

# Cait E Macphee

## List of Publications by Year in descending order

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85  
papers

7,116  
citations

76326

40  
h-index

58581

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.	7.1	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.	7.1	495
3	Atomic structure and hierarchical assembly of a cross- $\beta^2$ amyloid fibril. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5468-5473.	7.1	479
4	Giving structure to the biofilm matrix: an overview of individual strategies and emerging common themes. FEMS Microbiology Reviews, 2015, 39, 649-669.	8.6	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.	7.1	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.	7.1	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.	7.1	232
8	Amyloid Fibril Formation by Bovine Milk $\beta$ -Casein and Its Inhibition by the Molecular Chaperones $\alpha$ -S- and $\beta$ -Casein. Biochemistry, 2005, 44, 17027-17036.	2.5	193
9	Ultrastructural Organization of Amyloid Fibrils by Atomic Force Microscopy. Biophysical Journal, 2000, 79, 3282-3293.	0.5	185
10	Functionalised amyloid fibrils for roles in cell adhesion. Biomaterials, 2008, 29, 1553-1562.	11.4	180
11	Amyloid Fibril Formation by Lens Crystallin Proteins and Its Implications for Cataract Formation. Journal of Biological Chemistry, 2004, 279, 3413-3419.	3.4	166
12	Mimicking phosphorylation of $\beta$ -crystallin affects its chaperone activity. Biochemical Journal, 2007, 401, 129-141.	3.7	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.	13.7	155
14	Altered aggregation properties of mutant $\beta^3$ -crystallins cause inherited cataract. EMBO Journal, 2002, 21, 6005-6014.	7.8	147
15	Cytochrome Display on Amyloid Fibrils. Journal of the American Chemical Society, 2006, 128, 2162-2163.	13.7	146
16	Engineered and designed peptide-based fibrous biomaterials. Current Opinion in Solid State and Materials Science, 2004, 8, 141-149.	11.5	137
17	Human Apolipoprotein C-II Forms Twisted Amyloid Ribbons and Closed Loops. Biochemistry, 2000, 39, 8276-8283.	2.5	130
18	Perturbation of the Stability of Amyloid Fibrils through Alteration of Electrostatic Interactions. Biophysical Journal, 2011, 100, 2783-2791.	0.5	121

