Jakob Rahr Winther

List of Publications by Year
in descending order

100 papers	5,190 citations	37 h-index (94433)	70 g-index (88630)
108 all docs	108 docs citations	108 times ranked	6469 citing authors

#	Article	IF	Citations
1	Quantifying the global cellular thiolâ€"disulfide status. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 422-427.	7.1	357
2	Why is DsbA such an oxidizing disulfide catalyst?. Cell, 1995, 83, 947-955.	28.9	300
3	Monitoring disulfide bond formation in the eukaryotic cytosol. Journal of Cell Biology, 2004, 166, 337-345.	5.2	280
4	Shedding light on disulfide bond formation: engineering a redox switch in green fluorescent protein. EMBO Journal, 2001, 20, 5853-5862.	7.8	279
5	Quantification of thiols and disulfides. Biochimica Et Biophysica Acta - General Subjects, 2014, 1840, 838-846.	2.4	276
6	An introduction to methods for analyzing thiols and disulfides: Reactions, reagents, and practical considerations. Analytical Biochemistry, 2009, 394, 147-158.	2.4	236
7	Propeptide of carboxypeptidase Y provides a chaperone-like function as well as inhibition of the enzymatic activity.. Proceedings of the National Academy of Sciences of the United States of America, 1991, 88, 9330-9334.	7.1	195
8	Review: Biosynthesis and function of yeast vacuolar proteases. Yeast, 1996, 12, 1-16.	1.7	162
9	Intracellular glutathione pools are heterogeneously concentrated. Redox Biology, 2013, 1, 508-513.	9.0	161
10	Redox characteristics of the eukaryotic cytosol. Biochimica Et Biophysica Acta - Molecular Cell Research, 2008, 1783, 629-640.	4.1	159
11	Yeast carboxypeptidase Y vacuolar targeting signal is defined by four propeptide amino acids.. Journal of Cell Biology, 1990, 111, 361-368.	5.2	152
12	Surprisingly high stability of barley lipid transfer protein, LTP1, towards denaturant, heat and proteases. FEBS Letters, 2001, 488, 145-148.	2.8	126
13	Functional Differences in Yeast Protein Disulfide Isomerases. Journal of Cell Biology, 2001, 152, 553-562.	5.2	118
14	Kinetic and Thermodynamic Aspects of Cellular Thiolâ€"Disulfide Redox Regulation. Antioxidants and Redox Signaling, 2009, 11, 1047-1058.	5.4	115
15	Non-invasive In-cell Determination of Free Cytosolic [NAD+]/[NADH] Ratios Using Hyperpolarized Glucose Show Large Variations in Metabolic Phenotypes. Journal of Biological Chemistry, 2014, 289, 2344-2352.	3.4	98
16	Quantification of protein thiols and dithiols in the picomolar range using sodium borohydride and 4,4â€²-dithiodipyridine. Analytical Biochemistry, 2007, 363, 77-82.	2.4	97
17	Endoplasmic Reticulum Transport of Glutathione by Sec61 Is Regulated by Ero1 and Bip. Molecular Cell, 2017, 67, 962-973.e5.	9.7	91
18	The aspartic proteinase from Saccharomyces cerevisiae folds its own inhibitor into a helix. Nature Structural Biology, 2000, 7, 113-117.	9.7	87

