

# Tuomas P J Knowles

## 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.

295  
papers

18,020  
citations

65  
h-index

127  
g-index

316  
ext. papers

22,705  
ext. citations

10.2  
avg, IF

7.13  
L-index

#	Paper	IF	Citations
295	Surface Electrostatics Govern the Emulsion Stability of Biomolecular Condensates.. <i>Nano Letters</i> , <b>2022</b> ,	11.5	7
294	Microchip Free-Flow Electrophoresis for Bioanalysis, Sensing, and Purification.. <i>Methods in Molecular Biology</i> , <b>2022</b> , 2394, 249-266	1.4	
293	Kinetic profiling of therapeutic strategies for inhibiting the formation of amyloid oligomers.. <i>Journal of Chemical Physics</i> , <b>2022</b> , 156, 164904	3.9	0
292	The C-terminal tail of $\beta$ synuclein protects against aggregate replication but is critical for oligomerization.. <i>Communications Biology</i> , <b>2022</b> , 5, 123	6.7	3
291	Micromechanics of soft materials using microfluidics. <i>MRS Bulletin</i> , <b>2022</b> , 47, 119	3.2	2
290	Proliferation of Tau 304-380 Fragment Aggregates through Autocatalytic Secondary Nucleation. <i>ACS Chemical Neuroscience</i> , <b>2021</b> , 12, 4406-4415	5.7	2
289	Kinetic and Thermodynamic Driving Factors in the Assembly of Phenylalanine-Based Modules. <i>ACS Nano</i> , <b>2021</b> ,	16.7	4
288	Accelerating Reaction Rates of Biomolecules by Using Shear Stress in Artificial Capillary Systems. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 16401-16410	16.4	3
287	The Hsc70 disaggregation machinery removes monomer units directly from $\beta$ synuclein fibril ends. <i>Nature Communications</i> , <b>2021</b> , 12, 5999	17.4	2
286	In vivo rate-determining steps of tau seed accumulation in Alzheimer's disease. <i>Science Advances</i> , <b>2021</b> , 7, eabh1448	14.3	10
285	Surface-Catalyzed Secondary Nucleation Dominates the Generation of Toxic IAPP Aggregates. <i>Frontiers in Molecular Biosciences</i> , <b>2021</b> , 8, 757425	5.6	6
284	Squalamine and trodusquemine: two natural products for neurodegenerative diseases, from physical chemistry to the clinic. <i>Natural Product Reports</i> , <b>2021</b> ,	15.1	5
283	Environmental Control of Amyloid Polymorphism by Modulation of Hydrodynamic Stress. <i>ACS Nano</i> , <b>2021</b> , 15, 944-953	16.7	7
282	Kinetic analysis reveals that independent nucleation events determine the progression of polyglutamine aggregation in. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	1
281	Shear-mediated sol-gel transition of regenerated silk allows the formation of Janus-like microgels. <i>Scientific Reports</i> , <b>2021</b> , 11, 6673	4.9	6
280	Comparative Studies in the A30P and A53T $\beta$ synuclein Strains to Investigate the Molecular Origins of Parkinson's Disease. <i>Frontiers in Cell and Developmental Biology</i> , <b>2021</b> , 9, 552549	5.7	5
279	From Protein Building Blocks to Functional Materials. <i>ACS Nano</i> , <b>2021</b> , 15, 5819-5837	16.7	24

278	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> , <b>2021</b> , 118,	11.5	21
277	Antibody Affinity Governs the Inhibition of SARS-CoV-2 Spike/ACE2 Binding in Patient Serum. <i>ACS Infectious Diseases</i> , <b>2021</b> , 7, 2362-2369	5.5	10
276	Interactions of $\beta$ -Synuclein oligomers with lipid membranes. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , <b>2021</b> , 1863, 183536	3.8	13
275	Pulsed Hydrogen-Deuterium Exchange Reveals Altered Structures and Mechanisms in the Aggregation of Familial Alzheimer's Disease Mutants. <i>ACS Chemical Neuroscience</i> , <b>2021</b> , 12, 1972-1982	5.7	1
274	pH-Responsive Capsules with a Fibril Scaffold Shell Assembled from an Amyloidogenic Peptide. <i>Small</i> , <b>2021</b> , 17, e2007188	11	4
273	In situ Sub-Cellular Identification of Functional Amyloids in Bacteria and Archaea by Infrared Nanospectroscopy.. <i>Small Methods</i> , <b>2021</b> , 5, e2001002	12.8	2
272	Squalamine and Its Derivatives Modulate the Aggregation of Amyloid- $\beta$ and $\beta$ -Synuclein and Suppress the Toxicity of Their Oligomers. <i>Frontiers in Neuroscience</i> , <b>2021</b> , 15, 680026	5.1	11
271	Controlled self-assembly of plant proteins into high-performance multifunctional nanostructured films. <i>Nature Communications</i> , <b>2021</b> , 12, 3529	17.4	10
270	Soluble amyloid beta-containing aggregates are present throughout the brain at early stages of Alzheimer's disease. <i>Brain Communications</i> , <b>2021</b> , 3, fcab147	4.5	2
269	Elongation rate and average length of amyloid fibrils in solution using isotope-labelled small-angle neutron scattering. <i>RSC Chemical Biology</i> , <b>2021</b> , 2, 1232-1238	3	1
268	Infrared nanospectroscopy reveals the molecular interaction fingerprint of an aggregation inhibitor with single A $\beta$ 2 oligomers. <i>Nature Communications</i> , <b>2021</b> , 12, 688	17.4	11
267	Machine learning-aided protein identification from multidimensional signatures. <i>Lab on A Chip</i> , <b>2021</b> , 21, 2922-2931	7.2	1
266	Supramolecular Peptide Nanofibrils with Optimized Sequences and Molecular Structures for Efficient Retroviral Transduction. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2009382	15.6	4
265	Reentrant liquid condensate phase of proteins is stabilized by hydrophobic and non-ionic interactions. <i>Nature Communications</i> , <b>2021</b> , 12, 1085	17.4	68
264	One-Step Generation of Multisomes from Lipid-Stabilized Double Emulsions. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 6739-6747	9.5	3
263	Scaling analysis reveals the mechanism and rates of prion replication in vivo. <i>Nature Structural and Molecular Biology</i> , <b>2021</b> , 28, 365-372	17.6	7
262	Protein Conjugation by Electrophilic Alkynylation Using 5-(Alkynyl)dibenzothiophenium Triflates. <i>Bioconjugate Chemistry</i> , <b>2021</b> , 32, 1570-1575	6.3	1
261	LAG3 is not expressed in human and murine neurons and does not modulate $\beta$ -Synucleinopathies. <i>EMBO Molecular Medicine</i> , <b>2021</b> , 13, e14745	12	13

