

# Andrew J Baldwin

## List of Publications by Year in descending order

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Version: 2024-02-01

64  
papers

7,773  
citations

109321

35  
h-index

118850

62  
g-index

76  
all docs

76  
docs citations

76  
times ranked

9505  
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantitative chemical exchange saturation transfer imaging of nuclear overhauser effects in acute ischemic stroke. <i>Magnetic Resonance in Medicine</i> , 2022, , .	3.0	2
2	Reductive site-selective atypical <i>C</i> , <i>Z</i> -type/N2-C2 cleavage allows C-terminal protein amidation. <i>Science Advances</i> , 2022, 8, eabl8675.	10.3	1
3	Pathogen-sugar interactions revealed by universal saturation transfer analysis. <i>Science</i> , 2022, 377, .	12.6	24
4	Cell-permeable lanthanide-platinum anti-cancer prodrugs. <i>Dalton Transactions</i> , 2021, 50, 8761-8767.	3.3	6
5	Fast Molecular Compression by a Hyperthermal Collision Gives Bond-Selective Mechanochemistry. <i>Physical Review Letters</i> , 2021, 126, 056001.	7.8	22
6	A weakened interface in the P182L variant of HSP27 associated with severe Charcot-Marie-Tooth neuropathy causes aberrant binding to interacting proteins. <i>EMBO Journal</i> , 2021, 40, e103811.	7.8	14
7	Post-translational insertion of boron in proteins to probe and modulate function. <i>Nature Chemical Biology</i> , 2021, 17, 1245-1261.	8.0	15
8	Light-driven post-translational installation of reactive protein side chains. <i>Nature</i> , 2020, 585, 530-537.	27.8	100
9	Conditional Disorder in Small Heat-shock Proteins. <i>Journal of Molecular Biology</i> , 2020, 432, 3033-3049.	4.2	21
10	Dynamic design: manipulation of millisecond timescale motions on the energy landscape of cyclophilin A. <i>Chemical Science</i> , 2020, 11, 2670-2680.	7.4	16
11	Local frustration determines loop opening during the catalytic cycle of an oxidoreductase. <i>ELife</i> , 2020, 9, .	6.0	13
12	INDIANA: An in-cell diffusion method to characterize the size, abundance and permeability of cells. <i>Journal of Magnetic Resonance</i> , 2019, 302, 1-13.	2.1	11
13	HspB1 phosphorylation regulates its intramolecular dynamics and mechanosensitive molecular chaperone interaction with filamin C. <i>Science Advances</i> , 2019, 5, eaav8421.	10.3	52
14	Local unfolding of the HSP27 monomer regulates chaperone activity. <i>Nature Communications</i> , 2019, 10, 1068.	12.8	93
15	Structural principles that enable oligomeric small heat-shock protein paralogs to evolve distinct functions. <i>Science</i> , 2018, 359, 930-935.	12.6	51
16	Selective Radical Trifluoromethylation of Native Residues in Proteins. <i>Journal of the American Chemical Society</i> , 2018, 140, 1568-1571.	13.7	102
17	Measuring Diffusion Constants of Invisible Protein Conformers by Triple-Quantum <sup>1</sup> H CPMG Relaxation Dispersion. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 16777-16780.	13.8	17
18	Measuring Diffusion Constants of Invisible Protein Conformers by Triple-Quantum <sup>1</sup> H CPMG Relaxation Dispersion. <i>Angewandte Chemie</i> , 2018, 130, 17019-17022.	2.0	5

