Manajit Hayer-Hartl

List of Publications by Year
in descending order

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95
papers

20,171
citations

34016
52
h-index

40881
93
g-index

136
all docs

136
docs citations

136
times ranked

18373
citing authors

#	Article	IF	Citations
1	Molecular Chaperones in the Cytosol: from Nascent Chain to Folded Protein. Science, 2002, 295, 1852-1858.	6.0	3,041
2	Molecular chaperones in protein folding and proteostasis. Nature, 2011, 475, 324-332.	13.7	2,762
3	Molecular Chaperone Functions in Protein Folding and Proteostasis. Annual Review of Biochemistry, 2013, 82, 323-355.	5.0	1,218
4	In vivo aspects of protein folding and quality control. Science, 2016, 353, aac4354.	6.0	1,100
5	Successive action of DnaK, DnaJ and GroEL along the pathway of chaperone-mediated protein folding. Nature, 1992, 356, 683-689.	13.7	992
6	Converging concepts of protein folding in vitro and in vivo. Nature Structural and Molecular Biology, 2009, 16, 574-581.	3.6	979
7	Hsp70 and Hsp40 chaperones can inhibit self-assembly of polyglutamine proteins into amyloid-like fibrils. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 7841-7846.	3.3	609
8	Amyloid-like Aggregates Sequester Numerous Metastable Proteins with Essential Cellular Functions. Cell, 2011, 144, 67-78.	13.5	604
9	Proteome-wide Analysis of Chaperonin-Dependent Protein Folding in Escherichia coli. Cell, 2005, 122, 209-220.	13.5	590
10	Crystal Structure of the Nucleotide Exchange Factor GrpE Bound to the ATPase Domain of the Molecular Chaperone DnaK. Science, 1997, 276, 431-435.	6.0	469
11	Geldanamycin activates a heat shock response and inhibits huntingtin aggregation in a cell culture model of Huntington's disease. Human Molecular Genetics, 2001, 10, 1307-1315.	1.4	396
12	Cellular Toxicity of Polyglutamine Expansion Proteins. Molecular Cell, 2004, 15, 95-105.	4.5	395
13	Protein Folding in the Cytoplasm and the Heat Shock Response. Cold Spring Harbor Perspectives in Biology, 2010, 2, a004390-a004390.	2.3	335
14	The GroELâ€"GroES Chaperonin Machine: A Nano-Cage for Protein Folding. Trends in Biochemical Sciences, 2016, 41, 62-76.	3.7	325
15	DnaK Functions as a Central Hub in the E.Âcoli Chaperone Network. Cell Reports, 2012, 1, 251-264.	2.9	308
16	PolyQ Proteins Interfere with Nuclear Degradation of Cytosolic Proteins by Sequestering the Sis1p Chaperone. Cell, 2013, 154, 134-145.	13.5	307
17	Dual Function of Protein Confinement in Chaperonin-Assisted Protein Folding. Cell, 2001, 107, 223-233.	13.5	278
18	Structural Features of the GroEL-GroES Nano-Cage Required for Rapid Folding of Encapsulated Protein. Cell, 2006, 125, 903-914.	13.5	262

