2014-2015)

Carbon Dioxide Separation Using a High-toughness Ion Gel with a Tetra-armed Polymer Network. <i>Chemistry Letters</i> , <b>2015</b> , 44, 17-19	1.7	30
Rubber elasticity for percolation network consisting of Gaussian chains. <i>Journal of Chemical Physics</i> , <b>2015</b> , 143, 184905	3.9	17
Electrophoretic mobility of semi-flexible double-stranded DNA in defect-controlled polymer networks: Mechanism investigation and role of structural parameters. <i>Journal of Chemical Physics</i> , <b>2015</b> , 142, 234904	3.9	8
Reliable Hydrogel with Mechanical "Fuse Link" in an Aqueous Environment. <i>Advanced Materials</i> , <b>2015</b> , 27, 7407-11	24	42
Effect of Swelling and Deswelling on Mechanical Properties of Polymer Gels. <i>Macromolecular Symposia</i> , <b>2015</b> , 358, 128-139	0.8	12
Preparation and characterization of a nanofiber mat consisting of Tetra-PEG prepolymers. <i>Journal of Applied Polymer Science</i> , <b>2015</b> , 132, n/a-n/a	2.9	2
"Nonswellable" hydrogel without mechanical hysteresis. <i>Science</i> , <b>2014</b> , 343, 873-5	33.3	406
Experimental verification of fracture mechanism for polymer gels with controlled network structure. <i>Soft Matter</i> , <b>2014</b> , 10, 6658-65	3.6	26
A computer simulation of the networked structure of a hydrogel prepared from a tetra-armed star pre-polymer. <i>Soft Matter</i> , <b>2014</b> , 10, 3553-9	3.6	15
Degradation Behavior of Polymer Gels Caused by Nonspecific Cleavages of Network Strands. <i>Chemistry of Materials</i> , <b>2014</b> , 26, 5352-5357	9.6	21
Kinetic Aspect on Gelation Mechanism of Tetra-PEG Hydrogel. <i>Macromolecules</i> , <b>2014</b> , 47, 3274-3281	5.5	63
Multiscale Dynamics of Inhomogeneity-Free Polymer Gels. <i>Macromolecules</i> , <b>2014</b> , 47, 763-770	5.5	24
Electrophoretic Mobility of Double-Stranded DNA in Polymer Solutions and Gels with Tuned Structures. <i>Macromolecules</i> , <b>2014</b> , 47, 3582-3586	5.5	21
Small-Angle Neutron Scattering Study on Defect-Controlled Polymer Networks. <i>Macromolecules</i> , <b>2014</b> , 47, 1801-1809	5.5	41
Correlation Between the Physical Properties and Structure of Tetra-PEG Gels. <i>Nippon Gomu Kyokaishi</i> , <b>2014</b> , 87, 89-95	0	
Relationships between Mechanical Properties of Polymer Gels and Polymer Volume Fractions at Preparation and at Interested State. <i>Nihon Reoroji Gakkaishi</i> , <b>2014</b> , 42, 97-102	0.8	2
Mechanical properties of tetra-PEG gels with supercoiled network structure. <i>Journal of Chemical Physics</i> , <b>2014</b> , 140, 074902	3.9	23
Effect of prepolymer architecture on the network structure formed by AB-type crosslink-coupling. <i>Polymer Journal</i> , <b>2014</b> , 46, 14-20	2.7	10
	Rubber elasticity for percolation network consisting of Gaussian chains. Journal of Chemical Physics, 2015, 143, 184905  Electrophoretic mobility of semi-flexible double-stranded DNA in defect-controlled polymer networks: Mechanism investigation and role of structural parameters. Journal of Chemical Physics, 2015, 142, 234904  Reliable Hydrogel with Mechanical "Fuse Link" in an Aqueous Environment. Advanced Materials, 2015, 27, 7407-11  Effect of Swelling and Deswelling on Mechanical Properties of Polymer Gels. Macromolecular Symposia, 2015, 358, 128-139  Preparation and characterization of a nanofiber mat consisting of Tetra-PEG prepolymers. Journal of Applied Polymer Science, 2015, 132, n/a-n/a  "Nonswellable" hydrogel without mechanical hysteresis. Science, 2014, 343, 873-5  Experimental verification of fracture mechanism for polymer gels with controlled network structure. Soft Matter, 2014, 10, 6658-65  A computer simulation of the networked structure of a hydrogel prepared from a tetra-armed star pre-polymer. Soft Matter, 2014, 10, 3553-9  Degradation Behavior of Polymer Gels Caused by Nonspecific Cleavages of Network Strands. Chemistry of Materials, 2014, 26, 5352-5357  Kinetic Aspect on Gelation Mechanism of Tetra-PEG Hydrogel. Macromolecules, 2014, 47, 3274-3281  Multiscale Dynamics of Inhomogeneity-Free Polymer Gels. Macromolecules, 2014, 47, 763-770  Electrophoretic Mobility of Double-Stranded DNA in Polymer Solutions and Gels with Tuned Structures. Macromolecules, 2014, 47, 3582-3586  Small-Angle Neutron Scattering Study on Defect-Controlled Polymer Networks. Macromolecules, 2014, 47, 1801-1809  Relationships between the Physical Properties and Structure of Tetra-PEG Gels. Nippon Gomu Kyokaishi, 2014, 87, 89-95  Relationships between the Physical Properties of Polymer Cels and Polymer Volume Fractions at Preparation and at Interested State. Nihon Reoroji Gakkaishi, 2014, 42, 97-102  Mechanical properties of tetra-PEG gels with supercoiled network structure. Journal of Chemical Physics, 2014, 140, 074	Rubber elasticity for percolation network consisting of Gaussian chains. Journal of Chemical Physics, 2015, 143, 184905  Electrophoretic mobility of semi-flexible double-stranded DNA in defect-controlled polymer networks: Mechanism investigation and role of structural parameters. Journal of Chemical Physics, 2015, 142, 234904  Reliable Hydrogel with Mechanical "Fuse Link" in an Aqueous Environment. Advanced Materials, 2015, 27, 7407-11  Effect of Swelling and Deswelling on Mechanical Properties of Polymer Gels. Macromolecular Symposia, 2015, 358, 128-139  Preparation and characterization of a nanofiber mat consisting of Tetra-PEG prepolymers. Journal of Applied Polymer Science, 2015, 132, n/a-n/a  "Nonswellable" hydrogel without mechanical hysteresis. Science, 2014, 343, 873-5  Experimental verification of fracture mechanism for polymer gels with controlled network structure. Soft Matter, 2014, 10, 6558-65  A Computer simulation of the networked structure of a hydrogel prepared from a tetra-armed star pre-polymer. Soft Matter, 2014, 10, 3553-9  Degradation Behavior of Polymer Gels Caused by Nonspecific Cleavages of Network Strands. Chemistry of Materials, 2014, 26, 5352-5357  Kinetic Aspect on Gelation Mechanism of Tetra-PEG Hydrogel. Macromolecules, 2014, 47, 3274-3281  5.5  Multiscale Dynamics of Inhomogeneity-Free Polymer Gels. Macromolecules, 2014, 47, 763-770  Electrophoretic Mobility of Double-Stranded DNA in Polymer Solutions and Gels with Tuned Structures. Macromolecules, 2014, 47, 3582-3586  Small-angle Neutron Scattering Study on Defect-Controlled Polymer Networks. Macromolecules, 2014, 47, 3882-3586  Small-angle Neutron Scattering Study on Defect-Controlled Polymer Networks. Macromolecules, 2014, 47, 389-95  Relationships between the Physical Properties and Structure of Tetra-PEG Gels. Nippon Gomu Kyokaishi, 2014, 87, 89-95  Relationships between the Physical Properties of Polymer Gels and Polymer Volume Fractions at Preparation and at Interested State. Nihon Reorgii Cakkaishi, 2014, 42, 97-102  Mech

