NeilÂ A Ranson

List of Publications by Year
in descending order

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86 papers	5,736 citations	81900 39 h-index	82547 72 g-index
97 all docs	97 docs citations	97 times ranked	6286 citing authors

#	Article	IF	Citations
1	A new era for understanding amyloid structures and disease. Nature Reviews Molecular Cell Biology, 2018, 19, 755-773.	37.0	654
2	Location of a folding protein and shape changes in GroELâ€"GroES complexes imaged by cryo-electron microscopy. Nature, 1994, 371, 261-264.	27.8	366
3	ATP-Bound States of GroEL Captured by Cryo-Electron Microscopy. Cell, 2001, 107, 869-879.	28.9	274
4	Secretin PulD: Association with pilot PulS, structure, and ion-conducting channel formation. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 8173-8177.	7.1	189
5	Multivalent Binding of Nonnative Substrate Proteins by the Chaperonin GroEL. Cell, 2000, 100, 561-573.	28.9	183
6	The Origins and Consequences of Asymmetry in the Chaperonin Reaction Cycle. Journal of Molecular Biology, 1995, 249, 138-152.	4.2	178
7	An introduction to sample preparation and imaging by cryo-electron microscopy for structural biology. Methods, 2016, 100, 3-15.	3.8	178
8	Chaperonins. Biochemical Journal, 1998, 333, 233-242.	3.7	176
9	Lateral opening in the intact Î²-barrel assembly machinery captured by cryo-EM. Nature Communications, 2016, 7, 12865.	12.8	157
10	Amyloid structures: much more than just a cross-Î² fold. Current Opinion in Structural Biology, 2020, 60, 7-16.	5.7	150
11	Allosteric signaling of ATP hydrolysis in GroELâ€"GroES complexes. Nature Structural and Molecular Biology, 2006, 13, 147-152.	8.2	142
12	Chaperonins can Catalyse the Reversal of Early Aggregation Steps when a Protein Misfolds. Journal of Molecular Biology, 1995, 250, 581-586.	4.2	131
13	The structure of a Î²2-microglobulin fibril suggests a molecular basis for its amyloid polymorphism. Nature Communications, 2018, 9, 4517.	12.8	124
14	The chaperonin folding machine. Trends in Biochemical Sciences, 2002, 27, 627-632.	7.5	118
15	Approaches to altering particle distributions in cryo-electron microscopy sample preparation. Acta Crystallographica Section D: Structural Biology, 2018, 74, 560-571.	2.3	108
16	The Three-dimensional Structure of Genomic RNA in Bacteriophage MS2: Implications for Assembly. Journal of Molecular Biology, 2008, 375, 824-836.	4.2	105
17	pH-induced molecular shedding drives the formation of amyloid fibril-derived oligomers. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5691-5696.	7.1	95
18	Engineering the surface properties of a human monoclonal antibody prevents self-association and rapid clearance in vivo. Scientific Reports, 2016, 6, 38644.	3.3	89

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19	Binding, encapsulation and ejection: substrate dynamics during a chaperonin-assisted folding reaction. Journal of Molecular Biology, 1997, 266, 656-664.	4.2	88
20	Packaging signals in single-stranded RNA viruses: natureâ€™s alternative to a purely electrostatic assembly mechanism. Journal of Biological Physics, 2013, 39, 277-287.	1.5	86
21	Cryo-EM structure of the spinach cytochrome b6â€‰fâ€…complex at 3.6ÂÃ… resolution. Nature, 2019, 575, 535-539.	27.8	83
22	Direct Evidence for Packaging Signal-Mediated Assembly of Bacteriophage MS2. Journal of Molecular Biology, 2016, 428, 431-448.	4.2	80
23	Collection, pre-processing and on-the-fly analysis of data for high-resolution, single-particle cryo-electron microscopy. Nature Protocols, 2019, 14, 100-118.	12.0	72
24	Fibril structures of diabetes-related amylin variants reveal a basis for surface-templated assembly. Nature Structural and Molecular Biology, 2020, 27, 1048-1056.	8.2	71
25	Nucleocapsid protein structures from orthobunyaviruses reveal insight into ribonucleoprotein architecture and RNA polymerization. Nucleic Acids Research, 2013, 41, 5912-5926.	14.5	69
26	HBV RNA pre-genome encodes specific motifs that mediate interactions with the viral core protein that promote nucleocapsid assembly. Nature Microbiology, 2017, 2, 17098.	13.3	69
27	The 3.3â€‰Ã… structure of a plant geminivirus using cryo-EM. Nature Communications, 2018, 9, 2369.	12.8	69
28	Revealing the density of encoded functions in a viral RNA. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2227-2232.	7.1	64
29	Asymmetry, commitment and inhibition in the GroE ATPase cycle impose alternating functions on the two GroEL rings. Journal of Molecular Biology, 1998, 278, 267-278.	4.2	61
30	The Asymmetric Structure of an Icosahedral Virus Bound to Its Receptor Suggests a Mechanism for Genome Release. Structure, 2013, 21, 1225-1234.	3.3	61
31	Controlling aggregation of cholesterol-modified DNA nanostructures. Nucleic Acids Research, 2019, 47, 11441-11451.	14.5	60
32	Simple Rules for Efficient Assembly Predict the Layout of a Packaged Viral RNA. Journal of Molecular Biology, 2011, 408, 399-407.	4.2	59
33	Mechanisms of assembly and genome packaging in an RNA virus revealed by high-resolution cryo-EM. Nature Communications, 2015, 6, 10113.	12.8	57
34	Direct visualization of the small hydrophobic protein of human respiratory syncytial virus reveals the structural basis for membrane permeability. FEBS Letters, 2010, 584, 2786-2790.	2.8	56
35	Cryo-EM structure and in vitro DNA packaging of a thermophilic virus with supersized T=7 capsids. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 3556-3561.	7.1	54
36	Metabolic control of BRISCâ€“SHMT2 assembly regulates immune signalling. Nature, 2019, 570, 194-199.	27.8	51

