

James Nowick

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124
papers

5,573
citations

45
h-index

70
g-index

138
ext. papers

6,142
ext. citations

10.1
avg, IF

5.93
L-index

#	Paper	IF	Citations
124	Designed molecules that fold to mimic protein secondary structures. <i>Current Opinion in Chemical Biology</i> , 1999 , 3, 714-23	9.7	196
123	Exploring beta-sheet structure and interactions with chemical model systems. <i>Accounts of Chemical Research</i> , 2008 , 41, 1319-30	24.3	185
122	Mechanism of IAPP amyloid fibril formation involves an intermediate with a transient β sheet. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 19285-90	11.5	182
121	Amyloid β sheet mimics that antagonize protein aggregation and reduce amyloid toxicity. <i>Nature Chemistry</i> , 2012 , 4, 927-33	17.6	174
120	Chemical Models of Protein β Sheets. <i>Accounts of Chemical Research</i> , 1999 , 32, 287-296	24.3	170
119	Out-of-register β sheets suggest a pathway to toxic amyloid aggregates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 20913-8	11.5	149
118	Molecular recognition in micelles: the roles of hydrogen bonding and hydrophobicity in adenine-thymine base-pairing in SDS micelles. <i>Journal of the American Chemical Society</i> , 1993 , 115, 7636-7644	16.4	149
117	An improved method for the synthesis of enantiomerically pure amino acid ester isocyanates. <i>Journal of Organic Chemistry</i> , 1992 , 57, 7364-7366	4.2	136
116	An Unnatural Amino Acid that Mimics a Tripeptide β Strand and Forms β Sheetlike Hydrogen-Bonded Dimers. <i>Journal of the American Chemical Society</i> , 2000 , 122, 7654-7661	16.4	130
115	Kinetic studies and modeling of a self-replicating system. <i>Journal of the American Chemical Society</i> , 1991 , 113, 8831-8839	16.4	129
114	The supramolecular chemistry of β sheets. <i>Journal of the American Chemical Society</i> , 2013 , 135, 5477-92	16.4	125
113	Litter decay rates are determined by lignin chemistry. <i>Biogeochemistry</i> , 2012 , 108, 279-295	3.8	118
112	Synthesis of Peptide Isocyanates and Isothiocyanates. <i>Journal of Organic Chemistry</i> , 1996 , 61, 3929-3934	4.2	109
111	Macrocyclic β sheet peptides that inhibit the aggregation of a tau-protein-derived hexapeptide. <i>Journal of the American Chemical Society</i> , 2011 , 133, 3144-57	16.4	98
110	Novel RNA catalysts for the Michael reaction. <i>Chemistry and Biology</i> , 2001 , 8, 459-73		95
109	Convergent functional groups. 9. Complexation in new molecular clefts. <i>Journal of the American Chemical Society</i> , 1990 , 112, 8902-8906	16.4	95
108	Artificial β sheets. <i>Chemical Society Reviews</i> , 1996 , 25, 401-415	58.5	89