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19	Formation of a Secretion-Competent Protein Complex by a Dynamic Wrap-around Binding Mechanism. <i>Journal of Molecular Biology</i> , 2018, 430, 3157-3169.	4.2	5
20	The role of interfacial lipids in stabilizing membrane protein oligomers. <i>Nature</i> , 2017, 541, 421-424.	27.8	344
21	Proline isomerization in the C-terminal region of HSP27. <i>Cell Stress and Chaperones</i> , 2017, 22, 639-651.	2.9	24
22	Monitoring the Disassembly of Virus-like Particles by <sup>19</sup> F-NMR. <i>Journal of the American Chemical Society</i> , 2017, 139, 5277-5280.	13.7	23
23	Accommodating Protein Dynamics in the Modeling of Chemical Crosslinks. <i>Structure</i> , 2017, 25, 1751-1757.e5.	3.3	36
24	Structural and hydrodynamic properties of an intrinsically disordered region of a germ cell-specific protein on phase separation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, E8194-E8203.	7.1	381
25	Automatic Assignment of Methyl-NMR Spectra of Supramolecular Machines Using Graph Theory. <i>Journal of the American Chemical Society</i> , 2017, 139, 9523-9533.	13.7	48
26	Determination of an optimally sensitive and specific chemical exchange saturation transfer MRI quantification metric in relevant biological phantoms. <i>NMR in Biomedicine</i> , 2016, 29, 1624-1633.	2.8	12
27	Membraneless organelles can melt nucleic acid duplexes and act as biomolecular filters. <i>Nature Chemistry</i> , 2016, 8, 569-575.	13.6	278
28	Harnessing NMR relaxation interference effects to characterise supramolecular assemblies. <i>Chemical Communications</i> , 2016, 52, 7450-7453.	4.1	6
29	Posttranslational mutagenesis: A chemical strategy for exploring protein side-chain diversity. <i>Science</i> , 2016, 354, .	12.6	247
30	Studying the Conformational Equilibrium of the N-Terminal Domain of Dsbd by NMR and Computer Simulation. <i>Biophysical Journal</i> , 2015, 108, 184a.	0.5	0
31	AB-Crystallin Binds to Titin Ig Domains and Increases Stiffness of Skinned Cardiac Trabeculae. <i>Biophysical Journal</i> , 2015, 108, 444a.	0.5	0
32	Phase Transition of a Disordered Nuage Protein Generates Environmentally Responsive Membraneless Organelles. <i>Molecular Cell</i> , 2015, 57, 936-947.	9.7	1,408
33	Combining tandem mass spectrometry with ion mobility separation to determine the architecture of polydisperse proteins. <i>International Journal of Mass Spectrometry</i> , 2015, 377, 663-671.	1.5	16
34	Investigating the Mechanisms of Amylolysis of Starch Granules by Solution-State NMR. <i>Biomacromolecules</i> , 2015, 16, 1614-1621.	5.4	44
35	Collision Cross Sections for Structural Proteomics. <i>Structure</i> , 2015, 23, 791-799.	3.3	231
36	Bayesian Deconvolution of Mass and Ion Mobility Spectra: From Binary Interactions to Polydisperse Ensembles. <i>Analytical Chemistry</i> , 2015, 87, 4370-4376.	6.5	663

