Mark Howarth

List of Publications by Year
in descending order

71 papers	9,118 citations	87888 38 h-index	95266 68 g-index
76 all docs	76 docs citations	76 times ranked	10104 citing authors

#	Article	IF	Citations
1	DogCatcher allows loop-friendly protein-protein ligation. Cell Chemical Biology, 2022, 29, 339-350.e10.	5.2	29
2	Virus-like particles against infectious disease and cancer: guidance for the nano-architect. Current Opinion in Biotechnology, 2022, 73, 346-354.	6.6	14
3	SpySwitch enables pH- or heat-responsive capture and release for plug-and-display nanoassembly. Nature Communications, 2022, 13, .	12.8	12
4	Overcoming Symmetry Mismatch in Vaccine Nanoassembly through Spontaneous Amidation. Angewandte Chemie, 2021, 133, 325-334.	2.0	8
5	Overcoming Symmetry Mismatch in Vaccine Nanoassembly through Spontaneous Amidation. Angewandte Chemie - International Edition, 2021, 60, 321-330.	13.8	45
6	A COVID-19 vaccine candidate using SpyCatcher multimerization of the SARS-CoV-2 spike protein receptor-binding domain induces potent neutralising antibody responses. Nature Communications, 2021, 12, 542.	12.8	200
7	NeissLock provides an inducible protein anhydride for covalent targeting of endogenous proteins. Nature Communications, 2021, 12, 717.	12.8	2
8	Mosaic nanoparticles elicit cross-reactive immune responses to zoonotic coronaviruses in mice. Science, 2021, 371, 735-741.	12.6	305
9	Gastrobodies are engineered antibody mimetics resilient to pepsin and hydrochloric acid. Communications Biology, 2021, 4, 960.	4.4	6
10	SnoopLigase-Mediated Peptideâ€"Peptide Conjugation and Purification. Methods in Molecular Biology, 2021, 2208, 13-31.	0.9	1
11	Power to the protein: enhancing and combining activities using the Spy toolbox. Chemical Science, 2020, 11, 7281-7291.	7.4	109
12	Transmembrane protein rotaxanes reveal kinetic traps in the refolding of translocated substrates. Communications Biology, 2020, 3, 159.	4.4	12
13	Insider information on successful covalent protein coupling with help from SpyBank. Methods in Enzymology, 2019, 617, 443-461.	1.0	28
14	Spy&Go purification of SpyTag-proteins using pseudo-SpyCatcher to access an oligomerization toolbox. Nature Communications, 2019, 10, 1734.	12.8	73
15	SnoopLigase peptide-peptide conjugation enables modular vaccine assembly. Scientific Reports, 2019, 9, 4625.	3.3	29
16	Localization Error and Fitting Model Evaluation in Single Particle Tracking. Biophysical Journal, 2019, 116, 282a.	0.5	0
17	Approaching infinite affinity through engineering of peptideâ€"protein interaction. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 26523-26533.	7.1	163
18	SnoopLigase Catalyzes Peptideâ€"Peptide Locking and Enables Solid-Phase Conjugate Isolation. Journal of the American Chemical Society, 2018, 140, 3008-3018.	13.7	61

