Takeharu Tsuge

List of Publications by Year
in descending order

145 papers	4,509 citations	109137 35 h-index	133063 59 g-index
149 all docs	149 docs citations	149 times ranked	2746 citing authors

#	Article	IF	Citations
1	Environmental life cycle comparison of polyhydroxyalkanoates produced from renewable carbon resources by bacterial fermentation. Polymer Degradation and Stability, 2003, 80, 183-194.	2.7	302
2	High yield production of polyhydroxyalkanoates from soybean oil by Ralstonia eutropha and its recombinant strain. Polymer Degradation and Stability, 2004, 83, 79-86.	2.7	269
3	Metabolic improvements and use of inexpensive carbon sources in microbial production of polyhydroxyalkanoates. Journal of Bioscience and Bioengineering, 2002, 94, 579-584.	1.1	208
4	Biosynthesis and Characterization of Poly(3-hydroxybutyrate-co-3- hydroxyhexanoate) from Palm Oil Products in a Wautersia eutropha Mutant. Biotechnology Letters, 2005, 27, 1405-1410.	1.1	132
5	Molecular cloning of two (R)-specific enoyl-CoA hydratase genes fromPseudomonas aeruginosaand their use for polyhydroxyalkanoate synthesis. FEMS Microbiology Letters, 2000, 184, 193-198.	0.7	116
6	Molecular characterization and properties of (R)-specific enoyl-CoA hydratases from Pseudomonas aeruginosa: metabolic tools for synthesis of polyhydroxyalkanoates via fatty acid ÃŸ-oxidation. International Journal of Biological Macromolecules, 2003, 31, 195-205.	3.6	110
7	Optical Properties of ZnO Nanoparticles Capped with Polymers. Materials, 2011, 4, 1132-1143.	1.3	105
8	Controlled biosynthesis and characterization of poly(3-hydroxybutyrate-co-3-hydroxyvalerate-co-3-hydroxyhexanoate) from mixtures of palm kernel oil and 3HV-precursors. Polymer Degradation and Stability, 2008, 93, 17-23.	2.7	101
9	Rearrangement of Gene Order in the <i>phaCAB</i> Operon Leads to Effective Production of Ultrahigh-Molecular-Weight Poly[(<i>R</i>)-3-Hydroxybutyrate] in Genetically Engineered Escherichia coli. Applied and Environmental Microbiology, 2012, 78, 3177-3184.	1.4	97
10	Class IV polyhydroxyalkanoate (PHA) synthases and PHA-producing Bacillus. Applied Microbiology and Biotechnology, 2015, 99, 6231-6240.	1.7	85
11	Fundamental factors determining the molecular weight of polyhydroxyalkanoate during biosynthesis. Polymer Journal, 2016, 48, 1051-1057.	1.3	77
12	Crystal Structure of the (R)-Specific Enoyl-CoA Hydratase from Aeromonas caviae Involved in Polyhydroxyalkanoate Biosynthesis. Journal of Biological Chemistry, 2003, 278, 617-624.	1.6	73
13	Combination of N149S and D171G mutations in<i>Aeromonas caviae</i>polyhydroxyalkanoate synthase and impact on polyhydroxyalkanoate biosynthesis. FEMS Microbiology Letters, 2007, 277, 217-222.	0.7	72
14	Biosynthesis and Compositional Regulation of Poly[(3-hydroxybutyrate)-co-(3-hydroxyhexanoate)] in RecombinantRalstonia eutropha Expressing Mutated Polyhydroxyalkanoate Synthase Genes. Macromolecular Bioscience, 2004, 4, 238-242.	2.1	70
15	Identification, Biosynthesis, and Characterization of Polyhydroxyalkanoate Copolymer Consisting of 3-Hydroxybutyrate and 3-Hydroxy-4-methylvalerate. Biomacromolecules, 2009, 10, 2866-2874.	2.6	67
16	Microbial Synthesis of Poly((<i>R</i>)-3-hydroxybutyrate-<i>co</i>- 3-hydroxypropionate) from Unrelated Carbon Sources by Engineered Cupriavidus necator. Biomacromolecules, 2009, 10, 700-706.	2.6	60
17	Molecular weight characterization of poly[(R)-3-hydroxybutyrate] synthesized by genetically engineered strains of Escherichia coli. Polymer Degradation and Stability, 2006, 91, 1138-1146.	2.7	59
