G Andrew Woolley

List of Publications by Year
in descending order

120 papers	8,750 citations	53660 45 h-index	43802 91 g-index
130 all docs	130 docs citations	130 times ranked	6399 citing authors

#	Article	IF	Citations
1	Azobenzene photoswitches for biomolecules. Chemical Society Reviews, 2011, 40, 4422.	18.7	1,503
2	Azobenzene Photoswitching without Ultraviolet Light. Journal of the American Chemical Society, 2011, 133, 19684-19687.	6.6	527
3	Red-Shifting Azobenzene Photoswitches for in Vivo Use. Accounts of Chemical Research, 2015, 48, 2662-2670.	7.6	481
4	Photoswitching Azo Compounds in Vivo with Red Light. Journal of the American Chemical Society, 2013, 135, 9777-9784.	6.6	413
5	Photo-control of helix content in a short peptide. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 3803-3808.	3.3	275
6	Model ion channels: Gramicidin and alamethicin. Journal of Membrane Biology, 1992, 129, 109-36.	1.0	261
7	Photocontrolling Peptide Î± Helices. Accounts of Chemical Research, 2005, 38, 486-493.	7.6	216
8	Spectral Tuning of Azobenzene Photoswitches for Biological Applications. Angewandte Chemie - International Edition, 2009, 48, 1484-1486.	7.2	204
9	Â-Helix formation in a photoswitchable peptide tracked from picoseconds to microseconds by time-resolved IR spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 2379-2384.	3.3	186
10	Near-Infrared Photoswitching of Azobenzenes under Physiological Conditions. Journal of the American Chemical Society, 2017, 139, 13483-13486.	6.6	170
11	Using an Azobenzene Cross-Linker to Either Increase or Decrease Peptide Helix Content upon Trans-to-Cis Photoisomerization. Chemistry and Biology, 2002, 9, 391-397.	6.2	150
12	Bidirectional Photocontrol of Peptide Conformation with a Bridged Azobenzene Derivative. Angewandte Chemie - International Edition, 2012, 51, 6452-6455.	7.2	138
13	Robust visible light photoswitching with ortho-thiol substituted azobenzenes. Chemical Communications, 2013, 49, 10314.	2.2	137
14	Fluorescence Imaging of Azobenzene Photoswitching In Vivo. Angewandte Chemie - International Edition, 2011, 50, 1325-1327.	7.2	135
15	Simultaneous Optical and Electrical Recording of Single Gramicidin Channels. Biophysical Journal, 2003, 84, 612-622.	0.2	130
16	Photoswitching of <i>ortho</i>â€Substituted Azonium Ions by Red Light in Whole Blood. Angewandte Chemie - International Edition, 2013, 52, 14127-14130.	7.2	119
17	Î±-Helix folding in the presence of structural constraints. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 9588-9593.	3.3	116
18	Photocontrol of Coiledâ€Coil Proteins in Living Cells. Angewandte Chemie - International Edition, 2010, 49, 3943-3946.	7.2	108

