Jan-Hendrik Hehemann

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Environmental and Gut Bacteroidetes: The Food Connection. Frontiers in Microbiology, 2011, 2, 93.	1.5	989
2	Transfer of carbohydrate-active enzymes from marine bacteria to Japanese gut microbiota. Nature, 2010, 464, 908-912.	13.7	905
3	Bacteria of the human gut microbiome catabolize red seaweed glycans with carbohydrate-active enzyme updates from extrinsic microbes. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 19786-19791.	3.3	260
4	Competitionâ€"dispersal tradeoff ecologically differentiates recently speciated marine bacterioplankton populations. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 5622-5627.	3.3	187
5	Verrucomicrobia use hundreds of enzymes to digest the algal polysaccharide fucoidan. Nature Microbiology, 2020, 5, 1026-1039.	5.9	182
6	Adaptive radiation by waves of gene transfer leads to fine-scale resource partitioning in marine microbes. Nature Communications, 2016, 7, 12860.	5.8	140
7	Biochemical and Structural Characterization of the Complex Agarolytic Enzyme System from the Marine Bacterium Zobellia galactanivorans. Journal of Biological Chemistry, 2012, 287, 30571-30584.	1.6	139
8	Polysaccharide utilization loci of North Sea <i>Flavobacteriia</i> as basis for using SusC/D-protein expression for predicting major phytoplankton glycans. ISME Journal, 2019, 13, 76-91.	4.4	139
9	Laminarin is a major molecule in the marine carbon cycle. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 6599-6607.	3.3	123
10	A sweet new wave: structures and mechanisms of enzymes that digest polysaccharides from marine algae. Current Opinion in Structural Biology, 2014, 28, 77-86.	2.6	112
11	Comparative Biochemical Characterization of Three Exolytic Oligoalginate Lyases from Vibrio splendidus Reveals Complementary Substrate Scope, Temperature, and pH Adaptations. Applied and Environmental Microbiology, 2014, 80, 4207-4214.	1.4	103
12	A marine bacterial enzymatic cascade degrades the algal polysaccharide ulvan. Nature Chemical Biology, 2019, 15, 803-812.	3.9	97
13	Analysis of Keystone Enzyme in Agar Hydrolysis Provides Insight into the Degradation (of a) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5	1.6	89
14	Adaptive mechanisms that provide competitive advantages to marine bacteroidetes during microalgal blooms. ISME Journal, 2018, 12, 2894-2906.	4.4	84
15	Enigmatic persistence of dissolved organic matter in the ocean. Nature Reviews Earth & Environment, 2021, 2, 570-583.	12.2	84
16	KdgF, the missing link in the microbial metabolism of uronate sugars from pectin and alginate. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6188-6193.	3.3	80
17	The Î²-Glucanase ZgLamA from Zobellia galactanivorans Evolved a Bent Active Site Adapted for Efficient Degradation of Algal Laminarin. Journal of Biological Chemistry, 2014, 289, 2027-2042.	1.6	75
18	Accurate Quantification of Laminarin in Marine Organic Matter with Enzymes from Marine Microbes. Applied and Environmental Microbiology, 2017, 83, .	1.4	75

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19	Biphasic cellular adaptations and ecological implications of <i>Alteromonas macleodii</i> degrading a mixture of algal polysaccharides. ISME Journal, 2019, 13, 92-103.	4.4	74
20	Structural analysis of the degradation products of porphyran digested by Zobellia galactanivorans Î²-porphyranase A. Carbohydrate Polymers, 2011, 83, 277-283.	5.1	73
21	Substrate Recognition and Hydrolysis by a Family 50 exo-Î²-Agarase, Aga50D, from the Marine Bacterium Saccharophagus degradans. Journal of Biological Chemistry, 2013, 288, 28078-28088.	1.6	70
22	Analysis of a New Family of Widely Distributed Metal-independent Î±-Mannosidases Provides Unique Insight into the Processing of N-Linked Glycans. Journal of Biological Chemistry, 2011, 286, 15586-15596.	1.6	65
23	<i>Verrucomicrobiota</i> are specialist consumers of sulfated methyl pentoses during diatom blooms. ISME Journal, 2022, 16, 630-641.	4.4	62
24	Diatom fucan polysaccharide precipitates carbon during algal blooms. Nature Communications, 2021, 12, 1150.	5.8	58
25	Aquatic adaptation of a laterally acquired pectin degradation pathway in marine gammaproteobacteria. Environmental Microbiology, 2017, 19, 2320-2333.	1.8	57
26	Insights into the Îº/Î¹-carrageenan metabolism pathway of some marine Pseudoalteromonas species. Communications Biology, 2019, 2, 474.	2.0	54
27	Plant speciesâ€specific recognition of long and short Î²â€1,3â€linked glucans is mediated by different receptor systems. Plant Journal, 2020, 102, 1142-1156.	2.8	50
28	Oxidative demethylation of algal carbohydrates by cytochrome P450 monooxygenases. Nature Chemical Biology, 2018, 14, 342-344.	3.9	47
29	FGB1 and WSC3 are <i>in plantaâ€</i>induced <i>Î²</i>â€glucanâ€binding fungal lectins with different functions. New Phytologist, 2019, 222, 1493-1506.	3.5	43
30	The Conformation and Function of a Multimodular Glycogen-Degrading Pneumococcal Virulence Factor. Structure, 2011, 19, 640-651.	1.6	42
31	Changing expression patterns of TonB-dependent transporters suggest shifts in polysaccharide consumption over the course of a spring phytoplankton bloom. ISME Journal, 2021, 15, 2336-2350.	4.4	42
32	Biochemical characterization of an ulvan lyase from the marine flavobacterium Formosa agariphila KMM 3901T. Applied Microbiology and Biotechnology, 2018, 102, 6987-6996.	1.7	41
33	Portrait of an Enzyme, a Complete Structural Analysis of a Multimodular Î²-N-Acetylglucosaminidase from Clostridium perfringens. Journal of Biological Chemistry, 2009, 284, 9876-9884.	1.6	40
34	Structural and biochemical characterization of the laminarinase<i>Zg</i>LamC_{GH16}from<i>Zobellia galactanivorans</i>suggests preferred recognition of branched laminarin. Acta Crystallographica Section D: Biological Crystallography, 2015, 71, 173-184.	2.5	34
35	Alphaâ€and betaâ€mannan utilization by marine <i>Bacteroidetes</i>. Environmental Microbiology, 2018, 20, 4127-4140.	1.8	31
36	The Molecular Basis of Polysaccharide Sulfatase Activity and a Nomenclature for Catalytic Subsites in this Class of Enzyme. Structure, 2018, 26, 747-758.e4.	1.6	30