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37	Sequence-Specific, RNAâ€"Protein Interactions Overcome Electrostatic Barriers Preventing Assembly of Satellite Tobacco Necrosis Virus Coat Protein. Journal of Molecular Biology, 2013, 425, 1050-1064.	4.2	50
38	Structure of the shutdown state of myosin-2. Nature, 2020, 588, 515-520.	27.8	50
39	New Structural Insights into the Genome and Minor Capsid Proteins of BK Polyomavirus using Cryo-Electron Microscopy. Structure, 2016, 24, 528-536.	3.3	47
40	Structural and functional insights into oligopeptide acquisition by the RagAB transporter from Porphyromonas gingivalis. Nature Microbiology, 2020, 5, 1016-1025.	13.3	46
41	Role of enhanced receptor engagement in the evolution of a pandemic acute hemorrhagic conjunctivitis virus. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 397-402.	7.1	43
42	Insights into SusCD-mediated glycan import by a prominent gut symbiont. Nature Communications, 2021, 12, 44.	12.8	42
43	Structures of Unliganded and ATP-Bound States of the Escherichia coli Chaperonin GroEL by Cryoelectron Microscopy. Journal of Structural Biology, 2001, 135, 115-125.	2.8	40
44	Bacteriophage MS2 genomic RNA encodes an assembly instruction manual for its capsid. Bacteriophage, 2016, 6, e1157666.	1.9	38
45	Structures of <i>Rhodopseudomonas palustris</i> RC-LH1 complexes with open or closed quinone channels. Science Advances, 2021, 7, .	10.3	38
46	Mutually-induced Conformational Switching of RNA and Coat Protein Underpins Efficient Assembly of a Viral Capsid. Journal of Molecular Biology, 2010, 401, 309-322.	4.2	37
47	Visualising a Viral RNA Genome Poised for Release from Its Receptor Complex. Journal of Molecular Biology, 2011, 408, 408-419.	4.2	36
48	Distortion of the bilayer and dynamics of the BAM complex in lipid nanodiscs. Communications Biology, 2020, 3, 766.	4.4	32
49	Assembly of infectious enteroviruses depends on multiple, conserved genomic RNA-coat protein contacts. PLoS Pathogens, 2020, 16, e1009146.	4.7	31
50	Isolation of an Asymmetric RNA Uncoating Intermediate for a Single-Stranded RNA Plant Virus. Journal of Molecular Biology, 2012, 417, 65-78.	4.2	30
51	Î²2-Microglobulin Amyloid Fibril-Induced Membrane Disruption Is Enhanced by Endosomal Lipids and Acidic pH. PLoS ONE, 2014, 9, e104492.	2.5	30
52	The Structure of an Infectious Human Polyomavirus and Its Interactions with Cellular Receptors. Structure, 2018, 26, 839-847.e3.	3.3	29
53	Agnoprotein Is an Essential Egress Factor during BK Polyomavirus Infection. International Journal of Molecular Sciences, 2018, 19, 902.	4.1	27
54	Plant-Made Nervous Necrosis Virus-Like Particles Protect Fish Against Disease. Frontiers in Plant Science, 2019, 10, 880.	3.6	27

