Ren Wei

List of Publications by Year in Descending Order

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	Engineering and evaluation of thermostable PETase variants for PET degradation.. *Engineering in Life Sciences*, **2022**, 22, 192-203	3.4	9
49	Mechanism-Based Design of Efficient PET Hydrolases.. *ACS Catalysis*, **2022**, 12, 3382-3396	13.1	11
48	Process analysis of microplastic degradation using activated PMS and Fenton reagents.. *Chemosphere*, **2022**, 134220	8.4	3
47	Biosensor and chemo-enzymatic one-pot cascade applications to detect and transform PET-derived terephthalic acid in living cells. *IScience*, **2022**, 104326	6.1	1
46	Biodegradation and up-cycling of polyurethanes: Progress, challenges, and prospects. *Biotechnology Advances*, **2021**, 48, 107730	17.8	23
45	Enzymatic degradation of polyethylene terephthalate nanoplastics analyzed in real time by isothermal titration calorimetry. *Science of the Total Environment*, **2021**, 773, 145111	10.2	14
44	Towards bio-upcycling of polyethylene terephthalate. *Metabolic Engineering*, **2021**, 66, 167-178	9.7	42
43	Thermophilic whole-cell degradation of polyethylene terephthalate using engineered Clostridium thermocellum. *Microbial Biotechnology*, **2021**, 14, 374-385	6.3	46
42	Yeast cell surface display of bacterial PET hydrolase as a sustainable biocatalyst for the degradation of polyethylene terephthalate. *Methods in Enzymology*, **2021**, 648, 457-477	1.7	3
41	Fluorimetric high-throughput screening method for polyester hydrolase activity using polyethylene terephthalate nanoparticles. *Methods in Enzymology*, **2021**, 648, 253-270	1.7	6
40	Mechanistic investigation of enzymatic degradation of polyethylene terephthalate by nuclear magnetic resonance. *Methods in Enzymology*, **2021**, 648, 231-252	1.7	5
39	Biocatalysis in the Recycling Landscape for Synthetic Polymers and Plastics towards Circular Textiles. *ChemSusChem*, **2021**, 14, 4028-4040	8.3	11
38	Quantum Mechanical Investigation of the Oxidative Cleavage of the C-C Backbone Bonds in Polyethylene Model Molecules. *Polymers*, **2021**, 13,	4.5	3
37	MIXed plastics biodegradation and UPcycling using microbial communities: EU Horizon 2020 project MIX-UP started January 2020. *Environmental Sciences Europe*, **2021**, 33, 99	5	10
36	The metabolic potential of plastics as biotechnological carbon sources - Review and targets for the future.. *Metabolic Engineering*, **2021**,	9.7	6
35	Fusion of Chitin-Binding Domain From SYBC-H1 to the Leaf-Branch Compost Cutinase for Enhanced PET Hydrolysis.. *Frontiers in Bioengineering and Biotechnology*, **2021**, 9, 762854	5.8	3
34	Biodegradation of low-density polyethylene by Microbulbifer hydrolyticus IRE-31. *Journal of Environmental Management*, **2020**, 263, 110402	7.9	19