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37	Single cell fluorescence imaging of glycan uptake by intestinal bacteria. ISME Journal, 2019, 13, 1883-1889.	4.4	28
38	Evolution of a Vegetarian Vibrio: Metabolic Specialization of Vibrio breoganii to Macroalgal Substrates. Journal of Bacteriology, 2018, 200, .	1.0	24
39	The Structure of RdDddP from Roseobacter denitrificans Reveals That DMSP Lyases in the DddP-Family Are Metalloenzymes. PLoS ONE, 2014, 9, e103128.	1.1	22
40	Discrimination of Î²-1,4- and Î²-1,3-Linkages in Native Oligosaccharides via Charge Transfer Dissociation Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2020, 31, 1249-1259.	1.2	19
41	Exploiting fine-scale genetic and physiological variation of closely related microbes to reveal unknown enzyme functions. Journal of Biological Chemistry, 2017, 292, 13056-13067.	1.6	18
42	Ion-exchange purification and structural characterization of five sulfated fucoidans from brown algae. Glycobiology, 2021, 31, 352-357.	1.3	18
43	Quantifying fluorescent glycan uptake to elucidate strain-level variability in foraging behaviors of rumen bacteria. Microbiome, 2021, 9, 23.	4.9	16
44	Secretion of sulfated fucans by diatoms may contribute to marine aggregate formation. Limnology and Oceanography, 2021, 66, 3768-3782.	1.6	16
45	Autoproteolytic stability of a trypsin from the marine crab Cancer pagurus. Biochemical and Biophysical Research Communications, 2008, 370, 566-571.	1.0	15
46	Characterization of the GH16 and GH17 laminarinases from Vibrio breoganii 1C10. Applied Microbiology and Biotechnology, 2020, 104, 161-171.	1.7	15
47	Molecular recognition of the betaâ€glucans laminarin and pustulan by a SusDâ€like glycanâ€binding protein of a marine <i>Bacteroidetes</i>. FEBS Journal, 2018, 285, 4465-4481.	2.2	13
48	Specificity and mechanism of carbohydrate demethylation by cytochrome P450 monooxygenases. Biochemical Journal, 2018, 475, 3875-3886.	1.7	11
49	Dip in the gene pool: Metagenomic survey of natural coccolithovirus communities. Virology, 2014, 466-467, 129-137.	1.1	10
50	A new carbohydrate-active oligosaccharide dehydratase is involved in the degradation of ulvan. Journal of Biological Chemistry, 2021, 297, 101210.	1.6	8
51	Glycoside hydrolase from the GH76 family indicates that marine Salegentibacter sp. Hel_I_6 consumes alpha-mannan from fungi. ISME Journal, 2022, 16, 1818-1830.	4.4	8
52	Structural Basis of Ligand Selectivity by a Bacterial Adhesin Lectin Involved in Multispecies Biofilm Formation. MBio, 2021, 12, .	1.8	7
53	Laminarin Quantification in Microalgae with Enzymes from Marine Microbes. Bio-protocol, 2018, 8, e2666.	0.2	6
54	<i>Ab initio</i> phasing of a nucleoside hydrolaseâ€related hypothetical protein from <i>Saccharophagus degradans</i> that is associated with carbohydrate metabolism. Proteins: Structure, Function and Bioinformatics, 2011, 79, 2992-2998.	1.5	3

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55	Heterologous expression of LamA gene encoded endo-Î²-1,3-glucanase and CO2 fixation by bioengineered Synechococcus sp. PCC 7002. Frontiers of Environmental Science and Engineering, 2017, 11, 1.	3.3	2
56	Crystal structure of a marine glycoside hydrolase family 99â€related protein lacking catalytic machinery. Protein Science, 2017, 26, 2445-2450.	3.1	1