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19	Molecular chaperones as modulators of polyglutamine protein aggregation and toxicity. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 16412-16418.	3.3	212
20	Function of Trigger Factor and DnaK in Multidomain Protein Folding. Cell, 2004, 117, 199-209.	13.5	206
21	Real-time observation of trigger factor function on translating ribosomes. Nature, 2006, 444, 455-460.	13.7	202
22	Failure of RQC machinery causes protein aggregation and proteotoxic stress. Nature, 2016, 531, 191-195.	13.7	185
23	Rubisco condensate formation by CcmM in Î²-carboxysome biogenesis. Nature, 2019, 566, 131-135.	13.7	185
24	Soluble Oligomers of PolyQ-Expanded Huntingtin Target a Multiplicity of Key Cellular Factors. Molecular Cell, 2016, 63, 951-964.	4.5	181
25	Biogenesis and Metabolic Maintenance of Rubisco. Annual Review of Plant Biology, 2017, 68, 29-60.	8.6	176
26	Plant RuBisCo assembly in <i>E. coli</i> with five chloroplast chaperones including BSD2. Science, 2017, 358, 1272-1278.	6.0	172
27	Coupled chaperone action in folding and assembly of hexadecameric Rubisco. Nature, 2010, 463, 197-202.	13.7	165
28	Monitoring Protein Conformation along the Pathway of Chaperonin-Assisted Folding. Cell, 2008, 133, 142-153.	13.5	158
29	Asymmetrical interaction of GroEL and GroES in the ATPase cycle of assisted protein folding. Science, 1995, 269, 836-841.	6.0	147
30	Structure and function of the AAA+ protein CbbX, a red-type Rubisco activase. Nature, 2011, 479, 194-199.	13.7	141
31	Structure and Function of RbcX, anÂAssembly Chaperone for Hexadecameric Rubisco. Cell, 2007, 129, 1189-1200.	13.5	137
32	Interplay of Acetyltransferase EP300 and the Proteasome System in Regulating Heat Shock Transcription Factor 1. Cell, 2014, 156, 975-985.	13.5	130
33	Chaperonin-Catalyzed Rescue of Kinetically Trapped States in Protein Folding. Cell, 2010, 142, 112-122.	13.5	127
34	GroEL/ES Chaperonin Modulates the Mechanism and Accelerates the Rate of TIM-Barrel Domain Folding. Cell, 2014, 157, 922-934.	13.5	116
35	Recent advances in understanding catalysis of protein folding by molecular chaperones. FEBS Letters, 2020, 594, 2770-2781.	1.3	107
36	The protein import motor of mitochondria: a targeted molecular ratchet driving unfolding and translocation. EMBO Journal, 2002, 21, 3659-3671.	3.5	103

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37	Bacterial Hsp70 resolves misfolded states and accelerates productive folding of a multi-domain protein. Nature Communications, 2020, 11, 365.	5.8	99
38	Structure of green-type Rubisco activase from tobacco. Nature Structural and Molecular Biology, 2011, 18, 1366-1370.	3.6	97
39	Role of auxiliary proteins in Rubisco biogenesis and function. Nature Plants, 2015, 1, 15065.	4.7	91
40	The monensin-mediated transport of sodium ions through phospholipid bilayers studied by 23Na-NMR spectroscopy. Biochimica Et Biophysica Acta - Biomembranes, 1985, 817, 313-317.	1.4	88
41	Structure of human heat-shock transcription factor 1 in complex with DNA. Nature Structural and Molecular Biology, 2016, 23, 140-146.	3.6	87
42	Functional significance of symmetrical versus asymmetrical GroEL-GroES chaperonin complexes. Science, 1995, 269, 832-836.	6.0	86
43	Opposing effects of folding and assembly chaperones on evolvability of Rubisco. Nature Chemical Biology, 2015, 11, 148-155.	3.9	86
44	Pathway of Actin Folding Directed by the Eukaryotic Chaperonin TRiC. Cell, 2018, 174, 1507-1521.e16.	13.5	75
45	The oligomeric structure of GroEL/GroES is required for biologically significant chaperonin function in protein folding. Nature Structural Biology, 1998, 5, 977-985.	9.7	69
46	Essential role of the chaperonin folding compartment in vivo. EMBO Journal, 2008, 27, 1458-68.	3.5	65
47	Molecular species of cardiolipin in relation to other mitochondrial phospholipids. Is there an acyl specificity of the interaction between cardiolipin and the ADP/ATP carrier?. FEBS Journal, 1991, 199, 459-466.	0.2	62
48	Coexistence of Group I and Group II Chaperonins in the Archaeon Methanosarcina mazei. Journal of Biological Chemistry, 2003, 278, 33256-33267.	1.6	61
49	Active Cage Mechanism of Chaperonin-Assisted Protein Folding Demonstrated at Single-Molecule Level. Journal of Molecular Biology, 2014, 426, 2739-2754.	2.0	61
50	Structure and mechanism of the Rubisco-assembly chaperone Raf1. Nature Structural and Molecular Biology, 2015, 22, 720-728.	3.6	61
51	Measurement of intracellular potassium ion concentrations by n.m.r. Biochemical Journal, 1983, 210, 961-963.	1.7	57
52	SnapShot: Molecular Chaperones, Part I. Cell, 2007, 128, 212.e1-212.e2.	13.5	56
53	Crystal structure of a chaperone-bound assembly intermediate of form I Rubisco. Nature Structural and Molecular Biology, 2011, 18, 875-880.	3.6	56
54	Rubisco Activases: AAA+ Chaperones Adapted to Enzyme Repair. Frontiers in Molecular Biosciences, 2017, 4, 20.	1.6	52

