

Ren Wei

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

50
papers

2,454
citations

25
h-index

49
g-index

56
ext. papers

3,455
ext. citations

6.8
avg, IF

5.71
L-index

#	Paper	IF	Citations
50	Microbial enzymes for the recycling of recalcitrant petroleum-based plastics: how far are we?. <i>Microbial Biotechnology</i> , 2017 , 10, 1308-1322	6.3	297
49	Enzymatic Surface Hydrolysis of PET: Effect of Structural Diversity on Kinetic Properties of Cutinases from <i>Thermobifida</i> . <i>Macromolecules</i> , 2011 , 44, 4632-4640	5.5	205
48	Biocatalysis as a green route for recycling the recalcitrant plastic polyethylene terephthalate. <i>Microbial Biotechnology</i> , 2017 , 10, 1302-1307	6.3	151
47	New Insights into the Function and Global Distribution of Polyethylene Terephthalate (PET)-Degrading Bacteria and Enzymes in Marine and Terrestrial Metagenomes. <i>Applied and Environmental Microbiology</i> , 2018 , 84,	4.8	134
46	Structural and functional studies on a thermostable polyethylene terephthalate degrading hydrolase from <i>Thermobifida fusca</i> . <i>Applied Microbiology and Biotechnology</i> , 2014 , 98, 7815-23	5.7	124
45	Engineered bacterial polyester hydrolases efficiently degrade polyethylene terephthalate due to relieved product inhibition. <i>Biotechnology and Bioengineering</i> , 2016 , 113, 1658-65	4.9	111
44	Effect of hydrolysis products on the enzymatic degradation of polyethylene terephthalate nanoparticles by a polyester hydrolase from <i>Thermobifida fusca</i> . <i>Biochemical Engineering Journal</i> , 2015 , 93, 222-228	4.2	98
43	A dual enzyme system composed of a polyester hydrolase and a carboxylesterase enhances the biocatalytic degradation of polyethylene terephthalate films. <i>Biotechnology Journal</i> , 2016 , 11, 1082-7	5.6	87
42	Biocatalytic Degradation Efficiency of Postconsumer Polyethylene Terephthalate Packaging Determined by Their Polymer Microstructures. <i>Advanced Science</i> , 2019 , 6, 1900491	13.6	83
41	Microplastic pollution in water and sediment in a textile industrial area. <i>Environmental Pollution</i> , 2020 , 258, 113658	9.3	80
40	Functional characterization and structural modeling of synthetic polyester-degrading hydrolases from <i>Thermomonospora curvata</i> . <i>AMB Express</i> , 2014 , 4, 44	4.1	78
39	Ca ²⁺ and Mg ²⁺ binding site engineering increases the degradation of polyethylene terephthalate films by polyester hydrolases from <i>Thermobifida fusca</i> . <i>Biotechnology Journal</i> , 2015 , 10, 592-8	5.6	77
38	Degradation of Polyester Polyurethane by Bacterial Polyester Hydrolases. <i>Polymers</i> , 2017 , 9,	4.5	67
37	Microbial Genes for a Circular and Sustainable Bio-PET Economy. <i>Genes</i> , 2019 , 10,	4.2	64
36	Synthetic polyester-hydrolyzing enzymes from thermophilic actinomycetes. <i>Advances in Applied Microbiology</i> , 2014 , 89, 267-305	4.9	63
35	A disulfide bridge in the calcium binding site of a polyester hydrolase increases its thermal stability and activity against polyethylene terephthalate. <i>FEBS Open Bio</i> , 2016 , 6, 425-32	2.7	61
34	High level expression of a hydrophobic poly(ethylene terephthalate)-hydrolyzing carboxylesterase from <i>Thermobifida fusca</i> KW3 in <i>Escherichia coli</i> BL21(DE3). <i>Journal of Biotechnology</i> , 2010 , 146, 100-4	3.7	55

