Cait E Macphee

List of Publications by Year
in descending order

85 papers	7,116 citations	76196 40 h-index	58464 82 g-index
97 all docs	97 docs citations	97 times ranked	7675 citing authors

#	Article	IF	Citations
1	Characterization of the nanoscale properties of individual amyloid fibrils. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 15806-15811.	3.3	579
2	High-resolution molecular structure of a peptide in an amyloid fibril determined by magic angle spinning NMR spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 711-716.	3.3	495
3	Atomic structure and hierarchical assembly of a cross-Î² amyloid fibril. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5468-5473.	3.3	479
4	Giving structure to the biofilm matrix: an overview of individual strategies and emerging common themes. FEMS Microbiology Reviews, 2015, 39, 649-669.	3.9	454
5	Molecular conformation of a peptide fragment of transthyretin in an amyloid fibril. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 16748-16753.	3.3	249
6	BslA is a self-assembling bacterial hydrophobin that coats the <i>Bacillus subtilis</i> biofilm. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13600-13605.	3.3	244
7	The formation of spherulites by amyloid fibrils of bovine insulin. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 14420-14424.	3.3	232
8	Amyloid Fibril Formation by Bovine Milk Îº-Casein and Its Inhibition by the Molecular Chaperones Î±S- and Î²-Casein. Biochemistry, 2005, 44, 17027-17036.	1.2	193
9	Ultrastructural Organization of Amyloid Fibrils byAtomic Force Microscopy. Biophysical Journal, 2000, 79, 3282-3293.	0.2	185
10	Functionalised amyloid fibrils for roles in cell adhesion. Biomaterials, 2008, 29, 1553-1562.	5.7	180
11	Amyloid Fibril Formation by Lens Crystallin Proteins and Its Implications for Cataract Formation. Journal of Biological Chemistry, 2004, 279, 3413-3419.	1.6	166
12	Mimicking phosphorylation of Î±B-crystallin affects its chaperone activity. Biochemical Journal, 2007, 401, 129-141.	1.7	159
13	Formation of Mixed Fibrils Demonstrates the Generic Nature and Potential Utility of Amyloid Nanostructures. Journal of the American Chemical Society, 2000, 122, 12707-12713.	6.6	155
14	Altered aggregation properties of mutant Î³-crystallins cause inherited cataract. EMBO Journal, 2002, 21, 6005-6014.	3.5	147
15	Cytochrome Display on Amyloid Fibrils. Journal of the American Chemical Society, 2006, 128, 2162-2163.	6.6	146
16	Engineered and designed peptide-based fibrous biomaterials. Current Opinion in Solid State and Materials Science, 2004, 8, 141-149.	5.6	137
17	Human Apolipoprotein C-II Forms Twisted Amyloid Ribbons and Closed Loopsâ€. Biochemistry, 2000, 39, 8276-8283.	1.2	130
18	Perturbation of the Stability of Amyloid Fibrils through Alteration of Electrostatic Interactions. Biophysical Journal, 2011, 100, 2783-2791.	0.2	121

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19	Efficient Energy Transfer within Self-Assembling Peptide Fibers: A Route to Light-Harvesting Nanomaterials. Journal of the American Chemical Society, 2009, 131, 12520-12521.	6.6	119
20	Protein folding and misfolding: a paradigm of selfâ€"assembly and regulation in complex biological systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2003, 361, 1205-1222.	1.6	111
21	Functional Amyloid and Other Protein Fibers in the Biofilm Matrix. Journal of Molecular Biology, 2018, 430, 3642-3656.	2.0	103
22	High Hydrostatic Pressure Dissociates Early Aggregates of TTR105â€"115, but not the Mature Amyloid Fibrils. Journal of Molecular Biology, 2005, 347, 903-909.	2.0	95
23	Characterisation of Amyloid Fibril Formation by Small Heat-shock Chaperone Proteins Human Î±A-, Î±B- and R120G Î±B-Crystallins. Journal of Molecular Biology, 2007, 372, 470-484.	2.0	93
24	A Mass-Spectrometry-Based Framework To Define the Extent of Disorder in Proteins. Analytical Chemistry, 2014, 86, 10979-10991.	3.2	91
25	Chemical dissection and reassembly of amyloid fibrils formed by a peptide fragment of transthyretin11Edited by F. E. Cohen. Journal of Molecular Biology, 2000, 297, 1203-1215.	2.0	87
26	Economic significance of biofilms: a multidisciplinary and cross-sectoral challenge. Npj Biofilms and Microbiomes, 2022, 8, .	2.9	86
27	Higher Order Amyloid Fibril Structure by MAS NMR and DNP Spectroscopy. Journal of the American Chemical Society, 2013, 135, 19237-19247.	6.6	82
28	X-ray Scattering Study of the Effect of Hydration on the Cross-Î² Structure of Amyloid Fibrils. Journal of the American Chemical Society, 2006, 128, 11738-11739.	6.6	76
29	Mass spectrometry methods for intrinsically disordered proteins. Analyst, The, 2013, 138, 32-42.	1.7	76
30	Determination of Sedimentation Coefficients for Small Peptides. Biophysical Journal, 1998, 74, 466-474.	0.2	74
31	Modification of Fluorophore Photophysics through Peptide-Driven Self-Assembly. Journal of the American Chemical Society, 2008, 130, 5487-5491.	6.6	72
32	Interfacial self-assembly of a bacterial hydrophobin. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5419-5424.	3.3	68
33	Ion mobility mass spectrometry for peptide analysis. Methods, 2011, 54, 454-461.	1.9	65
34	The Circularization of Amyloid Fibrils Formed by Apolipoprotein C-II. Biophysical Journal, 2003, 85, 3979-3990.	0.2	62
35	Just in case it rains: building a hydrophobic biofilm the Bacillus subtilis way. Current Opinion in Microbiology, 2016, 34, 7-12.	2.3	58
36	Bifunctionality of a biofilm matrix protein controlled by redox state. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E6184-E6191.	3.3	57

