

Tuomas P J Knowles

List of Publications by Year in descending order

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296
papers

26,878
citations

8159

76
h-index

8138

148
g-index

316
all docs

316
docs citations

316
times ranked

17743
citing authors

#	ARTICLE	IF	CITATIONS
1	The amyloid state and its association with protein misfolding diseases. <i>Nature Reviews Molecular Cell Biology</i> , 2014, 15, 384-396.	16.1	1,894
2	Proliferation of amyloid- β 242 aggregates occurs through a secondary nucleation mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 9758-9763.	3.3	1,162
3	An Analytical Solution to the Kinetics of Breakable Filament Assembly. <i>Science</i> , 2009, 326, 1533-1537.	6.0	970
4	Direct Observation of the Interconversion of Normal and Toxic Forms of β -Synuclein. <i>Cell</i> , 2012, 149, 1048-1059.	13.5	755
5	Nanomechanics of functional and pathological amyloid materials. <i>Nature Nanotechnology</i> , 2011, 6, 469-479.	15.6	703
6	On the lag phase in amyloid fibril formation. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 7606-7618.	1.3	590
7	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, 7671-7676.	3.3	546
8	Molecular mechanisms of protein aggregation from global fitting of kinetic models. <i>Nature Protocols</i> , 2016, 11, 252-272.	5.5	546
9	Lipid vesicles trigger β -synuclein aggregation by stimulating primary nucleation. <i>Nature Chemical Biology</i> , 2015, 11, 229-234.	3.9	532
10	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, 5468-5473.	3.3	479
11	Amyloid Fibrils as Building Blocks for Natural and Artificial Functional Materials. <i>Advanced Materials</i> , 2016, 28, 6546-6561.	11.1	430
12	Biomimetic peptide self-assembly for functional materials. <i>Nature Reviews Chemistry</i> , 2020, 4, 615-634.	13.8	411
13	From Macroscopic Measurements to Microscopic Mechanisms of Protein Aggregation. <i>Journal of Molecular Biology</i> , 2012, 421, 160-171.	2.0	407
14	Differences in nucleation behavior underlie the contrasting aggregation kinetics of the $A\beta$ 40 and $A\beta$ 42 peptides. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 9384-9389.	3.3	405
15	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.	3.3	384
16	A molecular chaperone breaks the catalytic cycle that generates toxic $A\beta$ oligomers. <i>Nature Structural and Molecular Biology</i> , 2015, 22, 207-213.	3.6	373
17	Metastability of Native Proteins and the Phenomenon of Amyloid Formation. <i>Journal of the American Chemical Society</i> , 2011, 133, 14160-14163.	6.6	369
18	Half a century of amyloids: past, present and future. <i>Chemical Society Reviews</i> , 2020, 49, 5473-5509.	18.7	345

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19	Nanostructured films from hierarchical self-assembly of amyloidogenic proteins. <i>Nature Nanotechnology</i> , 2010, 5, 204-207.	15.6	338
20	RNA Granules Hitchhike on Lysosomes for Long-Distance Transport, Using Annexin A11 as a Molecular Tether. <i>Cell</i> , 2019, 179, 147-164.e20.	13.5	327
21	Secondary nucleation in amyloid formation. <i>Chemical Communications</i> , 2018, 54, 8667-8684.	2.2	323
22	Nucleated polymerization with secondary pathways. I. Time evolution of the principal moments. <i>Journal of Chemical Physics</i> , 2011, 135, 065105.	1.2	270
23	Mutations associated with familial Parkinson's disease alter the initiation and amplification steps of α -synuclein aggregation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 10328-10333.	3.3	252
24	Reentrant liquid condensate phase of proteins is stabilized by hydrophobic and non-ionic interactions. <i>Nature Communications</i> , 2021, 12, 1085.	5.8	245
25	Nucleation and Growth of Amino Acid and Peptide Supramolecular Polymers through Liquid-Liquid Phase Separation. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 18116-18123.	7.2	241
26	A natural product inhibits the initiation of α -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.	3.3	231
27	Dynamics of oligomer populations formed during the aggregation of Alzheimer's A β 242 peptide. <i>Nature Chemistry</i> , 2020, 12, 445-451.	6.6	223
28	Kinetic analysis reveals the diversity of microscopic mechanisms through which molecular chaperones suppress amyloid formation. <i>Nature Communications</i> , 2016, 7, 10948.	5.8	219
29	The Role of Stable α -Synuclein Oligomers in the Molecular Events Underlying Amyloid Formation. <i>Journal of the American Chemical Society</i> , 2014, 136, 3859-3868.	6.6	218
30	Ostwald's rule of stages governs structural transitions and morphology of dipeptide supramolecular polymers. <i>Nature Communications</i> , 2014, 5, 5219.	5.8	197
31	Chemical kinetics for drug discovery to combat protein aggregation diseases. <i>Trends in Pharmacological Sciences</i> , 2014, 35, 127-135.	4.0	191
32	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, 10016-10021.	3.3	186
33	Cholesterol catalyses A β 242 aggregation through a heterogeneous nucleation pathway in the presence of lipid membranes. <i>Nature Chemistry</i> , 2018, 10, 673-683.	6.6	186
34	Secondary nucleation of monomers on fibril surface dominates α -synuclein aggregation and provides autocatalytic amyloid amplification. <i>Quarterly Reviews of Biophysics</i> , 2017, 50, e6.	2.4	183
35	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.	3.3	181
36	An anticancer drug suppresses the primary nucleation reaction that initiates the production of the toxic A β 242 aggregates linked with Alzheimer's disease. <i>Science Advances</i> , 2016, 2, e1501244.	4.7	180