18	Effective production and kinetic characterization of ultra-high-molecular-weight poly[(R)-3-hydroxybutyrate] in recombinant Escherichia coli. Polymer Degradation and Stability, 2005, 87, 161-169.	2.7	57

#	Article	IF	Citations
19	Biosynthesis of Polyhydroxyalkanoate (PHA) Copolymer from Fructose Using Wild-Type and Laboratory-Evolved PHA Synthases. Macromolecular Bioscience, 2005, 5, 112-117.	2.1	56
20	Isolation of polyhydroxyalkanoate-producing bacteria from a polluted soil and characterization of the isolated strain Bacillus cereus YB-4. Polymer Degradation and Stability, 2010, 95, 1335-1339.	2.7	54
21	Molecular Weight Change of Polyhydroxyalkanoate (PHA) Caused by the PhaC Subunit of PHA Synthase from Bacillus cereus YB-4 in Recombinant Escherichia coli. Biomacromolecules, 2011, 12, 2660-2666.	2.6	48
22	Coreâ€"shell composite particles composed of biodegradable polymer particles and magnetic iron oxide nanoparticles for targeted drug delivery. Journal of Magnetism and Magnetic Materials, 2015, 381, 278-284.	1.0	48
23	Biosynthesis and characterization of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) and poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) copolymers using jatropha oil as the main carbon source. Process Biochemistry, 2011, 46, 1572-1578.	1.8	46
24	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. Biomacromolecules, 2004, 5, 2186-2194.	2.6	45
25	Crystal Growth and Solid-State Structure of Poly(lactide) Stereocopolymers. Biomacromolecules, 2005, 6, 457-467.	2.6	45
26	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:Â Effects of Molecular Weight and Second-Monomer Composition on Erosion Rates. Biomacromolecules, 2005, 6, 2008-2016.	2.6	44
27	Alteration of Chain Length Substrate Specificity of Aeromonas caviae R -Enantiomer-Specific Enoyl-Coenzyme A Hydratase through Site-Directed Mutagenesis. Applied and Environmental Microbiology, 2003, 69, 4830-4836.	1.4	43
28	Variation in Copolymer Composition and Molecular Weight of Polyhydroxyalkanoate Generated by Saturation Mutagenesis ofAeromonas caviae PHA Synthase. Macromolecular Bioscience, 2007, 7, 846-854.	2.1	43
29	Control of acetic acid concentration by pH-stat continuous substrate feeding in heterotrophic culture phase of two-stage cultivation ofAlcaligenes eutrophus for production of P(3HB) from CO2, H2, and O2 under non-explosive conditions. , 1999, 62, 625-631.		41
30	Physical and Structural Effects of Adding Ultrahigh-Molecular-Weight Poly[(<i>R</i>)-3-hydroxybutyrate] to Wild-Type Poly[(<i>R</i>)-3-hydroxybutyrate]. Macromolecules, 2012, 45, 1858-1865.	2.2	41
31	Phasin Proteins Activate Aeromonas caviae Polyhydroxyalkanoate (PHA) Synthase but Not Ralstonia eutropha PHA Synthase. Applied and Environmental Microbiology, 2014, 80, 2867-2873.	1.4	41
32	Biosynthesis and Characteristics of Aromatic Polyhydroxyalkanoates. Polymers, 2018, 10, 1267.	2.0	41
33	Expression and characterization of (R)-specific enoyl coenzyme A hydratases making a channeling route to polyhydroxyalkanoate biosynthesis in Pseudomonas putida. Applied Microbiology and Biotechnology, 2011, 90, 951-959.	1.7	39
34	Thermal properties and crystallization behaviors of medium-chain-length poly(3-hydroxyalkanoate)s. Polymer, 2012, 53, 3026-3034.	1.8	39
35	Utilization of 2-alkenoic acids for biosynthesis of medium-chain-length polyhydroxyalkanoates in metabolically engineered Escherichia coli to construct a novel chemical recycling system. Polymer Degradation and Stability, 2012, 97, 329-336.	2.7	39
