

Hans Leemhuis

List of Publications by Year in descending order

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32
papers

2,605
citations

331259

21
h-index

414034

32
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32
all docs

32
docs citations

32
times ranked

2406
citing authors

#	ARTICLE	IF	CITATIONS
1	Properties and applications of starch-converting enzymes of the α -amylase family. <i>Journal of Biotechnology</i> , 2002, 94, 137-155.	1.9	1,075
2	Glucansucrases: Three-dimensional structures, reactions, mechanism, α -glucan analysis and their implications in biotechnology and food applications. <i>Journal of Biotechnology</i> , 2013, 163, 250-272.	1.9	250
3	Engineering of cyclodextrin glucanotransferases and the impact for biotechnological applications. <i>Applied Microbiology and Biotechnology</i> , 2010, 85, 823-835.	1.7	157
4	Starch modification with microbial alpha-glucanotransferase enzymes. <i>Carbohydrate Polymers</i> , 2013, 93, 116-121.	5.1	115
5	Directed evolution of enzymes: Library screening strategies. <i>IUBMB Life</i> , 2009, 61, 222-228.	1.5	99
6	Inulin and levan synthesis by probiotic <i>Lactobacillus gasseri</i> strains: characterization of three novel fructansucrase enzymes and their fructan products. <i>Microbiology (United Kingdom)</i> , 2010, 156, 1264-1274.	0.7	93
7	4,6- α -Glucanotransferase, a Novel Enzyme That Structurally and Functionally Provides an Evolutionary Link between Glycoside Hydrolase Enzyme Families 13 and 70. <i>Applied and Environmental Microbiology</i> , 2011, 77, 8154-8163.	1.4	81
8	Isomalto/Malto-Polysaccharide, A Novel Soluble Dietary Fiber Made Via Enzymatic Conversion of Starch. <i>Journal of Agricultural and Food Chemistry</i> , 2014, 62, 12034-12044.	2.4	73
9	Structural characterization of linear isomalto-/malto-oligomer products synthesized by the novel GTFB 4,6- α -glucanotransferase enzyme from <i>Lactobacillus reuteri</i> 121. <i>Glycobiology</i> , 2012, 22, 517-528.	1.3	60
10	Conversion of Cyclodextrin Glycosyltransferase into a Starch Hydrolase by Directed Evolution: The Role of Alanine 230 in Acceptor Subsite +1. <i>Biochemistry</i> , 2003, 42, 7518-7526.	1.2	57
11	Biochemical Characterization of the <i>Lactobacillus reuteri</i> Glycoside Hydrolase Family 70 GTFB Type of 4,6- α -Glucanotransferase Enzymes That Synthesize Soluble Dietary Starch Fibers. <i>Applied and Environmental Microbiology</i> , 2015, 81, 7223-7232.	1.4	54
12	Glycosidic bond specificity of glucansucrases: on the role of acceptor substrate binding residues. <i>Biocatalysis and Biotransformation</i> , 2012, 30, 366-376.	1.1	53
13	4,6- α -Glucanotransferase activity occurs more widespread in <i>Lactobacillus</i> strains and constitutes a separate GH70 subfamily. <i>Applied Microbiology and Biotechnology</i> , 2013, 97, 181-193.	1.7	52
14	Mutations converting cyclodextrin glycosyltransferase from a transglycosylase into a starch hydrolase. <i>FEBS Letters</i> , 2002, 514, 189-192.	1.3	47
15	The Remote Substrate Binding Subsite ~ 6 in Cyclodextrin-glycosyltransferase Controls the Transferase Activity of the Enzyme via an Induced-fit Mechanism. <i>Journal of Biological Chemistry</i> , 2002, 277, 1113-1119.	1.6	43
16	<i>Thermoanaerobacterium thermosulfurigenes</i> cyclodextrin glycosyltransferase. <i>FEBS Journal</i> , 2002, 270, 155-162.	0.2	38
17	Improved thermostability of <i>Bacillus circulans</i> cyclodextrin glycosyltransferase by the introduction of a salt bridge. <i>Proteins: Structure, Function and Bioinformatics</i> , 2003, 54, 128-134.	1.5	38
18	Gluco-oligomers initially formed by the reuteransucrase enzyme of <i>Lactobacillus reuteri</i> 121 incubated with sucrose and malto-oligosaccharides. <i>Glycobiology</i> , 2013, 23, 1084-1096.	1.3	33

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19	The fully conserved Asp residue in conserved sequence region I of the α -amylase family is crucial for the catalytic site architecture and activity. <i>FEBS Letters</i> , 2003, 541, 47-51.	1.3	25
20	Single Amino Acid Mutations Interchange the Reaction Specificities of Cyclodextrin Glycosyltransferase and the Acarbose-Modifying Enzyme Acarviosyl Transferase. <i>Biochemistry</i> , 2004, 43, 13204-13213.	1.2	25
21	The role of conserved inulosucrase residues in the reaction and product specificity of <i>Lactobacillus freuteri</i> inulosucrase. <i>FEBS Journal</i> , 2012, 279, 3612-3621.	2.2	23
22	Synthesis of highly branched α -glucans with different structures using GH13 and GH57 glycogen branching enzymes. <i>Carbohydrate Polymers</i> , 2019, 216, 231-237.	5.1	18
23	Engineering cyclodextrin glycosyltransferase into a starch hydrolase with a high exo-specificity. <i>Journal of Biotechnology</i> , 2003, 103, 203-212.	1.9	16
24	Characterization of the GH13 and GH57 glycogen branching enzymes from <i>Petrotoga mobilis</i> SJ95 and potential role in glycogen biosynthesis. <i>PLoS ONE</i> , 2019, 14, e0219844.	1.1	12
25	Identification of <i>Thermotoga maritima</i> MSB8 GH57 α -amylase AmyC as a glycogen-branching enzyme with high hydrolytic activity. <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 6141-6151.	1.7	12
26	Digestion kinetics of low, intermediate and highly branched maltodextrins produced from gelatinized starches with various microbial glycogen branching enzymes. <i>Carbohydrate Polymers</i> , 2020, 247, 116729.	5.1	12
27	Engineering of Hydrolysis Reaction Specificity in the Transglycosylase Cyclodextrin Glycosyltransferase. <i>Biocatalysis and Biotransformation</i> , 2003, 21, 261-270.	1.1	9
28	Structural elements determining the transglycosylating activity of glycoside hydrolase family 57 glycogen branching enzymes. <i>Proteins: Structure, Function and Bioinformatics</i> , 2022, 90, 155-163.	1.5	9
29	The thermostable 4,6- α -glucanotransferase of <i>Bacillus coagulans</i> DSM 1 synthesizes isomaltooligosaccharides. <i>Amylase</i> , 2021, 5, 13-22.	0.7	8
30	GtfC Enzyme of <i>Geobacillus</i> sp. 12AMOR1 Represents a Novel Thermostable Type of GH70 4,6- α -Glucanotransferase That Synthesizes a Linear Alternating (α 1 \rightarrow 6)/(α 1 \rightarrow 4) α -Glucan and Delays Bread Staling. <i>Journal of Agricultural and Food Chemistry</i> , 2021, 69, 9859-9868.	2.4	7
31	Hydrolysis and Transglycosylation Reaction Specificity of Cyclodextrin Glycosyltransferases. <i>Journal of Applied Glycoscience</i> (1999), 2003, 50, 263-271.	0.3	6
32	High-throughput screening for gene libraries expressing carbohydrate hydrolase activity. <i>Biotechnology Letters</i> , 2003, 25, 1643-1645.	1.1	5