47	Experimental verification of homogeneity in polymer gels. <i>Polymer Journal</i> , <b>2014</b> , 46, 517-523	2.7	42
46	Back Cover: Macromol. Biosci. 6/2014. <i>Macromolecular Bioscience</i> , <b>2014</b> , 14, 900-900	5.5	
45	Investigation of migration behavior of rod-like dsDNA in gel with precisely controlled network structure. <i>Materials Research Society Symposia Proceedings</i> , <b>2014</b> , 1622, 169-174		
44	Mechanical properties of polymer gels with bimodal distribution in strand length. <i>Materials Research Society Symposia Proceedings</i> , <b>2014</b> , 1622, 31-36		
43	Mechanical Properties of Polymer Gels with Bimodal Distribution in Strand Length. <i>Macromolecules</i> , <b>2013</b> , 46, 7027-7033	5.5	27
42	Gelation mechanism and mechanical properties of Tetra-PEG gel. <i>Reactive and Functional Polymers</i> , <b>2013</b> , 73, 898-903	4.6	38
41	Solvation Structure of Poly(ethylene glycol) in Ionic Liquids Studied by High-energy X-ray Diffraction and Molecular Dynamics Simulations. <i>Macromolecules</i> , <b>2013</b> , 46, 2369-2375	5.5	28
40	Shrinking Kinetics of Polymer Gels with Alternating Hydrophilic/Thermoresponsive Prepolymer Units. <i>Macromolecules</i> , <b>2013</b> , 46, 4114-4119	5.5	14
39	Synthesis and Fracture Process Analysis of Double Network Hydrogels with a Well-Defined First Network <i>ACS Macro Letters</i> , <b>2013</b> , 2, 518-521	6.6	79
38	Transition between Phantom and Affine Network Model Observed in Polymer Gels with Controlled Network Structure. <i>Macromolecules</i> , <b>2013</b> , 46, 1035-1040	5.5	134
37	Mechanical properties of a polymer network of Tetra-PEG gel. <i>Polymer Journal</i> , <b>2013</b> , 45, 300-306	2.7	32
36	Ultimate elongation of polymer gels with controlled network structure. RSC Advances, 2013, 3, 13251	3.7	38
35	Migration Behavior of Rodlike dsDNA under Electric Field in Homogeneous Polymer Networks. <i>Macromolecules</i> , <b>2013</b> , 46, 8657-8663	5.5	17
34	Fracture energy of polymer gels with controlled network structures. <i>Journal of Chemical Physics</i> , <b>2013</b> , 139, 144905	3.9	78
33	Implementation of tetra-poly(ethylene glycol) hydrogel with high mechanical strength into microfluidic device technology. <i>Biomicrofluidics</i> , <b>2013</b> , 7, 54109	3.2	13
32	Brfisted Basicity of Solute Butylamine in an Aprotic Ionic Liquid Investigated by Potentiometric Titration. <i>Chemistry Letters</i> , <b>2013</b> , 42, 1250-1251	1.7	16
31	Effect of swelling and deswelling on the elasticity of polymer networks in the dilute to semi-dilute region. <i>Soft Matter</i> , <b>2012</b> , 8, 2730	3.6	56
30	Structural Analysis of High Performance Ion-Gel Comprising Tetra-PEG Network. <i>Macromolecules</i> , <b>2012</b> , 45, 3902-3909	5.5	35

29	Kinetic Study for AB-Type Coupling Reaction of Tetra-Arm Polymers. <i>Macromolecules</i> , <b>2012</b> , 45, 1031-1	103365	40
28	Anomalous volume phase transition in a polymer gel with alternative hydrophilic mphiphilic sequence. <i>Soft Matter</i> , <b>2012</b> , 8, 6876	3.6	28
27	High-performance ion gel with tetra-PEG network. Soft Matter, 2012, 8, 1756-1759	3.6	109
26	Strain energy density function of a near-ideal polymer network estimated by biaxial deformation of Tetra-PEG gel. <i>Soft Matter</i> , <b>2012</b> , 8, 8217	3.6	35
25	Structure and Properties of High Performance Gels Made by Module Assembling Method. <i>Materials Research Society Symposia Proceedings</i> , <b>2012</b> , 1418, 99		