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19	Yeast carboxypeptidase Y requires glycosylation for efficient intracellular transport, but not for vacuolar sorting, in vivo stability, or activity. FEBS Journal, 1991, 197, 681-689.	0.2	81
20	Active Site Mutations in Yeast Protein Disulfide Isomerase Cause Dithiothreitol Sensitivity and a Reduced Rate of Protein Folding in the Endoplasmic Reticulum. Journal of Cell Biology, 1997, 138, 1229-1238.	5.2	76
21	Autoactivation of proteinase A initiates activation of yeast vacuolar zymogens. FEBS Journal, 1992, 207, 277-283.	0.2	68
22	Increasing the Reactivity of an Artificial Dithiolâˆ'Disulfide Pair through Modification of the Electrostatic Milieu. Biochemistry, 2005, 44, 5899-5906.	2.5	68
23	Ligand recognition and domain structure of Vps10p, a vacuolar protein sorting receptor inSaccharomyces cerevisiae. FEBS Journal, 1999, 260, 461-469.	0.2	65
24	Evidence That Translation Reinitiation Leads to a Partially Functional Menkes Protein Containing Two Copper-Binding Sites. American Journal of Human Genetics, 2006, 79, 214-229.	6.2	61
25	Measuring Intracellular Redox Conditions Using GFP-Based Sensors. Antioxidants and Redox Signaling, 2006, 8, 354-361.	5.4	61
26	Multiple Pathways for Vacuolar Sorting of Yeast Proteinase A. Journal of Biological Chemistry, 1996, 271, 11865-11870.	3.4	59
27	Mechanistic Insight Provided by Glutaredoxin within a Fusion to Redox-Sensitive Yellow Fluorescent Protein. Biochemistry, 2006, 45, 2362-2371.	2.5	58
28	The Contributions of Protein Disulfide Isomerase and Its Homologues to Oxidative Protein Folding in the Yeast Endoplasmic Reticulum. Journal of Biological Chemistry, 2004, 279, 49780-49786.	3.4	57
29	A High-Affinity Inhibitor of Yeast Carboxypeptidase Y Is Encoded byTFS1and Shows Homology to a Family of Lipid Binding Proteins. Biochemistry, 1998, 37, 3351-3357.	2.5	54
30	Trisulfides in Proteins. Antioxidants and Redox Signaling, 2011, 15, 67-75.	5.4	53
31	High-Resolution Imaging of Redox Signaling in Live Cells Through an Oxidation-Sensitive Yellow Fluorescent Protein. Science Signaling, 2008, 1, pl3.	3.6	48
32	pH-dependent processing of yeast procarboxypeptidase Y by proteinase A in vivo and in vitro. FEBS Journal, 1994, 220, 19-27.	0.2	47
33	Pulmonary effects of nanofibrillated celluloses in mice suggest that carboxylation lowers the inflammatory and acute phase responses. Environmental Toxicology and Pharmacology, 2019, 66, 116-125.	4.0	42
34	The Human Selenoprotein VCP-interacting Membrane Protein (VIMP) Is Non-globular and Harbors a Reductase Function in an Intrinsically Disordered Region. Journal of Biological Chemistry, 2012, 287, 26388-26399.	3.4	41
35	Structure of glutaredoxin Grx1p C30S mutant from yeast. Acta Crystallographica Section D: Biological Crystallography, 2007, 63, 288-294.	2.5	39
36	Thiolâˆ'Disulfide Exchange between Glutaredoxin and Glutathione. Biochemistry, 2010, 49, 810-820.	2.5	39

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37	The p<i>K</i>_a Value and Accessibility of Cysteine Residues Are Key Determinants for Protein Substrate Discrimination by Glutaredoxin. Biochemistry, 2014, 53, 2533-2540.	2.5	38
38	The Potency and Specificity of the Interaction between the IA3 Inhibitor and Its Target Aspartic Proteinase fromSaccharomyces cerevisiae. Journal of Biological Chemistry, 2001, 276, 2023-2030.	3.4	37
39	Barley Lipid Transfer Protein, LTP1, Contains a New Type of Lipid-like Post-translational Modification*. Journal of Biological Chemistry, 2001, 276, 33547-33553.	3.4	36
40	A Soluble, Folded Protein without Charged Amino Acid Residues. Biochemistry, 2016, 55, 3949-3956.	2.5	34
41	Nanofibrillated cellulose causes acute pulmonary inflammation that subsides within a month. Nanotoxicology, 2018, 12, 729-746.	3.0	34
42	Mutation of yeast Eug1p CXXS active sites to CXXC results in a dramatic increase in protein disulphide isomerase activity. Biochemical Journal, 2001, 358, 269-274.	3.7	30
43	Erv2p:Â Characterization of the Redox Behavior of a Yeast Sulfhydryl Oxidaseâ€. Biochemistry, 2007, 46, 3246-3254.	2.5	30
44	Polysaccharide Effects on Calcite Growth: The Influence of Composition and Branching. Crystal Growth and Design, 2012, 12, 4906-4910.	3.0	30
45	Functional properties of the two redox-active sites in yeast protein disulphide isomerase in Vitro and in Vivo 1 1Edited by G. Von Heijne. Journal of Molecular Biology, 1999, 286, 1229-1239.	4.2	29
46	Thiol Alkylation below Neutral pH. Analytical Biochemistry, 2000, 286, 308-310.	2.4	29
47	Random Substitution of Large Parts of the Propeptide of Yeast Proteinase A. Journal of Biological Chemistry, 1995, 270, 8602-8609.	3.4	28
48	The pro region required for folding of carboxypeptidase Y is a partially folded domain with little regular structural core. Biochemistry, 1993, 32, 12160-12166.	2.5	27
49	Increased hydrophobicity of the Sâ€²1 binding site in carboxypeptidase Y obtained by site-directed mutagenesis. Carlsberg Research Communications, 1985, 50, 273-284.	1.8	22
50	Kinetic Analysis of the Mechanism and Specificity of Protein-disulfide Isomerase Using Fluorescence-quenched Peptides. Journal of Biological Chemistry, 1998, 273, 24992-24999.	3.4	22
51	Cytoplasmic glutathione redox status determines survival upon exposure to the thiol-oxidant 4,4Ã¢Â€Â²-dipyridyl disulfide. FEMS Yeast Research, 2007, 7, 391-403.	2.3	21
52	Computational Redesign of Thioredoxin Is Hypersensitive toward Minor Conformational Changes in the Backbone Template. Journal of Molecular Biology, 2016, 428, 4361-4377.	4.2	21
53	Visualization of Nanofibrillar Cellulose in Biological Tissues Using a Biotinylated Carbohydrate Binding Module of Î²-1,4-Glycanase. Chemical Research in Toxicology, 2015, 28, 1627-1635.	3.3	20
54	Can a Charged Surfactant Unfold an Uncharged Protein?. Biophysical Journal, 2018, 115, 2081-2086.	0.5	20

