

# Evan T Powers

## List of Publications by Year in descending order

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86  
papers

10,560  
citations

41344

49  
h-index

53230

85  
g-index

97  
all docs

97  
docs citations

97  
times ranked

11730  
citing authors

#	ARTICLE	IF	CITATIONS
1	Biological and Chemical Approaches to Diseases of Proteostasis Deficiency. Annual Review of Biochemistry, 2009, 78, 959-991.	11.1	1,035
2	Tafamidis, a potent and selective transthyretin kinetic stabilizer that inhibits the amyloid cascade. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 9629-9634.	7.1	582
3	A $\beta$ induces astrocytic glutamate release, extrasynaptic NMDA receptor activation, and synaptic loss. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E2518-27.	7.1	495
4	Prevention of Transthyretin Amyloid Disease by Changing Protein Misfolding Energetics. Science, 2003, 299, 713-716.	12.6	491
5	Amyloid- $\beta$ forms fibrils by nucleated conformational conversion of oligomers. Nature Chemical Biology, 2011, 7, 602-609.	8.0	352
6	Targeting protein aggregation for the treatment of degenerative diseases. Nature Reviews Drug Discovery, 2015, 14, 759-780.	46.4	338
7	Sequence-dependent denaturation energetics: A major determinant in amyloid disease diversity. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 16427-16432.	7.1	320
8	Elevated levels of oxidized cholesterol metabolites in Lewy body disease brains accelerate $\alpha$ -synuclein fibrilization. Nature Chemical Biology, 2006, 2, 249-253.	8.0	312
9	Transthyretin Aggregation under Partially Denaturing Conditions Is a Downhill Polymerization. Biochemistry, 2004, 43, 7365-7381.	2.5	303
10	The Transthyretin Amyloidoses: From Delineating the Molecular Mechanism of Aggregation Linked to Pathology to a Regulatory-Agency-Approved Drug. Journal of Molecular Biology, 2012, 421, 185-203.	4.2	267
11	Context-dependent contributions of backbone hydrogen bonding to $\beta$ -sheet folding energetics. Nature, 2004, 430, 101-105.	27.8	260
12	Arylfluorosulfates Inactivate Intracellular Lipid Binding Protein(s) through Chemoselective SuFEx Reaction with a Binding Site Tyr Residue. Journal of the American Chemical Society, 2016, 138, 7353-7364.	13.7	212
13	The core trisaccharide of an N-linked glycoprotein intrinsically accelerates folding and enhances stability. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 3131-3136.	7.1	206
14	"Inverse Drug Discovery" Strategy To Identify Proteins That Are Targeted by Latent Electrophiles As Exemplified by Aryl Fluorosulfates. Journal of the American Chemical Society, 2018, 140, 200-210.	13.7	206
15	Benzoxazoles as Transthyretin Amyloid Fibril Inhibitors: Synthesis, Evaluation, and Mechanism of Action. Angewandte Chemie - International Edition, 2003, 42, 2758-2761.	13.8	204
16	Metabolite-initiated protein misfolding may trigger Alzheimer's disease. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 4752-4757.	7.1	204
17	Diversity in the origins of proteostasis networks " a driver for protein function in evolution. Nature Reviews Molecular Cell Biology, 2013, 14, 237-248.	37.0	204
18	The Kinetics of Nucleated Polymerizations at High Concentrations: Amyloid Fibril Formation Near and Above the "Supercritical Concentration". Biophysical Journal, 2006, 91, 122-132.	0.5	188