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55	Structural Basis for Subunit Assembly in UDP-glucose Pyrophosphorylase from Saccharomyces cerevisiae. Journal of Molecular Biology, 2006, 364, 551-560.	2.0	49
56	A Simple Semiempirical Model for the Effect of Molecular Confinement upon the Rate of Protein Folding. Biochemistry, 2006, 45, 13356-13360.	1.2	48
57	Chaperonin Cofactors, Cpn10 and Cpn20, of Green Algae and Plants Function as Hetero-oligomeric Ring Complexes. Journal of Biological Chemistry, 2012, 287, 20471-20481.	1.6	48
58	Interactions of phospholipids with the mitochondrial cytochrome-c reductase studied by spin-label ESR and NMR spectroscopy. FEBS Journal, 1992, 209, 423-430.	0.2	47
59	Mechanism of Enzyme Repair by the AAA+ Chaperone Rubisco Activase. Molecular Cell, 2017, 67, 744-756.e6.	4.5	47
60	Tc toxin activation requires unfolding and refolding of a Î²-propeller. Nature, 2018, 563, 209-213.	13.7	45
61	GroEL Ring Separation and Exchange in the Chaperonin Reaction. Cell, 2018, 172, 605-617.e11.	13.5	43
62	Complex Chaperone Dependence of Rubisco Biogenesis. Biochemistry, 2018, 57, 3210-3216.	1.2	43
63	Chaperone Machineries of Rubisco â€" The Most Abundant Enzyme. Trends in Biochemical Sciences, 2020, 45, 748-763.	3.7	43
64	Differential substrate specificity of group I and group II chaperonins in the archaeon <i>Methanosarcina mazei</i>. Molecular Microbiology, 2009, 74, 1152-1168.	1.2	41
65	Chaperonin-Assisted Protein Folding: Relative Population of Asymmetric and Symmetric GroEL:GroES Complexes. Journal of Molecular Biology, 2015, 427, 2244-2255.	2.0	40
66	Degradation of potent Rubisco inhibitor by selective sugar phosphatase. Nature Plants, 2015, 1, 14002.	4.7	38
67	The Hsp70 Chaperone System Stabilizes a Thermo-sensitive Subproteome in E.Âcoli. Cell Reports, 2019, 28, 1335-1345.e6.	2.9	37
68	SnapShot: Molecular Chaperones, Part II. Cell, 2007, 128, 412.e1-412.e2.	13.5	33
69	Role of Small Subunit in Mediating Assembly of Red-type Form I Rubisco. Journal of Biological Chemistry, 2015, 290, 1066-1074.	1.6	32
70	Structural Plasticity and Noncovalent Substrate Binding in the GroEL Apical Domain. Journal of Biological Chemistry, 2002, 277, 33115-33126.	1.6	31
71	Dual Functions of a Rubisco Activase in Metabolic Repair and Recruitment to Carboxysomes. Cell, 2020, 183, 457-473.e20.	13.5	30
72	Improved recombinant expression and purification of functional plant Rubisco. FEBS Letters, 2019, 593, 611-621.	1.3	29

