

Christopher M Dobson

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

231 papers	36,210 citations	76 h-index	189 g-index
240 ext. papers	41,730 ext. citations	10.3 avg, IF	7.87 L-index

#	Paper	IF	Citations
231	The Hsc70 disaggregation machinery removes monomer units directly from β -synuclein fibril ends. <i>Nature Communications</i> , 2021 , 12, 5999	17.4	2
230	The release of toxic oligomers from β -synuclein fibrils induces dysfunction in neuronal cells. <i>Nature Communications</i> , 2021 , 12, 1814	17.4	39
229	Comparative Studies in the A30P and A53T β -synuclein Strains to Investigate the Molecular Origins of Parkinson's Disease. <i>Frontiers in Cell and Developmental Biology</i> , 2021 , 9, 552549	5.7	5
228	Squalamine and Its Derivatives Modulate the Aggregation of Amyloid- β and β -Synuclein and Suppress the Toxicity of Their Oligomers. <i>Frontiers in Neuroscience</i> , 2021 , 15, 680026	5.1	11
227	Distinct responses of human peripheral blood cells to different misfolded protein oligomers. <i>Immunology</i> , 2021 , 164, 358-371	7.8	2
226	Two human metabolites rescue a <i>C. elegans</i> model of Alzheimer's disease via a cytosolic unfolded protein response. <i>Communications Biology</i> , 2021 , 4, 843	6.7	1
225	Systematic Activity Maturation of a Single-Domain Antibody with Non-canonical Amino Acids through Chemical Mutagenesis. <i>Cell Chemical Biology</i> , 2021 , 28, 70-77.e5	8.2	6
224	A β Oligomers Dysregulate Calcium Homeostasis by Mechanosensitive Activation of AMPA and NMDA Receptors. <i>ACS Chemical Neuroscience</i> , 2021 , 12, 766-781	5.7	7
223	Scaling analysis reveals the mechanism and rates of prion replication in vivo. <i>Nature Structural and Molecular Biology</i> , 2021 , 28, 365-372	17.6	7
222	Exogenous misfolded protein oligomers can cross the intestinal barrier and cause a disease phenotype in <i>C. elegans</i> . <i>Scientific Reports</i> , 2021 , 11, 14391	4.9	1
221	Cytosolic aggregation of mitochondrial proteins disrupts cellular homeostasis by stimulating the aggregation of other proteins. <i>ELife</i> , 2021 , 10,	8.9	8
220	The binding of the small heat-shock protein B-crystallin to fibrils of β -synuclein is driven by entropic forces. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	2
219	A dopamine metabolite stabilizes neurotoxic amyloid- β oligomers. <i>Communications Biology</i> , 2021 , 4, 19	6.7	6
218	Observation of an β -synuclein liquid droplet state and its maturation into Lewy body-like assemblies. <i>Journal of Molecular Cell Biology</i> , 2021 , 13, 282-294	6.3	25
217	Small-molecule sequestration of amyloid- β s a drug discovery strategy for Alzheimer's disease. <i>Science Advances</i> , 2020 , 6,	14.3	28
216	Kinetic diversity of amyloid oligomers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 12087-12094	11.5	55
215	Assessing motor-related phenotypes of <i>Caenorhabditis elegans</i> with the wide field-of-view nematode tracking platform. <i>Nature Protocols</i> , 2020 , 15, 2071-2106	18.8	8

