Yu Hoshino

List of Publications by Year in descending order

125 papers	4,869 citations	117625 34 h-index	102487 66 g-index
133 all docs	133 docs citations	133 times ranked	5193 citing authors

#	Article	IF	Citations
1	Recognition, Neutralization, and Clearance of Target Peptides in the Bloodstream of Living Mice by Molecularly Imprinted Polymer Nanoparticles: A Plastic Antibody. Journal of the American Chemical Society, 2010, 132, 6644-6645.	13.7	437
2	Intelligent Image-Activated Cell Sorting. Cell, 2018, 175, 266-276.e13.	28.9	395
3	Peptide Imprinted Polymer Nanoparticles: A Plastic Antibody. Journal of the American Chemical Society, 2008, 130, 15242-15243.	13.7	377
4	Glycopolymer Nanobiotechnology. Chemical Reviews, 2016, 116, 1673-1692.	47.7	249
5	The rational design of a synthetic polymer nanoparticle that neutralizes a toxic peptide in vivo. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 33-38.	7.1	179
6	Temperatureâ€Responsive â€œCatch and Releaseâ€•of Proteins by using Multifunctional Polymerâ€Based Nanoparticles. Angewandte Chemie - International Edition, 2012, 51, 2405-2408.	13.8	145
7	Reversible Absorption of CO₂ Triggered by Phase Transition of Amine-Containing Micro- and Nanogel Particles. Journal of the American Chemical Society, 2012, 134, 18177-18180.	13.7	129
8	A polymer nanoparticle with engineered affinity for a vascular endothelial growth factor (VEGF165). Nature Chemistry, 2017, 9, 715-722.	13.6	125
9	Raman image-activated cell sorting. Nature Communications, 2020, 11, 3452.	12.8	116
10	Synthetic Polymer Nanoparticles with Antibody-like Affinity for a Hydrophilic Peptide. ACS Nano, 2010, 4, 199-204.	14.6	111
11	High-throughput label-free molecular fingerprinting flow cytometry. Science Advances, 2019, 5, eaau0241.	10.3	102
12	Design of Synthetic Polymer Nanoparticles that Capture and Neutralize a Toxic Peptide. Small, 2009, 5, 1562-1568.	10.0	98
13	Affinity Purification of Multifunctional Polymer Nanoparticles. Journal of the American Chemical Society, 2010, 132, 13648-13650.	13.7	94
14	Intelligent image-activated cell sorting 2.0. Lab on A Chip, 2020, 20, 2263-2273.	6.0	93
15	The evolution of plastic antibodies. Journal of Materials Chemistry, 2011, 21, 3517-3521.	6.7	88
16	Engineered Synthetic Polymer Nanoparticles as IgG Affinity Ligands. Journal of the American Chemical Society, 2012, 134, 15765-15772.	13.7	83
17	Control of Protein-Binding Kinetics on Synthetic Polymer Nanoparticles by Tuning Flexibility and Inducing Conformation Changes of Polymer Chains. Journal of the American Chemical Society, 2012, 134, 15209-15212.	13.7	73
18	Temperatureâ€Responsive Microgel Films as Reversible Carbon Dioxide Absorbents in Wet Environment. Angewandte Chemie - International Edition, 2014, 53, 2654-2657.	13.8	71

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19	A practical guide to intelligent image-activated cell sorting. Nature Protocols, 2019, 14, 2370-2415.	12.0	71
20	Polymer-modified gold nanoparticles via RAFT polymerization: a detailed study for a biosensing application. Polymer Chemistry, 2014, 5, 931-939.	3.9	70
21	Polymer Nanoparticleâ€“Protein Interface. Evaluation of the Contribution of Positively Charged Functional Groups to Protein Affinity. ACS Applied Materials & Interfaces, 2013, 5, 374-379.	8.0	61
22	Design of Synthetic Polymer Nanoparticles That Facilitate Resolubilization and Refolding of Aggregated Positively Charged Lysozyme. Journal of the American Chemical Society, 2016, 138, 4282-4285.	13.7	55
