Morten SÃ¸rlie

List of Publications by Year
in descending order

103 papers	6,603 citations	81900 39 h-index	64796 79 g-index
106 all docs	106 docs citations	106 times ranked	4615 citing authors

#	Article	IF	Citations
1	An Oxidative Enzyme Boosting the Enzymatic Conversion of Recalcitrant Polysaccharides. Science, 2010, 330, 219-222.	12.6	1,059
2	Production of Chitooligosaccharides and Their Potential Applications in Medicine. Marine Drugs, 2010, 8, 1482-1517.	4.6	496
3	Cleavage of cellulose by a CBM33 protein. Protein Science, 2011, 20, 1479-1483.	7.6	317
4	The chitinolytic machinery of <i><scp>S</scp>erratiaÂmarcescens</i> â€“ a model system for enzymatic degradation of recalcitrant polysaccharides. FEBS Journal, 2013, 280, 3028-3049.	4.7	244
5	Structural and functional characterization of a conserved pair of bacterial cellulose-oxidizing lytic polysaccharide monooxygenases. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 8446-8451.	7.1	241
6	Costs and benefits of processivity in enzymatic degradation of recalcitrant polysaccharides. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 18089-18094.	7.1	238
7	NMR structure of a lytic polysaccharide monooxygenase provides insight into copper binding, protein dynamics, and substrate interactions. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 18779-18784.	7.1	236
8	Endo/exo mechanism and processivity of family 18 chitinases produced by Serratia marcescens. FEBS Journal, 2006, 273, 491-503.	4.7	235
9	Structural and Functional Characterization of a Lytic Polysaccharide Monooxygenase with Broad Substrate Specificity. Journal of Biological Chemistry, 2015, 290, 22955-22969.	3.4	157
10	Lytic Polysaccharide Monooxygenases in Enzymatic Processing of Lignocellulosic Biomass. ACS Catalysis, 2019, 9, 4970-4991.	11.2	145
11	Aromatic Residues in the Catalytic Center of Chitinase A from Serratia marcescens Affect Processivity, Enzyme Activity, and Biomass Converting Efficiency. Journal of Biological Chemistry, 2009, 284, 10610-10617.	3.4	142
12	Kinetics of H2O2-driven degradation of chitin by a bacterial lytic polysaccharide monooxygenase. Journal of Biological Chemistry, 2018, 293, 523-531.	3.4	130
13	Interactions of a fungal lytic polysaccharide monooxygenase with Î²-glucan substrates and cellobiose dehydrogenase. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5922-5927.	7.1	126
14	Comparative Study of Two Chitin-Active and Two Cellulose-Active AA10-Type Lytic Polysaccharide Monooxygenases. Biochemistry, 2014, 53, 1647-1656.	2.5	124
15	Polysaccharide degradation by lytic polysaccharide monooxygenases. Current Opinion in Structural Biology, 2019, 59, 54-64.	5.7	105
16	Methylation of the Nâ€terminal histidine protects a lytic polysaccharide monooxygenase from autoâ€oxidative inactivation. Protein Science, 2018, 27, 1636-1650.	7.6	91
17	Hallmarks of Processivity in Glycoside Hydrolases from Crystallographic and Computational Studies of the Serratia marcescens Chitinases. Journal of Biological Chemistry, 2012, 287, 36322-36330.	3.4	89
18	Towards a molecular-level theory of carbohydrate processivity in glycoside hydrolases. Current Opinion in Biotechnology, 2014, 27, 96-106.	6.6	89

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19	Mutational Effects on Transglycosylating Activity of Family 18 Chitinases and Construction of a Hypertransglycosylating Mutant. Biochemistry, 2011, 50, 5693-5703.	2.5	82
20	Measuring Processivity. Methods in Enzymology, 2012, 510, 69-95.	1.0	80
21	Antifungal effect of chito-oligosaccharides with different degrees of polymerization. European Journal of Plant Pathology, 2015, 141, 147-158.	1.7	67