260	Liquid-Liquid Phase-Separated Systems from Reversible Gel-Sol Transition of Protein Microgels. <i>Advanced Materials</i> , <b>2021</b> , 33, e2008670	24	5
259	Conformational Expansion of Tau in Condensates Promotes Irreversible Aggregation. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 13056-13064	16.4	13
258	Liquid-Liquid Phase-Separated Systems from Reversible Gel-Sol Transition of Protein Microgels (Adv. Mater. 33/2021). <i>Advanced Materials</i> , <b>2021</b> , 33, 2170258	24	0
257	Feedback control of protein aggregation. <i>Journal of Chemical Physics</i> , <b>2021</b> , 155, 064102	3.9	0
256	Sequential storage and release of microdroplets. <i>Microsystems and Nanoengineering</i> , <b>2021</b> , 7, 76	7.7	1
255	Mechanism of Secondary Nucleation at the Single Fibril Level from Direct Observations of A $\beta$ 2 Aggregation. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 16621-16629	16.4	5
254	New Frontiers for Machine Learning in Protein Science. <i>Journal of Molecular Biology</i> , <b>2021</b> , 433, 167232	6.5	2
253	The binding of the small heat-shock protein $\beta$ -crystallin to fibrils of $\beta$ -synuclein is driven by entropic forces. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	2
252	Deformable and Robust Core-Shell Protein Microcapsules Templated by Liquid-Liquid Phase-Separated Microdroplets. <i>Advanced Materials Interfaces</i> , <b>2021</b> , 8, 2101071	4.6	1
251	Label-Free Protein Analysis Using Liquid Chromatography with Gravimetric Detection. <i>Analytical Chemistry</i> , <b>2021</b> , 93, 2848-2853	7.8	3
250	The unhappy chaperone. <i>QRB Discovery</i> , <b>2021</b> , 2,	2.7	2
249	In situ kinetic measurements of $\beta$ -synuclein aggregation reveal large population of short-lived oligomers. <i>PLoS ONE</i> , <b>2021</b> , 16, e0245548	3.7	4
248	A dopamine metabolite stabilizes neurotoxic amyloid- $\beta$ oligomers. <i>Communications Biology</i> , <b>2021</b> , 4, 19	6.7	6
247	Small-molecule sequestration of amyloid- $\beta$ as a drug discovery strategy for Alzheimer's disease. <i>Science Advances</i> , <b>2020</b> , 6,	14.3	28
246	Kinetic diversity of amyloid oligomers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 12087-12094	11.5	55
245	Assessing motor-related phenotypes of <i>Caenorhabditis elegans</i> with the wide field-of-view nematode tracking platform. <i>Nature Protocols</i> , <b>2020</b> , 15, 2071-2106	18.8	8
244	Single molecule secondary structure determination of proteins through infrared absorption nanospectroscopy. <i>Nature Communications</i> , <b>2020</b> , 11, 2945	17.4	34
243	Rational design of a conformation-specific antibody for the quantification of A $\beta$ oligomers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 13509-13518	11.5	26

242	Templating S100A9 amyloids on A $\beta$ fibrillar surfaces revealed by charge detection mass spectrometry, microscopy, kinetic and microfluidic analyses. <i>Chemical Science</i> , <b>2020</b> , 11, 7031-7039	9.4	6
241	Identification of on- and off-pathway oligomers in amyloid fibril formation. <i>Chemical Science</i> , <b>2020</b> , 11, 6236-6247	9.4	23
240	Microfluidic Templating of Spatially Inhomogeneous Protein Microgels. <i>Small</i> , <b>2020</b> , 16, e2000432	11	4
239	The Influence of Pathogenic Mutations in $\beta$ Synuclein on Biophysical and Structural Characteristics of Amyloid Fibrils. <i>ACS Nano</i> , <b>2020</b> , 14, 5213-5222	16.7	24
238	Multi-scale microporous silica microcapsules from gas-in water-in oil emulsions. <i>Soft Matter</i> , <b>2020</b> , 16, 3082-3087	3.6	7
237	Ultrathin Polydopamine Films with Phospholipid Nanodiscs Containing a Glycophorin A Domain. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2000378	15.6	14
236	Complexity in Lipid Membrane Composition Induces Resilience to A $\beta$ Aggregation. <i>ACS Chemical Neuroscience</i> , <b>2020</b> , 11, 1347-1352	5.7	10
235	Half a century of amyloids: past, present and future. <i>Chemical Society Reviews</i> , <b>2020</b> , 49, 5473-5509	58.5	142
234	Continuous Flow Reactors from Microfluidic Compartmentalization of Enzymes within Inorganic Microparticles. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 32951-32960	9.5	9
233	Multidimensional protein characterisation using microfluidic post-column analysis. <i>Lab on A Chip</i> , <b>2020</b> , 20, 2663-2673	7.2	2
232	Lipid-Stabilized Double Emulsions Generated in Planar Microfluidic Devices. <i>Langmuir</i> , <b>2020</b> , 36, 2349-2356	11	
231	Biocompatible Hybrid Organic/Inorganic Microhydrogels Promote Bacterial Adherence and Eradication and. <i>Nano Letters</i> , <b>2020</b> , 20, 1590-1597	11.5	16
230	Coating and Stabilization of Liposomes by Clathrin-Inspired DNA Self-Assembly. <i>ACS Nano</i> , <b>2020</b> , 14, 2316-2323	16.7	22
229	The catalytic nature of protein aggregation. <i>Journal of Chemical Physics</i> , <b>2020</b> , 152, 045101	3.9	16
228	Transthyretin Inhibits Primary and Secondary Nucleations of Amyloid- $\beta$ Peptide Aggregation and Reduces the Toxicity of Its Oligomers. <i>Biomacromolecules</i> , <b>2020</b> , 21, 1112-1125	6.9	28
227	Chris Dobson (1949-2019). <i>Nature Chemical Biology</i> , <b>2020</b> , 16, 105	11.7	
226	Microfluidic approaches for the analysis of protein-protein interactions in solution. <i>Biophysical Reviews</i> , <b>2020</b> , 12, 575-585	3.7	17
225	Dynamics of oligomer populations formed during the aggregation of Alzheimer's A $\beta$ 2 peptide. <i>Nature Chemistry</i> , <b>2020</b> , 12, 445-451	17.6	103