33	Enzymatic hydrolysis of polyethylene terephthalate films in an ultrafiltration membrane reactor. <i>Journal of Membrane Science</i> , 2015 , 494, 182-187	9.6	49
32	Conformational fitting of a flexible oligomeric substrate does not explain the enzymatic PET degradation. <i>Nature Communications</i> , 2019 , 10, 5581	17.4	48
31	Turbidimetric analysis of the enzymatic hydrolysis of polyethylene terephthalate nanoparticles. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2014 , 103, 72-78		46
30	Thermophilic whole-cell degradation of polyethylene terephthalate using engineered <i>Clostridium thermocellum</i> . <i>Microbial Biotechnology</i> , 2021 , 14, 374-385	6.3	46
29	Towards bio-upcycling of polyethylene terephthalate. <i>Metabolic Engineering</i> , 2021 , 66, 167-178	9.7	42
28	A high-throughput assay for enzymatic polyester hydrolysis activity by fluorimetric detection. <i>Biotechnology Journal</i> , 2012 , 7, 1517-21	5.6	37
27	Effect of Tris, MOPS, and phosphate buffers on the hydrolysis of polyethylene terephthalate films by polyester hydrolases. <i>FEBS Open Bio</i> , 2016 , 6, 919-27	2.7	37
26	Biodegradation and up-cycling of polyurethanes: Progress, challenges, and prospects. <i>Biotechnology Advances</i> , 2021 , 48, 107730	17.8	23
25	UV Pretreatment Impairs the Enzymatic Degradation of Polyethylene Terephthalate. <i>Frontiers in Microbiology</i> , 2020 , 11, 689	5.7	21
24	Plastic Biodegradation: Challenges and Opportunities 2018 , 1-29		20
23	Biodegradation of low-density polyethylene by <i>Microbulbifer hydrolyticus</i> IRE-31. <i>Journal of Environmental Management</i> , 2020 , 263, 110402	7.9	19
22	Enzymatic degradation of polyethylene terephthalate nanoplastics analyzed in real time by isothermal titration calorimetry. <i>Science of the Total Environment</i> , 2021 , 773, 145111	10.2	14
21	Fast Turbidimetric Assay for Analyzing the Enzymatic Hydrolysis of Polyethylene Terephthalate Model Substrates. <i>Biotechnology Journal</i> , 2019 , 14, e1800272	5.6	11
20	Biocatalysis in the Recycling Landscape for Synthetic Polymers and Plastics towards Circular Textiles. <i>ChemSusChem</i> , 2021 , 14, 4028-4040	8.3	11
19	Mechanism-Based Design of Efficient PET Hydrolases.. <i>ACS Catalysis</i> , 2022 , 12, 3382-3396	13.1	11
18	MIXed plastics biodegradation and UPcycling using microbial communities: EU Horizon 2020 project MIX-UP started January 2020. <i>Environmental Sciences Europe</i> , 2021 , 33, 99	5	10
17	Efficient extracellular recombinant production and purification of a <i>Bacillus</i> cyclodextrin glucanotransferase in <i>Escherichia coli</i> . <i>Microbial Cell Factories</i> , 2017 , 16, 87	6.4	9
16	Engineering and evaluation of thermostable PETase variants for PET degradation.. <i>Engineering in Life Sciences</i> , 2022 , 22, 192-203	3.4	9

15	Bio-upcycling of polyethylene terephthalate		9
14	Fluorimetric high-throughput screening method for polyester hydrolase activity using polyethylene terephthalate nanoparticles. <i>Methods in Enzymology</i> , 2021 , 648, 253-270	1.7	6
13	The metabolic potential of plastics as biotechnological carbon sources - Review and targets for the future.. <i>Metabolic Engineering</i> , 2021 ,	9.7	6
12	Mechanistic investigation of enzymatic degradation of polyethylene terephthalate by nuclear magnetic resonance. <i>Methods in Enzymology</i> , 2021 , 648, 231-252	1.7	5
11	Systematic analysis of the effects of different nitrogen source and ICDH knockout on glycolate synthesis in. <i>Journal of Biological Engineering</i> , 2019 , 13, 30	6.3	4
10	Enzymatic surface treatment of poly (3-hydroxybutyrate) (PHB), and poly (3-hydroxybutyrate-co-3-hydroxyvalerate) (PHBV). <i>Journal of Chemical Technology and Biotechnology</i> , 2015 , 90, 2036-2039	3.5	3
9	Yeast cell surface display of bacterial PET hydrolase as a sustainable biocatalyst for the degradation of polyethylene terephthalate. <i>Methods in Enzymology</i> , 2021 , 648, 457-477	1.7	3
8	Quantum Mechanical Investigation of the Oxidative Cleavage of the C-C Backbone Bonds in Polyethylene Model Molecules. <i>Polymers</i> , 2021 , 13,	4.5	3
7	Process analysis of microplastic degradation using activated PMS and Fenton reagents.. <i>Chemosphere</i> , 2022 , 134220	8.4	3
6	Fusion of Chitin-Binding Domain From SYBC-H1 to the Leaf-Branch Compost Cutinase for Enhanced PET Hydrolysis.. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021 , 9, 762854	5.8	3
5	Diversity of polyester degrading bacteria in surface sediments from Yangtze River Estuary 2019 ,		2
4	Plastic Biodegradation: Challenges and Opportunities 2019 , 333-361		1
3	Multi-wavelength colorimetric determination of large-ring cyclodextrin content for the cyclization activity of 4- β -glucanotransferase. <i>Carbohydrate Polymers</i> , 2015 , 122, 329-35	10.3	1
2	Biosensor and chemo-enzymatic one-pot cascade applications to detect and transform PET-derived terephthalic acid in living cells. <i>IScience</i> , 2022 , 104326	6.1	1
1	Vergleich von Polyethylenterephthalat-hydrolysierenden Cutinase-Varianten aus <i>Thermobifida fusca</i> . <i>Chemie-Ingenieur-Technik</i> , 2010 , 82, 1487-1487	0.8	