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19	Nanoteamwork: covalent protein assembly beyond duets towards protein ensembles and orchestras. Current Opinion in Biotechnology, 2018, 51, 16-23.	6.6	40
20	New Routes and Opportunities for Modular Construction of Particulate Vaccines: Stick, Click, and Glue. Frontiers in Immunology, 2018, 9, 1432.	4.8	115
21	Engineering a Rugged Nanoscaffold To Enhance Plug-and-Display Vaccination. ACS Nano, 2018, 12, 8855-8866.	14.6	180
22	Assembling and decorating hyaluronan hydrogels with twin protein superglues to mimic cell-cell interactions. Biomaterials, 2018, 180, 253-264.	11.4	25
23	Editorial overview: Nanobiotechnology: Baby steps and giant strides towards molecular mastery. Current Opinion in Biotechnology, 2018, 51, iv-vi.	6.6	0
24	Extracellular Self-Assembly of Functional and Tunable Protein Conjugates from <i>Bacillus subtilis</i>. ACS Synthetic Biology, 2017, 6, 957-967.	3.8	38
25	Controlling Multivalent Binding through Surface Chemistry: Model Study on Streptavidin. Journal of the American Chemical Society, 2017, 139, 4157-4167.	13.7	86
26	Dual Plug-and-Display Synthetic Assembly Using Orthogonal Reactive Proteins for Twin Antigen Immunization. Bioconjugate Chemistry, 2017, 28, 1544-1551.	3.6	86
27	Smart superglue in streptococci? The proof is in the pulling. Journal of Biological Chemistry, 2017, 292, 8998-8999.	3.4	0
28	Evolving Accelerated Amidation by SpyTag/SpyCatcher to Analyze Membrane Dynamics. Angewandte Chemie, 2017, 129, 16748-16752.	2.0	10
29	Evolving Accelerated Amidation by SpyTag/SpyCatcher to Analyze Membrane Dynamics. Angewandte Chemie - International Edition, 2017, 56, 16521-16525.	13.8	128
30	Amine Landscaping to Maximize Protein-Dye Fluorescence and Ultrastable Protein-Ligand Interaction. Cell Chemical Biology, 2017, 24, 1040-1047.e4.	5.2	13
31	Nanoassembly routes stimulate conflicting antibody quantity and quality for transmission-blocking malaria vaccines. Scientific Reports, 2017, 7, 3811.	3.3	65
32	SpyRing interrogation: analyzing how enzyme resilience can be achieved with phytase and distinct cyclization chemistries. Scientific Reports, 2016, 6, 21151.	3.3	52
33	Plug-and-Display: decoration of Virus-Like Particles via isopeptide bonds for modular immunization. Scientific Reports, 2016, 6, 19234.	3.3	310
34	A single molecule assay to probe monovalent and multivalent bonds between hyaluronan and its key leukocyte receptor CD44 under force. Scientific Reports, 2016, 6, 34176.	3.3	38
35	Programmable polyproteams built using twin peptide superglues. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1202-1207.	7.1	262
36	Secrets of a covalent interaction for biomaterials and biotechnology: SpyTag and SpyCatcher. Current Opinion in Chemical Biology, 2015, 29, 94-99.	6.1	248

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37	Site-Specific Biotinylation of Purified Proteins Using BirA. Methods in Molecular Biology, 2015, 1266, 171-184.	0.9	305
38	Say it with proteins: an alphabet of crystal structures. Nature Structural and Molecular Biology, 2015, 22, 349-349.	8.2	8
39	SpyTag/SpyCatcher Cyclization Confers Resilience to Boiling on a Mesophilic Enzyme. Angewandte Chemie - International Edition, 2014, 53, 6101-6104.	13.8	139
40	Superglue from bacteria: unbreakable bridges for protein nanotechnology. Trends in Biotechnology, 2014, 32, 506-512.	9.3	115
41	SpyAvidin Hubs Enable Precise and Ultrastable Orthogonal Nanoassembly. Journal of the American Chemical Society, 2014, 136, 12355-12363.	13.7	62
42	Loveâ€“Hate ligands for high resolution analysis of strain in ultra-stable protein/small molecule interaction. Bioorganic and Medicinal Chemistry, 2014, 22, 5476-5486.	3.0	9
43	Structural Analysis and Optimization of the Covalent Association between SpyCatcher and a Peptide Tag. Journal of Molecular Biology, 2014, 426, 309-317.	4.2	241
44	Plug-and-Play Pairing via Defined Divalent Streptavidins. Journal of Molecular Biology, 2014, 426, 199-214.	4.2	87
45	SpyLigase peptideâ€“peptide ligation polymerizes affibodies to enhance magnetic cancer cell capture. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E1176-81.	7.1	154
46	Hydroxy-Terminated Conjugated Polymer Nanoparticles Have Near-Unity Bright Fraction and Reveal Cholesterol-Dependence of IGF1R Nanodomains. ACS Nano, 2013, 7, 1137-1144.	14.6	34
47	Cholesterol Loading and Ultrastable Protein Interactions Determine the Level of Tumor Marker Required for Optimal Isolation of Cancer Cells. Cancer Research, 2013, 73, 2310-2321.	0.9	18
48	Quantum Dot Targeting with Lipoic Acid Ligase and HaloTag for Single-Molecule Imaging on Living Cells. ACS Nano, 2012, 6, 11080-11087.	14.6	67
49	Peptide tag forming a rapid covalent bond to a protein, through engineering a bacterial adhesin. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E690-7.	7.1	1,131
50	Mechanisms for Size-Dependent Protein Segregation at Immune Synapses Assessed with Molecular Rulers. Biophysical Journal, 2011, 100, 2865-2874.	0.5	29
51	How the biotinâ€“streptavidin interaction was made even stronger: investigation via crystallography and a chimaeric tetramer. Biochemical Journal, 2011, 435, 55-63.	3.7	112
52	A Peptide Filtering Relation Quantifies MHC Class I Peptide Optimization. PLoS Computational Biology, 2011, 7, e1002144.	3.2	39
53	Separating speed and ability to displace roadblocks during DNA translocation by FtsK. EMBO Journal, 2010, 29, 1423-1433.	7.8	34
54	A streptavidin variant with slower biotin dissociation and increased mechanostability. Nature Methods, 2010, 7, 391-393.	19.0	169