23	Thermocells Driven by Phase Transition of Hydrogel Nanoparticles. Journal of the American Chemical Society, 2020, 142, 17318-17322.	13.7	54
24	ELISA-Mimic Screen for Synthetic Polymer Nanoparticles with High Affinity to Target Proteins. Biomacromolecules, 2012, 13, 2952-2957.	5.4	52
25	Design of Glycopolymers Carrying Sialyl Oligosaccharides for Controlling the Interaction with the Influenza Virus. Biomacromolecules, 2017, 18, 4385-4392.	5.4	52
26	Rational Design of Synthetic Nanoparticles with a Large Reversible Shift of Acid Dissociation Constants: Proton Imprinting in Stimuli Responsive Nanogel Particles. Advanced Materials, 2014, 26, 3718-3723.	21.0	46
27	Preparation of abiotic polymer nanoparticles for sequestration and neutralization of a target peptide toxin. Nature Protocols, 2015, 10, 595-604.	12.0	46
28	Effect of Ultrasound on DNA Polymerase Reactions:Â Monitoring on a 27-MHz Quartz Crystal Microbalance. Biomacromolecules, 2006, 7, 682-685.	5.4	45
29	Controlling the lectin recognition of glycopolymersviadistance arrangement of sugar blocks. Chemical Communications, 2018, 54, 82-85.	4.1	43
30	Metal Mesh Device Sensor Immobilized with a Trimethoxysilane-Containing Glycopolymer for Label-Free Detection of Proteins and Bacteria. ACS Applied Materials & Interfaces, 2014, 6, 13234-13241.	8.0	40
31	Design rationale of thermally responsive microgel particle films that reversibly absorb large amounts of CO₂: fine tuning the pK_a of ammonium ions in the particles. Chemical Science, 2015, 6, 6112-6123.	7.4	40
32	Epitope Discovery for a Synthetic Polymer Nanoparticle: A New Strategy for Developing a Peptide Tag. Journal of the American Chemical Society, 2014, 136, 1194-1197.	13.7	39
33	Selective Protein Separation Using Siliceous Materials with a Trimethoxysilane-Containing Glycopolymer. ACS Applied Materials & Interfaces, 2012, 4, 411-417.	8.0	37
34	Biotinylation of Silicon and Nickel Surfaces and Detection of Streptavidin as Biosensor. Langmuir, 2013, 29, 9457-9463.	3.5	36
35	Topological Design of Star Glycopolymers for Controlling the Interaction with the Influenza Virus. Bioconjugate Chemistry, 2019, 30, 1192-1198.	3.6	36
36	Interaction between synthetic particles and biomacromolecules: fundamental study of nonspecific interaction and design of nanoparticles that recognize target molecules. Polymer Journal, 2014, 46, 537-545.	2.7	32

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37	Sequestering and inhibiting a vascular endothelial growth factor in vivo by systemic administration of a synthetic polymer nanoparticle. Journal of Controlled Release, 2019, 295, 13-20.	9.9	29
38	Surface Modification of Siliceous Materials Using Maleimidation and Various Functional Polymers Synthesized by Reversible Additionâ€“Fragmentation Chain Transfer Polymerization. ACS Applied Materials & Interfaces, 2012, 4, 5125-5133.	8.0	28
39	Design of multi-functional linear polymers that capture and neutralize a toxic peptide: a comparison with cross-linked nanoparticles. Journal of Materials Chemistry B, 2015, 3, 1706-1711.	5.8	28
40	Signal amplified two-dimensional photonic crystal biosensor immobilized with glyco-nanoparticles. Journal of Materials Chemistry B, 2014, 2, 3324-3332.	5.8	27
41	Engineering Nanoparticle Antitoxins Utilizing Aromatic Interactions. Biomacromolecules, 2014, 15, 3290-3295.	5.4	27