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37	Systematic development of small molecules to inhibit specific microscopic steps of A β 242 aggregation in Alzheimer's disease. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E200-E208.	3.3	180
38	A mechanistic model of tau amyloid aggregation based on direct observation of oligomers. Nature Communications, 2015, 6, 7025.	5.8	179
39	Nucleated polymerization with secondary pathways. II. Determination of self-consistent solutions to growth processes described by non-linear master equations. Journal of Chemical Physics, 2011, 135, 065106.	1.2	166
40	Chemical Kinetics for Bridging Molecular Mechanisms and Macroscopic Measurements of Amyloid Fibril Formation. Annual Review of Physical Chemistry, 2018, 69, 273-298.	4.8	161
41	Interaction of the Molecular Chaperone DNAJB6 with Growing Amyloid-beta 42 (A β 242) Aggregates Leads to Sub-stoichiometric Inhibition of Amyloid Formation. Journal of Biological Chemistry, 2014, 289, 31066-31076.	1.6	158
42	Crucial role of nonspecific interactions in amyloid nucleation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17869-17874.	3.3	157
43	Binding of the Molecular Chaperone α -B-Crystallin to A β 2 Amyloid Fibrils Inhibits Fibril Elongation. Biophysical Journal, 2011, 101, 1681-1689.	0.2	143
44	The S/T-Rich Motif in the DNAJB6 Chaperone Delays Polyglutamine Aggregation and the Onset of Disease in a Mouse Model. Molecular Cell, 2016, 62, 272-283.	4.5	140
45	Different soluble aggregates of A β 242 can give rise to cellular toxicity through different mechanisms. Nature Communications, 2019, 10, 1541.	5.8	140
46	The Interaction of α -B-Crystallin with Mature α -Synuclein Amyloid Fibrils Inhibits Their Elongation. Biophysical Journal, 2010, 98, 843-851.	0.2	136
47	Observation of spatial propagation of amyloid assembly from single nuclei. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 14746-14751.	3.3	134
48	Distinct thermodynamic signatures of oligomer generation in the aggregation of the amyloid- β 2 peptide. Nature Chemistry, 2018, 10, 523-531.	6.6	129
49	Secondary nucleation and elongation occur at different sites on Alzheimer's amyloid- β 2 aggregates. Science Advances, 2019, 5, eaau3112.	4.7	127
50	Targeting the Intrinsically Disordered Structural Ensemble of α -Synuclein by Small Molecules as a Potential Therapeutic Strategy for Parkinson's Disease. PLoS ONE, 2014, 9, e87133.	1.1	126
51	Kinetic fingerprints differentiate the mechanisms of action of anti-A β 2 antibodies. Nature Structural and Molecular Biology, 2020, 27, 1125-1133.	3.6	123
52	The A β 240 and A β 242 peptides self-assemble into separate homomolecular fibrils in binary mixtures but cross-react during primary nucleation. Chemical Science, 2015, 6, 4215-4233.	3.7	121
53	Quantification of the Concentration of A β 242 Propagons during the Lag Phase by an Amyloid Chain Reaction Assay. Journal of the American Chemical Society, 2014, 136, 219-225.	6.6	120
54	Fabrication of fibrillosomes from droplets stabilized by protein nanofibrils at all-aqueous interfaces. Nature Communications, 2016, 7, 12934.	5.8	116