36	Production of polyhydroxyalkanoate (PHA) from renewable carbon sources in recombinant Ralstonia eutropha using mutants of original PHA synthase. Biochemical Engineering Journal, 2003, 16, 107-113.	1.8	37

#	Article	IF	Citations
37	Laser Wavelength Effect on Size and Morphology of Silicon Nanoparticles Prepared by Laser Ablation in Liquid. Japanese Journal of Applied Physics, 2013, 52, 025001.	0.8	37
38	Mutation Effects of a Conserved Alanine (Ala510) in Type I Polyhydroxyalkanoate Synthase fromRalstonia eutropha on Polyester Biosynthesis. Macromolecular Bioscience, 2004, 4, 963-970.	2.1	35
39	Phase Structure and Enzymatic Degradation of Poly(l-lactide)/Atactic Poly(3-hydroxybutyrate) Blends:Â An Atomic Force Microscopy Study. Biomacromolecules, 2006, 7, 1921-1928.	2.6	35
40	Comonomer Compositional Distribution, Physical Properties, and Enzymatic Degradability of Bacterial Poly(3-hydroxybutyrate-<i>co</i>-3-hydroxy-4-methylvalerate) Copolyesters. Biomacromolecules, 2010, 11, 1615-1622.	2.6	35
41	Chain transfer reaction catalyzed by various polyhydroxyalkanoate synthases with poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlock 1 1427-1435.	1.7	34
42	Biosynthesis of polyhydroxyalkanoates containing 2-hydroxy-4-methylvalerate and 2-hydroxy-3-phenylpropionate units from a related or unrelated carbon source. Journal of Bioscience and Bioengineering, 2018, 125, 295-300.	1.1	34
43	Polyhydroxyalkanoate (PHA) Synthesis by Class IV PHA Synthases Employing<i>Ralstonia eutropha</i>PHB^{â^'}4 as Host Strain. Bioscience, Biotechnology and Biochemistry, 2011, 75, 1615-1617.	0.6	33
44	Characterization of Site-Specific Mutations in a Short-Chain-Length/Medium-Chain-Length Polyhydroxyalkanoate Synthase: <i>In Vivo</i> and <i>In Vitro</i> Studies of Enzymatic Activity and Substrate Specificity. Applied and Environmental Microbiology, 2013, 79, 3813-3821.	1.4	32
45	Development of a novel method for feeding a mixture of l-lactic acid and acetic acid in fed-batch culture of Ralstonia eutropha for poly-d-3-hydroxybutyrate production. Journal of Bioscience and Bioengineering, 2001, 91, 545-550.	1.1	31
46	Adsorption of Biopolyester Depolymerase on Silicon Wafer and Poly[(R)-3-hydroxybutyric acid] Single Crystal Revealed by Real-Time AFM. Macromolecular Bioscience, 2006, 6, 41-50.	2.1	31
47	Formation of new polyhydroxyalkanoate containing 3-hydroxy-4-methylvalerate monomer in Burkholderia sp.. Applied Microbiology and Biotechnology, 2011, 89, 1599-1609.	1.7	31
48	Development and validation of an HPLC-based screening method to acquire polyhydroxyalkanoate synthase mutants with altered substrate specificity. Journal of Bioscience and Bioengineering, 2012, 113, 286-292.	1.1	30
49	Evaluating the Ability of Polyhydroxyalkanoate Synthase Mutants to Produce P(3HB<i>â€coâ€</i>3HA) from Soybean Oil. Macromolecular Bioscience, 2009, 9, 71-78.	2.1	29
50	Endogenous Ethanol Affects Biopolyester Molecular Weight in Recombinant <i>Escherichia coli</i>. ACS Chemical Biology, 2013, 8, 2568-2576.	1.6	29
51	Biosynthesis and thermal characterization of polyhydroxyalkanoates bearing phenyl and phenylalkyl side groups. Polymer Degradation and Stability, 2014, 109, 379-384.	2.7	28
52	Uniformity of Monomer Composition and Material Properties of Medium-Chain-Length Polyhydroxyalkanoates Biosynthesized from Pure and Crude Fatty Acids. ACS Sustainable Chemistry and Engineering, 2016, 4, 6905-6911.	3.2	28