214	Biophysical studies of protein misfolding and aggregation in models of Alzheimer's and Parkinson's diseases. <i>Quarterly Reviews of Biophysics</i> , 2020 , 49, e22	7	7
213	Rational design of a conformation-specific antibody for the quantification of A β oligomers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 13509-13518	11.5	26
212	The Influence of Pathogenic Mutations in β Synuclein on Biophysical and Structural Characteristics of Amyloid Fibrils. <i>ACS Nano</i> , 2020 , 14, 5213-5222	16.7	24
211	A Cell- and Tissue-Specific Weakness of the Protein Homeostasis System Underlies Brain Vulnerability to Protein Aggregation. <i>iScience</i> , 2020 , 23, 100934	6.1	5
210	Half a century of amyloids: past, present and future. <i>Chemical Society Reviews</i> , 2020 , 49, 5473-5509	58.5	142
209	Rationally Designed Antibodies as Research Tools to Study the Structure-Toxicity Relationship of Amyloid- β Oligomers. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	7
208	A Role of Cholesterol in Modulating the Binding of β Synuclein to Synaptic-Like Vesicles. <i>Frontiers in Neuroscience</i> , 2020 , 14, 18	5.1	10
207	ThX - a next-generation probe for the early detection of amyloid aggregates. <i>Chemical Science</i> , 2020 , 11, 4578-4583	9.4	18
206	The N-terminal Acetylation of β Synuclein Changes the Affinity for Lipid Membranes but not the Structural Properties of the Bound State. <i>Scientific Reports</i> , 2020 , 10, 204	4.9	22
205	Transthyretin Inhibits Primary and Secondary Nucleations of Amyloid- β Peptide Aggregation and Reduces the Toxicity of Its Oligomers. <i>Biomacromolecules</i> , 2020 , 21, 1112-1125	6.9	28
204	Dynamics of oligomer populations formed during the aggregation of Alzheimer's A β 2 peptide. <i>Nature Chemistry</i> , 2020 , 12, 445-451	17.6	103
203	Screening of small molecules using the inhibition of oligomer formation in β Synuclein aggregation as a selection parameter. <i>Communications Chemistry</i> , 2020 , 3,	6.3	4
202	Proteome-wide observation of the phenomenon of life on the edge of solubility. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 1015-1020	11.5	52
201	Kinetic fingerprints differentiate the mechanisms of action of anti-A β antibodies. <i>Nature Structural and Molecular Biology</i> , 2020 , 27, 1125-1133	17.6	35
200	The extent of protein hydration dictates the preference for heterogeneous or homogeneous nucleation generating either parallel or antiparallel β sheet β Synuclein aggregates. <i>Chemical Science</i> , 2020 , 11, 11902-11914	9.4	9
199	Direct measurement of lipid membrane disruption connects kinetics and toxicity of A β 2 aggregation. <i>Nature Structural and Molecular Biology</i> , 2020 , 27, 886-891	17.6	12
198	Amelioration of aggregate cytotoxicity by catalytic conversion of protein oligomers into amyloid fibrils. <i>Nanoscale</i> , 2020 , 12, 18663-18672	7.7	7
197	A rationally designed bicyclic peptide remodels A β 2 aggregation in vitro and reduces its toxicity in a worm model of Alzheimer's disease. <i>Scientific Reports</i> , 2020 , 10, 15280	4.9	4

196	Thermodynamic and kinetic design principles for amyloid-aggregation inhibitors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 24251-24257	11.5	15
195	Trodusquemine displaces protein misfolded oligomers from cell membranes and abrogates their cytotoxicity through a generic mechanism. <i>Communications Biology</i> , 2020 , 3, 435	6.7	23
194	Biophysical studies of protein misfolding and aggregation in models of Alzheimer's and Parkinson's diseases - ERRATUM. <i>Quarterly Reviews of Biophysics</i> , 2020 , 53, e13	7	1
193	The Amyloid Phenomenon and Its Significance in Biology and Medicine. <i>Cold Spring Harbor Perspectives in Biology</i> , 2020 , 12,	10.2	65
192	Probing the dynamic stalk region of the ribosome using solution NMR. <i>Scientific Reports</i> , 2019 , 9, 13528	4.9	6
191	Chemical and mechanistic analysis of photodynamic inhibition of Alzheimer's β amyloid aggregation. <i>Chemical Communications</i> , 2019 , 55, 1152-1155	5.8	11
190	Fast Fluorescence Lifetime Imaging Reveals the Aggregation Processes of β Synuclein and Polyglutamine in Aging. <i>ACS Chemical Biology</i> , 2019 , 14, 1628-1636	4.9	17
189	Defining β Synuclein species responsible for Parkinson's disease phenotypes in mice. <i>Journal of Biological Chemistry</i> , 2019 , 294, 10392-10406	5.4	55
188	Expression of the amyloid- β peptide in a single pair of C. elegans sensory neurons modulates the associated behavioural response. <i>PLoS ONE</i> , 2019 , 14, e0217746	3.7	3
187	The Toxicity of Misfolded Protein Oligomers Is Independent of Their Secondary Structure. <i>ACS Chemical Biology</i> , 2019 , 14, 1593-1600	4.9	24
186	Secondary nucleation and elongation occur at different sites on Alzheimer's amyloid- β aggregates. <i>Science Advances</i> , 2019 , 5, eaau3112	14.3	74
185	Identifying A- and P-site locations on ribosome-protected mRNA fragments using Integer Programming. <i>Scientific Reports</i> , 2019 , 9, 6256	4.9	11
184	Probing the Origin of the Toxicity of Oligomeric Aggregates of β Synuclein with Antibodies. <i>ACS Chemical Biology</i> , 2019 , 14, 1352-1362	4.9	20
183	The metastability of the proteome of spinal motor neurons underlies their selective vulnerability in ALS. <i>Neuroscience Letters</i> , 2019 , 704, 89-94	3.3	17
182	Different soluble aggregates of A β 2 can give rise to cellular toxicity through different mechanisms. <i>Nature Communications</i> , 2019 , 10, 1541	17.4	71
181	Increased Secondary Nucleation Underlies Accelerated Aggregation of the Four-Residue N-Terminally Truncated A β 2 Species A β -42. <i>ACS Chemical Neuroscience</i> , 2019 , 10, 2374-2384	5.7	11
180	Differential Interactome and Innate Immune Response Activation of Two Structurally Distinct Misfolded Protein Oligomers. <i>ACS Chemical Neuroscience</i> , 2019 , 10, 3464-3478	5.7	7
179	Enhancement of the Anti-Aggregation Activity of a Molecular Chaperone Using a Rationally Designed Post-Translational Modification. <i>ACS Central Science</i> , 2019 , 5, 1417-1424	16.8	11