224	Screening of small molecules using the inhibition of oligomer formation in $\beta$ -synuclein aggregation as a selection parameter. <i>Communications Chemistry</i> , <b>2020</b> , 3, 6.3 4	6.3	4
223	Ultrastructural evidence for self-replication of Alzheimer-associated A $\beta$ 2 amyloid along the sides of fibrils. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 11265-11273	11.5	16
222	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> , <b>2020</b> , 117, 25272-25283	11.5	21
221	Physical mechanisms of amyloid nucleation on fluid membranes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 33090-33098	11.5	10
220	Modulating the Mechanical Performance of Macroscale Fibers through Shear-Induced Alignment and Assembly of Protein Nanofibrils. <i>Small</i> , <b>2020</b> , 16, e1904190	11	18
219	Kinetic fingerprints differentiate the mechanisms of action of anti-A $\beta$ antibodies. <i>Nature Structural and Molecular Biology</i> , <b>2020</b> , 27, 1125-1133	17.6	35
218	Rapid Structural, Kinetic, and Immunochemical Analysis of Alpha-Synuclein Oligomers in Solution. <i>Nano Letters</i> , <b>2020</b> , 20, 8163-8169	11.5	5
217	Biomolecular condensates undergo a generic shear-mediated liquid-to-solid transition. <i>Nature Nanotechnology</i> , <b>2020</b> , 15, 841-847	28.7	33
216	On the Mechanism of Self-Assembly by a Hydrogel-Forming Peptide. <i>Biomacromolecules</i> , <b>2020</b> , 21, 4781-4794	17.9	9
215	Direct measurement of lipid membrane disruption connects kinetics and toxicity of A $\beta$ 2 aggregation. <i>Nature Structural and Molecular Biology</i> , <b>2020</b> , 27, 886-891	17.6	12
214	A microfluidic strategy for the detection of membrane protein interactions. <i>Lab on A Chip</i> , <b>2020</b> , 20, 3230-3238	11.5	5
213	Amelioration of aggregate cytotoxicity by catalytic conversion of protein oligomers into amyloid fibrils. <i>Nanoscale</i> , <b>2020</b> , 12, 18663-18672	7.7	7
212	A rationally designed bicyclic peptide remodels A $\beta$ 2 aggregation in vitro and reduces its toxicity in a worm model of Alzheimer's disease. <i>Scientific Reports</i> , <b>2020</b> , 10, 15280	4.9	4
211	Converting lateral scanning into axial focusing to speed up three-dimensional microscopy. <i>Light: Science and Applications</i> , <b>2020</b> , 9, 165	16.7	12
210	Thermodynamic and kinetic design principles for amyloid-aggregation inhibitors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 24251-24257	11.5	15
209	Biomimetic peptide self-assembly for functional materials. <i>Nature Reviews Chemistry</i> , <b>2020</b> , 4, 615-634	34.6	121
208	Microfluidic Templating: Microfluidic Templating of Spatially Inhomogeneous Protein Microgels (Small 32/2020). <i>Small</i> , <b>2020</b> , 16, 2070178	11	1
207	Trodusquemine displaces protein misfolded oligomers from cell membranes and abrogates their cytotoxicity through a generic mechanism. <i>Communications Biology</i> , <b>2020</b> , 3, 435	6.7	23

206	The Amyloid Phenomenon and Its Significance in Biology and Medicine. <i>Cold Spring Harbor Perspectives in Biology</i> , <b>2020</b> , 12,	10.2	65
205	Controllable coacervation of recombinantly produced spider silk protein using kosmotropic salts. <i>Journal of Colloid and Interface Science</i> , <b>2020</b> , 560, 149-160	9.3	4
204	Digital Sensing and Molecular Computation by an Enzyme-Free DNA Circuit. <i>ACS Nano</i> , <b>2020</b> , 14, 5763-5771	17	22
203	Effects of sedimentation, microgravity, hydrodynamic mixing and air-water interface on $\beta$ -synuclein amyloid formation. <i>Chemical Science</i> , <b>2020</b> , 11, 3687-3693	9.4	7
202	A Microfluidic Co-Flow Route for Human Serum Albumin-Drug-Nanoparticle Assembly. <i>Chemistry - A European Journal</i> , <b>2020</b> , 26, 5965-5969	4.8	8
201	Scalable integration of nano-, and microfluidics with hybrid two-photon lithography. <i>Microsystems and Nanoengineering</i> , <b>2019</b> , 5, 40	7.7	28
200	RNA Granules Hitchhike on Lysosomes for Long-Distance Transport, Using Annexin A11 as a Molecular Tether. <i>Cell</i> , <b>2019</b> , 179, 147-164.e20	56.2	158
199	Characterizing Individual Protein Aggregates by Infrared Nanospectroscopy and Atomic Force Microscopy. <i>Journal of Visualized Experiments</i> , <b>2019</b> ,	1.6	5
198	Programmable On-Chip Artificial Cell Producing Post-Translationally Modified Ubiquitinated Protein. <i>Small</i> , <b>2019</b> , 15, e1901780	11	3
197	Analysis of B-crystallin polydispersity in solution through native microfluidic electrophoresis. <i>Analyst, The</i> , <b>2019</b> , 144, 4413-4424	5	3
196	Secondary nucleation and elongation occur at different sites on Alzheimer's amyloid- $\beta$ aggregates. <i>Science Advances</i> , <b>2019</b> , 5, eaau3112	14.3	74
195	Quaternization of Vinyl/Alkynyl Pyridine Enables Ultrafast Cysteine-Selective Protein Modification and Charge Modulation. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 6640-6644	16.4	28
194	Fabrication and Characterization of Reconstituted Silk Microgels for the Storage and Release of Small Molecules. <i>Macromolecular Rapid Communications</i> , <b>2019</b> , 40, e1800898	4.8	23
193	Direct observation of prion protein oligomer formation reveals an aggregation mechanism with multiple conformationally distinct species. <i>Chemical Science</i> , <b>2019</b> , 10, 4588-4597	9.4	19
192	A method of predicting the in vitro fibril formation propensity of A $\beta$ 0 mutants based on their inclusion body levels in E. coli. <i>Scientific Reports</i> , <b>2019</b> , 9, 3680	4.9	4
191	Sequence-Optimized Peptide Nanofibers as Growth Stimulators for Regeneration of Peripheral Neurons. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1809112	15.6	9
190	Quaternization of Vinyl/Alkynyl Pyridine Enables Ultrafast Cysteine-Selective Protein Modification and Charge Modulation. <i>Angewandte Chemie</i> , <b>2019</b> , 131, 6712-6716	3.6	7
189	Different soluble aggregates of A $\beta$ 2 can give rise to cellular toxicity through different mechanisms. <i>Nature Communications</i> , <b>2019</b> , 10, 1541	17.4	71