53	Optimization of l-lactic acid feeding for the production of poly-d-3-hydroxybutyric acid by Alcaligenes eutrophus in fed-batch culture. Journal of Bioscience and Bioengineering, 1999, 88, 404-409.	1.1	27
54	Efficient Production of Active Polyhydroxyalkanoate Synthase in Escherichia coli by Coexpression of Molecular Chaperones. Applied and Environmental Microbiology, 2013, 79, 1948-1955.	1.4	27

#	Article	IF	Citations
55	Characterization of polyhydroxyalkanoate synthases from Halomonas sp. O-1 and Halomonas elongata DSM2581: Site-directed mutagenesis and recombinant expression. Polymer Degradation and Stability, 2014, 109, 416-423.	2.7	27
56	New insights into activation and substrate recognition of polyhydroxyalkanoate synthase from Ralstonia eutropha. Applied Microbiology and Biotechnology, 2013, 97, 1175-1182.	1.7	26
57	Alcoholytic Cleavage of Polyhydroxyalkanoate Chains by Class IV Synthases Induced by Endogenous and Exogenous Ethanol. Applied and Environmental Microbiology, 2014, 80, 1421-1429.	1.4	26
58	Title is missing!. Biotechnology Letters, 2000, 22, 1067-1069.	1.1	25
59	Biosynthesis and characterization of novel polyhydroxyalkanoate polymers with high elastic property by Cupriavidus necator PHBâˆ’4 transformant. Polymer Degradation and Stability, 2010, 95, 2226-2232.	2.7	25
60	Characterization of polyhydroxyalkanoate (PHA) synthase derived from Delftia acidovorans DS-17 and the influence of PHA production in Escherichia coli. Journal of Bioscience and Bioengineering, 2013, 115, 633-638.	1.1	25
61	Altered expression of polyhydroxyalkanoate synthase gene and its effect on poly[(R)-3-hydroxybutyrate] synthesis in recombinant Escherichia coli. Polymer Degradation and Stability, 2006, 91, 1645-1650.	2.7	24
62	Poly[(R)-3-hydroxybutyrate] formation in Escherichia coli from glucose through an enoyl-CoA hydratase-mediated pathway. Journal of Bioscience and Bioengineering, 2007, 103, 38-44.	1.1	24
63	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
64	Engineering of class I lactate-polymerizing polyhydroxyalkanoate synthases from Ralstonia eutropha that synthesize lactate-based polyester with a block nature. Applied Microbiology and Biotechnology, 2013, 97, 3441-3447.	1.7	24
65	Biosynthesis and characterization of novel poly(3-hydroxybutyrate-co-3-hydroxy-2-methylbutyrate): thermal behavior associated with Î±-carbon methylation. RSC Advances, 2015, 5, 58679-58685.	1.7	24
66	<i>Bacillus cereus</i>-type polyhydroxyalkanoate biosynthetic gene cluster contains <i>R</i>-specific enoyl-CoA hydratase gene. Bioscience, Biotechnology and Biochemistry, 2017, 81, 1627-1635.	0.6	24
67	Enhanced Incorporation of 3-Hydroxy-4-Methylvalerate Unit into Biosynthetic Polyhydroxyalkanoate Using Leucine as a Precursor. AMB Express, 2011, 1, 6.	1.4	23
68	Polyhydroxyalkanoate Film Formation and Synthase Activity During In Vitro and In Situ Polymerization on Hydrophobic Surfaces. Biomacromolecules, 2008, 9, 2811-2818.	2.6	22
69	Biosynthesis and mobilization of a novel polyhydroxyalkanoate containing 3-hydroxy-4-methylvalerate monomer produced by Burkholderia sp. USM (JCM15050). Bioresource Technology, 2010, 101, 7916-7923.	4.8	22
70	Atomic Force Microscopic Observation of in Vitro Polymerized Poly[(R)-3-hydroxybutyrate]: Insight into Possible Mechanism of Granule Formation. Biomacromolecules, 2005, 6, 2671-2677.	2.6	21