107	A practical and efficient method for the synthesis of β -lactones. <i>Journal of Organic Chemistry</i> , 1991 , 56, 1176-1185	4.2	87
106	Molecular Recognition between Uncharged Molecules in Aqueous Micelles. <i>Journal of the American Chemical Society</i> , 1994 , 116, 3285-9	16.4	84
105	A new turn structure for the formation of beta-hairpins in peptides. <i>Journal of the American Chemical Society</i> , 2003 , 125, 876-7	16.4	83
104	An unnatural amino acid that induces beta-sheet folding and interaction in peptides. <i>Journal of the American Chemical Society</i> , 2002 , 124, 4972-3	16.4	80
103	An Artificial β -Sheet Comprising a Molecular Scaffold, a β -Strand Mimic, and a Peptide Strand1. <i>Journal of the American Chemical Society</i> , 1996 , 118, 2764-2765	16.4	79
102	Triurea Derivatives of Diethylenetriamine as Potential Templates for the Formation of Artificial β -Sheets1. <i>Journal of the American Chemical Society</i> , 1996 , 118, 1066-1072	16.4	77
101	Molecular scaffolds. I. Intramolecular hydrogen bonding in a family of di- and triureas. <i>Journal of Organic Chemistry</i> , 1992 , 57, 3763-3765	4.2	77
100	Molecular Scaffolds. 2. Intramolecular Hydrogen Bonding in 1,2-Diaminoethane Diureas. <i>Journal of the American Chemical Society</i> , 1995 , 117, 89-99	16.4	76
99	Characteristics of amyloid-related oligomers revealed by crystal structures of macrocyclic β -sheet mimics. <i>Journal of the American Chemical Society</i> , 2011 , 133, 6736-44	16.4	73
98	Molecular Scaffolds. 3. An Artificial Parallel β -Sheet. <i>Journal of Organic Chemistry</i> , 1995 , 60, 7386-7387	4.2	73
97	Elucidation of the Teixobactin Pharmacophore. <i>ACS Chemical Biology</i> , 2016 , 11, 1823-6	4.9	69
96	X-ray crystallographic structures of trimers and higher-order oligomeric assemblies of a peptide derived from A β (17-36). <i>Journal of the American Chemical Society</i> , 2014 , 136, 5595-8	16.4	69
95	Molecular recognition in aqueous micellar solution: adenine-thymine base-pairing in SDS micelles. <i>Journal of the American Chemical Society</i> , 1992 , 114, 1107-1108	16.4	68
94	Macrocyclic beta-sheet peptides that mimic protein quaternary structure through intermolecular beta-sheet interactions. <i>Journal of the American Chemical Society</i> , 2007 , 129, 5558-69	16.4	67
93	An Extended β -Strand Mimic for a Larger Artificial β -Sheet. <i>Journal of the American Chemical Society</i> , 1997 , 119, 5413-5424	16.4	65
92	Solid-Phase Synthesis of Artificial β -Sheets. <i>Journal of the American Chemical Society</i> , 1997 , 119, 7665-7669	16.4	64
91	Artificial beta-sheets: chemical models of beta-sheets. <i>Current Opinion in Chemical Biology</i> , 2008 , 12, 722-9	9.7	63
90	Elucidating the Structures of Amyloid Oligomers with Macrocyclic β -Hairpin Peptides: Insights into Alzheimer's Disease and Other Amyloid Diseases. <i>Accounts of Chemical Research</i> , 2018 , 51, 706-718	24.3	62

89	DSA: a new internal standard for NMR studies in aqueous solution. <i>Organic Letters</i> , 2003 , 5, 3511-3	6.2	57
88	A ribozyme with michaelase activity: synthesis of the substrate precursors. <i>Bioorganic and Medicinal Chemistry</i> , 2003 , 11, 235-49	3.4	55
87	X-ray Crystallographic Structures of a Trimer, Dodecamer, and Annular Pore Formed by an A β 7-36 β Hairpin. <i>Journal of the American Chemical Society</i> , 2016 , 138, 4634-42	16.4	54
86	A Chemical Model of a Protein β Sheet Dimer. <i>Journal of the American Chemical Society</i> , 1999 , 121, 8409-8410	16.4	52
85	Cyclic modular beta-sheets. <i>Journal of the American Chemical Society</i> , 2007 , 129, 2548-58	16.4	47
84	Structures of oligomers of a peptide from β amyloid. <i>Journal of the American Chemical Society</i> , 2013 , 135, 12460-7	16.4	46
83	Unnatural oligomers and unnatural oligomer libraries. <i>Current Opinion in Chemical Biology</i> , 1997 , 1, 120-9	9.7	46
82	What I have learned by using chemical model systems to study biomolecular structure and interactions. <i>Organic and Biomolecular Chemistry</i> , 2006 , 4, 3869-85	3.9	46
81	Enantioselective molecular recognition between beta-sheets. <i>Journal of the American Chemical Society</i> , 2004 , 126, 3062-3	16.4	45
80	Synthesis, incorporation efficiency, and stability of disulfide bridged functional groups at RNA 5'ends. <i>Bioorganic and Medicinal Chemistry</i> , 2000 , 8, 1317-29	3.4	45
79	X-ray crystallographic structure of a teixobactin analogue reveals key interactions of the teixobactin pharmacophore. <i>Chemical Communications</i> , 2017 , 53, 2772-2775	5.8	43
78	Stabilization, Assembly, and Toxicity of Trimers Derived from A β . <i>Journal of the American Chemical Society</i> , 2017 , 139, 966-975	16.4	43
77	The absence of favorable aromatic interactions between beta-sheet peptides. <i>Journal of the American Chemical Society</i> , 2005 , 127, 9998-9	16.4	42
76	A triply templated artificial beta-sheet. <i>Journal of the American Chemical Society</i> , 2001 , 123, 5176-80	16.4	41
75	Anaphylaxis Induced by Peptide Coupling Agents: Lessons Learned from Repeated Exposure to HATU, HBTU, and HCTU. <i>Journal of Organic Chemistry</i> , 2020 , 85, 1764-1768	4.2	41
74	Fmoc: a more soluble analogue of the 9-fluorenylmethoxycarbonyl protecting group. <i>Journal of Organic Chemistry</i> , 2000 , 65, 3858-60	4.2	40
73	Sequence-selective molecular recognition between beta sheets. <i>Angewandte Chemie - International Edition</i> , 2003 , 42, 1765-8	16.4	39
72	X-ray Crystallographic Structure of Oligomers Formed by a Toxic β Hairpin Derived from β Synuclein: Trimers and Higher-Order Oligomers. <i>Journal of the American Chemical Society</i> , 2016 , 138, 4458-67	16.4	39