42	Isolating Single Euglena gracilis Cells by Glass Microfluidics for Raman Analysis of Paramylon Biogenesis. Analytical Chemistry, 2019, 91, 9631-9639.	6.5	27
43	Synthetic hydrogel nanoparticles for sepsis therapy. Nature Communications, 2021, 12, 5552.	12.8	27
44	Inhibition of Bacterial Adhesion on Hydroxyapatite Model Teeth by Surface Modification with PEGMA-Phosmer Copolymers. ACS Biomaterials Science and Engineering, 2016, 2, 205-212.	5.2	26
45	Homogeneous Oligomeric Ligands Prepared via Radical Polymerization that Recognize and Neutralize a Target Peptide. Angewandte Chemie - International Edition, 2020, 59, 679-683.	13.8	26
46	Effect of Physical Properties of Nanogel Particles on the Kinetic Constants of Multipoint Protein Recognition Process. Biomacromolecules, 2014, 15, 541-547.	5.4	25
47	Development of glycosaminoglycan mimetics using glycopolymers. Polymer Journal, 2016, 48, 229-237.	2.7	25
48	Optimization of Poly(N-isopropylacrylamide) as an Artificial Amidase. Biomacromolecules, 2015, 16, 411-421.	5.4	24
49	Synthesis of well-controlled glycopolymers bearing oligosaccharides and their interactions with influenza viruses. Polymer Journal, 2016, 48, 745-749.	2.7	23
50	Minimization of Synthetic Polymer Ligands for Specific Recognition and Neutralization of a Toxic Peptide. Journal of the American Chemical Society, 2015, 137, 10878-10881.	13.7	22
51	Self-Assembly of a Double Hydrophilic Block Glycopolymer and the Investigation of Its Mechanism. Langmuir, 2018, 34, 8591-8598.	3.5	21
52	Bacterial Inhibition and Osteoblast Adhesion on Ti Alloy Surfaces Modified by Poly(PEGMA-r-Phosmer) Coating. ACS Applied Materials & Interfaces, 2018, 10, 23674-23681.	8.0	19
53	Honeycomb-carbon-fiber-supported amine-containing nanogel particles for CO2 capture using a rotating column TVSA. Chemical Engineering Journal, 2020, 383, 123123.	12.7	19
54	Membrane reactor immobilized with palladiumâ€loaded polymer nanogel for continuousâ€flow Suzuki coupling reaction. AICHE Journal, 2015, 61, 582-589.	3.6	18

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55	Assembly of Defect-Free Microgel Nanomembranes for CO₂ Separation. ACS Applied Materials & Interfaces, 2021, 13, 30030-30038.	8.0	18
56	RNA-Aligned Film Prepared from an RNA/Lipid Complex. Macromolecular Rapid Communications, 2002, 23, 253-255.	3.9	17
57	Wide-range pK_a tuning of proton imprinted nanoparticles for reversible protonation of target molecules via thermal stimuli. Journal of Materials Chemistry B, 2017, 5, 9204-9210.	5.8	17
58	Macroporous Gel with a Permeable Reaction Platform for Catalytic Flow Synthesis. ACS Omega, 2017, 2, 8796-8802.	3.5	17
59	Synthesis of Various Glycopolymers Bearing Sialyllactose and the Effect of Their Molecular Mobility on Interaction with the Influenza Virus. Biomacromolecules, 2019, 20, 2763-2769.	5.4	17
60	Polymer microgel particles as basic catalysts for Knoevenagel condensation in water. Polymer Journal, 2016, 48, 897-904.	2.7	16
61	Effects of Hydrophobic Modifications and Phase Transitions of Polyvinylamine Hydrogel Films on Reversible CO₂ Capture Behavior: Comparison between Copolymer Films and Blend Films for Temperatureâ€Responsive CO₂ Absorption. Macromolecular Chemistry and Physics, 2017, 218, 1600570.	2.2	16
62	Design of Synthetic Polymer Nanoparticles Specifically Capturing Indole, a Small Toxic Molecule. Biomacromolecules, 2019, 20, 1644-1654.	5.4	16
63	Syntheses of sulfated glycopolymers and analyses of their BACE-1 inhibitory activity. Bioorganic and Medicinal Chemistry Letters, 2013, 23, 6390-6395.	2.2	15