22	Electron Inventory, Kinetic Assignment (En), Structure, and Bonding of Nitrogenase Turnover Intermediates with C2H2and CO. Journal of the American Chemical Society, 2005, 127, 15880-15890.	13.7	65
23	Degradation of Chitosans with a Family 46 Chitosanase from <i>Streptomyces coelicolor</i> A3(2). Biomacromolecules, 2010, 11, 2487-2497.	5.4	63
24	Unraveling the roles of the reductant and free copper ions in LPMO kinetics. Biotechnology for Biofuels, 2021, 14, 28.	6.2	62
25	Kinetic insights into the role of the reductant in H2O2-driven degradation of chitin by a bacterial lytic polysaccharide monooxygenase. Journal of Biological Chemistry, 2019, 294, 1516-1528.	3.4	60
26	An in vitro investigation of endocrine disrupting effects of the mycotoxin alternariol. Toxicology and Applied Pharmacology, 2013, 271, 64-71.	2.8	59
27	Single-turnover of Nitric-oxide Synthase in the Presence of 4-Amino-tetrahydrobiopterin. Journal of Biological Chemistry, 2003, 278, 48602-48610.	3.4	58
28	Biotransformation of zearalenone and zearalenols to their major glucuronide metabolites reduces estrogenic activity. Toxicology in Vitro, 2015, 29, 575-581.	2.4	58
29	Synthesis and Structure of the Ruthenium(II) Complexes [(Î·-C5Me5)Ru(NO)(bipy)]2+and [(Î·-C5Me5)Ru(NO)(dppz)]2+. DNA Cleavage by an Organometallic dppz Complex (bipy = 2,2â€˜-Bipyridine; dppz) Tj ETQq1 1 0.784314	4.5	57
30	Human Chitotriosidase-Catalyzed Hydrolysis of Chitosan. Biochemistry, 2012, 51, 487-495.	2.5	53
31	Characterization of an Intermediate in the Reduction of Acetylene by the Nitrogenase Î±-Gln195MoFe Protein by Q-band EPR and13C,1H ENDOR. Journal of the American Chemical Society, 2000, 122, 5582-5587.	13.7	50
32	Expression and Characterization of Endochitinase C from<i>Serratia marcescens</i>BJL200 and Its Purification by a One-Step General Chitinase Purification Method. Bioscience, Biotechnology and Biochemistry, 2008, 72, 715-723.	1.3	50
33	Inhibition of angiogenesis by chitooligosaccharides with specific degrees of acetylation and polymerization. Carbohydrate Polymers, 2012, 89, 511-518.	10.2	49
34	Inhibition of Fungal Plant Pathogens by Synergistic Action of Chito-Oligosaccharides and Commercially Available Fungicides. PLoS ONE, 2014, 9, e93192.	2.5	49
35	The Predominant Molecular State of Bound Enzyme Determines the Strength and Type of Product Inhibition in the Hydrolysis of Recalcitrant Polysaccharides by Processive Enzymes. Journal of Biological Chemistry, 2015, 290, 11678-11691.	3.4	47
36	Natural substrate assay for chitinases using high-performance liquid chromatography: A comparison with existing assays. Analytical Biochemistry, 2007, 363, 128-134.	2.4	43

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37	Mechanistic basis of substrateâ€“O₂coupling within a chitin-active lytic polysaccharide monooxygenase: An integrated NMR/EPR study. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 19178-19189.	7.1	42
38	Adherence Inhibition of Enteropathogenic <i>Escherichia coli</i> by Chitooligosaccharides with Specific Degrees of Acetylation and Polymerization. Journal of Agricultural and Food Chemistry, 2013, 61, 2748-2754.	5.2	41
39	Chitin oligosaccharide binding to a family GH19 chitinase from the moss <i>Bryumâ€ƒcoronatum</i>. FEBS Journal, 2011, 278, 3991-4001.	4.7	40
40	Inhibition of a family 18 chitinase by chitooligosaccharides. Carbohydrate Polymers, 2008, 74, 41-49.	10.2	38