71	Chemistry of cyclopropylacysilanes I. Functionalized acylsilane reagents for the cyclopropanation of electrophilic alkenes. <i>Tetrahedron</i> , 1988 , 44, 4113-4134	2.4	37
70	Structure-Based Peptide Inhibitor Design of Amyloid- β Aggregation. <i>Frontiers in Molecular Neuroscience</i> , 2019 , 12, 54	6.1	36
69	X-ray crystallographic structure of an artificial beta-sheet dimer. <i>Journal of the American Chemical Society</i> , 2010 , 132, 11622-8	16.4	36
68	Application of (α -phosphonoacyl)silane reagents to the synthesis of α,β -unsaturated acylsilanes. <i>Journal of Organic Chemistry</i> , 1989 , 54, 2798-2802	4.2	36
67	The Propensities of Amino Acids To Form Parallel β -Sheets. <i>Journal of the American Chemical Society</i> , 1997 , 119, 10903-10908	16.4	34
66	Recipe for β -Sheets: Foldamers Containing Amyloidogenic Peptide Sequences. <i>European Journal of Organic Chemistry</i> , 2013 , 2013, 3523-3528	3.2	33
65	A Peptide/Oligoureia/Azapeptide Hybrid That Adopts a Hairpin Turn. <i>Journal of Organic Chemistry</i> , 1999 , 64, 276-281	4.2	33
64	Dityrosine cross-linked A β peptides: fibrillar beta-structure in A β (1-40) is conducive to formation of dityrosine cross-links but a dityrosine cross-link in A β (8-14) does not induce beta-structure. <i>Chemical Research in Toxicology</i> , 2003 , 16, 531-5	4	32
63	X-ray Crystallographic Structures of Oligomers of Peptides Derived from β -Microglobulin. <i>Journal of the American Chemical Society</i> , 2015 , 137, 6304-11	16.4	31
62	Nanometer-sized amino acids for the synthesis of nanometer-scale water-soluble molecular rods of precise length. <i>Journal of the American Chemical Society</i> , 2007 , 129, 7272-3	16.4	31
61	A fibril-like assembly of oligomers of a peptide derived from β -amyloid. <i>Journal of the American Chemical Society</i> , 2014 , 136, 12682-90	16.4	30
60	Use of disulfide "staples" to stabilize beta-sheet quaternary structure. <i>Organic Letters</i> , 2009 , 11, 3000-3	6.2	30
59	An artificial beta-sheet that dimerizes through parallel beta-sheet interactions. <i>Journal of the American Chemical Society</i> , 2007 , 129, 13043-8	16.4	30
58	An Artificial Antiparallel beta-Sheet Containing a New Peptidomimetic Template. <i>Journal of Organic Chemistry</i> , 1997 , 62, 7906-7907	4.2	29
57	A new class of macrocyclic receptors from iota-peptides. <i>Journal of the American Chemical Society</i> , 2007 , 129, 1486-7	16.4	29
56	Alanine scan reveals modifiable residues in teixobactin. <i>Chemical Communications</i> , 2017 , 53, 11357-11359	9.8	28
55	Diversification of β -Augmentation Interactions between CDI Toxin/Immunity Proteins. <i>Journal of Molecular Biology</i> , 2015 , 427, 3766-84	6.5	28
54	An efficient synthesis of N,N'-linked oligoureas. <i>Tetrahedron Letters</i> , 1998 , 39, 6613-6616	2	28