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19	Structure-Based Approach to the Photocontrol of Protein Folding. Journal of the American Chemical Society, 2009, 131, 2283-2289.	6.6	98
20	Red, far-red, and near infrared photoswitches based on azonium ions. Chemical Communications, 2015, 51, 12981-12984.	2.2	95
21	Reversible Photocontrol of DNA Binding by a Designed GCN4-bZIP Proteinâ€. Biochemistry, 2006, 45, 6075-6084.	1.2	94
22	Photocontrol of DNA Binding Specificity of a Miniature Engrailed Homeodomain. Journal of the American Chemical Society, 2005, 127, 15624-15629.	6.6	89
23	Long wavelength optical control of glutamate receptor ion channels using a tetra-<i>ortho</i>-substituted azobenzene derivative. Chemical Communications, 2014, 50, 14613-14615.	2.2	89
24	Photomodulation of ionic current through hemithioindigo-modified gramicidin channels. Organic and Biomolecular Chemistry, 2004, 2, 2798-2801.	1.5	88
25	Stabilization of Folded Peptide and Protein Structures via Distance Matching with a Long, Rigid Cross-Linker. Journal of the American Chemical Society, 2007, 129, 14154-14155.	6.6	87
26	A Water-Soluble Azobenzene Cross-Linker for Photocontrol of Peptide Conformation. Bioconjugate Chemistry, 2003, 14, 824-829.	1.8	85
27	Folding and unfolding of a photoswitchable peptide from picoseconds to microseconds. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 5383-5388.	3.3	85
28	Engineering Stabilized Ion Channels:Â Covalent Dimers of Alamethicinâ€. Biochemistry, 1996, 35, 6225-6232.	1.2	84
29	Photomodulated Blocking of Gramicidin Ion Channels. Journal of the American Chemical Society, 1996, 118, 12222-12223.	6.6	77
30	Optical Switching of Ionâˆ'Dipole Interactions in a Gramicidin Channel Analogue. Journal of the American Chemical Society, 2000, 122, 6364-6370.	6.6	73
31	Photochemical Regulation of DNA-Binding Specificity of MyoD. Angewandte Chemie - International Edition, 2005, 44, 7778-7782.	7.2	71
32	Peptides in membranes: Lipid-induced secondary structure of substance P. Biopolymers, 1987, 26, S109-S121.	1.2	70
33	Design of Regulated Ion Channels Using Measurements of Cis-Trans Isomerization in Single Molecules. Journal of the American Chemical Society, 1995, 117, 4448-4454.	6.6	70
34	Reversible Photocontrol of Peptide Conformation with a Rhodopsin-like Photoswitch. Journal of the American Chemical Society, 2012, 134, 6960-6963.	6.6	70
35	Conformations of proline residues in membrane environments. Biopolymers, 1990, 29, 149-157.	1.2	68
36	The structure and function of antiamoebin I, a proline-rich membrane-active polypeptide. Structure, 1998, 6, 783-792.	1.6	68

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37	The Kinetics of Helix Unfolding of an Azobenzene Cross-Linked Peptide Probed by Nanosecond Time-Resolved Optical Rotatory Dispersion. Journal of the American Chemical Society, 2003, 125, 12443-12449.	6.6	64
38	Synthesis of 3,3â€²-bis(sulfonato)-4,4â€²-bis(chloroacetamido)azobenzene and cysteine cross-linking for photo-control of protein conformation and activity. Nature Protocols, 2007, 2, 251-258.	5.5	63
39	Site-specific incorporation of photoisomerizable azobenzene groups into ribonuclease S. Bioorganic and Medicinal Chemistry Letters, 1997, 7, 2677-2680.	1.0	58
40	Temperature dependence of the interaction of alamethicin helixes in membranes. Biochemistry, 1993, 32, 9819-9825.	1.2	57
41	Reversible Photocontrol of Peptide Helix Content:â€‰ Adjusting Thermal Stability of the Cis State. Bioconjugate Chemistry, 2004, 15, 1297-1303.	1.8	51
42	A Blue-Green Absorbing Cross-Linker for Rapid Photoswitching of Peptide Helix Content. Bioconjugate Chemistry, 2006, 17, 670-676.	1.8	51
43	Origins of Helixâ˜'Coil Switching in a Light-Sensitive Peptideâ€. Biochemistry, 2004, 43, 15329-15338.	1.2	50
44	Intrinsic rectification of ion flux in alamethicin channels: studies with an alamethicin dimer. Biophysical Journal, 1997, 73, 770-778.	0.2	49
45	Kinetic characterization of ribonuclease S mutants containing photoisomerizable phenylazophenylalanine residues. Protein Engineering, Design and Selection, 2001, 14, 983-991.	1.0	46
46	Structure-Based Design of a Photocontrolled DNA Binding Protein. Journal of Molecular Biology, 2010, 399, 94-112.	2.0	46
47	Reversibility of conformational switching in light-sensitive peptides. Journal of Photochemistry and Photobiology A: Chemistry, 2005, 173, 21-28.	2.0	44
48	Role of Lipids in the Permeabilization of Membranes by Class L Amphipathic Helical Peptides. Biochemistry, 1997, 36, 9237-9245.	1.2	43
49	Voltage-dependent behavior of a "ball-and-chain" gramicidin channel. Biophysical Journal, 1997, 73, 2465-2475.	0.2	42
50	Protonation of Lysine Residues Inverts Cation/Anion Selectivity in a Model Channel. Biophysical Journal, 2000, 78, 1335-1348.	0.2	42
51	Photo-control of peptide conformation on a timescale of seconds with a conformationally constrained, blue-absorbing, photo-switchable linker. Organic and Biomolecular Chemistry, 2008, 6, 4323.	1.5	39
52	Bisâ€Azobenzene Crosslinkers for Photocontrol of Peptide Structure. ChemBioChem, 2011, 12, 1712-1723.	1.3	39
53	Potential-sensitive membrane association of a fluorescent dye. FEBS Letters, 1987, 224, 337-342.	1.3	37
54	Alamethicin Pyromellitate: An Ion-Activated Channel-Forming Peptide. Biochemistry, 1994, 33, 6850-6858.	1.2	37