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55	Selective targeting of primary and secondary nucleation pathways in A β 242 aggregation using a rational antibody scanning method. <i>Science Advances</i> , 2017, 3, e1700488.	4.7	116
56	Detailed Analysis of the Energy Barriers for Amyloid Fibril Growth. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 5247-5251.	7.2	112
57	Trodusquemine enhances A β 242 aggregation but suppresses its toxicity by displacing oligomers from cell membranes. <i>Nature Communications</i> , 2019, 10, 225.	5.8	111
58	The Amyloid Phenomenon and Its Significance in Biology and Medicine. <i>Cold Spring Harbor Perspectives in Biology</i> , 2020, 12, a033878.	2.3	111
59	Atomic force microscopy for single molecule characterisation of protein aggregation. <i>Archives of Biochemistry and Biophysics</i> , 2019, 664, 134-148.	1.4	109
60	Phase-separating RNA-binding proteins form heterogeneous distributions of clusters in subsaturated solutions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	3.3	107
61	Microfluidic Diffusion Analysis of the Sizes and Interactions of Proteins under Native Solution Conditions. <i>ACS Nano</i> , 2016, 10, 333-341.	7.3	105
62	Enhancing power density of biophotovoltaics by decoupling storage and power delivery. <i>Nature Energy</i> , 2018, 3, 75-81.	19.8	103
63	Kinetic diversity of amyloid oligomers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 12087-12094.	3.3	103
64	Biomolecular condensates undergo a generic shear-mediated liquid-to-solid transition. <i>Nature Nanotechnology</i> , 2020, 15, 841-847.	15.6	101
65	On the role of sidechain size and charge in the aggregation of A β 242 with familial mutations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E5849-E5858.	3.3	98
66	Determination of Polypeptide Conformation with Nanoscale Resolution in Water. <i>ACS Nano</i> , 2018, 12, 6612-6619.	7.3	97
67	Silk microcococoons for protein stabilisation and molecular encapsulation. <i>Nature Communications</i> , 2017, 8, 15902.	5.8	96
68	Identification and nanomechanical characterization of the fundamental single-strand protofilaments of amyloid I β -synuclein fibrils. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 7230-7235.	3.3	96
69	Learning the molecular grammar of protein condensates from sequence determinants and embeddings. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	96
70	Small-molecule sequestration of amyloid- β 2 as a drug discovery strategy for Alzheimer's disease. <i>Science Advances</i> , 2020, 6, .	4.7	95
71	Conserved C-Terminal Charge Exerts a Profound Influence on the Aggregation Rate of I β -Synuclein. <i>Journal of Molecular Biology</i> , 2011, 411, 329-333.	2.0	92
72	Nucleated polymerization with secondary pathways. III. Equilibrium behavior and oligomer populations. <i>Journal of Chemical Physics</i> , 2011, 135, 065107.	1.2	92