53	Assembly of Peptides Derived from Sheet Regions of Amyloid. <i>Journal of the American Chemical Society</i> , 2016 , 138, 13882-13890	16.4	27
52	Two new beta-strand mimics. <i>Bioorganic and Medicinal Chemistry</i> , 1999 , 7, 29-38	3.4	25
51	Polymorphism of oligomers of a peptide from Amyloid. <i>Journal of the American Chemical Society</i> , 2014 , 136, 5432-42	16.4	23
50	The Alginate Demonstration: Polymers, Food Science, and Ion Exchange. <i>Journal of Chemical Education</i> , 1998 , 75, 1430	2.4	23
49	Coassembly of Peptides Derived from Sheet Regions of Amyloid. <i>Journal of the American Chemical Society</i> , 2016 , 138, 13891-13900	16.4	21
48	A hydrophobic surface is essential to inhibit the aggregation of a tau-protein-derived hexapeptide. <i>Journal of the American Chemical Society</i> , 2013 , 135, 6846-52	16.4	21
47	Three-stranded mixed artificial sheets. <i>Tetrahedron</i> , 2002 , 58, 727-739	2.4	21
46	Repurposing Triphenylmethane Dyes to Bind to Trimers Derived from A β . <i>Journal of the American Chemical Society</i> , 2018 , 140, 11745-11754	16.4	20
45	Heterodivalent linked macrocyclic sheets with enhanced activity against A β aggregation: two sites are better than one. <i>Journal of the American Chemical Society</i> , 2012 , 134, 14179-84	16.4	20
44	X-ray Crystallographic Structure of a Teixobactin Derivative Reveals Amyloid-like Assembly. <i>Journal of the American Chemical Society</i> , 2018 , 140, 14028-14032	16.4	19
43	Functionalized analogues of an unnatural amino acid that mimics a tripeptide beta-strand. <i>Organic Letters</i> , 2008 , 10, 5293-6	6.2	18
42	Folding of an Artificial Sheet in Competitive Solvents. <i>Journal of Organic Chemistry</i> , 1999 , 64, 2527-2531	4.2	18
41	Structural Interaction of Apolipoprotein A-I Mimetic Peptide with Amyloid- β Generates Toxic Hetero-oligomers. <i>Journal of Molecular Biology</i> , 2020 , 432, 1020-1034	6.5	18
40	A Newcomer's Guide to Peptide Crystallography. <i>Israel Journal of Chemistry</i> , 2015 , 55, 698-710	3.4	17
39	X-ray Crystallographic Structure of a Compact Dodecamer from a Peptide Derived from A β . <i>Organic Letters</i> , 2017 , 19, 3462-3465	6.2	14
38	X-ray Crystallographic Structure of a Giant Double-Walled Peptide Nanotube Formed by a Macrocyclic Sheet Containing A β . <i>Journal of the American Chemical Society</i> , 2017 , 139, 8102-8105	16.4	14
37	Structural Polymorphs Suggest Competing Pathways for the Formation of Amyloid Fibrils That Diverge from a Common Intermediate Species. <i>Biochemistry</i> , 2018 , 57, 6470-6478	3.2	14
36	A Hexamer of a Peptide Derived from A β . <i>Biochemistry</i> , 2017 , 56, 6061-6071	3.2	13

35	Controlling the Oligomerization State of A β -Derived Peptides with Light. <i>Journal of the American Chemical Society</i> , 2018 , 140, 5842-5852	16.4	13
34	Giant macrolactams based on β -sheet peptides. <i>Journal of Organic Chemistry</i> , 2011 , 76, 3166-73	4.2	13
33	A Coordinated Chemistry Outreach Program for Thousands of High School Students. <i>Journal of Chemical Education</i> , 1996 , 73, 762	2.4	12
32	A Tetramer Derived from Islet Amyloid Polypeptide. <i>Journal of Organic Chemistry</i> , 2017 , 82, 7905-7912	4.2	11
31	Methylglyoxal synthetase, enol-pyruvaldehyde, glutathione and the glyoxalase system. <i>Journal of the American Chemical Society</i> , 2002 , 124, 13047-52	16.4	11
30	Structure-based drug design of an inhibitor of the SARS-CoV-2 (COVID-19) main protease using free software: A tutorial for students and scientists. <i>European Journal of Medicinal Chemistry</i> , 2021 , 218, 113390	6.8	10
29	An Efficient Method for the Expression and Purification of A β (M1-42). <i>Biochemistry</i> , 2018 , 57, 3861-3866	3.2	10
28	Effects of N-Terminal Residues on the Assembly of Constrained β -Hairpin Peptides Derived from A β . <i>Journal of the American Chemical Society</i> , 2020 , 142, 11593-11601	16.4	9
27	X-ray Crystallography Reveals Parallel and Antiparallel β -Sheet Dimers of a β -Hairpin Derived from A β that Assemble to Form Different Tetramers. <i>ACS Chemical Neuroscience</i> , 2020 , 11, 2340-2347	5.7	9
26	A Fluorescent Teixobactin Analogue. <i>ACS Chemical Biology</i> , 2020 , 15, 1222-1231	4.9	9
25	Nanometer-scale water-soluble macrocycles from nanometer-sized amino acids. <i>Journal of Organic Chemistry</i> , 2010 , 75, 1822-30	4.2	9
24	A new artificial beta-sheet that dimerizes through parallel beta-sheet interactions. <i>Organic Letters</i> , 2009 , 11, 1003-6	6.2	9
23	Effects of charge and hydrophobicity on the oligomerization of peptides derived from IAPP. <i>Bioorganic and Medicinal Chemistry</i> , 2018 , 26, 1151-1156	3.4	8
22	A Novel Hydrogen-Bonded Dimer Containing a 16-Membered Ring. <i>Journal of Organic Chemistry</i> , 1995 , 60, 1888-1890	4.2	7
21	Design and synthesis of a transition state analogue for the Diels-Alder reaction. <i>Bioorganic and Medicinal Chemistry</i> , 1998 , 6, 1421-8	3.4	6
20	Square channels formed by a peptide derived from transthyretin. <i>Chemical Science</i> , 2016 , 7, 6946-6951	9.4	6
19	Interpenetrating Cubes in the X-ray Crystallographic Structure of a Peptide Derived from Medin. <i>Journal of the American Chemical Society</i> , 2020 , 142, 15870-15875	16.4	5
18	A cyclic peptide inhibitor of the SARS-CoV-2 main protease. <i>European Journal of Medicinal Chemistry</i> , 2021 , 221, 113530	6.8	5