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55	Type 1 Insulin-like Growth Factor Receptor Translocates to the Nucleus of Human Tumor Cells. Cancer Research, 2010, 70, 6412-6419.	0.9	178
56	Spontaneous Intermolecular Amide Bond Formation between Side Chains for Irreversible Peptide Targeting. Journal of the American Chemical Society, 2010, 132, 4526-4527.	13.7	142
57	A molecular carâ€crash: a speeding motor hits a new ultraâ€stable nonâ€covalent interaction. FASEB Journal, 2010, 24, lb168.	0.5	0
58	Electrophilic Affibodies Forming Covalent Bonds to Protein Targets. Journal of Biological Chemistry, 2009, 284, 32906-32913.	3.4	27
59	Tapasin shapes immunodominance hierarchies according to the kinetic stability of peptide â€“ MHC classâ€„I complexes. European Journal of Immunology, 2008, 38, 364-369.	2.9	32
60	Compact Biocompatible Quantum Dots Functionalized for Cellular Imaging. Journal of the American Chemical Society, 2008, 130, 1274-1284.	13.7	583
61	Monovalent, reduced-size quantum dots for imaging receptors on living cells. Nature Methods, 2008, 5, 397-399.	19.0	398
62	Imaging proteins in live mammalian cells with biotin ligase and monovalent streptavidin. Nature Protocols, 2008, 3, 534-545.	12.0	221
63	Giving cells a new sugar-coating. Nature Chemical Biology, 2006, 2, 127-128.	8.0	4
64	A monovalent streptavidin with a single femtomolar biotin binding site. Nature Methods, 2006, 3, 267-273.	19.0	334
65	Site-specific labeling of cell surface proteins with biophysical probes using biotin ligase. Nature Methods, 2005, 2, 99-104.	19.0	617
66	Targeting quantum dots to surface proteins in living cells with biotin ligase. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 7583-7588.	7.1	516
67	Tapasin enhances MHC class I peptide presentation according to peptide half-life. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 11737-11742.	7.1	168
68	The processing of antigens delivered as DNA vaccines. Immunological Reviews, 2004, 199, 27-39.	6.0	30
69	Solid-Phase Synthesis of 89 Polyamine-Based Cationic Lipids for DNA Delivery to Mammalian Cells. Chemistry - A European Journal, 2004, 10, 463-473.	3.3	46
70	DNA Transfection Screening from Single Beads. ACS Combinatorial Science, 2004, 6, 753-760.	3.3	14
71	Assembly and Antigen-Presenting Function of MHC Class I Molecules in Cells Lacking the ER Chaperone Calreticulin. Immunity, 2002, 16, 99-109.	14.3	217