Kodai Watanabe

List of Publications by Year
in descending order

109 papers	3,055 citations	159358 30 h-index	205818 48 g-index
109 all docs	109 docs citations	109 times ranked	3142 citing authors

#	Article	IF	Citations
1	Cellulose-synthesizing machinery in bacteria. Cellulose, 2022, 29, 2755-2777.	2.4	16
2	PEGylation of silver nanoparticles by physisorption of cyclic poly(ethylene glycol) for enhanced dispersion stability, antimicrobial activity, and cytotoxicity. Nanoscale Advances, 2022, 4, 532-545.	2.2	9
3	Structural snapshot of a glycoside hydrolase family 8 endo-Î²-1,4-glucanase capturing the state after cleavage of the scissile bond. Acta Crystallographica Section D: Structural Biology, 2022, 78, 228-237.	1.1	0
4	Reinforcing Poly(methyl methacrylate) with Bacterial Cellulose Nanofibers Chemically Modified with Methacryolyl Groups. Nanomaterials, 2022, 12, 537.	1.9	10
5	Physical characteristics and cell-adhesive properties of in vivo fabricated bacterial cellulose/hyaluronan nanocomposites. Cellulose, 2022, 29, 3239-3251.	2.4	3
6	Topology and Sequence-Dependent Micellization and Phase Separation of Pluronic L35, L64, 10R5, and 17R4: Effects of Cyclization and the Chain Ends. Polymers, 2022, 14, 1823.	2.0	2
7	Fabrication of Ultrafine, Highly Ordered Nanostructures Using Carbohydrate-Inorganic Hybrid Block Copolymers. Nanomaterials, 2022, 12, 1653.	1.9	2
8	Stretchable OFET Memories: Tuning the Morphology and the Charge-Trapping Ability of Conjugated Block Copolymers through Soft Segment Branching. ACS Applied Materials & Interfaces, 2021, 13, 2932-2943.	4.0	42
9	Therapeutic efficacy of a paclitaxel-loaded nanofibrillated bacterial cellulose (PTX/NFBC) formulation in a peritoneally disseminated gastric cancer xenograft model. International Journal of Biological Macromolecules, 2021, 174, 494-501.	3.6	13
10	Cyclization of PEG and Pluronic Surfactants and the Effects of the Topology on Their Interfacial Activity. Langmuir, 2021, 37, 6974-6984.	1.6	4
11	Doxorubicin Embedded into Nanofibrillated Bacterial Cellulose (NFBC) Produces a Promising Therapeutic Outcome for Peritoneally Metastatic Gastric Cancer in Mice Models via Intraperitoneal Direct Injection. Nanomaterials, 2021, 11, 1697.	1.9	5
12	Enhanced Self-Assembly and Mechanical Properties of Cellulose-Based Triblock Copolymers: Comparisons with Amylose-Based Triblock Copolymers. ACS Sustainable Chemistry and Engineering, 2021, 9, 9779-9788.	3.2	8
13	Oneâ€Shot Intrablock Crossâ€Linking of Linear Diblock Copolymer to Realize Janusâ€Shaped Singleâ€Chain Nanoparticles. Angewandte Chemie, 2021, 133, 18270-18276.	1.6	3
14	Oneâ€Shot Intrablock Crossâ€Linking of Linear Diblock Copolymer to Realize Janusâ€Shaped Singleâ€Chain Nanoparticles. Angewandte Chemie - International Edition, 2021, 60, 18122-18128.	7.2	13
15	Molecular Dynamics Simulation of Cellulose Synthase Subunit D Octamer with Cellulose Chains from Acetic Acid Bacteria: Insight into Dynamic Behaviors and Thermodynamics on Substrate Recognition. Journal of Chemical Theory and Computation, 2021, 17, 488-496.	2.3	8
16	Densely Arrayed Cage-Shaped Polymer Topologies Synthesized via Cyclopolymerization of Star-Shaped Macromonomers. Macromolecules, 2021, 54, 9079-9090.	2.2	5
17	Biofabrication of a Hyaluronan/Bacterial Cellulose Composite Nanofibril by Secretion from Engineered<i>Gluconacetobacter</i>. Biomacromolecules, 2021, 22, 4709-4719.	2.6	11