188	Increased Secondary Nucleation Underlies Accelerated Aggregation of the Four-Residue N-Terminally Truncated A $\beta$ 2 Species A $\beta$ -42. <i>ACS Chemical Neuroscience</i> , <b>2019</b> , 10, 2374-2384	5.7	11
187	Atomic force microscopy for single molecule characterisation of protein aggregation. <i>Archives of Biochemistry and Biophysics</i> , <b>2019</b> , 664, 134-148	4.1	57
186	Enhancement of the Anti-Aggregation Activity of a Molecular Chaperone Using a Rationally Designed Post-Translational Modification. <i>ACS Central Science</i> , <b>2019</b> , 5, 1417-1424	16.8	11
185	Soluble aggregates present in cerebrospinal fluid change in size and mechanism of toxicity during Alzheimer's disease progression. <i>Acta Neuropathologica Communications</i> , <b>2019</b> , 7, 120	7.3	35
184	Universality of filamentous aggregation phenomena. <i>Physical Review E</i> , <b>2019</b> , 99, 062415	2.4	4
183	Rapid two-dimensional characterisation of proteins in solution. <i>Microsystems and Nanoengineering</i> , <b>2019</b> , 5, 33	7.7	6
182	Nucleation and Growth of Amino Acid and Peptide Supramolecular Polymers through Liquid-Liquid Phase Separation. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 18116-18123	16.4	122
181	Autocatalytic amplification of Alzheimer-associated A $\beta$ 2 peptide aggregation in human cerebrospinal fluid. <i>Communications Biology</i> , <b>2019</b> , 2, 365	6.7	28
180	Innenrücktitelbild: Nucleation and Growth of Amino Acid and Peptide Supramolecular Polymers through Liquid-Liquid Phase Separation (Angew. Chem. 50/2019). <i>Angewandte Chemie</i> , <b>2019</b> , 131, 18463-18463	3.6	36
179	Nucleation and Growth of Amino Acid and Peptide Supramolecular Polymers through Liquid-Liquid Phase Separation. <i>Angewandte Chemie</i> , <b>2019</b> , 131, 18284-18291	3.6	37
178	Dynamics and Control of Peptide Self-Assembly and Aggregation. <i>Advances in Experimental Medicine and Biology</i> , <b>2019</b> , 1174, 1-33	3.6	5
177	Protein Microgels from Amyloid Fibril Networks. <i>Advances in Experimental Medicine and Biology</i> , <b>2019</b> , 1174, 223-263	3.6	2
176	Label-Free Analysis of Protein Aggregation and Phase Behavior. <i>ACS Nano</i> , <b>2019</b> , 13, 13940-13948	16.7	22
175	Homage to Chris Dobson. <i>Frontiers in Molecular Biosciences</i> , <b>2019</b> , 6, 137	5.6	
174	Physical Determinants of Amyloid Assembly in Biofilm Formation. <i>MBio</i> , <b>2019</b> , 10,	7.8	40
173	Trodusquemine enhances A $\beta$ aggregation but suppresses its toxicity by displacing oligomers from cell membranes. <i>Nature Communications</i> , <b>2019</b> , 10, 225	17.4	69
172	Chemical Kinetics for Bridging Molecular Mechanisms and Macroscopic Measurements of Amyloid Fibril Formation. <i>Annual Review of Physical Chemistry</i> , <b>2018</b> , 69, 273-298	15.7	98
171	Water-Dispersible Polydopamine-Coated Nanofibers for Stimulation of Neuronal Growth and Adhesion. <i>Advanced Healthcare Materials</i> , <b>2018</b> , 7, e1701485	10.1	23

170	Massively parallel <i>C. elegans</i> tracking provides multi-dimensional fingerprints for phenotypic discovery. <i>Journal of Neuroscience Methods</i> , <b>2018</b> , 306, 57-67	3	35
169	Real-Time Intrinsic Fluorescence Visualization and Sizing of Proteins and Protein Complexes in Microfluidic Devices. <i>Analytical Chemistry</i> , <b>2018</b> , 90, 3849-3855	7.8	29
168	On-chip measurements of protein unfolding from direct observations of micron-scale diffusion. <i>Chemical Science</i> , <b>2018</b> , 9, 3503-3507	9.4	5
167	Biophotonics of Native Silk Fibrils. <i>Macromolecular Bioscience</i> , <b>2018</b> , 18, e1700295	5.5	26
166	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> , <b>2018</b> , 140, 2493-2503	16.4	31
165	Microfluidics for Protein Biophysics. <i>Journal of Molecular Biology</i> , <b>2018</b> , 430, 565-580	6.5	32
164	Microfluidic Diffusion Platform for Characterizing the Sizes of Lipid Vesicles and the Thermodynamics of Protein-Lipid Interactions. <i>Analytical Chemistry</i> , <b>2018</b> , 90, 3284-3290	7.8	16
163	Enhancing power density of biophotovoltaics by decoupling storage and power delivery. <i>Nature Energy</i> , <b>2018</b> , 3, 75-81	62.3	73
162	Distinct thermodynamic signatures of oligomer generation in the aggregation of the amyloid- $\beta$ peptide. <i>Nature Chemistry</i> , <b>2018</b> , 10, 523-531	17.6	89
161	Microfluidic approaches for probing amyloid assembly and behaviour. <i>Lab on A Chip</i> , <b>2018</b> , 18, 999-1016	7.2	15
160	Determination of Polypeptide Conformation with Nanoscale Resolution in Water. <i>ACS Nano</i> , <b>2018</b> , 12, 6612-6619	16.7	52
159	Extrinsic Amyloid-Binding Dyes for Detection of Individual Protein Aggregates in Solution. <i>Analytical Chemistry</i> , <b>2018</b> , 90, 10385-10393	7.8	14
158	Combining Affinity Selection and Specific Ion Mobility for Microchip Protein Sensing. <i>Analytical Chemistry</i> , <b>2018</b> , 90, 10302-10310	7.8	14
157	Stabilization and Characterization of Cytotoxic A $\beta$ Oligomers Isolated from an Aggregation Reaction in the Presence of Zinc Ions. <i>ACS Chemical Neuroscience</i> , <b>2018</b> , 9, 2959-2971	5.7	33
156	Secondary nucleation in amyloid formation. <i>Chemical Communications</i> , <b>2018</b> , 54, 8667-8684	5.8	174
155	Self-Assembly-Mediated Release of Peptide Nanoparticles through Jets Across Microdroplet Interfaces. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 27578-27583	9.5	11
154	On the role of sidechain size and charge in the aggregation of A42 with familial mutations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, E5849-E5858	11.5	58
153	Kinetic Analysis of Amyloid Formation. <i>Methods in Molecular Biology</i> , <b>2018</b> , 1779, 181-196	1.4	14