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73	What is the molten globule?. Nature Structural Biology, 1995, 2, 10-10.	9.7	28
74	Functional Characterization of an Archaeal GroEL/GroES Chaperonin System. Journal of Biological Chemistry, 2004, 279, 1090-1099.	1.6	28
75	Scaffolding protein CcmM directs multiprotein phase separation in Î²-carboxysome biogenesis. Nature Structural and Molecular Biology, 2021, 28, 909-922.	3.6	24
76	From chaperonins to Rubisco assembly and metabolic repair. Protein Science, 2017, 26, 2324-2333.	3.1	23
77	On the Role of Symmetrical and Asymmetrical Chaperonin Complexes in Assisted Protein Folding. Biological Chemistry, 1999, 380, 531-40.	1.2	21
78	A comment on: â€˜The aromatic amino acid content of the bacterial chaperone protein groEL (cpn60): Evidence for the presence of a single tryptophanâ€™, by N.C. Price, S.M. Kelly, S. Wood and A. auf der Mauer (1991) FEBS Lett. 292, 9-12. FEBS Letters, 1993, 320, 83-84.	1.3	19
79	A mobile loop order-disorder transition modulates the speed of chaperonin cycling. Protein Science, 2004, 13, 2139-2148.	3.1	18
80	Efficient Catalysis of Protein Folding by GroEL/ES of the Obligate Chaperonin Substrate MetF. Journal of Molecular Biology, 2020, 432, 2304-2318.	2.0	16
81	Assay of Malate Dehydrogenase: A Substrate for the E. coli Chaperonins GroEL and GroES. , 2000, 140, 127-132.		15
82	Crystal structure of phosphoribulokinase from<i>Synechococcus</i>sp. strain PCC 6301. Acta Crystallographica Section F, Structural Biology Communications, 2019, 75, 278-289.	0.4	15
83	Refolding of Bovine Mitochondrial Rhodanese by Chaperonins GroEL and GroES. , 2000, 140, 117-126.		13
84	Structural Analysis of the Rubisco-Assembly Chaperone RbcX-II from Chlamydomonas reinhardtii. PLoS ONE, 2015, 10, e0135448.	1.1	13
85	Interaction of two complementary fragments of the bovine spinal cord myelin basic protein with phosphatidylglycerol bilayers, studied by deuterium and phosphorus-31 NMR spectroscopy. Biochemistry, 1993, 32, 9709-9713.	1.2	12
86	Nitric Oxide Inhibits the Cochaperone Activity of the RING Finger-like Protein DnaJ. Nitric Oxide - Biology and Chemistry, 2001, 5, 289-295.	1.2	11
87	How to orient the functional GroEL-SR1 mutant for atomic force microscopy investigations. Biochemical and Biophysical Research Communications, 2005, 328, 477-483.	1.0	10
88	Prevention of Rhodanese Aggregation by the Chaperonin GroEL. , 2000, 140, 111-115.		9
89	Bacterial RF3 senses chaperone function in co-translational folding. Molecular Cell, 2021, 81, 2914-2928.e7.	4.5	9
90	Shift reagents for 39K Nmr. Inorganica Chimica Acta, 1984, 92, L37-L39.	1.2	8

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91	Structure and conformational cycle of a bacteriophage-encoded chaperonin. PLoS ONE, 2020, 15, e0230090.	1.1	8
92	The first chaperonin. Nature Reviews Molecular Cell Biology, 2013, 14, 611-611.	16.1	3
93	Cellular Machineries Devoted to Rubisco â€“ the Most Abundant Enzyme. FASEB Journal, 2020, 34, 1-1.	0.2	1
94	Cellular Machineries Devoted to Rubiscoâ€“the Most Abundant Enzyme. FASEB Journal, 2021, 35, .	0.2	0
95	Bacterial RF3 Senses Chaperone Function in Co-Translational Folding. SSRN Electronic Journal, 0, , .	0.4	0