178	Bacterial production and direct functional screening of expanded molecular libraries for discovering inhibitors of protein aggregation. <i>Science Advances</i> , 2019 , 5, eaax5108	14.3	10
177	Dynamics and Control of Peptide Self-Assembly and Aggregation. <i>Advances in Experimental Medicine and Biology</i> , 2019 , 1174, 1-33	3.6	5
176	Supersaturated proteins are enriched at synapses and underlie cell and tissue vulnerability in Alzheimer's disease. <i>Heliyon</i> , 2019 , 5, e02589	3.6	17
175	Lipid Dynamics and Phase Transition within β -Synuclein Amyloid Fibrils. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 7872-7877	6.4	19
174	A metastable subproteome underlies inclusion formation in muscle proteinopathies. <i>Acta Neuropathologica Communications</i> , 2019 , 7, 197	7.3	10
173	Trodusquemine enhances A β aggregation but suppresses its toxicity by displacing oligomers from cell membranes. <i>Nature Communications</i> , 2019 , 10, 225	17.4	69
172	Bifunctional fluorescent probes for detection of amyloid aggregates and reactive oxygen species. <i>Royal Society Open Science</i> , 2018 , 5, 171399	3.3	9
171	Chemical Kinetics for Bridging Molecular Mechanisms and Macroscopic Measurements of Amyloid Fibril Formation. <i>Annual Review of Physical Chemistry</i> , 2018 , 69, 273-298	15.7	98
170	Molecular determinants of the interaction of EGCG with ordered and disordered proteins. <i>Biopolymers</i> , 2018 , 109, e23117	2.2	20
169	Exploring the role of post-translational modifications in regulating β -Synuclein interactions by studying the effects of phosphorylation on nanobody binding. <i>Protein Science</i> , 2018 , 27, 1262-1274	6.3	18
168	Massively parallel C. elegans tracking provides multi-dimensional fingerprints for phenotypic discovery. <i>Journal of Neuroscience Methods</i> , 2018 , 306, 57-67	3	35
167	The small heat shock protein Hsp27 binds β -Synuclein fibrils, preventing elongation and cytotoxicity. <i>Journal of Biological Chemistry</i> , 2018 , 293, 4486-4497	5.4	64
166	Optical Structural Analysis of Individual β -Synuclein Oligomers. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 4886-4890	16.4	27
165	Optical Structural Analysis of Individual β -Synuclein Oligomers. <i>Angewandte Chemie</i> , 2018 , 130, 4980-4984	4.6	
164	Direct Observation of Oligomerization by Single Molecule Fluorescence Reveals a Multistep Aggregation Mechanism for the Yeast Prion Protein Ure2. <i>Journal of the American Chemical Society</i> , 2018 , 140, 2493-2503	16.4	31
163	Microfluidic Diffusion Platform for Characterizing the Sizes of Lipid Vesicles and the Thermodynamics of Protein-Lipid Interactions. <i>Analytical Chemistry</i> , 2018 , 90, 3284-3290	7.8	16
162	Hsp70 Inhibits the Nucleation and Elongation of Tau and Sequesters Tau Aggregates with High Affinity. <i>ACS Chemical Biology</i> , 2018 , 13, 636-646	4.9	63
161	Distinct thermodynamic signatures of oligomer generation in the aggregation of the amyloid- β peptide. <i>Nature Chemistry</i> , 2018 , 10, 523-531	17.6	89