33	UV Pretreatment Impairs the Enzymatic Degradation of Polyethylene Terephthalate. *Frontiers in Microbiology*, **2020**, 11, 689	5.7	21
32	Microplastic pollution in water and sediment in a textile industrial area. *Environmental Pollution*, **2020**, 258, 113658	9.3	80
31	Diversity of polyester degrading bacteria in surface sediments from Yangtze River Estuary **2019**,		2
30	Biocatalytic Degradation Efficiency of Postconsumer Polyethylene Terephthalate Packaging Determined by Their Polymer Microstructures. *Advanced Science*, **2019**, 6, 1900491	13.6	83
29	Microbial Genes for a Circular and Sustainable Bio-PET Economy. *Genes*, **2019**, 10,	4.2	64
28	Systematic analysis of the effects of different nitrogen source and ICDH knockout on glycolate synthesis in. *Journal of Biological Engineering*, **2019**, 13, 30	6.3	4
27	Plastic Biodegradation: Challenges and Opportunities **2019**, 333-361		1
26	Conformational fitting of a flexible oligomeric substrate does not explain the enzymatic PET degradation. *Nature Communications*, **2019**, 10, 5581	17.4	48
25	Fast Turbidimetric Assay for Analyzing the Enzymatic Hydrolysis of Polyethylene Terephthalate Model Substrates. *Biotechnology Journal*, **2019**, 14, e1800272	5.6	11
24	Plastic Biodegradation: Challenges and Opportunities **2018**, 1-29		20
23	New Insights into the Function and Global Distribution of Polyethylene Terephthalate (PET)-Degrading Bacteria and Enzymes in Marine and Terrestrial Metagenomes. *Applied and Environmental Microbiology*, **2018**, 84,	4.8	134
22	Biocatalysis as a green route for recycling the recalcitrant plastic polyethylene terephthalate. *Microbial Biotechnology*, **2017**, 10, 1302-1307	6.3	151
21	Microbial enzymes for the recycling of recalcitrant petroleum-based plastics: how far are we?. *Microbial Biotechnology*, **2017**, 10, 1308-1322	6.3	297
20	Efficient extracellular recombinant production and purification of a Bacillus cyclodextrin glucanotransferase in Escherichia coli. *Microbial Cell Factories*, **2017**, 16, 87	6.4	9
19	Degradation of Polyester Polyurethane by Bacterial Polyester Hydrolases. *Polymers*, **2017**, 9,	4.5	67
18	A dual enzyme system composed of a polyester hydrolase and a carboxylesterase enhances the biocatalytic degradation of polyethylene terephthalate films. *Biotechnology Journal*, **2016**, 11, 1082-7	5.6	87
17	A disulfide bridge in the calcium binding site of a polyester hydrolase increases its thermal stability and activity against polyethylene terephthalate. *FEBS Open Bio*, **2016**, 6, 425-32	2.7	61
16	Engineered bacterial polyester hydrolases efficiently degrade polyethylene terephthalate due to relieved product inhibition. *Biotechnology and Bioengineering*, **2016**, 113, 1658-65	4.9	111

15	Effect of Tris, MOPS, and phosphate buffers on the hydrolysis of polyethylene terephthalate films by polyester hydrolases. *FEBS Open Bio*, **2016**, 6, 919-27	2.7	37
14	Ca2+ and Mg2+ binding site engineering increases the degradation of polyethylene terephthalate films by polyester hydrolases from Thermobifida fusca. *Biotechnology Journal*, **2015**, 10, 592-8	5.6	77
13	Enzymatic hydrolysis of polyethylene terephthalate films in an ultrafiltration membrane reactor. *Journal of Membrane Science*, **2015**, 494, 182-187	9.6	49
12	Effect of hydrolysis products on the enzymatic degradation of polyethylene terephthalate nanoparticles by a polyester hydrolase from Thermobifida fusca. *Biochemical Engineering Journal*, **2015**, 93, 222-228	4.2	98
11	Enzymatic surface treatment of poly (3-hydroxybutyrate) (PHB), and poly (3-hydroxybutyrate-co-3-hydroxyvalerate) (PHBV). *Journal of Chemical Technology and Biotechnology*, **2015**, 90, 2036-2039	3.5	3
10	Multi-wavelength colorimetric determination of large-ring cyclodextrin content for the cyclization activity of 4-□glucanotransferase. *Carbohydrate Polymers*, **2015**, 122, 329-35	10.3	1
9	Structural and functional studies on a thermostable polyethylene terephthalate degrading hydrolase from Thermobifida fusca. *Applied Microbiology and Biotechnology*, **2014**, 98, 7815-23	5.7	124
8	Functional characterization and structural modeling of synthetic polyester-degrading hydrolases from Thermomonospora curvata. *AMB Express*, **2014**, 4, 44	4.1	78
7	Turbidimetric analysis of the enzymatic hydrolysis of polyethylene terephthalate nanoparticles. *Journal of Molecular Catalysis B: Enzymatic*, **2014**, 103, 72-78		46
6	Synthetic polyester-hydrolyzing enzymes from thermophilic actinomycetes. *Advances in Applied Microbiology*, **2014**, 89, 267-305	4.9	63
5	A high-throughput assay for enzymatic polyester hydrolysis activity by fluorimetric detection. *Biotechnology Journal*, **2012**, 7, 1517-21	5.6	37
4	Enzymatic Surface Hydrolysis of PET: Effect of Structural Diversity on Kinetic Properties of Cutinases from Thermobifida. *Macromolecules*, **2011**, 44, 4632-4640	5.5	205
3	Vergleich von Polyethylenterephthalat-hydrolysierenden Cutinase-Varianten aus Thermobifida fusca. *Chemie-Ingenieur-Technik*, **2010**, 82, 1487-1487	0.8	
2	High level expression of a hydrophobic poly(ethylene terephthalate)-hydrolyzing carboxylesterase from Thermobifida fusca KW3 in Escherichia coli BL21(DE3). *Journal of Biotechnology*, **2010**, 146, 100-4	3.7	55
1	Bio-upcycling of polyethylene terephthalate		9