64	Affinity Separation of Lectins Using Porous Membranes Immobilized with Glycopolymer Brushes Containing Mannose or N-Acetyl-D-Glucosamine. Membranes, 2013, 3, 169-181.	3.0	15
65	Novel Detection Technique for Particulate Matter in Air Using Metal Mesh Device Sensors. Chemistry Letters, 2014, 43, 408-410.	1.3	15
66	Design and preparation of thermo-responsive vinylamine-containing micro-gel particles for reversible absorption of carbon dioxide. Polymer Journal, 2017, 49, 601-606.	2.7	15
67	Rational designing of an antidote nanoparticle decorated with abiotic polymer ligands for capturing and neutralizing target toxins. Journal of Controlled Release, 2017, 268, 335-342.	9.9	15
68	Preparation of nanogel-immobilized porous gel beads for affinity separation of proteins: fusion of nano and micro gel materials. Polymer Journal, 2015, 47, 220-225.	2.7	14
69	Size-tuned hydrogel network of palladium-confining polymer particles: a highly active and durable catalyst for Suzuki coupling reactions in water at ambient temperature. Polymer Journal, 2018, 50, 1179-1186.	2.7	14
70	Amine-containing nanogel particles supported on porous carriers for enhanced carbon dioxide capture. Applied Energy, 2019, 253, 113567.	10.1	14
71	Aggregation of a double hydrophilic block glycopolymer: the effect of block polymer ratio. Journal of Materials Chemistry B, 2020, 8, 10101-10107.	5.8	13
72	Preparation of Palladium-loaded Polymer Nanoparticles with Catalytic Activity for Hydrogenation and Suzuki Coupling Reactions. Chemistry Letters, 2013, 42, 301-303.	1.3	12

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73	Label-free Detection of Antigen Protein Using a Metal Mesh Device Surface-modified by an Antibody. Analytical Sciences, 2015, 31, 173-176.	1.6	12
74	Macroporous Monolith with Polymer Gel Matrix as Continuous-flow Catalytic Reactor. Chemistry Letters, 2017, 46, 1065-1067.	1.3	12
75	Engineering the Binding Kinetics of Synthetic Polymer Nanoparticles for siRNA Delivery. Biomacromolecules, 2019, 20, 3648-3657.	5.4	12
76	Influence of Monomer Structures for Polymeric Multivalent Ligands: Consideration of the Molecular Mobility of Glycopolymers. Biomacromolecules, 2021, 22, 3119-3127.	5.4	12
77	SPR study for analysis of a water-soluble glycopolymer interface and molecular recognition properties. Polymer Journal, 2017, 49, 255-262.	2.7	11
78	Poly(<scp>N</scp>â€isopropylacrylamide) gelâ€based macroporous monolith for continuousâ€flow recovery of palladium(<scp>II</scp>) ions. Journal of Applied Polymer Science, 2017, 134, .	2.6	11
79	Reversible pK_a Modulation of Carboxylic Acids in Temperature-Responsive Nanoparticles through Imprinted Electrostatic Interactions. ACS Applied Materials & Interfaces, 2018, 10, 31096-31105.	8.0	11
80	Glycopolymers Mimicking GM1 Gangliosides: Cooperativity of Galactose and Neuraminic Acid for Cholera Toxin Recognition. Chemistry - an Asian Journal, 2019, 14, 1021-1027.	3.3	11
81	Polyamine nanogel particles spray-coated on carbon paper for efficient CO2 capture in a milli-channel reactor. Chemical Engineering Journal, 2020, 401, 126059.	12.7	11
82	Rational Design of Thermocells Driven by the Volume Phase Transition of Hydrogel Nanoparticles. ACS Applied Materials & Interfaces, 2021, 13, 32184-32192.	8.0	11
83	Glycopolymer monoliths for affinity bioseparation of proteins in a continuous-flow system: glycomonoliths. Journal of Materials Chemistry B, 2017, 5, 1148-1154.	5.8	10