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73	Single-molecule FRET studies on alpha-synuclein oligomerization of Parkinson's disease genetically related mutants. <i>Scientific Reports</i> , 2015, 5, 16696.	1.6	92
74	Single molecule secondary structure determination of proteins through infrared absorption nanospectroscopy. <i>Nature Communications</i> , 2020, 11, 2945.	5.8	92
75	Controlling the Physical Dimensions of Peptide Nanotubes by Supramolecular Polymer Coassembly. <i>ACS Nano</i> , 2016, 10, 7436-7442.	7.3	91
76	Physical determinants of the self-replication of protein fibrils. <i>Nature Physics</i> , 2016, 12, 874-880.	6.5	90
77	Dynamic microfluidic control of supramolecular peptide self-assembly. <i>Nature Communications</i> , 2016, 7, 13190.	5.8	89
78	Electrostatic Effects in Filamentous Protein Aggregation. <i>Biophysical Journal</i> , 2013, 104, 1116-1126.	0.2	88
79	Multistep Inhibition of α -Synuclein Aggregation and Toxicity <i>in Vitro</i> and <i>in Vivo</i> by Trodusquemine. <i>ACS Chemical Biology</i> , 2018, 13, 2308-2319.	1.6	86
80	From Protein Building Blocks to Functional Materials. <i>ACS Nano</i> , 2021, 15, 5819-5837.	7.3	83
81	Budding-like division of all-aqueous emulsion droplets modulated by networks of protein nanofibrils. <i>Nature Communications</i> , 2018, 9, 2110.	5.8	82
82	Fast Flow Microfluidics and Single-Molecule Fluorescence for the Rapid Characterization of α -Synuclein Oligomers. <i>Analytical Chemistry</i> , 2015, 87, 8818-8826.	3.2	81
83	Nucleation and Growth of Amino Acid and Peptide Supramolecular Polymers through Liquid-Liquid Phase Separation. <i>Angewandte Chemie</i> , 2019, 131, 18284-18291.	1.6	79
84	Conformational Expansion of Tau in Condensates Promotes Irreversible Aggregation. <i>Journal of the American Chemical Society</i> , 2021, 143, 13056-13064.	6.6	78
85	Quantitative analysis of intrinsic and extrinsic factors in the aggregation mechanism of Alzheimer-associated $A\beta$ -peptide. <i>Scientific Reports</i> , 2016, 6, 18728.	1.6	77
86	Origin of metastable oligomers and their effects on amyloid fibril self-assembly. <i>Chemical Science</i> , 2018, 9, 5937-5948.	3.7	76
87	Kinetics of spontaneous filament nucleation via oligomers: Insights from theory and simulation. <i>Journal of Chemical Physics</i> , 2016, 145, 211926.	1.2	73
88	Population of Nonnative States of Lysozyme Variants Drives Amyloid Fibril Formation. <i>Journal of the American Chemical Society</i> , 2011, 133, 7737-7743.	6.6	72
89	Ultrasensitive Measurement of Ca^{2+} Influx into Lipid Vesicles Induced by Protein Aggregates. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 7750-7754.	7.2	72
90	In vivo rate-determining steps of tau seed accumulation in Alzheimer's disease. <i>Science Advances</i> , 2021, 7, eabh1448.	4.7	70

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91	Self-assembly of MPG1, a hydrophobin protein from the rice blast fungus that forms functional amyloid coatings, occurs by a surface-driven mechanism. <i>Scientific Reports</i> , 2016, 6, 25288.	1.6	67
92	Physical Determinants of Amyloid Assembly in Biofilm Formation. <i>MBio</i> , 2019, 10, .	1.8	66
93	β^2 -Synuclein suppresses both the initiation and amplification steps of β^1 -synuclein aggregation via competitive binding to surfaces. <i>Scientific Reports</i> , 2016, 6, 36010.	1.6	65
94	Scaling behaviour and rate-determining steps in filamentous self-assembly. <i>Chemical Science</i> , 2017, 8, 7087-7097.	3.7	65
95	C-terminal truncation of β^1 -synuclein promotes amyloid fibril amplification at physiological pH. <i>Chemical Science</i> , 2018, 9, 5506-5516.	3.7	64
96	Soluble aggregates present in cerebrospinal fluid change in size and mechanism of toxicity during Alzheimer's disease progression. <i>Acta Neuropathologica Communications</i> , 2019, 7, 120.	2.4	64
97	Identification of on- and off-pathway oligomers in amyloid fibril formation. <i>Chemical Science</i> , 2020, 11, 6236-6247.	3.7	64
98	Frequency Factors in a Landscape Model of Filamentous Protein Aggregation. <i>Physical Review Letters</i> , 2010, 104, 228101.	2.9	63
99	Connecting Macroscopic Observables and Microscopic Assembly Events in Amyloid Formation Using Coarse Grained Simulations. <i>PLoS Computational Biology</i> , 2012, 8, e1002692.	1.5	63
100	Nanobodies raised against monomeric β^1 -synuclein inhibit fibril formation and destabilize toxic oligomeric species. <i>BMC Biology</i> , 2017, 15, 57.	1.7	61
101	Rational design of a conformation-specific antibody for the quantification of $A\beta^2$ oligomers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 13509-13518.	3.3	61
102	The physical chemistry of the amyloid phenomenon: thermodynamics and kinetics of filamentous protein aggregation. <i>Essays in Biochemistry</i> , 2014, 56, 11-39.	2.1	60
103	Modulation of electrostatic interactions to reveal a reaction network unifying the aggregation behaviour of the $A\beta^{242}$ peptide and its variants. <i>Chemical Science</i> , 2017, 8, 4352-4362.	3.7	60
104	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.	3.3	60
105	Transthyretin Inhibits Primary and Secondary Nucleations of Amyloid- β^2 Peptide Aggregation and Reduces the Toxicity of Its Oligomers. <i>Biomacromolecules</i> , 2020, 21, 1112-1125.	2.6	59
106	The Influence of Pathogenic Mutations in β^1 -Synuclein on Biophysical and Structural Characteristics of Amyloid Fibrils. <i>ACS Nano</i> , 2020, 14, 5213-5222.	7.3	58
107	The role of fibril structure and surface hydrophobicity in secondary nucleation of amyloid fibrils. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 25272-25283.	3.3	58
108	The Component Polypeptide Chains of Bovine Insulin Nucleate or Inhibit Aggregation of the Parent Protein in a Conformation-dependent Manner. <i>Journal of Molecular Biology</i> , 2006, 360, 497-509.	2.0	56