24	Rubber elasticity for incomplete polymer networks. <i>Journal of Chemical Physics</i> , <b>2012</b> , 137, 224903	3.9	34
23	Connectivity and Structural Defects in Model Hydrogels: A Combined Proton NMR and Monte Carlo Simulation Study. <i>Macromolecules</i> , <b>2011</b> , 44, 9666-9674	5.5	129
22	Structure and physical properties of dried Tetra-PEG gel. <i>Polymer</i> , <b>2011</b> , 52, 4123-4128	3.9	14
21	Examination of the Theories of Rubber Elasticity Using an Ideal Polymer Network. <i>Macromolecules</i> , <b>2011</b> , 44, 5817-5821	5.5	111
20	Exploiting gradients in cross-link density to control the bending and self-propelled motion of active gels. <i>Journal of Materials Chemistry</i> , <b>2011</b> , 21, 8360		47
19	Precise Control and Prediction of Hydrogel Degradation Behavior. <i>Macromolecules</i> , <b>2011</b> , 44, 3567-357	715.5	55
18	SANS Studies on Tetra-PEG Gel under Uniaxial Deformation. <i>Macromolecules</i> , <b>2011</b> , 44, 1203-1210	5.5	48
17	Evaluation of Gelation Kinetics of Tetra-PEG Gel. <i>Macromolecules</i> , <b>2010</b> , 43, 3935-3940	5.5	53
16	Evaluation of Topological Defects in Tetra-PEG Gels. <i>Macromolecules</i> , <b>2010</b> , 43, 488-493	5.5	96
15	Autonomous viscosity oscillation by reversible complex formation of terpyridine-terminated poly(ethylene glycol) in the BZ reaction. <i>Soft Matter</i> , <b>2010</b> , 6, 6072	3.6	40
14	Highly Elastic and Deformable Hydrogel Formed from Tetra-arm Polymers. <i>Macromolecular Rapid Communications</i> , <b>2010</b> , 31, 1954-9	4.8	117
13	SANS and SLS Studies on Tetra-Arm PEG Gels in As-Prepared and Swollen States. <i>Macromolecules</i> , <b>2009</b> , 42, 6245-6252	5.5	191
12	Structure Characterization of Tetra-PEG Gel by Small-Angle Neutron Scattering. <i>Macromolecules</i> , <b>2009</b> , 42, 1344-1351	5.5	212

11	Design and Fabrication of a High-Strength Hydrogel with Ideally Homogeneous Network Structure from Tetrahedron-like Macromonomers. <i>Macromolecules</i> , <b>2008</b> , 41, 5379-5384	5.5	868
10	Self-Flocculating/Self-Dispersing Oscillation of Microgels. <i>Angewandte Chemie</i> , <b>2008</b> , 120, 931-934	3.6	8
9	Photoregulated Wormlike Motion of a Gel. <i>Angewandte Chemie</i> , <b>2008</b> , 120, 9179-9183	3.6	16
8	Organized monolayer of thermosensitive microgel beads prepared by double-template polymerization. <i>Langmuir</i> , <b>2007</b> , 23, 8651-4	4	43
7	Characterization of a self-oscillating polymer with periodic soluble-insoluble changes. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , <b>2007</b> , 45, 1578-1588	2.6	6
6	Preparation of Spatio-temporal Functional Surface using Self-oscillating Gel. <i>Hyomen Kagaku</i> , <b>2007</b> , 28, 647-652		
5	Phase Transition Behaviors of Self-Oscillating Polymer and Nano-Gel Particles. <i>Macromolecular Rapid Communications</i> , <b>2005</b> , 26, 1140-1144	4.8	10
4	Synchronization of Self-Oscillation in Polymer Chains and the Cross-Linked Network. <i>ACS Symposium Series</i> , <b>2003</b> , 30-43	0.4	3
3	Design of novel biomimetic polymer gels with self-oscillating function. <i>Science and Technology of Advanced Materials</i> , <b>2002</b> , 3, 95-102	7.1	30
2	Anodic oxides on gallium phosphide for optoelectronic device and processing applications. <i>Journal of Applied Physics</i> , <b>1978</b> , 49, 4459-4464	2.5	6
1	Linear elasticity of polymer gels in terms of negative energy elasticity. Polymer Journal,	2.7	5