#	Article	IF	Citations
55	A lipid vesicle system for probing voltage-dependent peptide-lipid interactions: Application to alamethicin channel formation. Biopolymers, 1989, 28, 267-272.	1.2	36
56	Photo-control of peptide helix content by an azobenzene cross-linker: steric interactions with underlying residues are not critical. Protein Engineering, Design and Selection, 2002, 15, 561-569.	1.0	35
57	Optogenetic Inhibitor of the Transcription Factor CREB. Chemistry and Biology, 2015, 22, 1531-1539.	6.2	34
58	Synthesis and Characterization of a Long, Rigid Photoswitchable Crossâ€Linker for Promoting Peptide and Protein Conformational Change. ChemBioChem, 2008, 9, 2147-2154.	1.3	33
59	Improving a Designed Photocontrolled DNA-Binding Protein. Biochemistry, 2011, 50, 1226-1237.	1.2	33
60	An Anion-Selective Analogue of the Channel-Forming Peptide Alamethicinâ€. Biochemistry, 1999, 38, 6144-6150.	1.2	32
61	A photoswitchable DNA-binding protein based on a truncated GCN4-photoactive yellow protein chimera. Photochemical and Photobiological Sciences, 2010, 9, 1320-1326.	1.6	31
62	Achieving photo-control of protein conformation and activity: producing a photo-controlled leucine zipper. Faraday Discussions, 2003, 122, 89-103.	1.6	27
63	Optical Control of Proteinâ€"Protein Interactions via Blue Light-Induced Domain Swapping. Biochemistry, 2014, 53, 5008-5016.	1.2	27
64	Channel-Forming Activity of Alamethicin: Effects of Covalent Tethering. Chemistry and Biodiversity, 2007, 4, 1323-1337.	1.0	26
65	Computational Design of a Photocontrolled Cytosine Deaminase. Journal of the American Chemical Society, 2018, 140, 14-17.	6.6	26
66	Gramicidin derivatives as membrane-based pH sensors. Biochimica Et Biophysica Acta - Biomembranes, 2002, 1558, 26-33.	1.4	25
67	Prevention of Peptide Fibril Formation in an Aqueous Environment by Mutation of a Single Residue to Aib. Biochemistry, 2003, 42, 4492-4498.	1.2	25
68	A time-dependent role for the transcription factor CREB in neuronal allocation to an engram underlying a fear memory revealed using a novel in vivo optogenetic tool to modulate CREB function. Neuropsychopharmacology, 2020, 45, 916-924.	2.8	25
69	Characterization of Thermal Isomerization at the Single Molecule Level. The Journal of Physical Chemistry, 1995, 99, 13352-13355.	2.9	24
70	The effect of azobenzene cross-linker position on the degree of helical peptide photo-control. Organic and Biomolecular Chemistry, 2013, 11, 5325.	1.5	24
71	A Circularly Permuted Photoactive Yellow Protein as a Scaffold for Photoswitch Design. Biochemistry, 2013, 52, 3320-3331.	1.2	24
72	Optimizing the Photocontrol of bZIP Coiled Coils with Azobenzene Crosslinkers: Role of the Crosslinking Site. ChemBioChem, 2015, 16, 1757-1763.	1.3	24