71	Adsorption and Hydrolysis Reactions of Poly(hydroxybutyric acid) Depolymerases Secreted fromRalstoniapickettiiT1 andPenicilliumfuniculosumonto Poly[(R)-3-hydroxybutyric acid]. Biomacromolecules, 2007, 8, 2276-2281.	2.6	21
72	Biosynthesis of poly(3-hydroxybutyrate-co-3-hydroxy-4-methylvalerate) by recombinant Escherichia coli expressing leucine metabolism-related enzymes derived from Clostridium difficile. Journal of Bioscience and Bioengineering, 2014, 117, 670-675.	1.1	21

#	Article	IF	Citations
73	Fractionation and thermal characteristics of biosynthesized polyhydoxyalkanoates bearing aromatic groups as side chains. Polymer Journal, 2017, 49, 557-565.	1.3	21
74	Potential Applications of Polyhydroxyalkanoates as a Biomaterial for the Aging Population. Polymer Degradation and Stability, 2020, 181, 109371.	2.7	21
75	An extra large insertion in the polyhydroxyalkanoate synthase fromDelftia acidovoransDS-17: its deletion effects and relation to cellular proteolysis. FEMS Microbiology Letters, 2004, 231, 77-83.	0.7	19
76	A single-nucleotide substitution in phasin gene leads to enhanced accumulation of polyhydroxyalkanoate (PHA) in <i>Escherichia coli</i> harboring <i>Aeromonas caviae</i> PHA biosynthetic operon. Journal of General and Applied Microbiology, 2015, 61, 63-66.	0.4	19
77	Autotrophic biosynthesis of polyhydroxyalkanoate by Ralstonia eutropha from non-combustible gas mixture with low hydrogen content. Biotechnology Letters, 2020, 42, 1655-1662.	1.1	18
78	Biosynthesis of novel polyhydroxyalkanoate containing 3-hydroxy-4-methylvalerate by Chromobacterium sp. USM2. Journal of Applied Microbiology, 2011, 111, 559-571.	1.4	17
79	Expression of Aeromonas caviae polyhydroxyalkanoate synthase gene in Burkholderia sp. USM (JCM15050) enables the biosynthesis of SCL-MCL PHA from palm oil products. Journal of Applied Microbiology, 2012, 112, 45-54.	1.4	17
80	In-Situ Atomic Force Microscopy Observation of Enzymatic Degradation in Poly(hydroxyalkanoic acid) Thin Films: Normal and Constrained Conditions. Macromolecular Bioscience, 2004, 4, 276-285.	2.1	16
81	Biosynthesis of poly(3-hydroxybutyrate-co-3-hydroxyalkanoates) by recombinant Escherichia coli from glucose. Journal of Bioscience and Bioengineering, 2015, 120, 305-310.	1.1	16
82	Carboxy-terminal modification of polyhydroxyalkanoate (PHA) viaÂalcoholysis reaction catalyzed by Class IV PHA synthase. Polymer Degradation and Stability, 2015, 117, 90-96.	2.7	16
83	Superior thermal stability and fast crystallization behavior of a novel, biodegradable Î±-methylated bacterial polyester. NPG Asia Materials, 2021, 13, .	3.8	16
84	Development of a Novel Method for Feeding a Mixture of L-Lactic Acid and Acetic Acid in Fed-Batch Culture of Ralstonia eutropha for Poly-D-3-Hydroxybutyrate Production.. Journal of Bioscience and Bioengineering, 2001, 91, 545-550.	1.1	16
85	Effect of glycerol and its analogs on polyhydroxyalkanoate biosynthesis by recombinant Ralstonia eutropha: A quantitative structureâ€“activity relationship study of chain transfer agents. Polymer Degradation and Stability, 2013, 98, 1586-1590.	2.7	15
86	Metabolic Improvements and Use of Inexpensive Carbon Sources in Microbial Production of Polyhydroxyalkanoates.. Journal of Bioscience and Bioengineering, 2002, 94, 579-584.	1.1	15
87	Microbial synthesis and enzymatic degradation of renewable poly[(R)-3-hydroxybutyrate-co-(R)-3-hydroxyhexanoate]. Science and Technology of Advanced Materials, 2004, 5, 449-453.	2.8	14
