

Hideki Abe

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160
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L-index

#	Paper	IF	Citations
160	Synthesis, structure and properties of polyhydroxyalkanoates: biological polyesters. <i>Progress in Polymer Science</i> , 2000 , 25, 1503-1555	29.6	1591
159	Microbial Synthesis and Characterization of Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate). <i>Macromolecules</i> , 1995 , 28, 4822-4828	5.5	622
158	Solid-state microstructures, thermal properties, and crystallization of biodegradable poly(butylene succinate) (PBS) and its copolyesters. <i>Biomacromolecules</i> , 2001 , 2, 605-13	6.9	203
157	Miscibility and solid-state structures for blends of poly[(S)-lactide] with atactic poly[(R,S)-3-hydroxybutyrate]. <i>Polymer</i> , 2000 , 41, 5985-5992	3.9	171
156	Solid-State Structures and Enzymatic Degradabilities for Melt-Crystallized Films of Copolymers of (R)-3-Hydroxybutyric Acid with Different Hydroxyalkanoic Acids. <i>Macromolecules</i> , 1998 , 31, 1791-1797	5.5	164
155	Biosynthesis and properties of poly(3-hydroxybutyrate-co-3-hydroxyalkanoates) by recombinant strains of <i>Pseudomonas</i> sp. 61-3. <i>Biomacromolecules</i> , 2000 , 1, 17-22	6.9	159
154	Morphological and kinetic analyses of regime transition for poly[(S)-lactide] crystal growth. <i>Biomacromolecules</i> , 2001 , 2, 1007-14	6.9	158
153	Physical Properties and Enzymic Degradability of Polymer Blends of Bacterial Poly[(R)-3-hydroxybutyrate] and Poly[(R,S)-3-hydroxybutyrate] Stereoisomers. <i>Macromolecules</i> , 1995 , 28, 844-853	5.5	155
152	Metastability and transformation of polymorphic crystals in biodegradable poly(butylene adipate). <i>Biomacromolecules</i> , 2004 , 5, 371-8	6.9	142
151	Solid-state structures and thermal properties of aliphatic-aromatic poly(butylene adipate-co-butylene terephthalate) copolyesters. <i>Polymer Degradation and Stability</i> , 2004 , 83, 289-300	4.7	135
150	Biodegradable poly(ethylene succinate) (PES). 1. Crystal growth kinetics and morphology. <i>Biomacromolecules</i> , 2000 , 1, 704-12	6.9	124
149	Branched poly(lactide) synthesized by enzymatic polymerization: effects of molecular branches and stereochemistry on enzymatic degradation and alkaline hydrolysis. <i>Biomacromolecules</i> , 2007 , 8, 3115-25	6.9	120
148	Temperature-Induced Polymorphic Crystals of Poly(butylene adipate). <i>Macromolecular Chemistry and Physics</i> , 2002 , 203, 2369-2374	2.6	120
147	Crystallization, melting, and enzymatic degradation of biodegradable poly(butylene succinate-co-14 mol % ethylene succinate) copolyester. <i>Biomacromolecules</i> , 2001 , 2, 313-21	6.9	117
146	Crystallization, stability, and enzymatic degradation of poly(L-lactide) thin film. <i>Biomacromolecules</i> , 2002 , 3, 350-6	6.9	100
145	The role of polymorphic crystal structure and morphology in enzymatic degradation of melt-crystallized poly(butylene adipate) films. <i>Polymer Degradation and Stability</i> , 2005 , 87, 191-199	4.7	97
144	Stereocomplex Formation through Reorganization of Poly(L-lactic acid) and Poly(D-lactic acid) Crystals. <i>Macromolecules</i> , 2008 , 41, 2852-2858	5.5	91

143	Physical Properties and Enzymic Degradability of Poly(3-hydroxybutyrate) Stereoisomers with Different Stereoregularities. <i>Macromolecules</i> , 1994 , 27, 6018-6025	5.5	91
142	Thermal degradation of environmentally degradable poly(hydroxyalkanoic acid)s. <i>Macromolecular Bioscience</i> , 2006 , 6, 469-86	5.5	88
141	Structural effects on enzymatic degradabilities for poly[(R)-3-hydroxybutyric acid] and its copolymers. <i>International Journal of Biological Macromolecules</i> , 1999 , 25, 185-92	7.9	85