160	Microfluidic approaches for probing amyloid assembly and behaviour. <i>Lab on A Chip</i> , 2018 , 18, 999-1016	7.2	15
159	The contribution of biophysical and structural studies of protein self-assembly to the design of therapeutic strategies for amyloid diseases. <i>Neurobiology of Disease</i> , 2018 , 109, 178-190	7.5	51
158	Nanoscope Characterisation of Individual Endogenous Protein Aggregates in Human Neuronal Cells. <i>ChemBioChem</i> , 2018 , 19, 2033-2038	3.8	21
157	Stabilization and Characterization of Cytotoxic A β Oligomers Isolated from an Aggregation Reaction in the Presence of Zinc Ions. <i>ACS Chemical Neuroscience</i> , 2018 , 9, 2959-2971	5.7	33
156	Structural differences between toxic and nontoxic HypF-N oligomers. <i>Chemical Communications</i> , 2018 , 54, 8637-8640	5.8	21
155	Cholesterol catalyses A β 2 aggregation through a heterogeneous nucleation pathway in the presence of lipid membranes. <i>Nature Chemistry</i> , 2018 , 10, 673-683	17.6	126
154	Single-Molecule Characterization of the Interactions between Extracellular Chaperones and Toxic β -Synuclein Oligomers. <i>Cell Reports</i> , 2018 , 23, 3492-3500	10.6	42
153	Automated Behavioral Analysis of Large <i>C. elegans</i> Populations Using a Wide Field-of-view Tracking Platform. <i>Journal of Visualized Experiments</i> , 2018 ,	1.6	6
152	Microfluidic deposition for resolving single-molecule protein architecture and heterogeneity. <i>Nature Communications</i> , 2018 , 9, 3890	17.4	19
151	SAR by kinetics for drug discovery in protein misfolding diseases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 10245-10250	11.5	32
150	Mapping Surface Hydrophobicity of β -Synuclein Oligomers at the Nanoscale. <i>Nano Letters</i> , 2018 , 18, 7494-7501	11.5	42
149	Quantifying Co-Oligomer Formation by β -Synuclein. <i>ACS Nano</i> , 2018 , 12, 10855-10866	16.7	30
148	Proteasome-targeted nanobodies alleviate pathology and functional decline in an β -Synuclein-based Parkinson's disease model. <i>Npj Parkinson's Disease</i> , 2018 , 4, 25	9.7	38
147	C-terminal truncation of β -Synuclein promotes amyloid fibril amplification at physiological pH. <i>Chemical Science</i> , 2018 , 9, 5506-5516	9.4	34
146	Cooperative Assembly of Hsp70 Subdomain Clusters. <i>Biochemistry</i> , 2018 , 57, 3641-3649	3.2	8
145	Kinetic barriers to β -Synuclein protofilament formation and conversion into mature fibrils. <i>Chemical Communications</i> , 2018 , 54, 7854-7857	5.8	14
144	Multistep Inhibition of β -Synuclein Aggregation and Toxicity in Vitro and in Vivo by Trodusquemine. <i>ACS Chemical Biology</i> , 2018 , 13, 2308-2319	4.9	52
143	A natural product inhibits the initiation of β -Synuclein aggregation and suppresses its toxicity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E1009-E1017	11.5	177

142	Inhibition of β -Synuclein Fibril Elongation by Hsp70 Is Governed by a Kinetic Binding Competition between β -Synuclein Species. <i>Biochemistry</i> , 2017 , 56, 1177-1180	3.2	45
141	Spinal motor neuron protein supersaturation patterns are associated with inclusion body formation in ALS. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E3935-E3943 ^{11.5}	7.2	
140	Protein Misfolding, Amyloid Formation, and Human Disease: A Summary of Progress Over the Last Decade. <i>Annual Review of Biochemistry</i> , 2017 , 86, 27-68	29.1	1248
139	Amyloid-like Fibrils from an β -Helical Transmembrane Protein. <i>Biochemistry</i> , 2017 , 56, 3225-3233	3.2	14
138	Modulation of electrostatic interactions to reveal a reaction network unifying the aggregation behaviour of the A β 2 peptide and its variants. <i>Chemical Science</i> , 2017 , 8, 4352-4362	9.4	42
137	Direct Conversion of an Enzyme from Native-like to Amyloid-like Aggregates within Inclusion Bodies. <i>Biophysical Journal</i> , 2017 , 112, 2540-2551	2.9	9
136	Selective targeting of primary and secondary nucleation pathways in A β 2 aggregation using a rational antibody scanning method. <i>Science Advances</i> , 2017 , 3, e1700488	14.3	81
135	Phage display and kinetic selection of antibodies that specifically inhibit amyloid self-replication. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 6444-6449	11.5	41
134	Systematic development of small molecules to inhibit specific microscopic steps of A β 2 aggregation in Alzheimer's disease. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E200-E208	11.5	134
133	Nanobodies raised against monomeric γ -synuclein inhibit fibril formation and destabilize toxic oligomeric species. <i>BMC Biology</i> , 2017 , 15, 57	7.3	46
132	Gradient-free determination of isoelectric points of proteins on chip. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 23060-23067	3.6	19
131	Scaling behaviour and rate-determining steps in filamentous self-assembly. <i>Chemical Science</i> , 2017 , 8, 7087-7097	9.4	43
130	Silk micrococoon for protein stabilisation and molecular encapsulation. <i>Nature Communications</i> , 2017 , 8, 15902	17.4	65
129	Structural basis of membrane disruption and cellular toxicity by β -Synuclein oligomers. <i>Science</i> , 2017 , 358, 1440-1443	33.3	301
128	Inhibiting the Ca Influx Induced by Human CSF. <i>Cell Reports</i> , 2017 , 21, 3310-3316	10.6	14
127	Delivery of Native Proteins into <i>C. elegans</i> Using a Transduction Protocol Based on Lipid Vesicles. <i>Scientific Reports</i> , 2017 , 7, 15045	4.9	11
126	Protein homeostasis of a metastable subproteome associated with Alzheimer's disease. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E5703-E5711 ^{11.5}	53	
125	Ultrasensitive Measurement of Ca ²⁺ Influx into Lipid Vesicles Induced by Protein Aggregates. <i>Angewandte Chemie</i> , 2017 , 129, 7858-7862	3.6	6