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55	Structural constraints on the three-dimensional geometry of simple viruses: case studies of a new predictive tool. Acta Crystallographica Section A: Foundations and Advances, 2013, 69, 140-150.	0.3	25
56	Hsc70â€induced Changes in Clathrinâ€Auxilin Cage Structure Suggest a Role for Clathrin Light Chains in Cage Disassembly. Traffic, 2013, 14, 987-996.	2.7	24
57	Combining Transient Expression and Cryo-EM to Obtain High-Resolution Structures of Luteovirid Particles. Structure, 2019, 27, 1761-1770.e3.	3.3	23
58	Crystal Structure and Proteomics Analysis of Empty Virus-like Particles of Cowpea Mosaic Virus. Structure, 2016, 24, 567-575.	3.3	22
59	The role of membrane destabilisation and protein dynamics in BAM catalysed OMP folding. Nature Communications, 2021, 12, 4174.	12.8	22
60	Adaptation to genome decay in the structure of the smallest eukaryotic ribosome. Nature Communications, 2022, 13, 591.	12.8	22
61	Limits of Structural Plasticity in a Picornavirus Capsid Revealed by a Massively Expanded Equine Rhinitis A Virus Particle. Journal of Virology, 2014, 88, 6093-6099.	3.4	20
62	The structures of a naturally empty cowpea mosaic virus particle and its genome-containing counterpart by cryo-electron microscopy. Scientific Reports, 2017, 7, 539.	3.3	20
63	Dynamics in the murine norovirus capsid revealed by high-resolution cryo-EM. PLoS Biology, 2020, 18, e3000649.	5.6	19
64	Insights into the architecture of the Ure2p yeast protein assemblies from helical twisted fibrils. Protein Science, 2006, 15, 2481-2487.	7.6	18
65	A new paradigm for the roles of the genome in ssRNA viruses. Future Virology, 2013, 8, 531-543.	1.8	18
66	Structure of the 70S Ribosome from the Human Pathogen Acinetobacter baumannii in Complex with Clinically Relevant Antibiotics. Structure, 2020, 28, 1087-1100.e3.	3.3	16
67	Cryo-EM structure of human mitochondrial HSPD1. IScience, 2021, 24, 102022.	4.1	16
68	Sal-type ABC-F proteins: intrinsic and common mediators of pleuromutilin resistance by target protection in staphylococci. Nucleic Acids Research, 2022, 50, 2128-2142.	14.5	16
69	A Replicating Viral Vector Greatly Enhances Accumulation of Helical Virus-Like Particles in Plants. Viruses, 2021, 13, 885.	3.3	15
70	Mechanism of glycogen synthase inactivation and interaction with glycogenin. Nature Communications, 2022, 13, .	12.8	15
71	RNA Packing Specificity and Folding during Assembly of the Bacteriophage MS2. Computational and Mathematical Methods in Medicine, 2008, 9, 339-349.	1.3	12
72	Asymmetric Genome Organization in an RNA Virus Revealed via Graph-Theoretical Analysis of Tomographic Data. PLoS Computational Biology, 2015, 11, e1004146.	3.2	12

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73	Antigenic structure of the human coronavirus OC43 spike reveals exposed and occluded neutralizing epitopes. Nature Communications, 2022, 13, .	12.8	12
74	MpUL-multi: Software for Calculation of Amyloid Fibril Mass per Unit Length from TB-TEM Images. Scientific Reports, 2016, 6, 21078.	3.3	11
75	Combining high-resolution cryo-electron microscopy and mutagenesis to develop cowpea mosaic virus for bionanotechnology. Biochemical Society Transactions, 2017, 45, 1263-1269.	3.4	11
76	The structure of a plant-specific partitivirus capsid reveals a unique coat protein domain architecture with an intrinsically disordered protrusion. Communications Biology, 2021, 4, 1155.	4.4	11
77	Dissecting the Fine Details of Assembly of aTâ€‰=â€‰3 Phage Capsid. Journal of Theoretical Medicine, 2005, 6, 119-125.	0.5	10
78	Affimer reagents as tools in diagnosing plant virus diseases. Scientific Reports, 2019, 9, 7524.	3.3	10
79	Structural insight into Pichia pastoris fatty acid synthase. Scientific Reports, 2021, 11, 9773.	3.3	10
80	Securing the future of research computing in the biosciences. PLoS Computational Biology, 2019, 15, e1006958.	3.2	6
81	In vitro functional analysis of gRNA sites regulating assembly of hepatitis B virus. Communications Biology, 2021, 4, 1407.	4.4	6
82	Plant-expressed virus-like particles reveal the intricate maturation process of a eukaryotic virus. Communications Biology, 2021, 4, 619.	4.4	2
83	Exploring the Effect of Structure-Based Scaffold Hopping on the Inhibition of Coxsackievirus A24v Transduction by Pentavalent N-Acetylneuraminic Acid Conjugates. International Journal of Molecular Sciences, 2021, 22, 8418.	4.1	2
84	Cryo-Electron Microscopy of Viruses. , 2010, , 1-33.		1
85	Electron microscopy as a tool for 3D structure determination in molecular structural biology. , 2005, , .		0
86	Structural characterization of genomic RNA-coat protein contacts in single-stranded RNA viruses by high-resolution cryo-EM. Access Microbiology, 2020, 2, .	0.5	0