140	Evaluation of biodegradabilities of biosynthetic and chemosynthetic polyesters in river water. <i>Polymer Degradation and Stability</i> , 1996 , 51, 281-286	4.7	85
139	Thermal degradation processes of end-capped poly(L-lactide)s in the presence and absence of residual zinc catalyst. <i>Biomacromolecules</i> , 2004 , 5, 1606-14	6.9	82
138	Biosynthesis from gluconate of a random copolyester consisting of 3-hydroxybutyrate and medium-chain-length 3-hydroxyalkanoates by <i>Pseudomonas</i> sp. 61-3. <i>International Journal of Biological Macromolecules</i> , 1994 , 16, 115-9	7.9	79
137	Miscibility and morphology of blends of isotactic and atactic poly(3-hydroxybutyrate). <i>Macromolecules</i> , 1994 , 27, 50-54	5.5	72
136	Biodegradable poly(ethylene succinate) (PES). 2. Crystal morphology of melt-crystallized ultrathin film and its change after enzymatic degradation. <i>Biomacromolecules</i> , 2000 , 1, 713-20	6.9	69
135	Crystalline/amorphous phase structure and molecular mobility of biodegradable poly(butylene adipate-co-butylene terephthalate) and related polyesters. <i>Biomacromolecules</i> , 2002 , 3, 390-6	6.9	68
134	Physical Properties and Enzymic Degradability of Copolymers of (R)-3-Hydroxybutyric and 6-Hydroxyhexanoic Acids. <i>Macromolecules</i> , 1995 , 28, 7630-7637	5.5	67
133	Effects of residual metal compounds and chain-end structure on thermal degradation of poly(3-hydroxybutyric acid). <i>Polymer Degradation and Stability</i> , 2006 , 91, 769-777	4.7	65
132	Physical properties and enzymatic degradability of copolymers of (R)-3-hydroxybutyric acid and (S,S)-lactide. <i>Polymer</i> , 1998 , 39, 59-67	3.9	64
131	Engineering of <i>Ralstonia eutropha</i> for production of poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) from fructose and solid-state properties of the copolymer. <i>Biomacromolecules</i> , 2002 , 3, 618-24	6.9	64
130	Effect of low molecular weight additives on enzymatic degradation of poly(3-hydroxybutyrate). <i>Polymer</i> , 2000 , 41, 3227-3234	3.9	62
129	Crystal Growth in Poly(L-lactide) Thin Film Revealed by in situ Atomic Force Microscopy. <i>Macromolecular Chemistry and Physics</i> , 2003 , 204, 1822-1831	2.6	60
128	Side-chain effect of second monomer units on crystalline morphology, thermal properties, and enzymatic degradability for random copolyesters of (R)-3-hydroxybutyric acid with (R)-3-hydroxyalkanoic acids. <i>Biomacromolecules</i> , 2002 , 3, 133-8	6.9	59
127	Combination of N149S and D171G mutations in <i>Aeromonas caviae</i> polyhydroxyalkanoate synthase and impact on polyhydroxyalkanoate biosynthesis. <i>FEMS Microbiology Letters</i> , 2007 , 277, 217-22	2.9	58
126	Synthesis and Characterization of Poly[(R,S)-3-hydroxybutyrate-b-6-hydroxyhexanoate] as a Compatibilizer for a Biodegradable Blend of Poly[(R)-3-hydroxybutyrate] and Poly(6-hydroxyhexanoate). <i>Macromolecules</i> , 1994 , 27, 6012-6017	5.5	57

125	In situ observation of crystal growth for poly[(S)-lactide] by temperature-controlled atomic force microscopy. <i>Biomacromolecules</i> , 2001 , 2, 940-5	6.9	56
124	Effective enhancement of short-chain-length-medium-chain-length polyhydroxyalkanoate copolymer production by coexpression of genetically engineered 3-ketoacyl-acyl-carrier-protein synthase III (fabH) and polyhydroxyalkanoate synthesis genes. <i>Biomacromolecules</i> , 2004 , 5, 1457-64	6.9	55
123	Molecular weight characterization of poly[(R)-3-hydroxybutyrate] synthesized by genetically engineered strains of Escherichia coli. <i>Polymer Degradation and Stability</i> , 2006 , 91, 1138-1146	4.7	53