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37	The Component Polypeptide Chains of Bovine Insulin Nucleate or Inhibit Aggregation of the Parent Protein in a Conformation-dependent Manner. Journal of Molecular Biology, 2006, 360, 497-509.	2.0	56
38	Possibilities for â€˜smartâ€™ materials exploiting the self-assembly of polypeptides into fibrils. Soft Matter, 2008, 4, 647.	1.2	56
39	High-Resolution MAS NMR Analysis of PI3-SH3 Amyloid Fibrils: Backbone Conformation and Implications for Protofilament Assembly and Structure,. Biochemistry, 2010, 49, 7474-7484.	1.2	52
40	Soft matter science and the COVID-19 pandemic. Soft Matter, 2020, 16, 8310-8324.	1.2	51
41	Pulcherrimin formation controls growth arrest of the <i>Bacillus subtilis</i> biofilm. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13553-13562.	3.3	46
42	Relating gas phase to solution conformations: Lessons from disordered proteins. Proteomics, 2015, 15, 2872-2883.	1.3	42
43	Conformational dynamics of Î±-synuclein: insights from mass spectrometry. Analyst, The, 2015, 140, 3070-3081.	1.7	41
44	Inherent Variability in the Kinetics of Autocatalytic Protein Self-Assembly. Physical Review Letters, 2014, 113, 098101.	2.9	40
45	Morphology and mechanical stability of amyloid-like peptide fibrils. Journal of Materials Science: Materials in Medicine, 2007, 18, 1325-1331.	1.7	38
46	Trifluoroethanol induces the self-association of specific amphipathic peptides. FEBS Letters, 1997, 416, 265-268.	1.3	37
47	Competition between Primary Nucleation and Autocatalysis in Amyloid Fibril Self-Assembly. Biophysical Journal, 2015, 108, 632-643.	0.2	37
48	Formation of functional, nonâ€amyloidogenic fibres by recombinant <i>Bacillus subtilis</i> TasA. Molecular Microbiology, 2018, 110, 897-913.	1.2	37
49	Mechanistic and environmental control of the prevalence and lifetime of amyloid oligomers. Nature Communications, 2013, 4, 1891.	5.8	36
50	Shedding Light on the Dockâ€œLock Mechanism in Amyloid Fibril Growth Using Markov State Models. Journal of Physical Chemistry Letters, 2015, 6, 1076-1081.	2.1	35
51	Characterizing Early Aggregates Formed by an Amyloidogenic Peptide by Mass Spectrometry. Angewandte Chemie - International Edition, 2010, 49, 9448-9451.	7.2	33
52	The Diverse Structures and Functions of Surfactant Proteins. Trends in Biochemical Sciences, 2016, 41, 610-620.	3.7	33
53	Gender differences in conceptual understanding of Newtonian mechanics: a UK cross-institution comparison. European Journal of Physics, 2013, 34, 421-434.	0.3	32
54	Dissecting the Dynamic Conformations of the Metamorphic Protein Lymphotactin. Journal of Physical Chemistry B, 2014, 118, 12348-12359.	1.2	32