84	Fine-tuning of the surface porosity of micropatterned polyethersulfone membranes prepared by phase separation micromolding. Polymer Journal, 2020, 52, 397-403.	2.7	10
85	Electrostatic Interactions between Acid-/Base-Containing Polymer Nanoparticles and Proteins: Impact of Polymerization pH. ACS Applied Bio Materials, 2020, 3, 3827-3834.	4.6	10
86	Combining Acid- and Base-Imprinted Nanoparticles in a Hydrogel Film for Temperature-Responsive Quick and Reversible Capture of Salt. ACS Applied Polymer Materials, 2020, 2, 505-514.	4.4	10
87	Polyacrylamide backbones for polyvalent bioconjugates using â€œpost-clickâ€•chemistry. Polymer Chemistry, 2016, 7, 5920-5924.	3.9	9
88	Monitoring Photosynthetic Activity in Microalgal Cells by Raman Spectroscopy with Deuterium Oxide as a Tracking Probe. ChemBioChem, 2017, 18, 2063-2068.	2.6	9
89	Polystyreneâ€Supported PPh₃ in Monolithic Porous Material: Effect of Crossâ€Linking Degree on Coordination Mode and Catalytic Activity in Pdâ€Catalyzed Câ^'C Crossâ€Coupling of Aryl Chlorides. ChemCatChem, 2020, 12, 4034-4037.	3.7	9
90	Thermoresponsive CO2 absorbent for various CO2 concentrations: tuning the pKa of ammonium ions for effective carbon capture. Polymer Journal, 2021, 53, 157-167.	2.7	9

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91	Quantitative preparation of multiblock glycopolymers bearing glycounits at the terminal segments by aqueous reversible additionâ€“fragmentation chain transfer polymerization of acrylamide monomers. Journal of Polymer Science Part A, 2019, 57, 857-861.	2.3	8
92	Screening of a Glycopolymer Library of GM1 Mimics Containing Hydrophobic Units Using Surface Plasmon Resonance Imaging. ACS Omega, 2019, 4, 20690-20696.	3.5	8
93	Anti-biofouling phosphorylated HEMA and PEGMA block copolymers show high affinity to hydroxyapatite. Colloids and Surfaces B: Biointerfaces, 2017, 160, 289-296.	5.0	7
94	Polystyrene-Cross-Linking Triphenylphosphine on a Porous Monolith: Enhanced Catalytic Activity for Aryl Chloride Cross-Coupling in Biphasic Flow. Industrial & Engineering Chemistry Research, 2020, 59, 15179-15187.	3.7	7
95	A QCM study of strong carbohydrateâ€“carbohydrate interactions of glycopolymers carrying mannosides on substrates. Journal of Materials Chemistry B, 2022, 10, 2597-2601.	5.8	7
96	Multi-block and sequence-controlled polymerization of glycopolymers, and interaction with lectin. European Polymer Journal, 2020, 140, 110044.	5.4	6
97	Screening of a glycopolymer library for GM1 mimetics synthesized by the â€œcarbohydrate module methodâ€. Chemical Communications, 2021, 57, 10871-10874.	4.1	6
98	Polymer Nanoparticles with Uniform Monomer Sequences for Sequenceâ€Specific Peptide Recognition. Angewandte Chemie - International Edition, 2022, 61, .	13.8	6
99	Facile Preparation of a Glycopolymer Library by PET-RAFT Polymerization for Screening the Polymer Structures of GM1 Mimics. ACS Omega, 2022, 7, 13254-13259.	3.5	5
100	Spatiotemporal monitoring of intracellular metabolic dynamics by resonance Raman microscopy with isotope labeling. RSC Advances, 2020, 10, 16679-16686.	3.6	4
101	Control of Hydrolysis and Condensation Activities of Thermolysin by Ultrasound Irradiation. Chemistry Letters, 2005, 34, 1602-1603.	1.3	3
102	Pulsed Ultrasound Effect on DNA Polymerase Reaction Monitored on a QCM. Chemistry Letters, 2009, 38, 538-539.	1.3	3