152	Origin of metastable oligomers and their effects on amyloid fibril self-assembly. <i>Chemical Science</i> , <b>2018</b> , 9, 5937-5948	9.4	48
151	Cholesterol catalyses A $\beta$ 2 aggregation through a heterogeneous nucleation pathway in the presence of lipid membranes. <i>Nature Chemistry</i> , <b>2018</b> , 10, 673-683	17.6	126
150	Automated Behavioral Analysis of Large <i>C. elegans</i> Populations Using a Wide Field-of-view Tracking Platform. <i>Journal of Visualized Experiments</i> , <b>2018</b> ,	1.6	6
149	Mechanobiology of Protein Droplets: Force Arises from Disorder. <i>Cell</i> , <b>2018</b> , 175, 1457-1459	56.2	14
148	Observation of molecular self-assembly events in massively parallel microdroplet arrays. <i>Lab on a Chip</i> , <b>2018</b> , 18, 3303-3309	7.2	24
147	Microfluidic deposition for resolving single-molecule protein architecture and heterogeneity. <i>Nature Communications</i> , <b>2018</b> , 9, 3890	17.4	19
146	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> , <b>2018</b> , 115, 10245-10250	11.5	32
145	Direct Observation of Murine Prion Protein Replication in Vitro. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 14789-14798	16.4	18
144	Quantifying Co-Oligomer Formation by $\beta$ Synuclein. <i>ACS Nano</i> , <b>2018</b> , 12, 10855-10866	16.7	30
143	Statistical Mechanics of Globular Oligomer Formation by Protein Molecules. <i>Journal of Physical Chemistry B</i> , <b>2018</b> , 122, 11721-11730	3.4	8
142	Identification of Oxidative Stress in Red Blood Cells with Nanoscale Chemical Resolution by Infrared Nanospectroscopy. <i>International Journal of Molecular Sciences</i> , <b>2018</b> , 19,	6.3	32
141	Rapid Growth of Acetylated A $\beta$ (16-20) into Macroscopic Crystals. <i>ACS Nano</i> , <b>2018</b> , 12, 5408-5416	16.7	6
140	C-terminal truncation of $\beta$ Synuclein promotes amyloid fibril amplification at physiological pH. <i>Chemical Science</i> , <b>2018</b> , 9, 5506-5516	9.4	34
139	Reaction rate theory for supramolecular kinetics: application to protein aggregation. <i>Molecular Physics</i> , <b>2018</b> , 116, 3055-3065	1.7	13
138	Budding-like division of all-aqueous emulsion droplets modulated by networks of protein nanofibrils. <i>Nature Communications</i> , <b>2018</b> , 9, 2110	17.4	58
137	Cooperative Assembly of Hsp70 Subdomain Clusters. <i>Biochemistry</i> , <b>2018</b> , 57, 3641-3649	3.2	8
136	Identification and nanomechanical characterization of the fundamental single-strand protofilaments of amyloid $\beta$ Synuclein fibrils. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, 7230-7235	11.5	51
135	Kinetic barriers to $\beta$ Synuclein protofilament formation and conversion into mature fibrils. <i>Chemical Communications</i> , <b>2018</b> , 54, 7854-7857	5.8	14

134	Enhancing the Resolution of Micro Free Flow Electrophoresis through Spatially Controlled Sample Injection. <i>Analytical Chemistry</i> , <b>2018</b> , 90, 8998-9005	7.8	16
133	Multistep Inhibition of $\beta$ Synuclein Aggregation and Toxicity in Vitro and in Vivo by Trodusquemine. <i>ACS Chemical Biology</i> , <b>2018</b> , 13, 2308-2319	4.9	52
132	Oligomer Diversity during the Aggregation of the Repeat Region of Tau. <i>ACS Chemical Neuroscience</i> , <b>2018</b> , 9, 3060-3071	5.7	32
131	A natural product inhibits the initiation of $\beta$ Synuclein aggregation and suppresses its toxicity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, E1009-E1017	11.5	177
130	Inhibition of $\beta$ Synuclein Fibril Elongation by Hsp70 Is Governed by a Kinetic Binding Competition between $\beta$ Synuclein Species. <i>Biochemistry</i> , <b>2017</b> , 56, 1177-1180	3.2	45
129	Microfluidic devices fabricated using fast wafer-scale LED-lithography patterning. <i>Biomicrofluidics</i> , <b>2017</b> , 11, 014113	3.2	31
128	Intra-chain organisation of hydrophobic residues controls inter-chain aggregation rates of amphiphilic polymers. <i>Journal of Chemical Physics</i> , <b>2017</b> , 146, 135102	3.9	2
127	Acceleration of $\beta$ Synuclein aggregation. <i>Amyloid: the International Journal of Experimental and Clinical Investigation: the Official Journal of the International Society of Amyloidosis</i> , <b>2017</b> , 24, 20-21	2.7	3
126	Secondary nucleation of monomers on fibril surface dominates $\beta$ Synuclein aggregation and provides autocatalytic amyloid amplification. <i>Quarterly Reviews of Biophysics</i> , <b>2017</b> , 50, e6	7	102
125	Modulation of electrostatic interactions to reveal a reaction network unifying the aggregation behaviour of the A $\beta$ 2 peptide and its variants. <i>Chemical Science</i> , <b>2017</b> , 8, 4352-4362	9.4	42
124	Selective targeting of primary and secondary nucleation pathways in A $\beta$ 2 aggregation using a rational antibody scanning method. <i>Science Advances</i> , <b>2017</b> , 3, e1700488	14.3	81
123	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> , <b>2017</b> , 114, 6444-6449	11.5	41
122	Exciton Coupling of Phenylalanine Reveals Conformational Changes of Cationic Peptides. <i>ChemistrySelect</i> , <b>2017</b> , 2, 2476-2479	1.8	4
121	Systematic development of small molecules to inhibit specific microscopic steps of A $\beta$ 2 aggregation in Alzheimer's disease. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, E200-E208	11.5	134
120	Hierarchical Biomolecular Emulsions Using 3-D Microfluidics with Uniform Surface Chemistry. <i>Biomacromolecules</i> , <b>2017</b> , 18, 3642-3651	6.9	24
119	Kinetic constraints on self-assembly into closed supramolecular structures. <i>Scientific Reports</i> , <b>2017</b> , 7, 12295	4.9	12
118	Absolute Quantification of Amyloid Propagons by Digital Microfluidics. <i>Analytical Chemistry</i> , <b>2017</b> , 89, 12306-12313	7.8	15
117	Thermodynamics of Polypeptide Supramolecular Assembly in the Short-Chain Limit. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 16134-16142	16.4	24