124	Ultrasensitive Measurement of Ca Influx into Lipid Vesicles Induced by Protein Aggregates. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 7750-7754	16.4	51
123	Monomeric and fibrillar β synuclein exert opposite effects on the catalytic cycle that promotes the proliferation of A β 2 aggregates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 8005-8010	11.5	27
122	Mutations associated with familial Parkinson's disease alter the initiation and amplification steps of β synuclein aggregation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 10328-33	11.5	159
121	Protein Aggregate-Ligand Binding Assays Based on Microfluidic Diffusional Separation. <i>ChemBioChem</i> , 2016 , 17, 1920-1924	3.8	10
120	Physical determinants of the self-replication of protein fibrils. <i>Nature Physics</i> , 2016 , 12, 874-880	16.2	73
119	Hamiltonian Dynamics of Protein Filament Formation. <i>Physical Review Letters</i> , 2016 , 116, 038101	7.4	22
118	Binding affinity of amyloid oligomers to cellular membranes is a generic indicator of cellular dysfunction in protein misfolding diseases. <i>Scientific Reports</i> , 2016 , 6, 32721	4.9	73
117	A protein homeostasis signature in healthy brains recapitulates tissue vulnerability to Alzheimer's disease. <i>Science Advances</i> , 2016 , 2, e1600947	14.3	68
116	β synuclein suppresses both the initiation and amplification steps of β synuclein aggregation via competitive binding to surfaces. <i>Scientific Reports</i> , 2016 , 6, 36010	4.9	45
115	Particle-Based Monte-Carlo Simulations of Steady-State Mass Transport at Intermediate Péclet Numbers. <i>International Journal of Nonlinear Sciences and Numerical Simulation</i> , 2016 , 17, 175-183	1.8	20
114	Chemical properties of lipids strongly affect the kinetics of the membrane-induced aggregation of β synuclein. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 7065-70	11.5	164
113	Effect of molecular chaperones on aberrant protein oligomers in vitro: super-versus sub-stoichiometric chaperone concentrations. <i>Biological Chemistry</i> , 2016 , 397, 401-15	4.5	18
112	Single-Molecule Imaging of Individual Amyloid Protein Aggregates in Human Biofluids. <i>ACS Chemical Neuroscience</i> , 2016 , 7, 399-406	5.7	75
111	Ca ²⁺ is a key factor in β synuclein-induced neurotoxicity. <i>Journal of Cell Science</i> , 2016 , 129, 1792-801	5.3	106
110	Nanoscope insights into seeding mechanisms and toxicity of β synuclein species in neurons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 3815-9	11.5	57
109	Automated Ex Situ Assays of Amyloid Formation on a Microfluidic Platform. <i>Biophysical Journal</i> , 2016 , 110, 555-560	2.9	10
108	Kinetic model of the aggregation of alpha-synuclein provides insights into prion-like spreading. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, E1206-15	11.5	130
107	An anticancer drug suppresses the primary nucleation reaction that initiates the production of the toxic A β 2 aggregates linked with Alzheimer's disease. <i>Science Advances</i> , 2016 , 2, e1501244	14.3	133

106	A Fragment-Based Method of Creating Small-Molecule Libraries to Target the Aggregation of Intrinsically Disordered Proteins. <i>ACS Combinatorial Science</i> , 2016 , 18, 144-53	3.9	29
105	A structural ensemble of a ribosome-nascent chain complex during cotranslational protein folding. <i>Nature Structural and Molecular Biology</i> , 2016 , 23, 278-285	17.6	96
104	Molecular mechanisms of protein aggregation from global fitting of kinetic models. <i>Nature Protocols</i> , 2016 , 11, 252-72	18.8	342
103	Microfluidic Diffusion Analysis of the Sizes and Interactions of Proteins under Native Solution Conditions. <i>ACS Nano</i> , 2016 , 10, 333-41	16.7	61
102	Alpha-Synuclein Oligomers Interact with Metal Ions to Induce Oxidative Stress and Neuronal Death in Parkinson's Disease. <i>Antioxidants and Redox Signaling</i> , 2016 , 24, 376-91	8.4	192
101	Synthesis of Nonequilibrium Supramolecular Peptide Polymers on a Microfluidic Platform. <i>Journal of the American Chemical Society</i> , 2016 , 138, 9589-96	16.4	21
100	Structural basis of synaptic vesicle assembly promoted by β -synuclein. <i>Nature Communications</i> , 2016 , 7, 12563	17.4	139
99	Multi-dimensional super-resolution imaging enables surface hydrophobicity mapping. <i>Nature Communications</i> , 2016 , 7, 13544	17.4	97
98	Kinetic analysis reveals the diversity of microscopic mechanisms through which molecular chaperones suppress amyloid formation. <i>Nature Communications</i> , 2016 , 7, 10948	17.4	153
97	Towards a structural biology of the hydrophobic effect in protein folding. <i>Scientific Reports</i> , 2016 , 6, 28285	4.9	62
96	Quantitative thermophoretic study of disease-related protein aggregates. <i>Scientific Reports</i> , 2016 , 6, 22829	4.9	37
95	Structural Ensembles of Membrane-bound β -Synuclein Reveal the Molecular Determinants of Synaptic Vesicle Affinity. <i>Scientific Reports</i> , 2016 , 6, 27125	4.9	62
94	Structural characterization of the interaction of β -Synuclein nascent chains with the ribosomal surface and trigger factor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 5012-7	11.5	40
93	Structural Effects of Two Camelid Nanobodies Directed to Distinct C-Terminal Epitopes on β -Synuclein. <i>Biochemistry</i> , 2016 , 55, 3116-22	3.2	16
92	A transcriptional signature of Alzheimer's disease is associated with a metastable subproteome at risk for aggregation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 4753-8	11.5	64
91	Force generation by the growth of amyloid aggregates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 9524-9	11.5	18
90	Widespread Proteome Remodeling and Aggregation in Aging C. elegans. <i>Cell</i> , 2015 , 161, 919-32	56.2	333
89	Structural characterization of toxic oligomers that are kinetically trapped during β -Synuclein fibril formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, E1994-2003	11.5	278