122	Identification, biosynthesis, and characterization of polyhydroxyalkanoate copolymer consisting of 3-hydroxybutyrate and 3-hydroxy-4-methylvalerate. <i>Biomacromolecules</i> , 2009 , 10, 2866-74	6.9	52
121	Microscopic visualization on crystalline morphologies of thin films for poly[(R)-3-hydroxybutyric acid] and its copolymer. <i>Polymer</i> , 2000 , 41, 867-874	3.9	52
120	Biodegradability of Poly(hydroxyalkanoate) Materials. <i>Materials</i> , 2009 , 2, 1104-1126	3.5	50
119	Studies on comonomer compositional distribution of the bacterial poly(3-hydroxybutyric acid-co-3-hydroxypropionic acid)s and crystal and thermal characteristics of their fractionated component copolyesters. <i>Polymer</i> , 1998 , 39, 4801-4816	3.9	50
118	Biosynthesis of polyhydroxyalkanoate (PHA) copolymer from fructose using wild-type and laboratory-evolved PHA synthases. <i>Macromolecular Bioscience</i> , 2005 , 5, 112-7	5.5	50
117	Effects of residual zinc compounds and chain-end structure on thermal degradation of poly(epsilon-caprolactone). <i>Biomacromolecules</i> , 2004 , 5, 1480-8	6.9	48
116	Lactate fraction dependent mechanical properties of semitransparent poly(lactate-co-3-hydroxybutyrate)s produced by control of lactyl-CoA monomer fluxes in recombinant Escherichia coli. <i>Journal of Biotechnology</i> , 2011 , 154, 255-60	3.7	47
115	Microbial degradation of poly(aspartic acid) by two isolated strains of Pedobacter sp. and Sphingomonas sp. <i>Biomacromolecules</i> , 2000 , 1, 157-61	6.9	46
114	Improved synthesis of P(3HB-co-3HV-co-3HHx) terpolymers by mutant Cupriavidus necator using the PHA synthase gene of Chromobacterium sp. USM2 with high affinity towards 3HV. <i>Polymer Degradation and Stability</i> , 2010 , 95, 1436-1442	4.7	43
113	Crystal growth and solid-state structure of poly(lactide) Stereocopolymers. <i>Biomacromolecules</i> , 2005 , 6, 457-67	6.9	43
112	Enzymatic and Environmental Degradation of Racemic Poly(3-hydroxybutyric acid)s with Different Stereoregularities. <i>Macromolecules</i> , 1996 , 29, 8683-8688	5.5	43
111	Molecular weight change of polyhydroxyalkanoate (PHA) caused by the PhaC subunit of PHA synthase from Bacillus cereus YB-4 in recombinant Escherichia coli. <i>Biomacromolecules</i> , 2011 , 12, 2660-6	6.9	42
110	Poly(aspartic acid) degradation by a Sphingomonas sp. isolated from freshwater. <i>Applied and Environmental Microbiology</i> , 1999 , 65, 4268-70	4.8	42
109	Enzymatic degradation processes of poly[(R)-3-hydroxybutyric acid] and poly[(R)-3-hydroxybutyric acid-co-(R)-3-hydroxyvaleric acid] single crystals revealed by atomic force microscopy: effects of molecular weight and second-monomer composition on erosion rates. <i>Biomacromolecules</i> , 2005 , 6, 2008-16	6.9	41
108	Enzymatic degradation processes of lamellar crystals in thin films for poly[(R)-3-hydroxybutyric acid] and its copolymers revealed by real-time atomic force microscopy. <i>Biomacromolecules</i> , 2004 , 5, 2186-94	6.9	41

107	Variation in copolymer composition and molecular weight of polyhydroxyalkanoate generated by saturation mutagenesis of <i>Aeromonas caviae</i> PHA synthase. <i>Macromolecular Bioscience</i> , 2007 , 7, 846-54	5.5	40
106	Effect of metal compounds on thermal degradation behavior of aliphatic poly(hydroxyalkanoic acid)s. <i>Polymer Degradation and Stability</i> , 2008 , 93, 776-785	4.7	40
105	Characterization and properties of G4X mutants of <i>Ralstonia eutropha</i> PHA synthase for poly(3-hydroxybutyrate) biosynthesis in <i>Escherichia coli</i> . <i>Macromolecular Bioscience</i> , 2005 , 5, 197-206	5.5	40