41	Identification of a High-Affinity-Binding Oligosaccharide by (+) Nanoelectrospray Quadrupole Time-of-Flight Tandem Mass Spectrometry of a Noncovalent Enzymeâ€“Ligand Complex. Angewandte Chemie - International Edition, 2006, 45, 2429-2434.	13.8	36
42	Determination of substrate binding energies in individual subsites of a family 18 chitinase. FEBS Letters, 2010, 584, 4581-4585.	2.8	36
43	Enzyme processivity changes with the extent of recalcitrant polysaccharide degradation. FEBS Letters, 2014, 588, 4620-4624.	2.8	36
44	Antifungal activity of well-defined chito-oligosaccharide preparations against medically relevant yeasts. PLoS ONE, 2019, 14, e0210208.	2.5	35
45	One-electron oxidation of catecholamines generates free radicals with an in vitro toxicity correlating with their lifetime. Free Radical Biology and Medicine, 2006, 41, 1266-1271.	2.9	34
46	Slow Off-rates and Strong Product Binding Are Required for Processivity and Efficient Degradation of Recalcitrant Chitin by Family 18 Chitinases. Journal of Biological Chemistry, 2015, 290, 29074-29085.	3.4	33
47	Signatures of activation parameters reveal substrate-dependent rate determining steps in polysaccharide turnover by a family 18 chitinase. Carbohydrate Polymers, 2010, 81, 14-20.	10.2	32
48	Evidence of Two Distinct Oxygen Complexes of Reduced Endothelial Nitric Oxide Synthase. Journal of Biological Chemistry, 2004, 279, 19824-19831.	3.4	31
49	Thermodynamic Analysis of Allosamidin Binding to a Family 18 Chitinase. Biochemistry, 2007, 46, 12347-12354.	2.5	31
50	Kinetic Characterization of a Putatively Chitin-Active LPMO Reveals a Preference for Soluble Substrates and Absence of Monooxygenase Activity. ACS Catalysis, 2021, 11, 11685-11695.	11.2	31
51	Fast and Specific Peroxygenase Reactions Catalyzed by Fungal Mono-Copper Enzymes. Biochemistry, 2021, 60, 3633-3643.	2.5	31
52	Variant MoFe proteins of Azotobacter vinelandii: effects of carbon monoxide on electron paramagnetic resonance spectra generated during enzyme turnover. Journal of Biological Inorganic Chemistry, 2005, 10, 394-406.	2.6	30
53	Detection of a New Radical and FeMo-Cofactor EPR Signal during Acetylene Reduction by the Î±-H195Q Mutant of Nitrogenase. Journal of the American Chemical Society, 1999, 121, 9457-9458.	13.7	28
54	The Roles of Three <i>Serratia marcescens</i> Chitinases in Chitin Conversion Are Reflected in Different Thermodynamic Signatures of Allosamidin Binding. Journal of Physical Chemistry B, 2010, 114, 6144-6149.	2.6	28

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55	Activation of enzymatic chitin degradation by a lytic polysaccharide monooxygenase. Carbohydrate Research, 2015, 407, 166-169.	2.3	28
56	Modulation of Lck Function through Multisite Docking to T Cell-specific Adapter Protein. Journal of Biological Chemistry, 2008, 283, 21909-21919.	3.4	25
57	Key Residues Affecting Transglycosylation Activity in Family 18 Chitinases: Insights into Donor and Acceptor Subsites. Biochemistry, 2018, 57, 4325-4337.	2.5	25
58	Use of Stopped-Flow Spectrophotometry to Establish Midpoint Potentials for Redox Proteins. Analytical Biochemistry, 2000, 287, 118-125.	2.4	24
59	Heat capacity changes in heme proteinâ€"ligand interactions. Thermochimica Acta, 2007, 464, 24-28.	2.7	24
60	Can we make Chitosan by Enzymatic Deacetylation of Chitin?. Molecules, 2019, 24, 3862.	3.8	24
61	An investigation of the endocrine disrupting potential of enniatin B using in vitro bioassays. Toxicology Letters, 2015, 233, 84-94.	0.8	23
62	Aromatic-Mediated Carbohydrate Recognition in Processive <i>Serratia marcescens</i> Chitinases. Journal of Physical Chemistry B, 2016, 120, 1236-1249.	2.6	23