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109	Latent analysis of unmodified biomolecules and their complexes in solution with attomole detection sensitivity. <i>Nature Chemistry</i> , 2015, 7, 802-809.	6.6	56
110	Quaternization of Vinyl/Alkynyl Pyridine Enables Ultrafast Cysteine-Selective Protein Modification and Charge Modulation. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 6640-6644.	7.2	55
111	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.	3.3	54
112	Massively parallel <i>C. elegans</i> tracking provides multi-dimensional fingerprints for phenotypic discovery. <i>Journal of Neuroscience Methods</i> , 2018, 306, 57-67.	1.3	52
113	Infrared nanospectroscopy reveals the molecular interaction fingerprint of an aggregation inhibitor with single A β 242 oligomers. <i>Nature Communications</i> , 2021, 12, 688.	5.8	52
114	Electrostatically-guided inhibition of Curli amyloid nucleation by the CsgC-like family of chaperones. <i>Scientific Reports</i> , 2016, 6, 24656.	1.6	51
115	Oligomer Diversity during the Aggregation of the Repeat Region of Tau. <i>ACS Chemical Neuroscience</i> , 2018, 9, 3060-3071.	1.7	50
116	Controlled self-assembly of plant proteins into high-performance multifunctional nanostructured films. <i>Nature Communications</i> , 2021, 12, 3529.	5.8	50
117	Microfluidics for Protein Biophysics. <i>Journal of Molecular Biology</i> , 2018, 430, 565-580.	2.0	49
118	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.	3.3	49
119	Interactions of β -synuclein oligomers with lipid membranes. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2021, 1863, 183536.	1.4	49
120	Surface Electrostatics Govern the Emulsion Stability of Biomolecular Condensates. <i>Nano Letters</i> , 2022, 22, 612-621.	4.5	49
121	Twisting Transition between Crystalline and Fibrillar Phases of Aggregated Peptides. <i>Physical Review Letters</i> , 2012, 109, 158101.	2.9	48
122	Quantitative thermophoretic study of disease-related protein aggregates. <i>Scientific Reports</i> , 2016, 6, 22829.	1.6	48
123	Digital Sensing and Molecular Computation by an Enzyme-Free DNA Circuit. <i>ACS Nano</i> , 2020, 14, 5763-5771.	7.3	48
124	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.	1.2	47
125	Nanoscale spatially resolved infrared spectra from single microdroplets. <i>Lab on A Chip</i> , 2014, 14, 1315-1319.	3.1	46
126	Identification of Oxidative Stress in Red Blood Cells with Nanoscale Chemical Resolution by Infrared Nanospectroscopy. <i>International Journal of Molecular Sciences</i> , 2018, 19, 2582.	1.8	46

