Michael H Hecht

List of Publications by Year
in descending order

63 papers	3,898 citations	117571 34 h-index	128225 60 g-index
63 all docs	63 docs citations	63 times ranked	3658 citing authors

#	Article	IF	Citations
1	De novo proteins from designed combinatorial libraries. Protein Science, 2004, 13, 1711-1723.	3.1	237
2	Mutations that Reduce Aggregation of the Alzheimer's Aî²42 Peptide: an Unbiased Search for the Sequence Determinants of Aî² Amyloidogenesis. Journal of Molecular Biology, 2002, 319, 1279-1290.	2.0	216
3	Nature disfavors sequences of alternating polar and non-polar amino acids: implications for amyloidogenesis 1 1Edited by F. E. Cohen. Journal of Molecular Biology, 2000, 296, 961-968.	2.0	163
4	Rationally designed mutations convert de novo amyloid-like fibrils into monomeric Â-sheet proteins. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 2760-2765.	3.3	163
5	Generic hydrophobic residues are sufficient to promote aggregation of the Alzheimer's Abeta42 peptide. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 15824-15829.	3.3	163
6	Recombinant Proteins Can Be Isolated from E. coli Cells by Repeated Cycles of Freezing and Thawing. Nature Biotechnology, 1994, 12, 1357-1360.	9.4	162
7	A High-Throughput Screen for Compounds That Inhibit Aggregation of the Alzheimerâ€™s Peptide. ACS Chemical Biology, 2006, 1, 461-469.	1.6	158
8	Binary patterning of polar and nonpolar amino acids in the sequences and structures of native proteins. Protein Science, 1995, 4, 2032-2039.	3.1	123
9	The fourâ€helix bundle: what determines a fold?. FASEB Journal, 1995, 9, 1013-1022.	0.2	112
10	Sequence Determinants of Enhanced Amyloidogenicity of Alzheimer Aî²42 Peptide Relative to Aî²40. Journal of Biological Chemistry, 2005, 280, 35069-35076.	1.6	109
11	Solution structure of a de novo protein from a designed combinatorial library. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 13270-13273.	3.3	107
12	De Novo Proteins from Combinatorial Libraries. Chemical Reviews, 2001, 101, 3191-3204.	23.0	106
13	Template-Directed Assembly of ade NovoDesigned Protein. Journal of the American Chemical Society, 2002, 124, 6846-6848.	6.6	103
14	Stably folded de novo proteins from a designed combinatorial library. Protein Science, 2003, 12, 92-102.	3.1	101
15	Protein Design: The Choice of de Novo Sequences. Journal of Biological Chemistry, 1997, 272, 2031-2034.	1.6	97
16	De Novo Designed Proteins from a Library of Artificial Sequences Function in Escherichia Coli and Enable Cell Growth. PLoS ONE, 2011, 6, e15364.	1.1	96
17	Self-Assembling Nano-Architectures Created from a Protein Nano-Building Block Using an Intermolecularly Folded Dimeric <i>de Novo</i> Protein. Journal of the American Chemical Society, 2015, 137, 11285-11293.	6.6	94
18	De novo heme proteins from designed combinatorial libraries. Protein Science, 1997, 6, 2512-2524.	3.1	93

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19	A Novel Inhibitor of Amyloid Î² (AÎ²) Peptide Aggregation. Journal of Biological Chemistry, 2012, 287, 38992-39000.	1.6	93
20	Peroxidase Activity in Heme Proteins Derived from a Designed Combinatorial Library. Journal of the American Chemical Society, 2000, 122, 7612-7613.	6.6	83
21	Small Molecule Microarrays Enable the Discovery of Compounds That Bind the Alzheimerâ€™s AÎ² Peptide and Reduce its Cytotoxicity. Journal of the American Chemical Society, 2010, 132, 17015-17022.	6.6	80
22	Enzyme-like proteins from an unselected library of designed amino acid sequences. Protein Engineering, Design and Selection, 2004, 17, 67-75.	1.0	77
23	A Protein Designed by Binary Patterning of Polar and Nonpolar Amino Acids Displays Native-like Properties. Journal of the American Chemical Society, 1997, 119, 5302-5306.	6.6	74
24	Nanografting De Novo Proteins onto Gold Surfaces. Langmuir, 2005, 21, 9103-9109.	1.6	72
25	Cofactor binding and enzymatic activity in an unevolved superfamily of <i>de novo</i> designed 4â€helix bundle proteins. Protein Science, 2009, 18, 1388-1400.	3.1	71
26	Cooperative Thermal Denaturation of Proteins Designed by Binary Patterning of Polar and Nonpolar Amino Acids. Biochemistry, 2000, 39, 4603-4607.	1.2	65
27	Novel proteins: from fold to function. Current Opinion in Chemical Biology, 2011, 15, 421-426.	2.8	58
28	Mutations Enhance the Aggregation Propensity of the Alzheimerâ€™s AÎ² Peptide. Journal of Molecular Biology, 2008, 377, 565-574.	2.0	53
29	Peroxidase activity of de novo heme proteins immobilized on electrodes. Journal of Inorganic Biochemistry, 2007, 101, 1820-1826.	1.5	52
30	Midpoint reduction potentials and heme binding stoichiometries of de novo proteins from designed combinatorial libraries. Biophysical Chemistry, 2003, 105, 231-239.	1.5	50
31	Carbon Monoxide Binding by de Novo Heme Proteins Derived from Designed Combinatorial Libraries. Journal of the American Chemical Society, 2001, 123, 2109-2115.	6.6	48
32	Structure and dynamics of de novo proteins from a designed superfamily of 4â€helix bundles. Protein Science, 2008, 17, 821-832.	3.1	48
33	A de novo enzyme catalyzes a life-sustaining reaction in Escherichia coli. Nature Chemical Biology, 2018, 14, 253-255.	3.9	47
34	Detecting native-like properties in combinatorial libraries of de novo proteins. Folding & Design, 1997, 2, 89-92.	4.5	40
35	A protein constructed de novo enables cell growth by altering gene regulation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2400-2405.	3.3	35
36	Screening Combinatorial Libraries of de Novo Proteins by Hydrogenâˆ'Deuterium Exchange and Electrospray Mass Spectrometry. Journal of the American Chemical Society, 1999, 121, 9509-9513.	6.6	34