104	Enzymatic degradation of monolayer for poly(lactide) revealed by real-time atomic force microscopy: effects of stereochemical structure, molecular weight, and molecular branches on hydrolysis rates. <i>Biomacromolecules</i> , 2008 , 9, 2180-5	6.9	38
103	Analysis of adsorption function of polyhydroxybutyrate depolymerase from <i>Alcaligenes faecalis</i> T1 by using a quartz crystal microbalance. <i>Biomacromolecules</i> , 2001 , 2, 25-8	6.9	37
102	Thermal properties and crystallization behaviors of medium-chain-length poly(3-hydroxyalkanoate)s. <i>Polymer</i> , 2012 , 53, 3026-3034	3.9	34
101	Utilization of 2-alkenoic acids for biosynthesis of medium-chain-length polyhydroxyalkanoates in metabolically engineered <i>Escherichia coli</i> to construct a novel chemical recycling system. <i>Polymer Degradation and Stability</i> , 2012 , 97, 329-336	4.7	33
100	Molecular mobility and phase structure of biodegradable poly(butylene succinate) and poly(butylene succinate-co-butylene adipate). <i>Biomacromolecules</i> , 2002 , 3, 1095-100	6.9	33
99	Effect of water on the surface molecular mobility of poly(lactide) thin films: an atomic force microscopy study. <i>Biomacromolecules</i> , 2004 , 5, 1187-93	6.9	32
98	Purification and characterization of poly(aspartic acid) hydrolase from <i>Sphingomonas</i> sp. KT-1. <i>Biomacromolecules</i> , 2001 , 2, 1155-60	6.9	32
97	Chain transfer reaction catalyzed by various polyhydroxyalkanoate synthases with poly(ethylene glycol) as an exogenous chain transfer agent. <i>Applied Microbiology and Biotechnology</i> , 2010 , 87, 1427-35	5.7	31
96	Phase structure and enzymatic degradation of poly(L-lactide)/atactic poly(3-hydroxybutyrate) blends: an atomic force microscopy study. <i>Biomacromolecules</i> , 2006 , 7, 1921-8	6.9	30
95	Adsorption of biopolyester depolymerase on silicon wafer and poly[(R)-3-hydroxybutyric acid] single crystal revealed by real-time AFM. <i>Macromolecular Bioscience</i> , 2006 , 6, 41-50	5.5	29
94	Effect of phase structure on enzymatic degradation in poly(L-lactide)/atactic poly(3-hydroxybutyrate) blends with different miscibility. <i>Biomacromolecules</i> , 2009 , 10, 1013-8	6.9	28
93	Structural effects of terminal groups on nonenzymatic and enzymatic degradations of end-capped poly(L-lactide). <i>Biomacromolecules</i> , 2008 , 9, 1071-8	6.9	28
92	Synthesis and Thermal Properties of Novel Periodic Poly(esterimide)s Derived from Adipate, Butane-1,4-diamine, and Linear Aliphatic Diols. <i>Macromolecules</i> , 2006 , 39, 2875-2885	5.5	28
91	Composition Fractionation and Thermal Characterization of Poly(3-hydroxybutyrate-co-3-hydroxypropionate). <i>Polymer Journal</i> , 1996 , 28, 1096-1102	2.7	28
90	Evaluating the ability of polyhydroxyalkanoate synthase mutants to produce P(3HB-co-3HA) from soybean oil. <i>Macromolecular Bioscience</i> , 2009 , 9, 71-8	5.5	27

89	Synthesis, solid-state structure, and surface properties of end-capped poly(L-lactide). <i>Biomacromolecules</i> , 2004 , 5, 530-6	6.9	27
88	Uniformity of Monomer Composition and Material Properties of Medium-Chain-Length Polyhydroxyalkanoates Biosynthesized from Pure and Crude Fatty Acids. <i>ACS Sustainable Chemistry and Engineering</i> , 2016 , 4, 6905-6911	8.3	26
87	Effect of monomer composition and composition distribution on enzymatic degradation of poly(3-hydroxybutyrate-co-3-hydroxyvalerate). <i>Macromolecular Chemistry and Physics</i> , 1999 , 200, 977-982	2.6	26
86	Comonomer compositional distribution, physical properties, and enzymatic degradability of bacterial poly(3-hydroxybutyrate-co-3-hydroxy-4-methylvalerate) copolyesters. <i>Biomacromolecules</i> , 2010 , 11, 1615-22	6.9	25