88	A Robust Route to Enzymatically Functional, Hierarchically Selfâ€Assembled Peptide Frameworks. Advanced Materials, 2013, 25, 2661-2665.	11.1	13
89	Low Carbon Concentration Feeding Improves Medium-Chain-Length Polyhydroxyalkanoate Production in Escherichia coli Strains With Defective Î²-Oxidation. Frontiers in Bioengineering and Biotechnology, 2018, 6, 178.	2.0	13
90	Gas chromatography-mass spectrometry-based monomer composition analysis of medium-chain-length polyhydroxyalkanoates biosynthesized by <i>Pseudomonas</i> spp. Bioscience, Biotechnology and Biochemistry, 2018, 82, 1615-1623.	0.6	13

#	Article	IF	Citations
91	Increased synthesis of poly(3-hydroxydodecanoate) by random mutagenesis of polyhydroxyalkanoate synthase. Applied Microbiology and Biotechnology, 2018, 102, 7927-7934.	1.7	13
92	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. Journal of Chemical Technology and Biotechnology, 2009, 85, 779-782.	1.6	12
93	In vitro evidence of chain transfer to tetraethylene glycols in enzymatic polymerization of polyhydroxyalkanoate. Applied Microbiology and Biotechnology, 2013, 97, 4821-4829.	1.7	12
94	Unique acrylic resins with aromatic side chains by homopolymerization of cinnamic monomers. Communications Chemistry, 2019, 2, .	2.0	12
95	The gene dosage effect of carbonic anhydrase on the biosynthesis of poly(3-hydroxybutyrate) under autotrophic and mixotrophic culture conditions. Polymer Journal, 2021, 53, 209-213.	1.3	12
96	Organization of Polyhydroxyalkanoate Synthase for In Vitro Polymerization as Revealed by Atomic Force Microscopy. Macromolecular Bioscience, 2005, 5, 929-935.	2.1	11
97	Adsorption effects of poly(hydroxybutyric acid) depolymerase on chain-folding surface of polyester single crystals revealed by mutant enzyme and frictional force microscopy. Polymer Degradation and Stability, 2007, 92, 176-183.	2.7	11
98	Preparative synthesis of Poly[(R)-3-hydroxybutyrate] monomer for enzymatic cell-free polymerization. Polymer Journal, 2012, 44, 982-985.	1.3	11
99	Biosynthesis and characterization of novel polyhydroxyalkanoate copolymers consisting of 3-hydroxy-2-methylbutyrate and 3-hydroxyhexanoate. Journal of Polymer Research, 2017, 24, 1.	1.2	11
100	Waste cooking oil as substrate for biosynthesis of poly(3-hydroxybutyrate) and poly(3-hydroxybutyrate-co-3-hydroxyhexanoate): Turning waste into a value-added product. Malaysian Journal of Microbiology, 2013, , .	0.1	11
101	Imaging internal features of whole, unfixed bacteria. Scanning, 2011, 33, 59-68.	0.7	10
102	Behavior of different polyhydroxyalkanoate synthases in response to the ethanol level in Escherichia coli cultures. Polymer Journal, 2015, 47, 767-770.	1.3	10
103	Poly(hydroxyalkanoate) Generation from Nonchiral Substrates Using Multiple Enzyme Immobilizations on Peptide Nanofibers. ACS Biomaterials Science and Engineering, 2017, 3, 3076-3082.	2.6	10
104	NADPH supply for poly(3-hydroxybutyrate) synthesis concomitant with enzymatic oxidation of phosphite. Journal of Bioscience and Bioengineering, 2018, 126, 764-768.	1.1	10
105	Microbial Secretion Platform for 3â€Hydroxybutyrate Oligomer and Its Endâ€Capped Forms Using Chain Transfer Reactionâ€Mediated Polyhydroxyalkanoate Synthases. Biotechnology Journal, 2019, 14, 1900201.	1.8	10
106	Expanded amino acid sequence of the PhaC box in the active center of polyhydroxyalkanoate synthases. FEBS Letters, 2020, 594, 710-716.	1.3	10
107	Genome-Based Analysis and Gene Dosage Studies Provide New Insight into 3-Hydroxy-4-Methylvalerate Biosynthesis in Ralstonia eutropha. Journal of Bacteriology, 2015, 197, 1350-1359.	1.0	9