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19	Small molecule proteostasis regulators that reprogram the ER to reduce extracellular protein aggregation. <i>ELife</i> , 2016, 5, .	6.0	185
20	ALS Mutants of Human Superoxide Dismutase Form Fibrous Aggregates Via Framework Destabilization. <i>Journal of Molecular Biology</i> , 2003, 332, 601-615.	4.2	183
21	Mechanisms of Protein Fibril Formation: Nucleated Polymerization with Competing Off-Pathway Aggregation. <i>Biophysical Journal</i> , 2008, 94, 379-391.	0.5	182
22	Localized thermodynamic coupling between hydrogen bonding and microenvironment polarity substantially stabilizes proteins. <i>Nature Structural and Molecular Biology</i> , 2009, 16, 684-690.	8.2	178
23	The intrinsic and extrinsic effects of N-linked glycans on glycoproteostasis. <i>Nature Chemical Biology</i> , 2014, 10, 902-910.	8.0	166
24	The Oxidative Stress Metabolite 4-Hydroxynonenal Promotes Alzheimer Protofibril Formation. <i>Biochemistry</i> , 2007, 46, 1503-1510.	2.5	157
25	Protein Native-State Stabilization by Placing Aromatic Side Chains in N-Glycosylated Reverse Turns. <i>Science</i> , 2011, 331, 571-575.	12.6	157
26	An Adaptable Standard for Protein Export from the Endoplasmic Reticulum. <i>Cell</i> , 2007, 131, 809-821.	28.9	147
27	Aromatic Sulfonyl Fluorides Covalently Kinetically Stabilize Transthyretin to Prevent Amyloidogenesis while Affording a Fluorescent Conjugate. <i>Journal of the American Chemical Society</i> , 2013, 135, 5656-5668.	13.7	142
28	Oxidative Metabolites Accelerate Alzheimer's Amyloidogenesis by a Two-Step Mechanism, Eliminating the Requirement for Nucleation. <i>Biochemistry</i> , 2005, 44, 4977-4983.	2.5	137
29	Synthesis, Structure, and Activity of Diclofenac Analogues as Transthyretin Amyloid Fibril Formation Inhibitors. <i>Journal of Medicinal Chemistry</i> , 2002, 45, 321-332.	6.4	134
30	AG10 inhibits amyloidogenesis and cellular toxicity of the familial amyloid cardiomyopathy-associated V122I transthyretin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 9992-9997.	7.1	120
31	Quantification of the Thermodynamically Linked Quaternary and Tertiary Structural Stabilities of Transthyretin and Its Disease-Associated Variants: The Relationship between Stability and Amyloidosis. <i>Biochemistry</i> , 2008, 47, 6969-6984.	2.5	115
32	Small Molecule Oxidation Products Trigger Disease-Associated Protein Misfolding. <i>Accounts of Chemical Research</i> , 2006, 39, 611-619.	15.6	99
33	Evaluating $\beta^2$ -turn mimics as $\beta^2$ -sheet folding nucleators. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 11067-11072.	7.1	97
34	Pharmacologic IRE1/XBP1s activation confers targeted ER proteostasis reprogramming. <i>Nature Chemical Biology</i> , 2020, 16, 1052-1061.	8.0	90
35	Structural and Energetic Basis of Carbohydrate-Aromatic Packing Interactions in Proteins. <i>Journal of the American Chemical Society</i> , 2013, 135, 9877-9884.	13.7	85
36	Pharmacologic ATF6 activating compounds are metabolically activated to selectively modify endoplasmic reticulum proteins. <i>ELife</i> , 2018, 7, .	6.0	85