103	Preparation of multifunctional glycopolymers using double orthogonal reactions and the effect of electrostatic groups on the glycopolymerâ€“lectin interaction. Polymer Journal, 2019, 51, 1299-1308.	2.7	3
104	Homogeneous Oligomeric Ligands Prepared via Radical Polymerization that Recognize and Neutralize a Target Peptide. Angewandte Chemie, 2020, 132, 689-693.	2.0	3
105	Affinity purification of multifunctional oligomeric ligands synthesizedviacontrolled radical polymerization. Journal of Materials Chemistry B, 2020, 8, 5597-5601.	5.8	3
106	Investigation of the effect of microflow reactor diameter on condensation reactions in <scp>l</scp>-proline-immobilized polymer monoliths. Reaction Chemistry and Engineering, 2021, 7, 55-60.	3.7	3
107	Engineered Nanogel Particles Enhance the Photoautotrophic Biosynthesis of Polyhydroxyalkanoate in Marine Photosynthetic Bacteria. ACS Sustainable Chemistry and Engineering, 2022, 10, 4133-4142.	6.7	3
108	Probing the Biogenesis of Polysaccharide Granules in Algal Cells at Sub-Organellar Resolution via Raman Microscopy with Stable Isotope Labeling. Analytical Chemistry, 2021, 93, 16796-16803.	6.5	3

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109	Preparations of a RNA-lipid complex film and its physical properties. Nucleic Acids Symposium Series, 2001, 1, 61-62.	0.3	2
110	Biopolymer monolith for protein purification. Faraday Discussions, 2019, 219, 154-167.	3.2	2
111	Controlling the block sequence of multi-block oligomer ligands for neutralization of a target peptide. Materials Advances, 2020, 1, 604-608.	5.4	2
112	Design of abiotic polymer ligand-decorated lipid nanoparticles for effective neutralization of target toxins in the blood. Biomaterials Science, 2021, 9, 5588-5598.	5.4	2
113	De Novo Design of Star-Shaped Glycoligands with Synthetic Polymer Structures toward an Influenza Hemagglutinin Inhibitor. Biomacromolecules, 2022, 23, 1232-1241.	5.4	2
114	Inverse pH-response of Temperature-sensitive Copolymers by Combination with Porous CaCO3 Framework. Chemistry Letters, 2015, 44, 1425-1427.	1.3	1
115	Fibronectin Coating on Implant Material Surface Attracted Both Osteoblasts and Bacteria. Chemistry Letters, 2019, 48, 764-767.	1.3	1
116	Design of synthetic polymer nanoparticles that inhibit glucose absorption from the intestine. Biochemical and Biophysical Research Communications, 2021, 561, 1-6.	2.1	1
117	Polymer Nanoparticles with Uniform Monomer Sequences for Sequence Specific Peptide Recognition. Angewandte Chemie, 0, , .	2.0	1
118	Equilibrium Distribution Coefficients of Some Nitrate Impurities in Sodium Nitrate from Zone Refining. Separation Science and Technology, 1984, 19, 403-416.	2.5	0
119	Glycoglycan Mimic by Synthetic Polymers. ACS Symposium Series, 2017, , 69-77.	0.5	0
120	Nanoarchitectonics for Energy and Environment. , 2017, , 279-323.		0
121	Bio-inert Properties of TEG Modified Dendrimer Interface. Analytical Sciences, 2021, 37, 519-523.	1.6	0
122	Sulfated Glycopolymers for glycosaminoglycan mimics and nanomedicine. Frontiers in Bioengineering and Biotechnology, 0, 4, .	4.1	0
123	Syntheses and Functions of Glycosaminoglycan Mimicking Polymers. , 2018, , 213-224.		0
124	Development of Gas Separation Membranes Consisting of Hydrogel Particles for CO2 Capture from Combustion Gas. Membrane, 2018, 43, 132-136.	0.0	0
125	Development of Macroporous Polymer Monolith Immobilizing L-Proline-Based Organocatalyst and Application to Flow Asymmetric Aldol Addition Reaction. Kagaku Kogaku Ronbunshu, 2020, 46, 77-83.	0.3	0