88	Fast flow microfluidics and single-molecule fluorescence for the rapid characterization of β -synuclein oligomers. <i>Analytical Chemistry</i> , 2015 , 87, 8818-26	7.8	65
87	Latent analysis of unmodified biomolecules and their complexes in solution with attomole detection sensitivity. <i>Nature Chemistry</i> , 2015 , 7, 802-9	17.6	44
86	Structure-Free Validation of Residual Dipolar Coupling and Paramagnetic Relaxation Enhancement Measurements of Disordered Proteins. <i>Biochemistry</i> , 2015 , 54, 6876-86	3.2	15
85	Enzymatically Active Microgels from Self-Assembling Protein Nanofibrils for Microflow Chemistry. <i>ACS Nano</i> , 2015 , 9, 5772-81	16.7	36
84	A molecular chaperone breaks the catalytic cycle that generates toxic A β oligomers. <i>Nature Structural and Molecular Biology</i> , 2015 , 22, 207-213	17.6	268
83	Lipid vesicles trigger β -synuclein aggregation by stimulating primary nucleation. <i>Nature Chemical Biology</i> , 2015 , 11, 229-34	11.7	355
82	Supersaturation is a major driving force for protein aggregation in neurodegenerative diseases. <i>Trends in Pharmacological Sciences</i> , 2015 , 36, 72-7	13.2	122
81	Protein microgels from amyloid fibril networks. <i>ACS Nano</i> , 2015 , 9, 43-51	16.7	94
80	Structure of a low-population intermediate state in the release of an enzyme product. <i>ELife</i> , 2015 , 4,	8.9	25
79	Nucleation-conversion-polymerization reactions of biological macromolecules with prenucleation clusters. <i>Physical Review E</i> , 2014 , 89, 032712	2.4	34
78	Rare individual amyloid- β oligomers act on astrocytes to initiate neuronal damage. <i>Biochemistry</i> , 2014 , 53, 2442-53	3.2	68
77	Chemical kinetics for drug discovery to combat protein aggregation diseases. <i>Trends in Pharmacological Sciences</i> , 2014 , 35, 127-35	13.2	161
76	The amyloid state and its association with protein misfolding diseases. <i>Nature Reviews Molecular Cell Biology</i> , 2014 , 15, 384-96	48.7	1481
75	Direct observation of heterogeneous amyloid fibril growth kinetics via two-color super-resolution microscopy. <i>Nano Letters</i> , 2014 , 14, 339-45	11.5	127
74	Interaction of the molecular chaperone DNAJB6 with growing amyloid-beta 42 (A β 2) aggregates leads to sub-stoichiometric inhibition of amyloid formation. <i>Journal of Biological Chemistry</i> , 2014 , 289, 31066-76	5.4	106
73	Differences in nucleation behavior underlie the contrasting aggregation kinetics of the A β 0 and A β 2 peptides. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 9384-9	11.5	294
72	Toxicity of protein oligomers is rationalized by a function combining size and surface hydrophobicity. <i>ACS Chemical Biology</i> , 2014 , 9, 2309-17	4.9	128
71	Oligomer-targeting with a conformational antibody fragment promotes toxicity in A β -expressing flies. <i>Acta Neuropathologica Communications</i> , 2014 , 2, 43	7.3	10