18	Suzukiâ€"Miyaura Catalyst-Transfer Polycondensation of Triolborate-Type Carbazole Monomers. Polymers, 2021, 13, 4168.	2.0	3

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19	Facile Post-Carboxymethylation of Cellulose Nanofiber Surfaces for Enhanced Water Dispersibility. ACS Omega, 2021, 6, 34107-34114.	1.6	12
20	Topology-Dependent Interaction of Cyclic Poly(ethylene glycol) Complexed with Gold Nanoparticles against Bovine Serum Albumin for a Colorimetric Change. Langmuir, 2021, , .	1.6	2
21	Facile synthesis of poly(trimethylene carbonate) by alkali metal carboxylate-catalyzed ring-opening polymerization. Polymer Journal, 2020, 52, 103-110.	1.3	15
22	Detailed Structural Analyses of Nanofibrillated Bacterial Cellulose and Its Application as Binder Material for a Display Device. Biomacromolecules, 2020, 21, 581-588.	2.6	9
23	Suzukiâ€"Miyaura catalyst-transfer polycondensation of triolborate-type fluorene monomer: toward rapid access to polyfluorene-containing block and graft copolymers from various macroinitiators. Polymer Chemistry, 2020, 11, 6832-6839.	1.9	15
24	characterization of d-LA homo-oligomer degradation by the isolated strains. Polymer Degradation and Stability, 2020, 179, 109231.	2.7	11
25	Enhanced dispersion stability of gold nanoparticles by the physisorption of cyclic poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlock 10	5.8	105
26	Highly asymmetric lamellar nanostructures from nanoparticleâ€"linear hybrid block copolymers. Nanoscale, 2020, 12, 16526-16534.	2.8	8
27	Programmed folding into spiro-multicyclic polymer topologies from linear and star-shaped chains. Communications Chemistry, 2020, 3, .	2.0	13
28	Nanofibrillated Bacterial Cellulose Surface Modified with Methyltrimethoxysilane for Fiber-Reinforced Composites. ACS Applied Nano Materials, 2020, 3, 8232-8241.	2.4	25
29	Rapid access to discrete and monodisperse block co-oligomers from sugar and terpenoid toward ultrasmall periodic nanostructures. Communications Chemistry, 2020, 3, .	2.0	19
30	Nanofibrillated Bacterial Cellulose Modified with (3-Aminopropyl)trimethoxysilane under Aqueous Conditions: Applications to Poly(methyl methacrylate) Fiber-Reinforced Nanocomposites. ACS Omega, 2020, 5, 29561-29569.	1.6	16
31	Carbohydrates as Hard Segments for Sustainable Elastomers: Carbohydrates Direct the Self-Assembly and Mechanical Properties of Fully Bio-Based Block Copolymers. Macromolecules, 2020, 53, 5408-5417.	2.2	24
32	Sweet Pluronic poly(propylene oxide)-b-oligosaccharide block copolymer systems: Toward sub-4Ânm thin-film nanopattern resolution. European Polymer Journal, 2020, 134, 109831.	2.6	8
33	Metallopolymer-<i>block</i>-oligosaccharide for sub-10 nm microphase separation. Polymer Chemistry, 2020, 11, 2995-3002.	1.9	11
34	A versatile synthetic strategy for macromolecular cages: intramolecular consecutive cyclization of star-shaped polymers. Chemical Science, 2019, 10, 440-446.	3.7	28
35	Structural and rheological characterization of bacterial cellulose gels obtained from Gluconacetobacter genus. Food Hydrocolloids, 2019, 92, 233-239.	5.6	28
36	Microphase separation of carbohydrate-based star-block copolymers with sub-10 nm periodicity. Polymer Chemistry, 2019, 10, 1119-1129.	1.9	29