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19	Efficient Energy Transfer within Self-Assembling Peptide Fibers: A Route to Light-Harvesting Nanomaterials. <i>Journal of the American Chemical Society</i> , 2009, 131, 12520-12521.	13.7	119
20	Protein folding and misfolding: a paradigm of self-assembly and regulation in complex biological systems. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2003, 361, 1205-1222.	3.4	111
21	Functional Amyloid and Other Protein Fibers in the Biofilm Matrix. <i>Journal of Molecular Biology</i> , 2018, 430, 3642-3656.	4.2	103
22	High Hydrostatic Pressure Dissociates Early Aggregates of TTR105K115, but not the Mature Amyloid Fibrils. <i>Journal of Molecular Biology</i> , 2005, 347, 903-909.	4.2	95
23	Characterisation of Amyloid Fibril Formation by Small Heat-shock Chaperone Proteins Human $\alpha$ A-, $\alpha$ B- and R120G $\alpha$ B-Crystallins. <i>Journal of Molecular Biology</i> , 2007, 372, 470-484.	4.2	93
24	A Mass-Spectrometry-Based Framework To Define the Extent of Disorder in Proteins. <i>Analytical Chemistry</i> , 2014, 86, 10979-10991.	6.5	91
25	Chemical dissection and reassembly of amyloid fibrils formed by a peptide fragment of transthyretin11Edited by F. E. Cohen. <i>Journal of Molecular Biology</i> , 2000, 297, 1203-1215.	4.2	87
26	Economic significance of biofilms: a multidisciplinary and cross-sectoral challenge. <i>Npj Biofilms and Microbiomes</i> , 2022, 8, .	6.4	86
27	Higher Order Amyloid Fibril Structure by MAS NMR and DNP Spectroscopy. <i>Journal of the American Chemical Society</i> , 2013, 135, 19237-19247.	13.7	82
28	X-ray Scattering Study of the Effect of Hydration on the Cross- $\beta$ Structure of Amyloid Fibrils. <i>Journal of the American Chemical Society</i> , 2006, 128, 11738-11739.	13.7	76
29	Mass spectrometry methods for intrinsically disordered proteins. <i>Analyst</i> , The, 2013, 138, 32-42.	3.5	76
30	Determination of Sedimentation Coefficients for Small Peptides. <i>Biophysical Journal</i> , 1998, 74, 466-474.	0.5	74
31	Modification of Fluorophore Photophysics through Peptide-Driven Self-Assembly. <i>Journal of the American Chemical Society</i> , 2008, 130, 5487-5491.	13.7	72
32	Interfacial self-assembly of a bacterial hydrophobin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 5419-5424.	7.1	68
33	Ion mobility mass spectrometry for peptide analysis. <i>Methods</i> , 2011, 54, 454-461.	3.8	65
34	The Circularization of Amyloid Fibrils Formed by Apolipoprotein C-II. <i>Biophysical Journal</i> , 2003, 85, 3979-3990.	0.5	62
35	Just in case it rains: building a hydrophobic biofilm the <i>Bacillus subtilis</i> way. <i>Current Opinion in Microbiology</i> , 2016, 34, 7-12.	5.1	58
36	Bifunctionality of a biofilm matrix protein controlled by redox state. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E6184-E6191.	7.1	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. <i>Journal of Molecular Biology</i> , 2006, 360, 497-509.	4.2	56
38	Possibilities for "smart" materials exploiting the self-assembly of polypeptides into fibrils. <i>Soft Matter</i> , 2008, 4, 647.	2.7	56
39	High-Resolution MAS NMR Analysis of PI3-SH3 Amyloid Fibrils: Backbone Conformation and Implications for Protofilament Assembly and Structure. <i>Biochemistry</i> , 2010, 49, 7474-7484.	2.5	52
40	Soft matter science and the COVID-19 pandemic. <i>Soft Matter</i> , 2020, 16, 8310-8324.	2.7	51
41	Pulcherrimin formation controls growth arrest of the <i>Bacillus subtilis</i> biofilm. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 13553-13562.	7.1	46
42	Relating gas phase to solution conformations: Lessons from disordered proteins. <i>Proteomics</i> , 2015, 15, 2872-2883.	2.2	42
43	Conformational dynamics of $\beta$ -synuclein: insights from mass spectrometry. <i>Analyst</i> , 2015, 140, 3070-3081.	3.5	41
44	Inherent Variability in the Kinetics of Autocatalytic Protein Self-Assembly. <i>Physical Review Letters</i> , 2014, 113, 098101.	7.8	40
45	Morphology and mechanical stability of amyloid-like peptide fibrils. <i>Journal of Materials Science: Materials in Medicine</i> , 2007, 18, 1325-1331.	3.6	38
46	Trifluoroethanol induces the self-association of specific amphipathic peptides. <i>FEBS Letters</i> , 1997, 416, 265-268.	2.8	37
47	Competition between Primary Nucleation and Autocatalysis in Amyloid Fibril Self-Assembly. <i>Biophysical Journal</i> , 2015, 108, 632-643.	0.5	37
48	Formation of functional, non-amyloidogenic fibres by recombinant <i>Bacillus subtilis</i> TasA. <i>Molecular Microbiology</i> , 2018, 110, 897-913.	2.5	37
49	Mechanistic and environmental control of the prevalence and lifetime of amyloid oligomers. <i>Nature Communications</i> , 2013, 4, 1891.	12.8	36
50	Shedding Light on the Dock-Lock Mechanism in Amyloid Fibril Growth Using Markov State Models. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 1076-1081.	4.6	35
51	Characterizing Early Aggregates Formed by an Amyloidogenic Peptide by Mass Spectrometry. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 9448-9451.	13.8	33
52	The Diverse Structures and Functions of Surfactant Proteins. <i>Trends in Biochemical Sciences</i> , 2016, 41, 610-620.	7.5	33
53	Gender differences in conceptual understanding of Newtonian mechanics: a UK cross-institution comparison. <i>European Journal of Physics</i> , 2013, 34, 421-434.	0.6	32
54	Dissecting the Dynamic Conformations of the Metamorphic Protein Lymphotactin. <i>Journal of Physical Chemistry B</i> , 2014, 118, 12348-12359.	2.6	32