85	Synthesis and Properties of Alternating Copolymers of 3-Hydroxybutyrate and Lactate Units with Different Stereocompositions. <i>Macromolecules</i> , 2014 , 47, 7354-7361	5.5	24
84	Real-Time Synchrotron SAXS and WAXD Studies on Annealing Behavior of Poly[(R)-3-hydroxybutyrate] Single Crystals. <i>Macromolecules</i> , 2006 , 39, 2201-2208	5.5	24
83	Development and validation of an HPLC-based screening method to acquire polyhydroxyalkanoate synthase mutants with altered substrate specificity. <i>Journal of Bioscience and Bioengineering</i> , 2012 , 113, 286-92	3.3	23
82	Degradation and adsorption characteristics of PHB depolymerase as revealed by kinetics of mutant enzymes with amino acid substitution in substrate-binding domain. <i>Biomacromolecules</i> , 2010 , 11, 113-9	6.9	23
81	Alcoholic cleavage of polyhydroxyalkanoate chains by class IV synthases induced by endogenous and exogenous ethanol. <i>Applied and Environmental Microbiology</i> , 2014 , 80, 1421-9	4.8	22
80	Unusual change in molecular weight of polyhydroxyalkanoate (PHA) during cultivation of PHA-accumulating <i>Escherichia coli</i> . <i>Polymer Degradation and Stability</i> , 2010 , 95, 2250-2254	4.7	22
79	Polyhydroxyalkanoate film formation and synthase activity during in vitro and in situ polymerization on hydrophobic surfaces. <i>Biomacromolecules</i> , 2008 , 9, 2811-8	6.9	22
78	Synchrotron SAXS and WAXS Studies on Changes in Structural and Thermal Properties of Poly[(R)-3-hydroxybutyrate] Single Crystals during Heating. <i>Macromolecular Rapid Communications</i> , 2005 , 26, 678-683	4.8	22
77	Studies on the Enzymatic Degradation of Solution-Grown Lamellar Crystals of Poly[(R)-3-hydroxybutyrate]: Defects in Crystals. <i>Macromolecules</i> , 2000 , 33, 9535-9541	5.5	22
76	Poly[(R)-3-hydroxybutyrate] formation in <i>Escherichia coli</i> from glucose through an enoyl-CoA hydratase-mediated pathway. <i>Journal of Bioscience and Bioengineering</i> , 2007 , 103, 38-44	3.3	21
75	Altered expression of polyhydroxyalkanoate synthase gene and its effect on poly[(R)-3-hydroxybutyrate] synthesis in recombinant <i>Escherichia coli</i> . <i>Polymer Degradation and Stability</i> , 2006 , 91, 1645-1650	4.7	21
74	Adsorption and hydrolysis reactions of poly(hydroxybutyric acid) depolymerases secreted from <i>Ralstonia pickettii</i> T1 and <i>Penicillium funiculosum</i> onto poly[(R)-3-hydroxybutyric acid]. <i>Biomacromolecules</i> , 2007 , 8, 2276-81	6.9	20
73	Interaction between poly[(R)-3-hydroxybutyrate] depolymerase and biodegradable polyesters evaluated by atomic force microscopy. <i>Langmuir</i> , 2005 , 21, 11829-35	4	20
72	Enzymatic processes for biodegradation of poly(hydroxyalkanoate)s crystals. <i>Canadian Journal of Chemistry</i> , 2008 , 86, 471-483	0.9	19

71	Surface properties and enzymatic degradation of end-capped poly(l-lactide). <i>Polymer Degradation and Stability</i> , 2006 , 91, 1300-1310	4.7	19
70	Biochemical and molecular characterization of poly(aspartic acid) hydrolase-2 from sphingomonas sp. KT-1. <i>Biomacromolecules</i> , 2003 , 4, 1285-92	6.9	19
69	Structural effects on biodegradation of aliphatic polyesters. <i>Macromolecular Symposia</i> , 1997 , 118, 725-731	3.8	18
68	Molecular Weight of Poly(3-Hydroxybutyrate) during Biological Polymerization in <i>Alcaligenes Eutrophus</i> . <i>Journal of Macromolecular Science - Pure and Applied Chemistry</i> , 1995 , 32, 759-774	2.2	18
67	Enhanced incorporation of 3-hydroxy-4-methylvalerate unit into biosynthetic polyhydroxyalkanoate using leucine as a precursor. <i>AMB Express</i> , 2011 , 1, 6	4.1	17