17	Design, Synthesis, and Study of Lactam and Ring-Expanded Analogues of Teixobactin. <i>Journal of Organic Chemistry</i> , 2020 , 85, 1331-1339	4.2	4
16	The MIT Chemistry Outreach Program: Graduate students presenting chemistry to high school students. <i>Journal of Chemical Education</i> , 1989 , 66, 668	2.4	3
15	Structure-Based Drug Design of an Inhibitor of the SARS-CoV-2 (COVID-19) Main Protease Using Free Software: A Tutorial for Students and Scientists. <i>ChemRxiv</i> , 2020 ,	4.4	3
14	Phenylalanine Mutation to Cyclohexylalanine Facilitates Triangular Trimer Formation by β -Hairpins Derived from A β . <i>Journal of the American Chemical Society</i> , 2020 , 142, 20708-20716	16.4	3
13	Synthesis of Amino Acid Ester Isocyanates: Methyl (S)-2-Isocyanato-3-Phenylpropanoate	220-220	3
12	Exploring amyloid oligomers with peptide model systems. <i>Current Opinion in Chemical Biology</i> , 2021 , 64, 106-115	9.7	2
11	Transmembrane Proteins: Amyloids Hidden in Plain Sight?. <i>Biochemistry</i> , 2017 , 56, 4735-4736	3.2	1
10	Apolipoprotein A-I Mimetic 4F Peptide Generates Amyloid Cytotoxins by Forming Hetero-oligomers with β -Amyloid		1
9	Structure-Based Design of a Cyclic Peptide Inhibitor of the SARS-CoV-2 Main Protease		1
8	Synthesis of β -Lactones and Alkenes via Thiol Esters: (E)-2,3-Dimethyl-3-Dodecene	61-61	1
7	Visualizing Teixobactin Supramolecular Assemblies and Cell Wall Damage in Using CryoEM. <i>ACS Omega</i> , 2021 , 6, 27412-27417	3.9	0
6	Expression of N-Terminal Cysteine A β and Conjugation to Generate Fluorescent and Biotinylated A β . <i>Biochemistry</i> , 2021 , 60, 1191-1200	3.2	0
5	An aza-Diels-Alder route to quinoline-based unnatural amino acids and polypeptide surrogates. <i>RSC Advances</i> , 2021 , 11, 14132-14139	3.7	0
4	Synthesis and study of macrocyclic β -hairpin peptides for investigating amyloid oligomers. <i>Methods in Enzymology</i> , 2021 , 656, 123-168	1.7	0
3	An Improved Turn Structure for Inducing β -Hairpin Formation in Peptides. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 22776-22782	16.4	0
2	An Improved Turn Structure for Inducing β -Hairpin Formation in Peptides. <i>Angewandte Chemie</i> , 2021 , 133, 22958	3.6	0
1	Synthesis and application of fluorescent teixobactin analogs.. <i>Methods in Enzymology</i> , 2022 , 665, 233-258.	7	