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37	Quantifying the stabilizing effects of protein-ligand interactions in the gas phase. <i>Nature Communications</i> , 2015, 6, 8551.	12.8	136
38	The structured core domain of $\beta$ -crystallin can prevent amyloid fibrillation and associated toxicity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, E1562-70.	7.1	181
39	An exact solution for $R_{2,eff}$ in CPMG experiments in the case of two site chemical exchange. <i>Journal of Magnetic Resonance</i> , 2014, 244, 114-124.	2.1	42
40	Phase Separation of Disordered Protein in the Formation of Membrane-Less Organelles. <i>Biophysical Journal</i> , 2014, 106, 35a.	0.5	1
41	Membrane proteins bind lipids selectively to modulate their structure and function. <i>Nature</i> , 2014, 510, 172-175.	27.8	665
42	An $R_{1\rho}$ expression for a spin in chemical exchange between two sites with unequal transverse relaxation rates. <i>Journal of Biomolecular NMR</i> , 2013, 55, 211-218.	2.8	32
43	C-terminal interactions mediate the quaternary dynamics of $\beta$ -crystallin. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2013, 368, 20110405.	4.0	70
44	Probing Dynamic Conformations of the High-Molecular-Weight $\beta$ -Crystallin Heat Shock Protein Ensemble by NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2012, 134, 15343-15350.	13.7	63
45	Twisting Transition between Crystalline and Fibrillar Phases of Aggregated Peptides. <i>Physical Review Letters</i> , 2012, 109, 158101.	7.8	48
46	Small Heat-Shock Proteins: Paramedics of the Cell. <i>Topics in Current Chemistry</i> , 2012, 328, 69-98.	4.0	116
47	The Morphology of Decorated Amyloid Fibers is Controlled by the Conformation and Position of the Displayed Protein. <i>ACS Nano</i> , 2012, 6, 1332-1346.	14.6	19
48	Dynamic binding. <i>Nature</i> , 2012, 488, 165-166.	27.8	10
49	Measurement of the signs of methyl $^{13}C$ chemical shift differences between interconverting ground and excited protein states by $R_{1\rho}$ : an application to $\beta$ -crystallin. <i>Journal of Biomolecular NMR</i> , 2012, 53, 1-12.	2.8	18
50	Dissecting Heterogeneous Molecular Chaperone Complexes Using a Mass Spectrum Deconvolution Approach. <i>Chemistry and Biology</i> , 2012, 19, 599-607.	6.0	70
51	Perturbation of the Stability of Amyloid Fibrils through Alteration of Electrostatic Interactions. <i>Biophysical Journal</i> , 2011, 100, 2783-2791.	0.5	121
52	Metastability of Native Proteins and the Phenomenon of Amyloid Formation. <i>Journal of the American Chemical Society</i> , 2011, 133, 14160-14163.	13.7	369
53	$\beta$ -Crystallin Polydispersity Is a Consequence of Unbiased Quaternary Dynamics. <i>Journal of Molecular Biology</i> , 2011, 413, 297-309.	4.2	122
54	Quaternary Dynamics of $\beta$ -Crystallin as a Direct Consequence of Localised Tertiary Fluctuations in the C-Terminus. <i>Journal of Molecular Biology</i> , 2011, 413, 310-320.	4.2	89

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55	The Polydispersity of I $\pm$ B-Crystallin Is Rationalized by an Interconverting Polyhedral Architecture. <i>Structure</i> , 2011, 19, 1855-1863.	3.3	116
56	The Quaternary Organization and Dynamics of the Molecular Chaperone HSP26 Are Thermally Regulated. <i>Chemistry and Biology</i> , 2010, 17, 1008-1017.	6.0	45
57	Quaternary dynamics and plasticity underlie small heat shock protein chaperone function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 2007-2012.	7.1	231
58	<sup>13</sup> C <sub>2</sub> Methyl Group Probes of Millisecond Time Scale Exchange in Proteins by <sup>1</sup> H Relaxation Dispersion: An Application to Proteasome Gating Residue Dynamics. <i>Journal of the American Chemical Society</i> , 2010, 132, 10992-10995.	13.7	60
59	NMR spectroscopy brings invisible protein states into focus. <i>Nature Chemical Biology</i> , 2009, 5, 808-814.	8.0	403
60	Measurement of Methyl Axis Orientations in Invisible, Excited States of Proteins by Relaxation Dispersion NMR Spectroscopy. <i>Journal of the American Chemical Society</i> , 2009, 131, 11939-11948.	13.7	33
61	Measurement of Amyloid Fibril Length Distributions by Inclusion of Rotational Motion in Solution NMR Diffusion Measurements. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 3385-3387.	13.8	47
62	Contribution of rotational diffusion to pulsed field gradient diffusion measurements. <i>Journal of Chemical Physics</i> , 2007, 127, 114505.	3.0	23
63	Characterisation of Amyloid Fibril Formation by Small Heat-shock Chaperone Proteins Human I $\pm$ A-, I $\pm$ B- and R120G I $\pm$ B-Crystallins. <i>Journal of Molecular Biology</i> , 2007, 372, 470-484.	4.2	93
64	Cytochrome Display on Amyloid Fibrils. <i>Journal of the American Chemical Society</i> , 2006, 128, 2162-2163.	13.7	146