63	Substrate positioning in chitinase A, a processive chito-biohydrolase fromSerratia marcescens. FEBS Letters, 2011, 585, 2339-2344.	2.8	21
64	Analysis of productive binding modes in the human chitotriosidase. FEBS Letters, 2013, 587, 3508-3513.	2.8	21
65	The kinase Itk and the adaptor TSAd change the specificity of the kinase Lck in T cells by promoting the phosphorylation of Tyr ¹⁹². Science Signaling, 2014, 7, ra118.	3.6	21
66	The effect of the carbohydrate binding module on substrate degradation by the human chitotriosidase. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2015, 1854, 1494-1501.	2.3	21
67	Processivity, Substrate Positioning, and Binding: The Role of Polar Residues in a Family 18 Glycoside Hydrolase. Biochemistry, 2015, 54, 7292-7306.	2.5	20
68	Thermodynamic Relationships with Processivity in <i>Serratia marcescens</i> Family 18 Chitinases. Journal of Physical Chemistry B, 2015, 119, 9601-9613.	2.6	20
69	Thermodynamics of tunnel formation upon substrate binding in a processive glycoside hydrolase. Archives of Biochemistry and Biophysics, 2017, 620, 35-42.	3.0	20
70	Analytical Tools for Characterizing Cellulose-Active Lytic Polysaccharide Monooxygenases (LPMOs). Methods in Molecular Biology, 2018, 1796, 219-246.	0.9	19
71	The use of isothermal titration calorimetry to determine the thermodynamics of metal ion binding to low-cost sorbents. Thermochimica Acta, 2010, 501, 119-121.	2.7	18
72	Processivity and substrate-binding in family 18 chitinases. Biocatalysis and Biotransformation, 2012, 30, 353-365.	2.0	18

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73	Treatment of recalcitrant crystalline polysaccharides with lytic polysaccharide monooxygenase relieves the need for glycoside hydrolase processivity. Carbohydrate Research, 2019, 473, 66-71.	2.3	18
74	Analysis of Noncovalent Chitinase-Chito-Oligosaccharide Complexes by Infrared-Matrix Assisted Laser Desorption Ionization and Nanoelectrospray Ionization Mass Spectrometry. Analytical Chemistry, 2011, 83, 4030-4036.	6.5	16
75	Relative quantification of the proteomic changes associated with the mycotoxin zearalenone in the H295R steroidogenesis model. Toxicon, 2011, 58, 533-542.	1.6	16
76	Tetrahydrobiopterin as Combined Electron/Proton Donor in Nitric Oxide Biosynthesis: Cryogenic UVâ€“Vis and EPR Detection of Reaction Intermediates. Methods in Enzymology, 2005, 396, 456-466.	1.0	15
77	Cytosol protein regulation in H295R steroidogenesis model induced by the zearalenone metabolites, Î±- and Î²-zearalenol. Toxicon, 2012, 59, 17-24.	1.6	14
78	Human Chitotriosidase: Catalytic Domain or Carbohydrate Binding Module, Whoâ€™s Leading HCHTâ€™s Biological Function. Scientific Reports, 2017, 7, 2768.	3.3	14
79	Human Chitotriosidase Is an Endo-Processive Enzyme. PLoS ONE, 2017, 12, e0171042.	2.5	14
80	Antibiotic saving effect of combination therapy through synergistic interactions between well-characterized chito-oligosaccharides and commercial antifungals against medically relevant yeasts. PLoS ONE, 2019, 14, e0227098.	2.5	13
81	The role of active site aromatic residues in substrate degradation by the human chitotriosidase. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2016, 1864, 242-247.	2.3	12
82	Crystal structure and thermodynamic dissection of chitin oligosaccharide binding to the LysM module of chitinase-A from Pteris ryukyuensis. Biochemical and Biophysical Research Communications, 2017, 494, 736-741.	2.1	12
83	Dissecting factors that contribute to ligand-binding energetics for family 18 chitinases. Thermochimica Acta, 2010, 511, 189-193.	2.7	11