116	Nanobodies raised against monomeric $\alpha$ -synuclein inhibit fibril formation and destabilize toxic oligomeric species. <i>BMC Biology</i> , <b>2017</b> , 15, 57	7.3	46
115	Nanoscale click-reactive scaffolds from peptide self-assembly. <i>Journal of Nanobiotechnology</i> , <b>2017</b> , 15, 70	9.4	9
114	Gradient-free determination of isoelectric points of proteins on chip. <i>Physical Chemistry Chemical Physics</i> , <b>2017</b> , 19, 23060-23067	3.6	19
113	Scaling behaviour and rate-determining steps in filamentous self-assembly. <i>Chemical Science</i> , <b>2017</b> , 8, 7087-7097	9.4	43
112	Silk micrococoon for protein stabilisation and molecular encapsulation. <i>Nature Communications</i> , <b>2017</b> , 8, 15902	17.4	65
111	Sequential Release of Proteins from Structured Multishell Microcapsules. <i>Biomacromolecules</i> , <b>2017</b> , 18, 3052-3059	6.9	10
110	Mechanism of biosurfactant adsorption to oil/water interfaces from millisecond scale tensiometry measurements. <i>Interface Focus</i> , <b>2017</b> , 7, 20170013	3.9	9
109	Ultrasensitive Measurement of $\text{Ca}^{2+}$ Influx into Lipid Vesicles Induced by Protein Aggregates. <i>Angewandte Chemie</i> , <b>2017</b> , 129, 7858-7862	3.6	6
108	Ultrasensitive Measurement of Ca Influx into Lipid Vesicles Induced by Protein Aggregates. <i>Angewandte Chemie - International Edition</i> , <b>2017</b> , 56, 7750-7754	16.4	51
107	Monomeric and fibrillar $\beta$ -synuclein exert opposite effects on the catalytic cycle that promotes the proliferation of A $\beta$ 2 aggregates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 8005-8010	11.5	27
106	Enhanced Quality Factor Label-free Biosensing with Micro-Cantilevers Integrated into Microfluidic Systems. <i>Analytical Chemistry</i> , <b>2017</b> , 89, 11929-11936	7.8	13
105	On-chip label-free protein analysis with downstream electrodes for direct removal of electrolysis products. <i>Lab on A Chip</i> , <b>2017</b> , 18, 162-170	7.2	28
104	Mutations associated with familial Parkinson's disease alter the initiation and amplification steps of $\beta$ -synuclein aggregation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 10328-33	11.5	159
103	Protein Aggregate-Ligand Binding Assays Based on Microfluidic Diffusional Separation. <i>ChemBioChem</i> , <b>2016</b> , 17, 1920-1924	3.8	10
102	Quantitative analysis of intrinsic and extrinsic factors in the aggregation mechanism of Alzheimer-associated A $\beta$ peptide. <i>Scientific Reports</i> , <b>2016</b> , 6, 18728	4.9	64
101	Physical determinants of the self-replication of protein fibrils. <i>Nature Physics</i> , <b>2016</b> , 12, 874-880	16.2	73
100	Hamiltonian Dynamics of Protein Filament Formation. <i>Physical Review Letters</i> , <b>2016</b> , 116, 038101	7.4	22
99	Fluctuations in the Kinetics of Linear Protein Self-Assembly. <i>Physical Review Letters</i> , <b>2016</b> , 116, 258103	7.4	24

98	Micro- and nanoscale hierarchical structure of core-shell protein microgels. <i>Journal of Materials Chemistry B</i> , <b>2016</b> , 4, 7989-7999	7.3	19
97	Dynamic microfluidic control of supramolecular peptide self-assembly. <i>Nature Communications</i> , <b>2016</b> , 7, 13190	17.4	72
96	Fabrication of fibrillosomes from droplets stabilized by protein nanofibrils at all-aqueous interfaces. <i>Nature Communications</i> , <b>2016</b> , 7, 12934	17.4	95
95	βSynuclein suppresses both the initiation and amplification steps of βSynuclein aggregation via competitive binding to surfaces. <i>Scientific Reports</i> , <b>2016</b> , 6, 36010	4.9	45
94	Particle-Based Monte-Carlo Simulations of Steady-State Mass Transport at Intermediate Péclet Numbers. <i>International Journal of Nonlinear Sciences and Numerical Simulation</i> , <b>2016</b> , 17, 175-183	1.8	20
93	Automated Ex Situ Assays of Amyloid Formation on a Microfluidic Platform. <i>Biophysical Journal</i> , <b>2016</b> , 110, 555-560	2.9	10
92	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> , <b>2016</b> , 113, E1206-15	11.5	130
91	An anticancer drug suppresses the primary nucleation reaction that initiates the production of the toxic Aβ2 aggregates linked with Alzheimer's disease. <i>Science Advances</i> , <b>2016</b> , 2, e1501244	14.3	133
90	Consistent Treatment of Hydrophobicity in Protein Lattice Models Accounts for Cold Denaturation. <i>Physical Review Letters</i> , <b>2016</b> , 116, 078101	7.4	23
89	A Fragment-Based Method of Creating Small-Molecule Libraries to Target the Aggregation of Intrinsically Disordered Proteins. <i>ACS Combinatorial Science</i> , <b>2016</b> , 18, 144-53	3.9	29
88	Microfluidic Diffusion Viscometer for Rapid Analysis of Complex Solutions. <i>Analytical Chemistry</i> , <b>2016</b> , 88, 3488-93	7.8	20
87	An Environmentally Sensitive Fluorescent Dye as a Multidimensional Probe of Amyloid Formation. <i>Journal of Physical Chemistry B</i> , <b>2016</b> , 120, 2087-94	3.4	3
86	Molecular mechanisms of protein aggregation from global fitting of kinetic models. <i>Nature Protocols</i> , <b>2016</b> , 11, 252-72	18.8	342
85	Microfluidic Diffusion Analysis of the Sizes and Interactions of Proteins under Native Solution Conditions. <i>ACS Nano</i> , <b>2016</b> , 10, 333-41	16.7	61
84	Oligomers of Heat-Shock Proteins: Structures That Don't Imply Function. <i>PLoS Computational Biology</i> , <b>2016</b> , 12, e1004756	5	5
83	Synthesis of Nonequilibrium Supramolecular Peptide Polymers on a Microfluidic Platform. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 9589-96	16.4	21
82	Controlling the Physical Dimensions of Peptide Nanotubes by Supramolecular Polymer Coassembly. <i>ACS Nano</i> , <b>2016</b> , 10, 7436-42	16.7	73
81	Elastic instability-mediated actuation by a supra-molecular polymer. <i>Nature Physics</i> , <b>2016</b> , 12, 926-930	16.2	31