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37	Downsizing feature of microphase-separated structures <i>via</i> intramolecular crosslinking of block copolymers. Chemical Science, 2019, 10, 3330-3339.	3.7	14
38	Installing a functional group into the inactive Ï‰-chain end of PMMA and PS-<i>b</i>-PMMA by terminal-selective transesterification. Polymer Chemistry, 2019, 10, 3390-3398.	1.9	5
39	Biodegradable Compatibilizers for Poly(hydroxyalkanoate)/Poly(Îµ-caprolactone) Blends through Click Reactions with End-Functionalized Microbial Poly(hydroxyalkanoate)s. ACS Sustainable Chemistry and Engineering, 2019, 7, 7969-7978.	3.2	27
40	Trimethyl Glycine as an Environmentally Benign and Biocompatible Organocatalyst for Ring-Opening Polymerization of Cyclic Carbonate. ACS Sustainable Chemistry and Engineering, 2019, 7, 8868-8875.	3.2	12
41	Alkali Metal Carboxylate as an Efficient and Simple Catalyst for Ring-Opening Polymerization of Cyclic Esters. Macromolecules, 2018, 51, 689-696.	2.2	61
42	Highly Ordered Cylinder Morphologies with 10 nm Scale Periodicity in Biomass-Based Block Copolymers. Macromolecules, 2018, 51, 428-437.	2.2	23
43	Synthesis, Isolation, and Properties of All Head-to-Tail Cyclic Poly(3-hexylthiophene): Fully Delocalized Exciton over the Defect-Free Ring Polymer. Macromolecules, 2018, 51, 9284-9293.	2.2	17
44	Facile and Efficient Modification of Polystyrene-<i>block</i>-poly(methyl methacrylate) for Achieving Sub-10 nm Feature Size. Macromolecules, 2018, 51, 8064-8072.	2.2	35
45	Chain-End Functionalization with a Saccharide for 10 nm Microphase Separation: â€œClassicalâ€• PS-<i>b</i>-PMMA versus PS-<i>b</i>-PMMA-Saccharide. Macromolecules, 2018, 51, 8870-8877.	2.2	25
46	Unraveling the stress effects on the optical properties of stretchable rod-coil polyfluorene-poly(<i>n</i>-butyl acrylate) block copolymer thin films. Polymer Chemistry, 2018, 9, 3820-3831.	1.9	28
47	Multicyclic Polymer Synthesis through Controlled/Living Cyclopolymerization of Î±,Ï‰-Dinorbornenyl-Functionalized Macromonomers. Macromolecules, 2018, 51, 3855-3864.	2.2	33
48	Synthesis of Î¼-ABC Tricyclic Miktoarm Star Polymer via Intramolecular Click Cyclization. Polymers, 2018, 10, 877.	2.0	6
49	Control over Molecular Architectures of Carbohydrate-Based Block Copolymers for Stretchable Electrical Memory Devices. Macromolecules, 2018, 51, 4966-4975.	2.2	32
50	A facile strategy for manipulating micellar size and morphology through intramolecular cross-linking of amphiphilic block copolymers. Polymer Chemistry, 2017, 8, 3647-3656.	1.9	15
51	Structural and mechanical characterization of bacterial celluloseâ€“polyethylene glycol diacrylate composite gels. Carbohydrate Polymers, 2017, 173, 67-76.	5.1	27
52	Synthesis of Well-Defined Three- and Four-Armed Cage-Shaped Polymers via â€œTopological Conversionâ€• from Trefoil- and Quatrefoil-Shaped Polymers. Macromolecules, 2017, 50, 97-106.	2.2	43
53	Crystal structure of the flexible tandem repeat domain of bacterial cellulose synthesis subunit C. Scientific Reports, 2017, 7, 13018.	1.6	28
54	One-Step Production of Amphiphilic Nanofibrillated Cellulose Using a Cellulose-Producing Bacterium. Biomacromolecules, 2017, 18, 3432-3438.	2.6	29

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55	NMR characterization of methylcellulose: Chemical shift assignment and mole fraction of monomers in the polymer chains. Carbohydrate Polymers, 2017, 157, 728-738.	5.1	19