66	Structural Transition of Poly[(R)-3-hydroxybutyrate-co-(R)-3-hydroxyvalerate] Single Crystals on Heating As Revealed by Synchrotron Radiation SAXS and WAXD. <i>Macromolecules</i> , 2007 , 40, 2392-2399	5.5	17
65	Thermal degradation behavior of poly(4-hydroxybutyric acid). <i>Polymer Degradation and Stability</i> , 2006 , 91, 2333-2341	4.7	16
64	In-situ atomic force microscopy observation of enzymatic degradation in poly(hydroxyalkanoic acid) thin films: normal and constrained conditions. <i>Macromolecular Bioscience</i> , 2004 , 4, 276-85	5.5	16
63	Novel Biodegradable Copolymers with a Periodic Sequence Structure Derived from Succinate Butan-1,4-diol, and Butan-1,4-diamine. <i>Macromolecular Rapid Communications</i> , 2004 , 25, 1303-1308	4.8	16
62	Fractionation and thermal characteristics of biosynthesized polyhydroxyalkanoates bearing aromatic groups as side chains. <i>Polymer Journal</i> , 2017 , 49, 557-565	2.7	15
61	Biosynthesis and characterization of novel poly(3-hydroxybutyrate-co-3-hydroxy-2-methylbutyrate): thermal behavior associated with carbon methylation. <i>RSC Advances</i> , 2015 , 5, 58679-58685	3.7	14
60	Temperature dependence of the molecular motion in the crystalline region of biodegradable poly(butylene adipate), poly(ethylene succinate), and poly(butylene succinate). <i>Polymer Degradation and Stability</i> , 2004 , 84, 105-114	4.7	14
59	Crystal morphologies and enzymatic degradation of melt-crystallized thin films of random copolyesters of (R)-3-hydroxybutyric acid with (R)-3-hydroxyalkanoic acids. <i>Polymer Degradation and Stability</i> , 2002 , 76, 467-478	4.7	14
58	Development of a H3PW12O40/CeO2 catalyst for bulk ring-opening polymerization of a cyclic carbonate. <i>Green Chemistry</i> , 2018 , 20, 4995-5006	10	14
57	Carboxy-terminal modification of polyhydroxyalkanoate (PHA) via alcoholysis reaction catalyzed by Class IV PHA synthase. <i>Polymer Degradation and Stability</i> , 2015 , 117, 90-96	4.7	13
56	Effect of glycerol and its analogs on polyhydroxyalkanoate biosynthesis by recombinant <i>Ralstonia eutropha</i> : A quantitative structure-activity relationship study of chain transfer agents. <i>Polymer Degradation and Stability</i> , 2013 , 98, 1586-1590	4.7	13
55	Crystallization behavior and thermal properties of melt-crystallized poly[(R)-3-hydroxybutyric acid-co-6-hydroxyhexanoic acid] films. <i>International Journal of Biological Macromolecules</i> , 1999 , 25, 177-83	7.9	13
54	A novel and wide substrate specific polyhydroxyalkanoate (PHA) synthase from unculturable bacteria found in mangrove soil. <i>Journal of Polymer Research</i> , 2018 , 25, 1	2.7	12

53	Miscibility and morphology study on crystalline/crystalline partially miscible polymer blends of 6-arm Poly(L-lactide) and Poly(3-hydroxybutyrate-co-3-hydroxyvalerate). <i>Polymer</i> , 2015 , 60, 260-266	3.9	12
52	Real-time enzymatic degradation study of poly[(R)-3-hydroxybutyric acid] copolymer thin film by atomic force microscopy in buffer solution. <i>Macromolecular Bioscience</i> , 2002 , 2, 189	5.5	12
51	Group-Transfer Polymerization of Various Crotonates Using Organic Acid Catalysts. <i>Macromolecules</i> , 2019 , 52, 4052-4058	5.5	11
50	Adsorption effects of poly(hydroxybutyric acid) depolymerase on chain-folding surface of polyester single crystals revealed by mutant enzyme and frictional force microscopy. <i>Polymer Degradation and Stability</i> , 2007 , 92, 176-183	4.7	11
49	In situ observation of lamellar growth in thin films for poly[(R)-3-hydroxybutyric acid-co-6-hydroxyhexanoic acid] at a high crystallization temperature of 110°C by atomic force microscopy. <i>Polymer</i> , 2001 , 42, 2707-2710	3.9	11