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73	Discovering Selective Binders for Photoswitchable Proteins Using Phage Display. ACS Synthetic Biology, 2018, 7, 2355-2364.	1.9	24
74	Fluorescent Gramicidin Derivatives for Single-Molecule Fluorescence and Ion Channel Measurements. Bioconjugate Chemistry, 2001, 12, 594-602.	1.8	23
75	Quantitative Analysis of the Effects of Photoswitchable Distance Constraints on the Structure of a Globular Protein. Biochemistry, 2012, 51, 6421-6431.	1.2	23
76	Structureâ˘'Function Relationships in Helix-Bundle Channels Probed via Total Chemical Synthesis of Alamethicin Dimers:Â Effects of a Gln7to Asn7Mutationâ€. Biochemistry, 1997, 36, 13873-13881.	1.2	22
77	Modeling ion channel regulation. Current Opinion in Chemical Biology, 2003, 7, 710-714.	2.8	22
78	A Redâ€Light Azobenzene Diâ€Maleimide Photoswitch: Pros and Cons. Advanced Optical Materials, 2016, 4, 1402-1409.	3.6	21
79	A collection of caged compounds for probing roles of local translation in neurobiology. Bioorganic and Medicinal Chemistry, 2010, 18, 7746-7752.	1.4	20
80	A bisazobenzene crosslinker that isomerizes with visible light. Beilstein Journal of Organic Chemistry, 2012, 8, 2184-2190.	1.3	20
81	Understanding pH-Dependent Selectivity of Alamethicin K18 Channels by Computer Simulation. Biophysical Journal, 2003, 84, 1464-1469.	0.2	19
82	Polyanions Decelerate the Kinetics of Positively Charged Gramicidin Channels as Shown by Sensitized Photoinactivation. Biophysical Journal, 2002, 82, 1308-1318.	0.2	18
83	A Cysteine-Free Firefly Luciferase Retains Luminescence Activity. Biochemical and Biophysical Research Communications, 2000, 267, 394-397.	1.0	16
84	Modular design of optically controlled protein affinity reagents. Chemical Communications, 2018, 54, 1591-1594.	2.2	16
85	A Yeast System for Discovering Optogenetic Inhibitors of Eukaryotic Translation Initiation. ACS Synthetic Biology, 2019, 8, 744-757.	1.9	16
86	Evidence for similar function of transmembrane segments in receptor and membrane-anchored proteins. Biopolymers, 1988, 27, 1171-1182.	1.2	15
87	Photoswitchable Affinity Reagents: Computational Design and Efficient Redâ€Light Switching. ChemPhotoChem, 2019, 3, 431-440.	1.5	15
88	Yeast Two-Hybrid Screening of Photoswitchable Proteinâ€"Protein Interaction Libraries. Journal of Molecular Biology, 2020, 432, 3113-3126.	2.0	15
89	A Fluorescence-Based Assay for Ribonuclease A Activity. Analytical Biochemistry, 1998, 264, 26-33.	1.1	14
90	Strategies for the photo-control of endogenous protein activity. Current Opinion in Structural Biology, 2017, 45, 53-58.	2.6	14