56	Intramolecular olefin metathesis as a robust tool to synthesize single-chain nanoparticles in a size-controlled manner. Polymer Chemistry, 2016, 7, 4782-4792.	1.9	23
57	NMR characterization of sodium carboxymethyl cellulose 2: Chemical shift assignment and conformation analysis of substituent groups. Carbohydrate Polymers, 2016, 150, 241-249.	5.1	21
58	Advanced functionalization of polyhydroxyalkanoate via the UV-initiated thiol-ene click reaction. Applied Microbiology and Biotechnology, 2016, 100, 4375-4383.	1.7	8
59	Self-Assembly of Maltoheptaose-<i>block</i>-polycaprolactone Copolymers: Carbohydrate-Decorated Nanoparticles with Tunable Morphology and Size in Aqueous Media. Macromolecules, 2016, 49, 4178-4194.	2.2	29
60	InÂvitro synthesis of polyhydroxyalkanoates using thermostable acetyl-CoA synthetase, CoA transferase, and PHA synthase from thermotorelant bacteria. Journal of Bioscience and Bioengineering, 2016, 122, 660-665.	1.1	25
61	Synthesis of Well-Defined Amphiphilic Star-Block and Miktoarm Star Copolyethers via <i>t</i>-Bu-P₄-Catalyzed Ring-Opening Polymerization of Glycidyl Ethers. Macromolecules, 2016, 49, 499-509.	2.2	39
62	NMR characterization of sodium carboxymethyl cellulose: Substituent distribution and mole fraction of monomers in the polymer chains. Carbohydrate Polymers, 2016, 146, 1-9.	5.1	64
63	Mechanical properties of a bacterial cellulose/polyethylene glycol gel with a peripheral region crosslinked by polyethylene glycol diacrylate. Polymer Journal, 2016, 48, 317-321.	1.3	1
64	Organophosphate-catalyzed bulk ring-opening polymerization as an environmentally benign route leading to block copolyesters, end-functionalized polyesters, and polyester-based polyurethane. Polymer Chemistry, 2015, 6, 4374-4384.	1.9	53
65	Controlled/Living Ring-Opening Polymerization of Glycidylamine Derivatives Using <i>t</i>-Bu-P₄/Alcohol Initiating System Leading to Polyethers with Pendant Primary, Secondary, and Tertiary Amino Groups. Macromolecules, 2015, 48, 3217-3229.	2.2	40
66	In Vivo Curdlan/Cellulose Bionanocomposite Synthesis by Genetically Modified <i>Gluconacetobacter xylinus</i>. Biomacromolecules, 2015, 16, 3154-3160.	2.6	45
67	Bacterial cellulose gels with high mechanical strength. Materials Science and Engineering C, 2015, 47, 57-62.	3.8	42
68	Characterization of an Alginate Lyase, FlAlyA, from Flavobacterium sp. Strain UMI-01 and Its Expression in Escherichia coli. Marine Drugs, 2014, 12, 4693-4712.	2.2	72
69	Stereoblock-like Brush Copolymers Consisting of Poly(<scp>l</scp>-lactide) and Poly(<scp>d</scp>-lactide) Side Chains along Poly(norbornene) Backbone: Synthesis, Stereocomplex Formation, and Structureâ€“Property Relationship. Macromolecules, 2014, 47, 7118-7128.	2.2	46
70	Synthesis of Linear, Cyclic, Figure-Eight-Shaped, and Tadpole-Shaped Amphiphilic Block Copolyethers via <i>t</i>-Bu-P₄-Catalyzed Ring-Opening Polymerization of Hydrophilic and Hydrophobic Glycidyl Ethers. Macromolecules, 2014, 47, 2853-2863.	2.2	75
71	Polyhydroxyalkanoate production by a novel bacterium Massilia sp. UMI-21 isolated from seaweed, and molecular cloning of its polyhydroxyalkanoate synthase gene. Journal of Bioscience and Bioengineering, 2014, 118, 514-519.	1.1	27
72	The c-di-GMP recognition mechanism of the PilZ domain of bacterial cellulose synthase subunit A. Biochemical and Biophysical Research Communications, 2013, 431, 802-807.	1.0	42