70	Solution conditions determine the relative importance of nucleation and growth processes in β synuclein aggregation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 7671-6	11.5	395
69	The role of stable β synuclein oligomers in the molecular events underlying amyloid formation. <i>Journal of the American Chemical Society</i> , 2014 , 136, 3859-68	16.4	163
68	Direct observation of the three regions in β synuclein that determine its membrane-bound behaviour. <i>Nature Communications</i> , 2014 , 5, 3827	17.4	266
67	Targeting the intrinsically disordered structural ensemble of β synuclein by small molecules as a potential therapeutic strategy for Parkinson's disease. <i>PLoS ONE</i> , 2014 , 9, e87133	3.7	98
66	Kinetic modelling indicates that fast-translating codons can coordinate cotranslational protein folding by avoiding misfolded intermediates. <i>Nature Communications</i> , 2014 , 5, 2988	17.4	50
65	A simple lattice model that captures protein folding, aggregation and amyloid formation. <i>PLoS ONE</i> , 2014 , 9, e85185	3.7	50
64	Atomic structure and hierarchical assembly of a cross- β amyloid fibril. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 5468-73	11.5	401
63	Proliferation of amyloid- β 2 aggregates occurs through a secondary nucleation mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 9758-63	11.5	867
62	Widespread aggregation and neurodegenerative diseases are associated with supersaturated proteins. <i>Cell Reports</i> , 2013 , 5, 781-90	10.6	182
61	The Kinetics and Mechanisms of Amyloid Formation 2013 , 183-209		8
60	β synuclein senses lipid packing defects and induces lateral expansion of lipids leading to membrane remodeling. <i>Journal of Biological Chemistry</i> , 2013 , 288, 20883-20895	5.4	141
59	Measuring the kinetics of amyloid fibril elongation using quartz crystal microbalances. <i>Methods in Molecular Biology</i> , 2012 , 849, 101-19	1.4	14
58	Detailed analysis of the energy barriers for amyloid fibril growth. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 5247-51	16.4	88
57	Expression in drosophila of tandem amyloid β peptides provides insights into links between aggregation and neurotoxicity. <i>Journal of Biological Chemistry</i> , 2012 , 287, 20748-54	5.4	34
56	A rationally designed six-residue swap generates comparability in the aggregation behavior of β synuclein and β synuclein. <i>Biochemistry</i> , 2012 , 51, 8771-8	3.2	20
55	Twisting transition between crystalline and fibrillar phases of aggregated peptides. <i>Physical Review Letters</i> , 2012 , 109, 158101	7.4	47
54	From macroscopic measurements to microscopic mechanisms of protein aggregation. <i>Journal of Molecular Biology</i> , 2012 , 421, 160-71	6.5	331
53	Direct observation of the interconversion of normal and toxic forms of β synuclein. <i>Cell</i> , 2012 , 149, 1048-58	56.2	588

52	Amyloid- β oligomers are sequestered by both intracellular and extracellular chaperones. <i>Biochemistry</i> , 2012 , 51, 9270-6	3.2	65
51	Hydrophobicity and conformational change as mechanistic determinants for nonspecific modulators of amyloid β -self-assembly. <i>Biochemistry</i> , 2012 , 51, 126-37	3.2	40
50	Molecular mechanisms used by chaperones to reduce the toxicity of aberrant protein oligomers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 12479-84	11.5	121
49	^1H , ^{13}C and ^{15}N resonance assignments of human muscle acylphosphatase. <i>Biomolecular NMR Assignments</i> , 2012 , 6, 27-9	0.7	12
48	Membrane lipid composition and its physicochemical properties define cell vulnerability to aberrant protein oligomers. <i>Journal of Cell Science</i> , 2012 , 125, 2416-27	5.3	72
47	The extracellular chaperone clusterin sequesters oligomeric forms of the amyloid- β (1-40) peptide. <i>Nature Structural and Molecular Biology</i> , 2011 , 19, 79-83	17.6	198
46	Binding of the molecular chaperone B-crystallin to A β amyloid fibrils inhibits fibril elongation. <i>Biophysical Journal</i> , 2011 , 101, 1681-9	2.9	122
45	Nucleated polymerization with secondary pathways. II. Determination of self-consistent solutions to growth processes described by non-linear master equations. <i>Journal of Chemical Physics</i> , 2011 , 135, 065106	3.9	132
44	Metastability of native proteins and the phenomenon of amyloid formation. <i>Journal of the American Chemical Society</i> , 2011 , 133, 14160-3	16.4	305
43	Nucleated polymerization with secondary pathways. I. Time evolution of the principal moments. <i>Journal of Chemical Physics</i> , 2011 , 135, 065105	3.9	226
42	Conserved C-terminal charge exerts a profound influence on the aggregation rate of β synuclein. <i>Journal of Molecular Biology</i> , 2011 , 411, 329-33	6.5	76
41	A FRET sensor for non-invasive imaging of amyloid formation in vivo. <i>ChemPhysChem</i> , 2011 , 12, 673-680	3.2	76
40	In situ measurements of the formation and morphology of intracellular β amyloid fibrils by super-resolution fluorescence imaging. <i>Journal of the American Chemical Society</i> , 2011 , 133, 12902-5	16.4	129
39	Observation of spatial propagation of amyloid assembly from single nuclei. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 14746-51	11.5	108
38	Nucleated polymerization with secondary pathways. III. Equilibrium behavior and oligomer populations. <i>Journal of Chemical Physics</i> , 2011 , 135, 065107	3.9	82
37	Experimental free energy surfaces reveal the mechanisms of maintenance of protein solubility. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 21057-62	11.5	59
36	A causative link between the structure of aberrant protein oligomers and their toxicity. <i>Nature Chemical Biology</i> , 2010 , 6, 140-7	11.7	443
35	Frequency factors in a landscape model of filamentous protein aggregation. <i>Physical Review Letters</i> , 2010 , 104, 228101	7.4	55