80	Amyloid Fibrils as Building Blocks for Natural and Artificial Functional Materials. <i>Advanced Materials</i> , <b>2016</b> , 28, 6546-61	24	292
79	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> , <b>2016</b> , 6, 25288	4.9	48
78	Kinetic analysis reveals the diversity of microscopic mechanisms through which molecular chaperones suppress amyloid formation. <i>Nature Communications</i> , <b>2016</b> , 7, 10948	17.4	153
77	Quantitative analysis of co-oligomer formation by amyloid-beta peptide isoforms. <i>Scientific Reports</i> , <b>2016</b> , 6, 28658	4.9	38
76	Quantitative thermophoretic study of disease-related protein aggregates. <i>Scientific Reports</i> , <b>2016</b> , 6, 22829	4.9	37
75	Electrostatically-guided inhibition of Curli amyloid nucleation by the CsgC-like family of chaperones. <i>Scientific Reports</i> , <b>2016</b> , 6, 24656	4.9	39
74	Kinetics of spontaneous filament nucleation via oligomers: Insights from theory and simulation. <i>Journal of Chemical Physics</i> , <b>2016</b> , 145, 211926	3.9	50
73	Dynamics of heteromolecular filament formation. <i>Journal of Chemical Physics</i> , <b>2016</b> , 145, 175101	3.9	4
72	The S/T-Rich Motif in the DNAJB6 Chaperone Delays Polyglutamine Aggregation and the Onset of Disease in a Mouse Model. <i>Molecular Cell</i> , <b>2016</b> , 62, 272-283	17.6	87
71	Analysis of the length distribution of amyloid fibrils by centrifugal sedimentation. <i>Analytical Biochemistry</i> , <b>2016</b> , 504, 7-13	3.1	10
70	A Microfluidic Platform for Real-Time Detection and Quantification of Protein-Ligand Interactions. <i>Biophysical Journal</i> , <b>2016</b> , 110, 1957-66	2.9	22
69	On the lag phase in amyloid fibril formation. <i>Physical Chemistry Chemical Physics</i> , <b>2015</b> , 17, 7606-18	3.6	421
68	Molecular Rotors Provide Insights into Microscopic Structural Changes During Protein Aggregation. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 10170-9	3.4	27
67	Force generation by the growth of amyloid aggregates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 9524-9	11.5	18
66	Preventing peptide and protein misbehavior. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 5267-8	11.5	7
65	Structural characterization of toxic oligomers that are kinetically trapped during $\beta$ -synuclein fibril formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, E1994-2003	11.5	278
64	Fast flow microfluidics and single-molecule fluorescence for the rapid characterization of $\beta$ -synuclein oligomers. <i>Analytical Chemistry</i> , <b>2015</b> , 87, 8818-26	7.8	65
63	The A $\beta$ 0 and A $\beta$ 2 peptides self-assemble into separate homomolecular fibrils in binary mixtures but cross-react during primary nucleation. <i>Chemical Science</i> , <b>2015</b> , 6, 4215-4233	9.4	91

62	Dynamics of protein aggregation and oligomer formation governed by secondary nucleation. <i>Journal of Chemical Physics</i> , <b>2015</b> , 143, 054901	3.9	36
61	A microfluidic platform for quantitative measurements of effective protein charges and single ion binding in solution. <i>Physical Chemistry Chemical Physics</i> , <b>2015</b> , 17, 12161-7	3.6	15
60	Latent analysis of unmodified biomolecules and their complexes in solution with attomole detection sensitivity. <i>Nature Chemistry</i> , <b>2015</b> , 7, 802-9	17.6	44
59	The length distribution of frangible biofilaments. <i>Journal of Chemical Physics</i> , <b>2015</b> , 143, 164901	3.9	15
58	Single-molecule FRET studies on alpha-synuclein oligomerization of Parkinson's disease genetically related mutants. <i>Scientific Reports</i> , <b>2015</b> , 5, 16696	4.9	69
57	Aggregation-Prone Amyloid- $\beta$ Cu(II) Species Formed on the Millisecond Timescale under Mildly Acidic Conditions. <i>ChemBioChem</i> , <b>2015</b> , 16, 1293-7	3.8	23
56	A mechanistic model of tau amyloid aggregation based on direct observation of oligomers. <i>Nature Communications</i> , <b>2015</b> , 6, 7025	17.4	129
55	Enzymatically Active Microgels from Self-Assembling Protein Nanofibrils for Microflow Chemistry. <i>ACS Nano</i> , <b>2015</b> , 9, 5772-81	16.7	36
54	A molecular chaperone breaks the catalytic cycle that generates toxic A $\beta$ oligomers. <i>Nature Structural and Molecular Biology</i> , <b>2015</b> , 22, 207-213	17.6	268
53	Kinetic theory of protein filament growth: Self-consistent methods and perturbative techniques. <i>International Journal of Modern Physics B</i> , <b>2015</b> , 29, 1530002	1.1	19
52	Lipid vesicles trigger $\beta$ -synuclein aggregation by stimulating primary nucleation. <i>Nature Chemical Biology</i> , <b>2015</b> , 11, 229-34	11.7	355
51	Nucleation-conversion-polymerization reactions of biological macromolecules with prenucleation clusters. <i>Physical Review E</i> , <b>2014</b> , 89, 032712	2.4	34
50	Chemical kinetics for drug discovery to combat protein aggregation diseases. <i>Trends in Pharmacological Sciences</i> , <b>2014</b> , 35, 127-35	13.2	161
49	The amyloid state and its association with protein misfolding diseases. <i>Nature Reviews Molecular Cell Biology</i> , <b>2014</b> , 15, 384-96	48.7	1481
48	Quantification of the concentration of A $\beta$ 2 propagons during the lag phase by an amyloid chain reaction assay. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 219-25	16.4	102
47	Polymer physics inspired approaches for the study of the mechanical properties of amyloid fibrils. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , <b>2014</b> , 52, 281-292	2.6	12
46	Interaction of the molecular chaperone DNAJB6 with growing amyloid-beta 42 (A $\beta$ 2) aggregates leads to sub-stoichiometric inhibition of amyloid formation. <i>Journal of Biological Chemistry</i> , <b>2014</b> , 289, 31066-76	5.4	106
45	Differences in nucleation behavior underlie the contrasting aggregation kinetics of the A $\beta$ 0 and A $\beta$ 2 peptides. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 9384-9	11.5	294