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73	One-step production of nanofibrillated bacterial cellulose (NFBC) from waste glycerol using Gluconacetobacter intermedius NEDO-01. Cellulose, 2013, 20, 2971-2979.	2.4	50
74	Cellulose complementing factor (Ccp) is a new member of the cellulose synthase complex (terminal) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.1	71
75	Engineering of l-tyrosine oxidation in Escherichia coli and microbial production of hydroxytyrosol. Metabolic Engineering, 2012, 14, 603-610.	3.6	74
76	Engineering of a Tyrosol-Producing Pathway, Utilizing Simple Sugar and the Central Metabolic Tyrosine, in Escherichia coli. Journal of Agricultural and Food Chemistry, 2012, 60, 979-984.	2.4	49
77	Cellulose production by Enterobacter sp. CJF-002 and identification of genes for cellulose biosynthesis. Cellulose, 2012, 19, 1989-2001.	2.4	35
78	In vitro synthesis of polyhydroxyalkanoate (PHA) incorporating lactate (LA) with a block sequence by using a newly engineered thermostable PHA synthase from Pseudomonas sp. SG4502 with acquired LA-polymerizing activity. Applied Microbiology and Biotechnology, 2012, 94, 365-376.	1.7	27
79	Isolation of a thermotolerant bacterium producing medium-chain-length polyhydroxyalkanoate. Journal of Applied Microbiology, 2011, 111, 811-817.	1.4	23
80	Chemo-enzymatic synthesis of polyhydroxyalkanoate (PHA) incorporating 2-hydroxybutyrate by wild-type class I PHA synthase from Ralstonia eutropha. Applied Microbiology and Biotechnology, 2011, 92, 509-517.	1.7	42
81	Unusual change in molecular weight of polyhydroxyalkanoate (PHA) during cultivation of PHA-accumulating Escherichia coli. Polymer Degradation and Stability, 2010, 95, 2250-2254.	2.7	24
82	Development of a New Conversion Process Consisting of Hydrothermal Treatment and Catalytic Reaction Using ZrO2â€“FeO X Catalyst to Convert Fermentation Residue into Useful Chemicals. Topics in Catalysis, 2010, 53, 654-658.	1.3	20
83	Structure of bacterial cellulose synthase subunit D octamer with four inner passageways. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 17957-17961.	3.3	118
84	Chemo-enzymatic synthesis of polyhydroxyalkanoate by an improved two-phase reaction system (TPRS). Journal of Bioscience and Bioengineering, 2009, 108, 517-523.	1.1	15
85	Kinetic Analysis of Engineered Polyhydroxyalkanoate Synthases with Broad Substrate Specificity. Polymer Journal, 2009, 41, 237-240.	1.3	14
86	Nonvolatile and Shape-Memorized Bacterial Cellulose Gels Swollen by Poly(ethylene glycol). Polymer Journal, 2009, 41, 524-525.	1.3	15
87	Chemo-Enzymatic Synthesis of Poly(lactate-<i>co</i>-(3-hydroxybutyrate)) by a Lactate-Polymerizing Enzyme. Macromolecules, 2009, 42, 1985-1989.	2.2	40
88	Regulation of endoglucanase gene (cmcax) expression in Acetobacter xylinum. Journal of Bioscience and Bioengineering, 2008, 106, 88-94.	1.1	25
89	Purification, Crystallization and Preliminary X-Ray Studies of AxCesD Required for Efficient Cellulose Biosynthesis in Acetobacter xylinum. Protein and Peptide Letters, 2008, 15, 115-117.	0.4	4
90	A microbial factory for lactate-based polyesters using a lactate-polymerizing enzyme. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 17323-17327.	3.3	261