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55	Mechanism and ion-dependence of <i>in vitro</i> autoactivation of yeast proteinase A: possible implications for compartmentalized activation <i>in vivo</i>. Biochemical Journal, 1997, 326, 339-344.	3.7	19
56	Mutational Analysis of the Vacuolar Sorting Signal of Procarboxypeptidase Y in Yeast Shows a Low Requirement for Sequence Conservation. Journal of Biological Chemistry, 1996, 271, 841-846.	3.4	18
57	Mutation of yeast Eug1p CXXS active sites to CXXC results in a dramatic increase in protein disulphide isomerase activity. Biochemical Journal, 2001, 358, 269.	3.7	18
58	The free sulfhydryl group (Cys341) of carboxypeptidase Y: Functional effects of mutational substitutions. Carlsberg Research Communications, 1987, 52, 263-273.	1.8	17
59	Millisecond Dynamics in Glutaredoxin during Catalytic Turnover Is Dependent on Substrate Binding and Absent in the Resting States. Journal of the American Chemical Society, 2011, 133, 3034-3042.	13.7	16
60	Rational Protein Engineering to Increase the Activity and Stability of IsPETase Using the PROSS Algorithm. Polymers, 2021, 13, 3884.	4.5	16
61	Preparation of fluorescence quenched libraries containing interchain disulphide bonds for studies of protein disulphide isomerases. Journal of Peptide Science, 1998, 4, 128-137.	1.4	15
62	Kinetic and thermodynamic properties of two barley thioredoxin h isozymes, HvTrxh1 and HvTrxh2. FEBS Letters, 2010, 584, 3376-3380.	2.8	15
63	A Robust Proton Flux (pHlux) Assay for Studying the Function and Inhibition of the Influenza A M2 Proton Channel. Biochemistry, 2018, 57, 5949-5956.	2.5	15
64	Charge Interactions in a Highly Charge-Depleted Protein. Journal of the American Chemical Society, 2021, 143, 2500-2508.	13.7	15
65	Mutations in a Single Signaling Pathway Allow Cell Growth in Heavy Water. ACS Synthetic Biology, 2020, 9, 733-748.	3.8	14
66	Flash properties of <scp>Gaussia luciferase</scp> are the result of covalent inhibition after a limited number of cycles. Protein Science, 2021, 30, 638-649.	7.6	13
67	A black hole for oxidized glutathione. Nature Chemical Biology, 2013, 9, 69-70.	8.0	12
68	In Silico Prediction of Mutant HIV-1 Proteases Cleaving a Target Sequence. PLoS ONE, 2014, 9, e95833.	2.5	12
69	Charge Engineering Reveals the Roles of Ionizable Side Chains in Electrospray Ionization Mass Spectrometry. Jacs Au, 2021, 1, 2385-2393.	7.9	12
70	Protein oxidation: prime suspect found â€˜not guiltyâ€™. Nature Cell Biology, 1999, 1, E57-E58.	10.3	11
71	Random Mutagenesis Analysis of the Influenza A M2 Proton Channel Reveals Novel Resistance Mutants. Biochemistry, 2018, 57, 5957-5968.	2.5	11
72	Exchange of Regions of the Carboxypeptidase Y Propeptide. Sequence Specificity and Function in Folding in Vivo. FEBS Journal, 1996, 242, 29-35.	0.2	9