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37	Potent and Selective Structure-Based Dibenzofuran Inhibitors of Transthyretin Amyloidogenesis: Kinetic Stabilization of the Native State. <i>Journal of the American Chemical Society</i> , 2005, 127, 6662-6671.	13.7	76
38	The proteostasis boundary in misfolding diseases of membrane traffic. <i>FEBS Letters</i> , 2009, 583, 2639-2646.	2.8	76
39	Site-specific modification of Alzheimer's peptides by cholesterol oxidation products enhances aggregation energetics and neurotoxicity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 18563-18568.	7.1	76
40	FoldEco: A Model for Proteostasis in <i>E. coli</i> . <i>Cell Reports</i> , 2012, 1, 265-276.	6.4	72
41	Context-Dependent Effects of Asparagine Glycosylation on Pin WW Folding Kinetics and Thermodynamics. <i>Journal of the American Chemical Society</i> , 2010, 132, 15359-15367.	13.7	69
42	Incorporating $\beta$ -Turns and a Turn Mimetic out of Context in Loop 1 of the WW Domain Affords Cooperatively Folded $\beta$ -Sheets. <i>Journal of the American Chemical Society</i> , 2001, 123, 5206-5212.	13.7	64
43	Influence of the N-terminal domain on the aggregation properties of the prion protein. <i>Protein Science</i> , 2005, 14, 2154-2166.	7.6	63
44	Quantification of Transthyretin Kinetic Stability in Human Plasma Using Subunit Exchange. <i>Biochemistry</i> , 2014, 53, 1993-2006.	2.5	62
45	Glycosylation of the enhanced aromatic sequon is similarly stabilizing in three distinct reverse turn contexts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 14127-14132.	7.1	61
46	Potent Kinetic Stabilizers That Prevent Transthyretin-Mediated Cardiomyocyte Proteotoxicity. <i>Science Translational Medicine</i> , 2011, 3, 97ra81.	12.4	61
47	Backbone-Hydrogen Bonds Make Context-Dependent Contributions to Protein Folding Kinetics and Thermodynamics: Lessons from Amide-to-Ester Mutations. <i>Advances in Protein Chemistry</i> , 2005, 72, 39-78.	4.4	60
48	N-glycosylation of enhanced aromatic sequons to increase glycoprotein stability. <i>Biopolymers</i> , 2012, 98, 195-211.	2.4	58
49	The unfolded protein response regulator ATF6 promotes mesodermal differentiation. <i>Science Signaling</i> , 2018, 11, .	3.6	54
50	Partitioning Conformational Intermediates between Competing Refolding and Aggregation Pathways: Insights into Transthyretin Amyloid Disease. <i>Biochemistry</i> , 2005, 44, 16612-16623.	2.5	53
51	Predictive model of response to tafamidis in hereditary ATTR polyneuropathy. <i>JCI Insight</i> , 2019, 4, .	5.0	53
52	Ordered Langmuir-Blodgett Films of Amphiphilic $\beta$ -Hairpin Peptides Imaged by Atomic Force Microscopy. <i>Angewandte Chemie - International Edition</i> , 2002, 41, 127-130.	13.8	51
53	Design, synthesis, and evaluation of oxazole transthyretin amyloidogenesis inhibitors. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2005, 15, 1075-1078.	2.2	51
54	Characterizing the Altered Cellular Proteome Induced by the Stress-Independent Activation of Heat Shock Factor 1. <i>ACS Chemical Biology</i> , 2014, 9, 1273-1283.	3.4	51

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55	Understanding the mechanism of $\beta$ -sheet folding from a chemical and biological perspective. <i>Biopolymers</i> , 2008, 90, 751-758.	2.4	48
56	Deconvoluting Stress-Responsive Proteostasis Signaling Pathways for Pharmacologic Activation Using Targeted RNA Sequencing. <i>ACS Chemical Biology</i> , 2019, 14, 784-795.	3.4	45
57	The Dependence of Carbohydrate-Aromatic Interaction Strengths on the Structure of the Carbohydrate. <i>Journal of the American Chemical Society</i> , 2016, 138, 7636-7648.	13.7	44
58	Peptide probes detect misfolded transthyretin oligomers in plasma of hereditary amyloidosis patients. <i>Science Translational Medicine</i> , 2017, 9, .	12.4	44
59	A Perspective on Mechanisms of Protein Tetramer Formation. <i>Biophysical Journal</i> , 2003, 85, 3587-3599.	0.5	43
60	Heparin Binds 8 kDa Gelsolin Cross- $\beta$ -Sheet Oligomers and Accelerates Amyloidogenesis by Hastening Fibril Extension. <i>Biochemistry</i> , 2011, 50, 2486-2498.	2.5	42
61	Stabilizing the C <sub>H</sub> 2 Domain of an Antibody by Engineering in an Enhanced Aromatic Sequon. <i>ACS Chemical Biology</i> , 2016, 11, 1852-1861.	3.4	40
62	Individual and Collective Contributions of Chaperoning and Degradation to Protein Homeostasis in <i>E. coli</i> . <i>Cell Reports</i> , 2015, 11, 321-333.	6.4	39
63	The endoplasmic reticulum $\alpha$ -HSP40 co-chaperone $\alpha$ -ERdj3/DNAJB11 assembles and functions as a tetramer. <i>EMBO Journal</i> , 2017, 36, 2296-2309.	7.8	38
64	$\beta$ -Sheet folding mechanisms from perturbation energetics. <i>Current Opinion in Structural Biology</i> , 2006, 16, 94-101.	5.7	37
65	Enhanced Aromatic Sequons Increase Oligosaccharyltransferase Glycosylation Efficiency and Glycan Homogeneity. <i>Chemistry and Biology</i> , 2015, 22, 1052-1062.	6.0	36
66	The 8 and 5 kDa Fragments of Plasma Gelsolin Form Amyloid Fibrils by a Nucleated Polymerization Mechanism, while the 68 kDa Fragment Is Not Amyloidogenic. <i>Biochemistry</i> , 2009, 48, 11370-11380.	2.5	33
67	ATF6 is essential for human cone photoreceptor development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	31
68	Pharmacologic IRE1/XBP1s activation promotes systemic adaptive remodeling in obesity. <i>Nature Communications</i> , 2022, 13, 608.	12.8	31
69	Defining the Functional Targets of Cap <sup>n</sup> ™ collar Transcription Factors NRF1, NRF2, and NRF3. <i>Antioxidants</i> , 2020, 9, 1025.	5.1	29
70	Costly Mistakes: Translational Infidelity and Protein Homeostasis. <i>Cell</i> , 2008, 134, 204-206.	28.9	25
71	Translation efficiency is maintained at elevated temperature in <i>Escherichia coli</i> . <i>Journal of Biological Chemistry</i> , 2018, 293, 777-793.	3.4	24
72	Blinded potency comparison of transthyretin kinetic stabilisers by subunit exchange in human plasma. <i>Amyloid: the International Journal of Experimental and Clinical Investigation: the Official Journal of the International Society of Amyloidosis</i> , 2021, 28, 24-29.	3.0	22