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55	Quantifying Disorder through Conditional Entropy: An Application to Fluid Mixing. PLoS ONE, 2013, 8, e65617.	1.1	32
56	Membrainy: a â€˜smartâ€™, unified membrane analysis tool. Source Code for Biology and Medicine, 2015, 10, 3.	1.7	29
57	A Kinetic Study of Ovalbumin Fibril Formation: The Importance of Fragmentation and End-Joining. Biophysical Journal, 2015, 108, 2300-2311.	0.2	28
58	The Bacterial Hydrophobin BslA is a Switchable Ellipsoidal Janus Nanocolloid. Langmuir, 2015, 31, 11558-11563.	1.6	28
59	Helixâ^'Helix Association of a Lipid-Bound Amphipathic Î±-Helix Derived from Apolipoprotein C-IIâ€. Biochemistry, 1999, 38, 10878-10884.	1.2	25
60	Accurate Determination of Interstrand Distances and Alignment in Amyloid Fibrils by Magic Angle Spinning NMR. Journal of Physical Chemistry B, 2010, 114, 13555-13561.	1.2	25
61	The majority of the matrix protein TapA is dispensable for <i>Bacillus subtilis</i> colony biofilm architecture. Molecular Microbiology, 2020, 114, 920-933.	1.2	21
62	Founder cell configuration drives competitive outcome within colony biofilms. ISME Journal, 2022, 16, 1512-1522.	4.4	20
63	Apolipoprotein C-II39-62Activates Lipoprotein Lipase by Direct Lipid-Independent Bindingâ€. Biochemistry, 2000, 39, 3433-3440.	1.2	19
64	Early stages of insulin fibrillogenesis examined with ion mobility mass spectrometry and molecular modelling. Analyst, The, 2015, 140, 7000-7011.	1.7	19
65	Connecting the dots between bacterial biofilms and ice cream. Physical Biology, 2015, 12, 063001.	0.8	18
66	Natural variations in the biofilm-associated protein BslA from the genus Bacillus. Scientific Reports, 2017, 7, 6730.	1.6	17
67	Molecular cooking: physical transformations in Chinese â€˜centuryâ€™ eggs. Soft Matter, 2009, 5, 2725.	1.2	14
68	Analytical methods for structural ensembles and dynamics of intrinsically disordered proteins. Biophysical Reviews, 2016, 8, 429-439.	1.5	14
69	Adsorption of the natural protein surfactant Rsn-2 onto liquid interfaces. Physical Chemistry Chemical Physics, 2017, 19, 8584-8594.	1.3	14
70	Electron capture dissociation and drift tube ion mobility-mass spectrometry coupled with site directed mutations provide insights into the conformational diversity of a metamorphic protein. Physical Chemistry Chemical Physics, 2015, 17, 10538-10550.	1.3	13
71	Effect of Protonation State on the Stability of Amyloid Oligomers Assembled from TTR(105â€"115). Journal of Physical Chemistry Letters, 2013, 4, 1233-1238.	2.1	12
72	A phenomenological description of BslA assemblies across multiple length scales. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150131.	1.6	12

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73	The Conformation of Interfacially Adsorbed Ranaspumin-2 Is an Arrested State on the Unfolding Pathway. Biophysical Journal, 2016, 111, 732-742.	0.2	12
74	Initial Steps of Amyloidogenic Peptide Assembly Revealed by Coldâ€Ion Spectroscopy. Angewandte Chemie - International Edition, 2018, 57, 213-217.	7.2	10
75	Mass Spectrometry to Characterize the Binding of a Peptide to a Lipid Surface. Analytical Biochemistry, 1999, 275, 22-29.	1.1	9
76	Comment on â€œRivalry in <i>Bacillus subtilis</i> colonies: enemy or family?â€ Soft Matter, 2020, 16, 3344-3346.	1.2	8
77	Biofilm hydrophobicity in environmental isolates of Bacillus subtilis. Microbiology (United Kingdom), 2021, 167, .	0.7	8
78	BslA-stabilized emulsion droplets with designed microstructure. Interface Focus, 2017, 7, 20160124.	1.5	7
79	Expression and purification of a recombinant amyloidogenic peptide from transthyretin for solid-state NMR spectroscopy. Protein Expression and Purification, 2010, 70, 101-108.	0.6	5
80	The association and aggregation of the metamorphic chemokine lymphotactin with fondaparinux: from nm molecular complexes to Î¼m molecular assemblies. Chemical Communications, 2016, 52, 394-397.	2.2	4
81	Functionalised fibrils for bio-nanotechnology. , 2006, , .		3
82	Initial Steps of Amyloidogenic Peptide Assembly Revealed by Coldâ€Ion Spectroscopy. Angewandte Chemie, 2018, 130, 219-223.	1.6	2
83	Amyloid Formation. , 2013, , 67-75.		1
84	Amyloid Protein Biomaterials. , 2013, , 76-81.		1
85	The formation of amyloid fibrils by relaxin. , 2001, , 399-404.		0