84	Effect of enzyme processivity on the efficacy of a competitive chitinase inhibitor. Carbohydrate Polymers, 2010, 82, 779-785.	10.2	11
85	Enzyme assay for chitinase catalyzed hydrolysis of tetra-N-acetylchitotetraose by isothermal titration calorimetry. Thermochimica Acta, 2007, 454, 144-146.	2.7	10
86	Using chitosan to understand chitinases and the role of processivity in the degradation of recalcitrant polysaccharides. Reactive and Functional Polymers, 2020, 148, 104488.	4.1	10
87	Novel molecular biological tools for the efficient expression of fungal lytic polysaccharide monooxygenases in Pichia pastoris. Biotechnology for Biofuels, 2021, 14, 122.	6.2	10
88	CO exchange of the oxyferrous complexes of endothelial nitric-oxide synthase oxygenase domain in the presence of 4-amino-tetrahydrobiopterin. Journal of Inorganic Biochemistry, 2004, 98, 1217-1222.	3.5	9
89	The SH3 domains of the protein kinases ITK and LCK compete for adjacent sites on T cellâ€“specific adapter protein. Journal of Biological Chemistry, 2019, 294, 15480-15494.	3.4	9
90	Chemoenzymatic Synthesis of Chito-oligosaccharides with Alternating <i>N</i>-<scp>d</scp>-Acetylglucosamine and <scp>d</scp>-Glucosamine. Biochemistry, 2020, 59, 4581-4590.	2.5	9

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91	Thermodynamic Signatures of Substrate Binding for Three Thermobifida fusca Cellulases with Different Modes of Action. Biochemistry, 2019, 58, 1648-1659.	2.5	8
92	Thermodynamic analysis of allosamidin binding to the human chitotriosidase. Thermochimica Acta, 2013, 565, 146-150.	2.7	7
93	Structural and Thermodynamic Signatures of Ligand Binding to the Enigmatic Chitinase D of <i>Serratia proteamaculans</i>. Journal of Physical Chemistry B, 2019, 123, 2270-2279.	2.6	7
94	NMR and Fluorescence Spectroscopies Reveal the Preorganized Binding Site in Family 14 Carbohydrate-Binding Module from Human Chitotriosidase. ACS Omega, 2019, 4, 21975-21984.	3.5	7
95	The directionality of processive enzymes acting on recalcitrant polysaccharides is reflected in the kinetic signatures of oligomer degradation. FEBS Letters, 2015, 589, 1807-1812.	2.8	5
96	Synergistic Antifungal Activity of Chito-Oligosaccharides and Commercial Antifungals on Biofilms of Clinical Candida Isolates. Journal of Fungi (Basel, Switzerland), 2021, 7, 718.	3.5	5
97	Polar residues lining the binding cleft of a Serratia marcescens family 18 chitinase position the substrate for attack and stabilize associative interactions. Molecular Physics, 2019, 117, 3664-3682.	1.7	4
98	Kinetic relationships with processivity in Serratia marcescens family 18 glycoside hydrolases. Biochemical and Biophysical Research Communications, 2020, 521, 120-124.	2.1	3
99	Genomic and Proteomic Study of Andreprevotia ripae Isolated from an Anthill Reveals an Extensive Repertoire of Chitinolytic Enzymes. Journal of Proteome Research, 2021, 20, 4041-4052.	3.7	3
100	The characterization of the glucono-Î´-lactone-carboxylic acid equilibrium in the products of chitin-active lytic polysaccharide monooxygenases. Journal of Chemical Thermodynamics, 2017, 106, 10-15.	2.0	1
101	The effect of carbohydrate binding modules and linkers on inhibitor binding to family 18 glycoside hydrolases. Journal of Chemical Thermodynamics, 2018, 125, 220-224.	2.0	1
102	Thermodynamic insights into the role of aromatic residues in chitooligosaccharide binding to the transglycosylating chitinase-D from Serratia proteamaculans. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2020, 1868, 140414.	2.3	0
103	The Ribonucleotide Reductase system from Bacillus cereus. FASEB Journal, 2007, 21, A640.	0.5	0