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73	The Proteome Folding Problem and Cellular Proteostasis. <i>Journal of Molecular Biology</i> , 2021, 433, 167197.	4.2	22
74	Using Cooperatively Folded Peptides To Measure Interaction Energies and Conformational Propensities. <i>Accounts of Chemical Research</i> , 2017, 50, 1875-1882.	15.6	18
75	N-PEGylation of a Reverse Turn Is Stabilizing in Multiple Sequence Contexts, unlike N-GlcNAcylation. <i>ACS Chemical Biology</i> , 2011, 6, 1188-1192.	3.4	17
76	Ligand-promoted protein folding by biased kinetic partitioning. <i>Nature Chemical Biology</i> , 2017, 13, 369-371.	8.0	15
77	Thermodynamic stability and denaturation kinetics of a benign natural transthyretin mutant identified in a Danish kindred. <i>Amyloid: the International Journal of Experimental and Clinical Investigation: the Official Journal of the International Society of Amyloidosis</i> , 2011, 18, 35-46.	3.0	14
78	A designed protein binding-pocket to control excited-state intramolecular proton transfer fluorescence. <i>Organic and Biomolecular Chemistry</i> , 2019, 17, 1076-1080.	2.8	13
79	Stereoelectronic effects in stabilizing protein-N-glycan interactions revealed by experiment and machine learning. <i>Nature Chemistry</i> , 2021, 13, 480-487.	13.6	13
80	Protection from the outside. <i>Nature</i> , 2011, 471, 42-43.	27.8	10
81	Fluorogenic small molecules requiring reaction with a specific protein to create a fluorescent conjugate for biological imaging—what we know and what we need to learn. <i>Biopolymers</i> , 2014, 101, 484-495.	2.4	8
82	Semi-quantitative models for identifying potent and selective transthyretin amyloidogenesis inhibitors. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2017, 27, 3441-3449.	2.2	8
83	Kinetic versus thermodynamic control of mutational effects on protein homeostasis: A perspective from computational modeling and experiment. <i>Protein Science</i> , 2019, 28, 1324-1339.	7.6	5
84	Response. <i>Amyloid: the International Journal of Experimental and Clinical Investigation: the Official Journal of the International Society of Amyloidosis</i> , 2021, 28, 140-141.	3.0	1
85	From uncovering the mechanism of transthyretin aggregation to the drug tafamidis for ameliorating neurodegeneration and cardiomyopathy. , 2021, , 65-103.		1
86	Proteostasis Modulation Prevents Photoreceptor Pathology in Retinal Organoids. <i>SSRN Electronic Journal</i> , 0, , .	0.4	1