34	Sequestration of the Abeta peptide prevents toxicity and promotes degradation in vivo. <i>PLoS Biology</i> , 2010 , 8, e1000334	9.7	63
33	The interaction of alphaB-crystallin with mature alpha-synuclein amyloid fibrils inhibits their elongation. <i>Biophysical Journal</i> , 2010 , 98, 843-51	2.9	120
32	Intrinsic determinants of neurotoxic aggregate formation by the amyloid beta peptide. <i>Biophysical Journal</i> , 2010 , 98, 1677-84	2.9	44
31	Differential phospholipid binding of alpha-synuclein variants implicated in Parkinson's disease revealed by solution NMR spectroscopy. <i>Biochemistry</i> , 2010 , 49, 862-71	3.2	179
30	ANS binding reveals common features of cytotoxic amyloid species. <i>ACS Chemical Biology</i> , 2010 , 5, 735-40	4.9	291
29	Detergent-like interaction of Congo red with the amyloid beta peptide. <i>Biochemistry</i> , 2010 , 49, 1358-60	3.2	61
28	alpha2-Macroglobulin and haptoglobin suppress amyloid formation by interacting with prefibrillar protein species. <i>Journal of Biological Chemistry</i> , 2009 , 284, 4246-54	5.4	72
27	Multiple tight phospholipid-binding modes of alpha-synuclein revealed by solution NMR spectroscopy. <i>Journal of Molecular Biology</i> , 2009 , 390, 775-90	6.5	281
26	An analytical solution to the kinetics of breakable filament assembly. <i>Science</i> , 2009 , 326, 1533-7	33.3	804
25	Direct characterization of amyloidogenic oligomers by single-molecule fluorescence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 14424-9	11.5	165
24	Molecular determinants of the aggregation behavior of alpha- and beta-synuclein. <i>Protein Science</i> , 2008 , 17, 887-98	6.3	84
23	Kinetics and thermodynamics of amyloid formation from direct measurements of fluctuations in fibril mass. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 10016-21	11.5	167
22	Structural reorganisation and potential toxicity of oligomeric species formed during the assembly of amyloid fibrils. <i>PLoS Computational Biology</i> , 2007 , 3, 1727-38	5	178
21	Systematic in vivo analysis of the intrinsic determinants of amyloid Beta pathogenicity. <i>PLoS Biology</i> , 2007 , 5, e290	9.7	152
20	The extracellular chaperone clusterin influences amyloid formation and toxicity by interacting with prefibrillar structures. <i>FASEB Journal</i> , 2007 , 21, 2312-22	0.9	237
19	The extracellular chaperone clusterin potently inhibits human lysozyme amyloid formation by interacting with prefibrillar species. <i>Journal of Molecular Biology</i> , 2007 , 369, 157-67	6.5	74
18	Spatial persistence of angular correlations in amyloid fibrils. <i>Physical Review Letters</i> , 2006 , 96, 238301	7.4	69
17	Prefibrillar amyloid aggregates could be generic toxins in higher organisms. <i>Journal of Neuroscience</i> , 2006 , 26, 8160-7	6.6	199

16	Protein misfolding, functional amyloid, and human disease. <i>Annual Review of Biochemistry</i> , 2006 , 75, 333-66	29.1	5002
15	Mapping long-range interactions in alpha-synuclein using spin-label NMR and ensemble molecular dynamics simulations. <i>Journal of the American Chemical Society</i> , 2005 , 127, 476-7	16.4	559
14	Heteronuclear NMR investigations of dynamic regions of intact Escherichia coli ribosomes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 10949-54	11.5	80
13	Protein aggregation and aggregate toxicity: new insights into protein folding, misfolding diseases and biological evolution. <i>Journal of Molecular Medicine</i> , 2003 , 81, 678-99	5.5	1272
12	A camelid antibody fragment inhibits the formation of amyloid fibrils by human lysozyme. <i>Nature</i> , 2003 , 424, 783-8	50.4	212
11	Protein folding and misfolding. <i>Nature</i> , 2003 , 426, 884-90	50.4	3716
10	Inherent toxicity of aggregates implies a common mechanism for protein misfolding diseases. <i>Nature</i> , 2002 , 416, 507-11	50.4	2119
9	The protofilament structure of insulin amyloid fibrils. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002 , 99, 9196-201	11.5	707
8	Determination of the structures of distinct transition state ensembles for a β -sheet peptide with parallel folding pathways. <i>Journal of Chemical Physics</i> , 2002 , 117, 9510-9517	3.9	33
7	Protein misfolding, evolution and disease. <i>Trends in Biochemical Sciences</i> , 1999 , 24, 329-32	10.3	1690
6	Thermodynamic and kinetic design principles for protein aggregation inhibitors		2
5	Microfluidic Antibody Affinity Profiling for In-Solution Characterisation of Alloantibody - HLA Interactions in Human Serum		6
4	The Hsc70 Disaggregation Machinery Removes Monomer Units Directly from β -Synuclein Fibril Ends		3
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