48	Unique acrylic resins with aromatic side chains by homopolymerization of cinnamic monomers. <i>Communications Chemistry</i> , 2019 , 2,	6.3	10
47	In vitro evidence of chain transfer to tetraethylene glycols in enzymatic polymerization of polyhydroxyalkanoate. <i>Applied Microbiology and Biotechnology</i> , 2013 , 97, 4821-9	5.7	10
46	In vitro synthesis of polyhydroxyalkanoate catalyzed by class II and III PHA synthases: a useful technique for surface coatings of a hydrophobic support with PHA. <i>Journal of Chemical Technology and Biotechnology</i> , 2009 , 85, 779-782	3.5	10
45	Adsorption characteristics of P(3HB) depolymerase as evaluated by surface plasmon resonance and atomic force microscopy. <i>Biomacromolecules</i> , 2008 , 9, 3201-7	6.9	10
44	Molecular weight-dependent degradation of D-lactate-containing polyesters by polyhydroxyalkanoate depolymerases from <i>Variovorax</i> sp. C34 and <i>Alcaligenes faecalis</i> T1. <i>Applied Microbiology and Biotechnology</i> , 2015 , 99, 9555-63	5.7	9
43	Cloning of poly(aspartic acid) (PAA) hydrolase-1 gene from <i>Pedobacter</i> sp. KP-2 and hydrolysis of thermally synthesized PAA by its gene product. <i>Macromolecular Bioscience</i> , 2009 , 9, 10-9	5.5	9
42	Surface Patterning of Poly(ϵ -caprolactone): Epitaxial Crystallization and Enzymatic Degradation. <i>Macromolecular Chemistry and Physics</i> , 2010 , 211, 2480-2483	2.6	9
41	Studies on thermo-mechanical and thermal degradation properties of bio-based polyurethanes synthesized from vanillin-derived diol and lysine diisocyanate. <i>Polymer Degradation and Stability</i> , 2019 , 167, 283-291	4.7	8
40	Morphological changes in poly(L-lactide)/poly(3-hydroxybutyrate-co-3-hydroxyvalerate) blends induced by different miscibility. <i>Polymer</i> , 2015 , 66, 259-267	3.9	8
39	Novel Periodic Copolymers Consisting of Ester and Amide Units with the Same Carbon Numbers: Effects of Comonomeric and Sequential Structures on Crystalline Structures and Physical Properties. <i>Macromolecules</i> , 2006 , 39, 9071-9079	5.5	8
38	Synthesis and Characterization of Biobased Polyesters Containing Anthraquinones Derived from Gallic Acid. <i>Biomacromolecules</i> , 2019 , 20, 318-325	6.9	8
37	Real-Time Observation of Enzymatic Polyhydroxyalkanoate Polymerization Using High-Speed Scanning Atomic Force Microscopy. <i>ACS Omega</i> , 2017 , 2, 181-185	3.9	7
36	Biosynthesis of novel lactate-based polymers containing medium-chain-length 3-hydroxyalkanoates by recombinant <i>Escherichia coli</i> strains from glucose. <i>Journal of Bioscience and Bioengineering</i> , 2019 , 128, 191-197	3.3	7

35	A common active site of polyhydroxyalkanoate synthase from <i>Bacillus cereus</i> YB-4 is involved in polymerization and alcoholysis reactions. <i>Applied Microbiology and Biotechnology</i> , 2015 , 99, 4701-11	5.7	7
34	Biosynthesis and characterization of novel polyhydroxyalkanoate copolymers consisting of 3-hydroxy-2-methylbutyrate and 3-hydroxyhexanoate. <i>Journal of Polymer Research</i> , 2017 , 24, 1	2.7	6
33	Crystallization and mechanical behavior of covalent functionalized carbon nanotube/poly(3-hydroxybutyrate-co-3-hydroxyvalerate) nanocomposites. <i>Journal of Applied Polymer Science</i> , 2015 , 132, n/a-n/a	2.9	6
32	Preparation of Poly(3-hydroxybutyrate) Microspheres Containing Lastet of an Anticancer Drug and Its Application to Drug Delivery System.. <i>Kobunshi Ronbunshu</i> , 1992 , 49, 61-67	0	6
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