108	A common active site of polyhydroxyalkanoate synthase from Bacillus cereus YB-4 is involved in polymerization and alcoholysis reactions. Applied Microbiology and Biotechnology, 2015, 99, 4701-4711.	1.7	9

#	Article	IF	Citations
109	Cloning and heterologous expression of a novel subgroup of class IV polyhydroxyalkanoate synthase genes from the genus Bacillus. Bioscience, Biotechnology and Biochemistry, 2017, 81, 194-196.	0.6	9
110	Synergy of valine and threonine supplementation on poly(2-hydroxybutyrate-block-3-hydroxybutyrate) synthesis in engineered Escherichia coli expressing chimeric polyhydroxyalkanoate synthase. Journal of Bioscience and Bioengineering, 2020, 129, 302-306.	1.1	9
111	The influence of medium composition on the microbial secretory production of hydroxyalkanoate oligomers. Journal of General and Applied Microbiology, 2021, 67, 134-141.	0.4	9
112	Engineering of Aeromonas caviae Polyhydroxyalkanoate Synthase Through Site-Directed Mutagenesis for Enhanced Polymerization of the 3-Hydroxyhexanoate Unit. Frontiers in Bioengineering and Biotechnology, 2021, 9, 627082.	2.0	9
113	Processing, Mechanical Properties, and Structure Analysis of Melt-Spun Fibers of P(3HB)/UHMW-P(3HB) Identical Blend. ACS Symposium Series, 2012, , 63-75.	0.5	8
114	Characterization of binding preference of polyhydroxyalkanoate biosynthesis-related multifunctional protein PhaM from Ralstonia eutropha. Applied Microbiology and Biotechnology, 2016, 100, 4413-4421.	1.7	8
115	Real-Time Observation of Enzymatic Polyhydroxyalkanoate Polymerization Using High-Speed Scanning Atomic Force Microscopy. ACS Omega, 2017, 2, 181-185.	1.6	8
116	Efficient molecular weight control of bacterially synthesized polyesters by alcohol supplementation. Journal of Chemical Technology and Biotechnology, 2014, 89, 1110-1114.	1.6	7
117	Biosynthesis and characterization of poly(3-hydroxybutyrate-co-2-hydroxyalkanoate) with different comonomer fractions. Polymer Degradation and Stability, 2020, 178, 109193.	2.7	7
118	Microbial oversecretion of (R)-3-hydroxybutyrate oligomer with diethylene glycol terminal as a macromonomer for polyurethane synthesis. International Journal of Biological Macromolecules, 2021, 167, 1290-1296.	3.6	7
119	Thermal properties of poly(3-hydroxy-2-methylbutyrate-co-3-hydroxybutyrate) copolymers with narrow comonomer-unit compositional distributions. Polymer Journal, 2021, 53, 1451-1457.	1.3	7
120	Characterization of biosynthesized P(3HB-co-3HA)s swellable in organic solvents. Polymer Degradation and Stability, 2010, 95, 1345-1348.	2.7	6
121	In vivo and in vitro characterization of hydrophilic protein tag-fused Ralstonia eutropha polyhydroxyalkanoate synthase. International Journal of Biological Macromolecules, 2019, 138, 379-385.	3.6	6
122	Thermal degradation behavior of bacterial poly(3-hydroxybutyrate-co-3-mercaptopropionate). Polymer Degradation and Stability, 2019, 165, 35-42.	2.7	6
123	Poly(3-mercapto-2-methylpropionate), a Novel Î±-Methylated Bio-Polythioester with Rubber-like Elasticity, and Its Copolymer with 3-hydroxybutyrate: Biosynthesis and Characterization. Bioengineering, 2022, 9, 228.	1.6	6
124	Kinetic modeling study of the group-transfer polymerization of alkyl crotonates using a silicon Lewis acid catalyst. Polymer Chemistry, 2020, 11, 5981-5991.	1.9	5
125	Optical Properties of Laser-Irradiated ZnO Nanoparticles in 2-Propanol. Japanese Journal of Applied Physics, 2010, 49, 052602.	0.8	4