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91	Development of a Novel Thiol Reagent for Probing Ion Channel Structure:â€‰ Studies in a Model System. Biochemistry, 1997, 36, 1343-1348.	1.2	13
92	Lighting up with azobenzenes. Nature Chemistry, 2012, 4, 75-77.	6.6	13
93	Tuning the Attempt Frequency of Protein Folding Dynamics via Transition-State Rigidification: Application to Trp-Cage. Journal of Physical Chemistry Letters, 2015, 6, 521-526.	2.1	13
94	sGAL: a computational method for finding surface exposed sites in proteins suitable for Cys-mediated cross-linking. Bioinformatics, 2006, 22, 3101-3102.	1.8	11
95	C-terminal amino groups facilitate membrane incorporation of gramicidin derivatives. Biochimica Et Biophysica Acta - Biomembranes, 1995, 1234, 133-138.	1.4	10
96	Engineering charge selectivity in model ion channels. Bioorganic and Medicinal Chemistry, 2004, 12, 1337-1342.	1.4	10
97	Photo-control of DNA binding by an engrailed homeodomainâ€”photoactive yellow protein hybrid. Photochemical and Photobiological Sciences, 2015, 14, 1729-1736.	1.6	9
98	An open and shut cage. Nature Nanotechnology, 2013, 8, 892-893.	15.6	8
99	An<i>Escherichia coli</i>system for evolving improved light-controlled DNA-binding proteins. Protein Engineering, Design and Selection, 2015, 28, 293-302.	1.0	8
100	Synthesis and characterization of bis(4-amino-2-bromo-6-methoxy)azobenzene derivatives. Beilstein Journal of Organic Chemistry, 2019, 15, 3000-3008.	1.3	8
101	Structureâ€based design of a photoswitchable affibody scaffold. Protein Science, 2021, 30, 2359-2372.	3.1	8
102	Photo Control of Protein Function Using Photoactive Yellow Protein. Methods in Molecular Biology, 2016, 1408, 79-92.	0.4	8
103	PATIC: a conformationally constrained photoisomerizable amino acid. Chemical Biology and Drug Design, 1999, 53, 560-568.	1.2	7
104	Origins of the Intermediate Spectral Form in M100 Mutants of Photoactive Yellow Protein. Photochemistry and Photobiology, 2015, 91, 985-991.	1.3	7
105	Detection of Incorporation of <i>p</i>-Coumaric Acid into Photoactive Yellow Protein Variants <i>in Vivo</i>. Biochemistry, 2019, 58, 2682-2694.	1.2	6
106	Site-specific biosynthetic incorporation of a fluorescent tag into proteins via Cysteine-tRNACys. Analytical Biochemistry, 2002, 307, 252-257.	1.1	5
107	[4] Use of ionophores for manipulating intracellular ion concentrations. Methods in Neurosciences, 1995, 27, 52-68.	0.5	4
108	Designing Chimeric LOV Photoswitches. Chemistry and Biology, 2012, 19, 441-442.	6.2	4

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109	Light-Controlled Gene Switches in Mammalian Cells. Methods in Molecular Biology, 2012, 813, 195-210.	0.4	4
110	Directed evolution approaches for optogenetic tool development. Biochemical Society Transactions, 2021, 49, 2737-2748.	1.6	4
111	Molecular Machines. ChemPhysChem, 2016, 17, 1713-1714.	1.0	3
112	Intramolecular cross-linking of proteins with azobenzene-based cross-linkers. Methods in Enzymology, 2019, 624, 129-149.	0.4	3
113	Photoswitch Design. Neuromethods, 2011, , 171-184.	0.2	3
114	Selection of Proteinâ€"Protein Interactions of Desired Affinities with a Bandpass Circuit. Journal of Molecular Biology, 2019, 431, 391-400.	2.0	2
115	Duplication of a Single Strand in a Î²-Sheet Can Produce a New Switching Function in a Photosensory Protein. Biochemistry, 2018, 57, 4093-4104.	1.2	1
116	Illuminating the photoisomerization of a modified azobenzene single crystal by femtosecond absorption spectroscopy. Canadian Journal of Chemistry, 2019, 97, 488-495.	0.6	1
117	Point (S-to-G) Mutations in the W(S/G)GE Motif in Red/Green Cyanobacteriochrome GAF Domains Enhance Thermal Reversion Rates. Biochemistry, 2022, 61, 1444-1455.	1.2	1
118	The biochemical activities of the aggregate formed by linear gramicidin in an aqueous environment. Biochemical Society Transactions, 2000, 28, A348-A348.	1.6	0
119	Photocontrolling Peptide Î± Helices. ChemInform, 2005, 36, no.	0.1	0
120	Engineering Charge Selectivity in Alamethicin Channels. Novartis Foundation Symposium, 1999, 225, 62-73.	1.2	0