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127	Autocatalytic amplification of Alzheimer-associated A β ²⁴² peptide aggregation in human cerebrospinal fluid. <i>Communications Biology</i> , 2019, 2, 365.	2.0	46
128	Quantitative analysis of co-oligomer formation by amyloid-beta peptide isoforms. <i>Scientific Reports</i> , 2016, 6, 28658.	1.6	45
129	Monomeric and fibrillar α -synuclein exert opposite effects on the catalytic cycle that promotes the proliferation of A β ²⁴² aggregates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 8005-8010.	3.3	45
130	Scalable integration of nano-, and microfluidics with hybrid two-photon lithography. <i>Microsystems and Nanoengineering</i> , 2019, 5, 40.	3.4	45
131	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.	6.6	44
132	Trodusquemine displaces protein misfolded oligomers from cell membranes and abrogates their cytotoxicity through a generic mechanism. <i>Communications Biology</i> , 2020, 3, 435.	2.0	44
133	LAG3 is not expressed in human and murine neurons and does not modulate α -synucleinopathies. <i>EMBO Molecular Medicine</i> , 2021, 13, e14745.	3.3	44
134	Enzymatically Active Microgels from Self-Assembling Protein Nanofibrils for Microflow Chemistry. <i>ACS Nano</i> , 2015, 9, 5772-5781.	7.3	43
135	Microfluidic devices fabricated using fast wafer-scale LED-lithography patterning. <i>Biomicrofluidics</i> , 2017, 11, 014113.	1.2	42
136	Real-Time Intrinsic Fluorescence Visualization and Sizing of Proteins and Protein Complexes in Microfluidic Devices. <i>Analytical Chemistry</i> , 2018, 90, 3849-3855.	3.2	42
137	Stabilization and Characterization of Cytotoxic A β ⁴⁰ Oligomers Isolated from an Aggregation Reaction in the Presence of Zinc Ions. <i>ACS Chemical Neuroscience</i> , 2018, 9, 2959-2971.	1.7	42
138	Label-Free Analysis of Protein Aggregation and Phase Behavior. <i>ACS Nano</i> , 2019, 13, 13940-13948.	7.3	42
139	Dynamics of protein aggregation and oligomer formation governed by secondary nucleation. <i>Journal of Chemical Physics</i> , 2015, 143, 054901.	1.2	41
140	Microfluidic deposition for resolving single-molecule protein architecture and heterogeneity. <i>Nature Communications</i> , 2018, 9, 3890.	5.8	40
141	Nucleation-conversion-polymerization reactions of biological macromolecules with prenucleation clusters. <i>Physical Review E</i> , 2014, 89, 032712.	0.8	39
142	On-chip label-free protein analysis with downstream electrodes for direct removal of electrolysis products. <i>Lab on A Chip</i> , 2018, 18, 162-170.	3.1	39
143	Modulating the Mechanical Performance of Macroscale Fibers through Shear-Induced Alignment and Assembly of Protein Nanofibrils. <i>Small</i> , 2020, 16, e1904190.	5.2	39
144	Quantifying Co-Oligomer Formation by α -Synuclein. <i>ACS Nano</i> , 2018, 12, 10855-10866.	7.3	38

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145	Direct measurement of lipid membrane disruption connects kinetics and toxicity of A β 242 aggregation. <i>Nature Structural and Molecular Biology</i> , 2020, 27, 886-891.	3.6	38
146	Biocompatible Hybrid Organic/Inorganic Microhydrogels Promote Bacterial Adherence and Eradication <i>in Vitro</i> and <i>in Vivo</i> . <i>Nano Letters</i> , 2020, 20, 1590-1597.	4.5	38
147	Coating and Stabilization of Liposomes by Clathrin-Inspired DNA Self-Assembly. <i>ACS Nano</i> , 2020, 14, 2316-2323.	7.3	38
148	Mechanism of Secondary Nucleation at the Single Fibril Level from Direct Observations of A β 242 Aggregation. <i>Journal of the American Chemical Society</i> , 2021, 143, 16621-16629.	6.6	38
149	Ultrastructural evidence for self-replication of Alzheimer-associated A β 242 amyloid along the sides of fibrils. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 11265-11273.	3.3	37
150	The Hsc70 disaggregation machinery removes monomer units directly from I α -synuclein fibril ends. <i>Nature Communications</i> , 2021, 12, 5999.	5.8	37
151	Role of filament annealing in the kinetics and thermodynamics of nucleated polymerization. <i>Journal of Chemical Physics</i> , 2014, 140, 214904.	1.2	36
152	Molecular Rotors Provide Insights into Microscopic Structural Changes During Protein Aggregation. <i>Journal of Physical Chemistry B</i> , 2015, 119, 10170-10179.	1.2	36
153	Ultrathin Polydopamine Films with Phospholipid Nanodiscs Containing a Glycophorin A Domain. <i>Advanced Functional Materials</i> , 2020, 30, 2000378.	7.8	36
154	A Fragment-Based Method of Creating Small-Molecule Libraries to Target the Aggregation of Intrinsically Disordered Proteins. <i>ACS Combinatorial Science</i> , 2016, 18, 144-153.	3.8	35
155	Self-Assembly of Amyloid Fibrils That Display Active Enzymes. <i>ChemCatChem</i> , 2014, 6, 1961-1968.	1.8	34
156	Squalamine and Its Derivatives Modulate the Aggregation of Amyloid- β 2 and I α -Synuclein and Suppress the Toxicity of Their Oligomers. <i>Frontiers in Neuroscience</i> , 2021, 15, 680026.	1.4	34
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