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91	In vitro growth and differentiated activities of human periodontal ligament fibroblasts cultured on salmon collagen gel. Journal of Biomedical Materials Research - Part A, 2007, 82A, 395-402.	2.1	38
92	Activities of MC3T3-E1 cells cultured on Î³-irradiated salmon atelocollagen scaffold. Journal of Bioscience and Bioengineering, 2006, 101, 511-514.	1.1	8
93	Structural characterization of the Acetobacter xylinum endo-Î²-1,4-glucanase CMCax required for cellulose biosynthesis. Proteins: Structure, Function and Bioinformatics, 2006, 64, 1069-1077.	1.5	47
94	Enzymatic synthesis of poly(3-hydroxybutyrate-co-4-hydroxybutyrate) with CoA recycling using polyhydroxyalkanoate synthase and acyl-CoA synthetase. Journal of Bioscience and Bioengineering, 2005, 99, 508-511.	1.1	20
95	Crystallization and preliminary crystallographic analysis of the cellulose biosynthesis-related protein CMCax fromAcetobacter xylinum. Acta Crystallographica Section F: Structural Biology Communications, 2005, 61, 252-254.	0.7	5
96	Application of cross-linked salmon atelocollagen to the scaffold of human periodontal ligament cells. Journal of Bioscience and Bioengineering, 2004, 97, 389-394.	1.1	63
97	A method of cell-sheet preparation using collagenase digestion of salmon atelocollagen fibrillar gel. Journal of Bioscience and Bioengineering, 2004, 98, 493-496.	1.1	29
98	Chemoenzymatic Synthesis of Poly(3-hydroxybutyrate) in a Water-Organic Solvent Two-Phase System. Macromolecules, 2004, 37, 4544-4546.	2.2	17
99	Synthesis of Poly(3-hydroxybutyrate) by Immobilized Poly(3-hydroxybutyrate) Synthase. Polymer Journal, 2003, 35, 407-410.	1.3	5
100	Isolation and Characterization of Bacillus sp. INT005 Accumulating Polyhydroxyalkanoate (PHA) from Gas Field Soil.. Journal of Bioscience and Bioengineering, 2003, 95, 77-81.	1.1	11
101	Cloning of Cellulose Synthesis Related Genes from Acetobacter xylinum ATCC23769 and ATCC53582: Comparison of Cellulose Synthetic Ability Between Strains. DNA Research, 2002, 9, 149-156.	1.5	59
102	Effects of endogenous endo-Î²-1,4-glucanase on cellulose biosynthesis in Acetobacter xylinum ATCC23769. Journal of Bioscience and Bioengineering, 2002, 94, 275-281.	1.1	42
103	Polyhydroxyalkanoate synthase from Bacillus sp. INT005 is composed of PhaC and PhaR. Journal of Bioscience and Bioengineering, 2002, 94, 343-50.	1.1	21
104	Cloning and Sequencing of the Beta-glucosidase Gene from Acetobacter xylinum ATCC 23769. DNA Research, 2001, 8, 263-269.	1.5	31
105	Cloning and Sequencing of the Levansucrase Gene from Acetobacter xylinum NCI 1005. DNA Research, 2000, 7, 237-242.	1.5	16
106	Structural analyses of new tri- and tetrasaccharides produced from disaccharides by transglycosylation of purified Trichoderma viride beta-glucosidase. Glycoconjugate Journal, 1999, 16, 415-423.	1.4	27
107	Synthesis of two waterâ€soluble polysaccharides by <i>Acetobacter</i> sp. NCI 1005. Macromolecular Symposia, 1997, 120, 19-28.	0.4	0
108	The production of a new water-soluble polysaccharide by Acetobacter xylinum NCI 1005 and its structural analysis by NMR spectroscopy. Carbohydrate Research, 1997, 305, 117-122.	1.1	42

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109	Enhancement of Bacterial Cellulose Productivity and Preparation of Branched Polysaccharide-Bacterial Cellulose Composite by Co-cultivation of Acetobacter Species.. Journal of Fiber Science and Technology, 1995, 51, 323-332.	0.0	1