Masaki Nakahata

List of Publications by Year
in descending order

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41 papers	5,318 citations	279701 23 h-index	276775 41 g-index
46 all docs	46 docs citations	46 times ranked	6002 citing authors

#	Article	IF	Citations
1	Redox-responsive self-healing materials formed from hostâ€“guest polymers. Nature Communications, 2011, 2, 511.	5.8	1,207
2	Supramolecular Polymeric Materials via Cyclodextrinâ€“Guest Interactions. Accounts of Chemical Research, 2014, 47, 2128-2140.	7.6	751
3	Expansionâ€“contraction of photoresponsive artificial muscle regulated by hostâ€“guest interactions. Nature Communications, 2012, 3, 1270.	5.8	622
4	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
5	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
6	Highly Flexible, Tough, and Selfâ€Healing Supramolecular Polymeric Materials Using Hostâ€“Guest Interaction. Macromolecular Rapid Communications, 2016, 37, 86-92.	2.0	207
7	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
8	Self-Healing Materials Formed by Cross-Linked Polyrotaxanes with Reversible Bonds. CheM, 2016, 1, 766-775.	5.8	121
9	Redoxâ€Responsive Macroscopic Gel Assembly Based on Discrete Dual Interactions. Angewandte Chemie - International Edition, 2014, 53, 3617-3621.	7.2	115
10	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
11	pH- and Sugar-Responsive Gel Assemblies Based on Boronateâ€“Catechol Interactions. ACS Macro Letters, 2014, 3, 337-340.	2.3	82
12	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
13	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
14	Visible Light-Induced Hydrogelation of an Alginate Derivative and Application to Stereolithographic Bioprinting Using a Visible Light Projector and Acid Red. Biomacromolecules, 2018, 19, 672-679.	2.6	63
15	Mechanical stimulation of single cells by reversible host-guest interactions in 3D microscaffolds. Science Advances, 2020, 6, .	4.7	61
16	Stimuli-responsive hydrogels as a model of the dynamic cellular microenvironment. Polymer Journal, 2020, 52, 861-870.	1.3	55
17	Horseradish Peroxidase Catalyzed Hydrogelation for Biomedical, Biopharmaceutical, and Biofabrication Applications. Chemistry - an Asian Journal, 2017, 12, 3098-3109.	1.7	52
18	Dynamic Mechano-Regulation of Myoblast Cells on Supramolecular Hydrogels Cross-Linked by Reversible Host-Guest Interactions. Scientific Reports, 2017, 7, 7660.	1.6	46

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19	Peroxidase-catalyzed microextrusion bioprinting of cell-laden hydrogel constructs in vaporized ppm-level hydrogen peroxide. Biofabrication, 2018, 10, 045007.	3.7	43
20	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
21	Supramolecular Polymeric Materials Containing Cyclodextrins. Chemical and Pharmaceutical Bulletin, 2017, 65, 330-335.	0.6	29
22	Macroscopic Selfâ€Assembly Based on Complementary Interactions between Nucleobase Pairs. Chemistry - A European Journal, 2015, 21, 2770-2774.	1.7	26
23	Dynamic Contact Guidance of Myoblasts by Feature Size and Reversible Switching of Substrate Topography: Orchestration of Cell Shape, Orientation, and Nematic Ordering of Actin Cytoskeletons. Langmuir, 2019, 35, 7538-7551.	1.6	24
24	Extrusion-Based Bioprinting through Glucose-Mediated Enzymatic Hydrogelation. International Journal of Bioprinting, 2019, 6, 250.	1.7	20
25	Cytocompatible Enzymatic Hydrogelation Mediated by Glucose and Cysteine Residues. ACS Macro Letters, 2017, 6, 485-488.	2.3	18
26	Naphthalimideâ€“coumarin conjugate: ratiometric fluorescent receptor for self-calibrating quantification of cyanide anions in cells. RSC Advances, 2017, 7, 32304-32309.	1.7	17
27	Visible Light-Curable Chitosan Ink for Extrusion-Based and Vat Polymerization-Based 3D Bioprintings. Polymers, 2021, 13, 1382.	2.0	14
28	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
29	Horseradish peroxidase-catalyzed hydrogelation consuming enzyme-produced hydrogen peroxide in the presence of reducing sugars. Soft Matter, 2019, 15, 2163-2169.	1.2	13
30	Gelatin-Based Electrospun Fibers Insolubilized by Horseradish Peroxidase-Catalyzed Cross-Linking for Biomedical Applications. ACS Omega, 2020, 5, 21254-21259.	1.6	11
31	Modulation of Cell-Cycle Progression by Hydrogen Peroxide-Mediated Cross-Linking and Degradation of Cell-Adhesive Hydrogels. Cells, 2022, 11, 881.	1.8	11
32	Development of phenol-grafted polyglucuronic acid and its application to extrusion-based bioprinting inks. Carbohydrate Polymers, 2022, 277, 118820.	5.1	10
33	Versatility of hydrogelation by dual-enzymatic reactions with oxidases and peroxidase. Biochemical Engineering Journal, 2018, 131, 1-8.	1.8	9
34	Relationships between Diffusion and Viscoelasticity of Associative Polymer Networks. Nihon Reoroji Gakkaishi, 2019, 47, 133-142.	0.2	9
35	Crossâ€Linking Building Blocks Using a â€œBoronate Bridgeâ€•to Build Functional Hybrid Materials. ChemNanoMat, 2019, 5, 141-151.	1.5	9
36	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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37	Automated Microhand System for Measuring Cell Stiffness By Using Two Plate End-Effectors. IEEE Robotics and Automation Letters, 2022, 7, 2385-2390.	3.3	2
38	A Bioâ€synthetic Hybrid Hydrogel Formed under Physiological Conditions Consisting of Mucin and a Synthetic Polymer Carrying Boronic Acid. Macromolecular Bioscience, 2022, 22, e2200055.	2.1	2
39	Timeâ€“strain inseparability in multiaxial stress relaxation of supramolecular gels formed via hostâ€“guest interactions. Soft Matter, 0, , .	1.2	2
40	Formation of Redox-Responsive Supramolecular Polymeric Materials Based on Host-Guest Interaction at Polymer Side Chain. Kobunshi Ronbunshu, 2015, 72, 573-581.	0.2	0
41	Stimuli-responsive Supramolecular Gel Actuators. Journal of the Japan Society for Precision Engineering, 2014, 80, 722-726.	0.0	0