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73	Rapid TaqMan-Based Quantification of Chlorophyll <i>d</i> -Containing Cyanobacteria in the Genus Acaryochloris. Applied and Environmental Microbiology, 2014, 80, 3244-3249.	3.1	9
74	Steady state kinetic analysis of O-linked GalNAc glycan release catalyzed by endo-Î±-N-acetylgalactosaminidase. Carbohydrate Research, 2019, 480, 54-60.	2.3	8
75	Fluorometric polyethyleneglycolâ€"peptide hybrid substrates for quantitative assay of protein disulfide isomerase. Analytical Biochemistry, 2004, 333, 148-155.	2.4	7
76	A fluorescent probe which allows highly specific thiol labeling at low pH. Analytical Biochemistry, 2012, 421, 115-120.	2.4	7
77	Catalytic site interactions in yeast OMP synthase. Archives of Biochemistry and Biophysics, 2014, 542, 28-38.	3.0	7
78	Positive staining for cellulose in oral pulse granuloma. Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology, 2017, 123, 464-467.	0.4	7
79	Production of a heterologous proteinase A by Saccharomyces kluyveri. Applied Microbiology and Biotechnology, 2001, 57, 216-219.	3.6	6
80	Gene regulation in response to protein disulphide isomerase deficiency. Yeast, 2003, 20, 645-652.	1.7	6
81	The thiol oxidant dipyridyl disulfide can supply the PDI-Ero1p pathway with additional oxidative equivalents. Antonie Van Leeuwenhoek, 2007, 92, 463-472.	1.7	6
82	Metal-Ion Dependent Catalytic Properties of <i>Sulfolobus solfataricus</i> Class II Î±-Mannosidase. Biochemistry, 2012, 51, 8039-8046.	2.5	6
83	Quantifying Changes in the Cellular Thiol-Disulfide Status during Differentiation of B Cells into Antibody-Secreting Plasma Cells. International Journal of Cell Biology, 2013, 2013, 1-9.	2.5	6
84	Oxidant resistance in a yeast mutant deficient in the Sit4 phosphatase. Current Genetics, 2008, 53, 275-286.	1.7	5
85	Improving folding properties of computationally designed proteins. Protein Engineering, Design and Selection, 2019, 32, 145-151.	2.1	5
86	Computational and Experimental Assessment of Backbone Templates for Computational Redesign of the Thioredoxin Fold. Journal of Physical Chemistry B, 2021, 125, 11141-11149.	2.6	5
87	Mutational replacement of methionine by arginine in the Sâ€²1 substrate binding site of yeast carboxypeptidase. Carlsberg Research Communications, 1986, 51, 459-465.	1.8	4
88	Active-site residues of procarboxypeptidase Y are accessible to chemical modification. BBA - Proteins and Proteomics, 1994, 1205, 289-293.	2.1	4
89	Saccharopepsin. , 2004, , 87-90.		3
90	Exploring the antigenic response to multiplexed immunizations in a chicken model of antibody production. Heliyon, 2017, 3, e00267.	3.2	3

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91	Mutational Analysis of Divalent Metal Ion Binding in the Active Site of Class II Î±-Mannosidase from Sulfolobus solfataricus. Biochemistry, 2015, 54, 2032-2039.	2.5	2
92	Crystallization of mutant forms of glutaredoxin Grx1p from yeast. Acta Crystallographica Section F: Structural Biology Communications, 2006, 62, 920-922.	0.7	1
93	Genetic Interaction between theero1-1andleu2Mutations inSaccharomyces cerevisiae. Bioscience, Biotechnology and Biochemistry, 2007, 71, 2934-2942.	1.3	1
94	Mutations in the RAM network confer resistance to the thiol oxidant 4,4â€²-dipyridyl disulfide. Molecular Genetics and Genomics, 2008, 279, 629-642.	2.1	1
95	Substitutional landscape of a split fluorescent protein fragment using high-density peptide microarrays. PLoS ONE, 2021, 16, e0241461.	2.5	1
96	The functional role of the autolysis loop in the regulation of factor X upon hemostatic response. Journal of Thrombosis and Haemostasis, 2022, 20, 589-599.	3.8	1
97	Co-evolution of drug resistance and broadened substrate recognition in HIV protease variants isolated from an <i>Escherichia coli</i> genetic selection system. Biochemical Journal, 2022, 479, 479-501.	3.7	1
98	Saccharopepsin. , 2013, , 128-133.		0
99	Hacking an enzyme. Nature Chemical Biology, 2018, 14, 202-204.	8.0	0
100	Editorial overview: A perspective on protein evolution. Current Opinion in Structural Biology, 2018, 48, viii-ix.	5.7	0