44	Ostwald's rule of stages governs structural transitions and morphology of dipeptide supramolecular polymers. <i>Nature Communications</i> , <b>2014</b> , 5, 5219	17.4	150
43	Sonochemically-induced spectral shift as a probe of green fluorescent protein release from nano capsules. <i>RSC Advances</i> , <b>2014</b> , 4, 10303-10309	3.7	1
42	Single point mutations induce a switch in the molecular mechanism of the aggregation of the Alzheimer's disease associated A $\beta$ 2 peptide. <i>ACS Chemical Biology</i> , <b>2014</b> , 9, 378-82	4.9	20
41	Quantitative Analysis of Diffusive Reactions at the Solid-Liquid Interface in Finite Systems. <i>Journal of Physical Chemistry Letters</i> , <b>2014</b> , 5, 695-9	6.4	7
40	Solution conditions determine the relative importance of nucleation and growth processes in $\beta$ synuclein aggregation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 7671-6	11.5	395
39	Nanoscale spatially resolved infrared spectra from single microdroplets. <i>Lab on A Chip</i> , <b>2014</b> , 14, 1315-9	7.2	41
38	The role of stable $\beta$ synuclein oligomers in the molecular events underlying amyloid formation. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 3859-68	16.4	163
37	The physical chemistry of the amyloid phenomenon: thermodynamics and kinetics of filamentous protein aggregation. <i>Essays in Biochemistry</i> , <b>2014</b> , 56, 11-39	7.6	42
36	Targeting the intrinsically disordered structural ensemble of $\beta$ synuclein by small molecules as a potential therapeutic strategy for Parkinson's disease. <i>PLoS ONE</i> , <b>2014</b> , 9, e87133	3.7	98
35	Asymptotic solutions of the Oosawa model for the length distribution of biofilaments. <i>Journal of Chemical Physics</i> , <b>2014</b> , 140, 194906	3.9	21
34	Crucial role of nonspecific interactions in amyloid nucleation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 17869-74	11.5	116
33	Self-Assembly of Amyloid Fibrils That Display Active Enzymes. <i>ChemCatChem</i> , <b>2014</b> , 6, 1961-1968	5.2	30
32	Role of filament annealing in the kinetics and thermodynamics of nucleated polymerization. <i>Journal of Chemical Physics</i> , <b>2014</b> , 140, 214904	3.9	33
31	Atomic structure and hierarchical assembly of a cross- $\beta$ amyloid fibril. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 5468-73	11.5	401
30	Proliferation of amyloid- $\beta$ 2 aggregates occurs through a secondary nucleation mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 9758-63	11.5	867
29	Electrostatic effects in filamentous protein aggregation. <i>Biophysical Journal</i> , <b>2013</b> , 104, 1116-26	2.9	74
28	The Kinetics and Mechanisms of Amyloid Formation <b>2013</b> , 183-209		8
27	Detailed analysis of the energy barriers for amyloid fibril growth. <i>Angewandte Chemie - International Edition</i> , <b>2012</b> , 51, 5247-51	16.4	88

26	Twisting transition between crystalline and fibrillar phases of aggregated peptides. <i>Physical Review Letters</i> , <b>2012</b> , 109, 158101	7.4	47
25	From macroscopic measurements to microscopic mechanisms of protein aggregation. <i>Journal of Molecular Biology</i> , <b>2012</b> , 421, 160-71	6.5	331
24	Direct observation of the interconversion of normal and toxic forms of $\beta$ -synuclein. <i>Cell</i> , <b>2012</b> , 149, 1048-56.2	5.2	588
23	Analyse der Energiebarrieren für das Wachstum von Amyloidfibrillen. <i>Angewandte Chemie</i> , <b>2012</b> , 124, 5339-5344	3.6	4
22	Connecting macroscopic observables and microscopic assembly events in amyloid formation using coarse grained simulations. <i>PLoS Computational Biology</i> , <b>2012</b> , 8, e1002692	5	58
21	Binding of the molecular chaperone B-crystallin to A $\beta$ amyloid fibrils inhibits fibril elongation. <i>Biophysical Journal</i> , <b>2011</b> , 101, 1681-9	2.9	122
20	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> , <b>2011</b> , 135, 065106	3.9	132
19	Metastability of native proteins and the phenomenon of amyloid formation. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 14160-3	16.4	305
18	Nucleated polymerization with secondary pathways. I. Time evolution of the principal moments. <i>Journal of Chemical Physics</i> , <b>2011</b> , 135, 065105	3.9	226
17	Nanomechanics of functional and pathological amyloid materials. <i>Nature Nanotechnology</i> , <b>2011</b> , 6, 469-738.7	3.7	590
16	Conserved C-terminal charge exerts a profound influence on the aggregation rate of $\beta$ -synuclein. <i>Journal of Molecular Biology</i> , <b>2011</b> , 411, 329-33	6.5	76
15	Population of nonnative states of lysozyme variants drives amyloid fibril formation. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 7737-7743	16.4	67
14	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> , <b>2011</b> , 108, 14746-51	11.5	108
13	Relationship between prion propensity and the rates of individual molecular steps of fibril assembly. <i>Journal of Biological Chemistry</i> , <b>2011</b> , 286, 12101-7	5.4	25
12	Nucleated polymerization with secondary pathways. III. Equilibrium behavior and oligomer populations. <i>Journal of Chemical Physics</i> , <b>2011</b> , 135, 065107	3.9	82
11	Nanostructured films from hierarchical self-assembly of amyloidogenic proteins. <i>Nature Nanotechnology</i> , <b>2010</b> , 5, 204-7	28.7	301
10	Quantitative approaches for characterising fibrillar protein nanostructures. <i>Materials Research Society Symposia Proceedings</i> , <b>2010</b> , 1274, 1		
9	Frequency factors in a landscape model of filamentous protein aggregation. <i>Physical Review Letters</i> , <b>2010</b> , 104, 228101	7.4	55

8	The interaction of alphaB-crystallin with mature alpha-synuclein amyloid fibrils inhibits their elongation. <i>Biophysical Journal</i> , <b>2010</b> , 98, 843-51	2.9	120
7	An analytical solution to the kinetics of breakable filament assembly. <i>Science</i> , <b>2009</b> , 326, 1533-7	33.3	804
6	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> , <b>2007</b> , 104, 10016-21	11.5	167
5	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> , <b>2006</b> , 360, 497-509	6.5	54
4	Thermodynamic and kinetic design principles for protein aggregation inhibitors		2
3	Rapid Fractionation and Characterisation of Alpha-Synuclein Oligomers in Solution		2
2	Microfluidic Antibody Affinity Profiling for In-Solution Characterisation of Alloantibody - HLA Interactions in Human Serum		6
1	Amplification, not spreading limits rate of tau aggregate accumulation in Alzheimer's disease		1