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55	Quantifying Disorder through Conditional Entropy: An Application to Fluid Mixing. <i>PLoS ONE</i> , 2013, 8, e65617.	2.5	32
56	Membrainy: a "smart"™, unified membrane analysis tool. <i>Source Code for Biology and Medicine</i> , 2015, 10, 3.	1.7	29
57	A Kinetic Study of Ovalbumin Fibril Formation: The Importance of Fragmentation and End-Joining. <i>Biophysical Journal</i> , 2015, 108, 2300-2311.	0.5	28
58	The Bacterial Hydrophobin BslA is a Switchable Ellipsoidal Janus Nanocolloid. <i>Langmuir</i> , 2015, 31, 11558-11563.	3.5	28
59	Helix~Helix Association of a Lipid-Bound Amphipathic Î±-Helix Derived from Apolipoprotein C-II. <i>Biochemistry</i> , 1999, 38, 10878-10884.	2.5	25
60	Accurate Determination of Interstrand Distances and Alignment in Amyloid Fibrils by Magic Angle Spinning NMR. <i>Journal of Physical Chemistry B</i> , 2010, 114, 13555-13561.	2.6	25
61	The majority of the matrix protein TapA is dispensable for <i>Bacillus subtilis</i> colony biofilm architecture. <i>Molecular Microbiology</i> , 2020, 114, 920-933.	2.5	21
62	Founder cell configuration drives competitive outcome within colony biofilms. <i>ISME Journal</i> , 2022, 16, 1512-1522.	9.8	20
63	Apolipoprotein C-II39-62Activates Lipoprotein Lipase by Direct Lipid-Independent Binding. <i>Biochemistry</i> , 2000, 39, 3433-3440.	2.5	19
64	Early stages of insulin fibrillogenesis examined with ion mobility mass spectrometry and molecular modelling. <i>Analyst</i> , The, 2015, 140, 7000-7011.	3.5	19
65	Connecting the dots between bacterial biofilms and ice cream. <i>Physical Biology</i> , 2015, 12, 063001.	1.8	18
66	Natural variations in the biofilm-associated protein BslA from the genus <i>Bacillus</i> . <i>Scientific Reports</i> , 2017, 7, 6730.	3.3	17
67	Molecular cooking: physical transformations in Chinese "century"™ eggs. <i>Soft Matter</i> , 2009, 5, 2725.	2.7	14
68	Analytical methods for structural ensembles and dynamics of intrinsically disordered proteins. <i>Biophysical Reviews</i> , 2016, 8, 429-439.	3.2	14
69	Adsorption of the natural protein surfactant Rsn-2 onto liquid interfaces. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 8584-8594.	2.8	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. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 10538-10550.	2.8	13
71	Effect of Protonation State on the Stability of Amyloid Oligomers Assembled from TTR(105~115). <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 1233-1238.	4.6	12
72	A phenomenological description of BslA assemblies across multiple length scales. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016, 374, 20150131.	3.4	12

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73	The Conformation of Interfacially Adsorbed Rana spumini-2 Is an Arrested State on the Unfolding Pathway. <i>Biophysical Journal</i> , 2016, 111, 732-742.	0.5	12
74	Initial Steps of Amyloidogenic Peptide Assembly Revealed by Cold-Atom Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 213-217.	13.8	10
75	Mass Spectrometry to Characterize the Binding of a Peptide to a Lipid Surface. <i>Analytical Biochemistry</i> , 1999, 275, 22-29.	2.4	9
76	Comment on "Rivalry in <i>Bacillus subtilis</i> colonies: enemy or family?" <i>Soft Matter</i> , 2020, 16, 3344-3346.	2.7	8
77	Biofilm hydrophobicity in environmental isolates of <i>Bacillus subtilis</i> . <i>Microbiology (United Kingdom)</i> , 2021, 167, .	1.8	8
78	BslA-stabilized emulsion droplets with designed microstructure. <i>Interface Focus</i> , 2017, 7, 20160124.	3.0	7
79	Expression and purification of a recombinant amyloidogenic peptide from transthyretin for solid-state NMR spectroscopy. <i>Protein Expression and Purification</i> , 2010, 70, 101-108.	1.3	5
80	The association and aggregation of the metamorphic chemokine lymphotactin with fondaparinux: from nm molecular complexes to 14m molecular assemblies. <i>Chemical Communications</i> , 2016, 52, 394-397.	4.1	4
81	Functionalised fibrils for bio-nanotechnology. , 2006, , .		3
82	Initial Steps of Amyloidogenic Peptide Assembly Revealed by Cold-Atom Spectroscopy. <i>Angewandte Chemie</i> , 2018, 130, 219-223.	2.0	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