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37	Directed evolution of the peroxidase activity of a de novo-designed protein. Protein Engineering, Design and Selection, 2012, 25, 445-452.	1.0	31
38	Domain-Swapped Dimeric Structure of a Stable and Functional <i>De Novo</i> Four-Helix Bundle Protein, WA20. Journal of Physical Chemistry B, 2012, 116, 6789-6797.	1.2	31
39	De Novo Proteins with Life-Sustaining Functions Are Structurally Dynamic. Journal of Molecular Biology, 2016, 428, 399-411.	2.0	28
40	An intein-based genetic selection allows the construction of a high-quality library of binary patterned de novo protein sequences. Protein Engineering, Design and Selection, 2005, 18, 201-207.	1.0	25
41	Proteins from an Unevolved Library of de novo Designed Sequences Bind a Range of Small Molecules. ACS Synthetic Biology, 2012, 1, 130-138.	1.9	25
42	A de novo protein confers copper resistance in E scherichia coli. Protein Science, 2016, 25, 1249-1259.	3.1	24
43	A Non-natural Protein Rescues Cells Deleted for a Key Enzyme in Central Metabolism. ACS Synthetic Biology, 2017, 6, 694-700.	1.9	23
44	Self-Assembling Supramolecular Nanostructures Constructed from <i>de Novo</i> Extender Protein Nanobuilding Blocks. ACS Synthetic Biology, 2018, 7, 1381-1394.	1.9	23
45	<i>De novo</i> Proteins From Binary-Patterned Combinatorial Libraries. , 2006, 340, 53-70.		21
46	Divergent evolution of a bifunctional <i>de novo</i> protein. Protein Science, 2015, 24, 246-252.	3.1	21
47	Electrochemical and ligand binding studies of a de novo heme protein. Biophysical Chemistry, 2006, 123, 102-112.	1.5	20
48	Structureâ€Activity Relationships for a Series of Compounds that Inhibit Aggregation of the Alzheimer's Peptide, A<i>Î²</i>42. Chemical Biology and Drug Design, 2014, 84, 505-512.	1.5	18
49	Protein Design by Binary Patterning of Polar and Nonpolar Amino Acids. , 2007, 352, 155-166.		15
50	Are natural proteins special? Can we do that?. Current Opinion in Structural Biology, 2018, 48, 124-132.	2.6	15
51	Combinatorial Approaches to Probe the Sequence Determinants of Protein Aggregation and Amyloidogenicity. Protein and Peptide Letters, 2006, 13, 279-286.	0.4	14
52	A Strategy for Combinatorial Cavity Design in De Novo Proteins. Life, 2020, 10, 9.	1.1	14
53	Artificial Gene Amplification in Escherichia coli Reveals Numerous Determinants for Resistance to Metal Toxicity. Journal of Molecular Evolution, 2018, 86, 103-110.	0.8	13
54	Hyperstable <i>De Novo</i> Protein with a Dimeric Bisecting Topology. ACS Synthetic Biology, 2020, 9, 254-259.	1.9	10

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55	Binding of small molecules to cavity forming mutants of a <i>de novo</i> designed protein. Protein Science, 2011, 20, 702-711.	3.1	9
56	A Completely <i>De Novo</i> ATPase from Combinatorial Protein Design. Journal of the American Chemical Society, 2020, 142, 15230-15234.	6.6	9
57	Unevolved De Novo Proteins Have Innate Tendencies to Bind Transition Metals. Life, 2019, 9, 8.	1.1	8
58	Design of a Fe₄S₄ cluster into the core of a <i>deÂnovo</i> fourâ€helix bundle. Biotechnology and Applied Biochemistry, 2020, 67, 574-585.	1.4	6
59	1H, 13C and 15N resonance assignments of S-824, a de novo four-helix bundle from a designed combinatorial library. Journal of Biomolecular NMR, 2003, 27, 395-396.	1.6	5
60	Harnessing synthetic biology to enhance heterologous protein expression. Protein Science, 2020, 29, 1698-1706.	3.1	4
61	NMR assignment of S836: a de novo protein from a designed superfamily. Biomolecular NMR Assignments, 2007, 1, 213-215.	0.4	2
62	Stability of Protein Structure during Nanocarrier Encapsulation: Insights on Solvent Effects from Simulations and Spectroscopic Analysis. ACS Nano, 2020, 14, 16962-16972.	7.3	1
63	Knowledge-based Protein Design. , 2009, , .		0