126	Contribution of the Distal Pocket Residue to the Acyl-Chain-Length Specificity of (R)-Specific Enoyl-Coenzyme A Hydratases from Pseudomonas spp.. Applied and Environmental Microbiology, 2015, 81, 8076-8083.	1.4	4

#	Article	IF	Citations
127	Bioproduction of Polyhydroxyalkanoate from Plant Oils. , 2017, , 231-260.		4
128	Effect of Disyndiotacticity on the Glass Transition Temperature of Poly(ethyl crotonate)s Synthesized by Group-Transfer Polymerization Catalyzed by Organic Acids. Macromolecules, 2020, 53, 7759-7766.	2.2	3
129	Copolymers incorporated with Î²-substituted acrylate synthesized by organo-catalyzed group-transfer polymerization. Polymer Journal, 2021, 53, 989-999.	1.3	3
130	Molecular cloning of two (R)-specific enoyl-CoA hydratase genes from Pseudomonas aeruginosa and their use for polyhydroxyalkanoate synthesis. , 0, .		3
131	Biosynthesis of Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) From Glucose by Escherichia coli Through Butyryl-CoA Formation Driven by Ccr-Emd Combination. Frontiers in Bioengineering and Biotechnology, 2022, 10, .	2.0	3
132	Microbial Production of Biodegradable Plastics from Carbon Dioxide and Agricultural Waste Material. ACS Symposium Series, 1997, , 294-306.	0.5	2
133	Development of High Efficient L-lactate Fermentation and P(3HB) Biosynthesis for "Lactate Industry", the New Technology for Post-petrochemistry.. Kagaku Kogaku Ronbunshu, 1999, 25, 136-142.	0.1	2
134	Preparation and Optical Properties of Rare Earth Doped Y₂O₃ Nanoparticles Synthesized by Thermal Decomposition with Oleic Acid. Advanced Materials Research, 2011, 332-334, 1974-1978.	0.3	2
135	Biodegradable and magnetic coreâ€“shell composite particle prepared by emulsion solvent diffusion method. Japanese Journal of Applied Physics, 2016, 55, 02BE01.	0.8	2
136	Monomer-Supplying Enzymes for Polyhydroxyalkanoate Biosynthesis. , 2020, , 3-34.		2
137	Optimization of Culture Conditions for Secretory Production of 3-Hydroxybutyrate Oligomers Using Recombinant Escherichia coli. Frontiers in Bioengineering and Biotechnology, 2022, 10, 829134.	2.0	2
138	Microbial Synthesis of Polyhydroxyalkanoate Copolymer Containing 3-Hydroxy-4-methylvalerate Unit: Recent Development and Perspective. Kobunshi Ronbunshu, 2013, 70, 513-519.	0.2	1
139	Fabrication of Langmuir-Blodgett Film of Surface-Modified ZnO Nanoparticles Prepared by Solution Process. Transactions of the Materials Research Society of Japan, 2016, 41, 67-70.	0.2	1
140	Development of Polyhydroxyalkanoate (PHA) and Its Copolymers as a Possible â€œCureâ€•for the Plastic Pollution. Environmental and Microbial Biotechnology, 2021, , 59-79.	0.4	1
141	Enhanced Production of (R)-3-Hydroxybutyrate Oligomers by Coexpression of Molecular Chaperones in Recombinant Escherichia coli Harboring a Polyhydroxyalkanoate Synthase Derived from Bacillus cereus YB-4. Microorganisms, 2022, 10, 458.	1.6	1
142	Development of New Bio-based Plastics from Non-edible Biomass. Oleoscience, 2014, 14, 123-129.	0.0	0
143	Microbial Production of Polyhydroxyalkanoates From Plant Oils: Renewability and Biodegradability. , 2020, , 148-159.		0
144	Screening Method for Polyhydroxyalkanoate Synthase Mutants Based on Polyester Degree of Polymerization Using High-Performance Liquid Chromatography. Microorganisms, 2021, 9, 1949.	1.6	0

#	Article	IF	Citations
145	Secretory Production of Microbial Oligoesters and Their Use for Poly(ester-urethane) Synthesis. Oleoscience, 2021, 21, 525-529.	0.0	0