

Brent L Iverson

List of Publications by Year in descending order

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124
papers

12,086
citations

34105

52
h-index

25787

108
g-index

146
all docs

146
docs citations

146
times ranked

13111
citing authors

#	ARTICLE	IF	CITATIONS
1	Rethinking the term "epi-stacking". <i>Chemical Science</i> , 2012, 3, 2191.	7.4	1,304
2	Virus-Based Toolkit for the Directed Synthesis of Magnetic and Semiconducting Nanowires. <i>Science</i> , 2004, 303, 213-217.	12.6	946
3	Synthetic molecules that fold into a pleated secondary structure in solution. <i>Nature</i> , 1995, 375, 303-305.	27.8	522
4	Display of heterologous proteins on the surface of microorganisms: From the screening of combinatorial libraries to live recombinant vaccines. <i>Nature Biotechnology</i> , 1997, 15, 29-34.	17.5	488
5	Viral assembly of oriented quantum dot nanowires. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 6946-6951.	7.1	468
6	Bacterial Biosynthesis of Cadmium Sulfide Nanocrystals. <i>Chemistry and Biology</i> , 2004, 11, 1553-1559.	6.0	415
7	Monoclonal antibodies isolated without screening by analyzing the variable-gene repertoire of plasma cells. <i>Nature Biotechnology</i> , 2010, 28, 965-969.	17.5	299
8	¹ H NMR Investigation of Solvent Effects in Aromatic Stacking Interactions. <i>Journal of the American Chemical Society</i> , 2001, 123, 7560-7563.	13.7	293
9	Protection against anthrax toxin by recombinant antibody fragments correlates with antigen affinity. <i>Nature Biotechnology</i> , 2002, 20, 597-601.	17.5	260
10	Electron-Transfer Reactions of Ruthenium Trisbipyridyl-Viologen Donor-Acceptor Molecules: Comparison of the Distance Dependence of Electron Transfer-Rates in the Normal and Marcus Inverted Regions. <i>Journal of the American Chemical Society</i> , 1994, 116, 4786-4795.	13.7	226
11	Dioxygen and carbonyl binding to iron(II) porphyrins: a comparison of the "picket fence" and "pocket" porphyrins. <i>Journal of the American Chemical Society</i> , 1983, 105, 3052-3064.	13.7	225
12	Aromatic Oligomers that Form Hetero Duplexes in Aqueous Solution. <i>Journal of the American Chemical Society</i> , 2002, 124, 15174-15175.	13.7	224
13	Prevalent, protective, and convergent IgG recognition of SARS-CoV-2 non-RBD spike epitopes. <i>Science</i> , 2021, 372, 1108-1112.	12.6	210
14	Isolation of engineered, full-length antibodies from libraries expressed in <i>Escherichia coli</i> . <i>Nature Biotechnology</i> , 2007, 25, 563-565.	17.5	206
15	Anchored periplasmic expression, a versatile technology for the isolation of high-affinity antibodies from <i>Escherichia coli</i> -expressed libraries. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 9193-9198.	7.1	200
16	Commercial proteases: Present and future. <i>FEBS Letters</i> , 2013, 587, 1155-1163.	2.8	194
17	Models of higher-order structure: foldamers and beyond. <i>Current Opinion in Chemical Biology</i> , 2001, 5, 650-653.	6.1	178
18	Synthesis and organization of nanoscale II-VI semiconductor materials using evolved peptide specificity and viral capsid assembly. <i>Journal of Materials Chemistry</i> , 2003, 13, 2414-2421.	6.7	174

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19	Production of Correctly Folded Fab Antibody Fragment in the Cytoplasm of Escherichia coli trxB gor Mutants via the Coexpression of Molecular Chaperones. Protein Expression and Purification, 2001, 23, 338-347.	1.3	172
20	Function-based isolation of novel enzymes from a large library. Nature Biotechnology, 2000, 18, 1071-1074.	17.5	171
21	Synthesis and Conformational Characterization of Tethered, Self-Complexing 1,5-Dialkoxynaphthalene/1,4,5,8-Naphthalenetetracarboxylic Diimide Systems. Journal of the American Chemical Society, 2000, 122, 8898-8909.	13.7	157
22	Engineering of protease variants exhibiting high catalytic activity and exquisite substrate selectivity. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 6855-6860.	7.1	140
23	Altering the Folding Patterns of Naphthyl Trimers. Journal of the American Chemical Society, 2005, 127, 2637-2640.	13.7	135
24	Isolation and expression of recombinant antibody fragments to the biological warfare pathogen Brucella melitensis. Journal of Immunological Methods, 2003, 276, 185-196.	1.4	133
25	Sequencing exons 5 to 8 of the p53 gene by MALDI-TOF mass spectrometry. Nature Biotechnology, 1998, 16, 381-384.	17.5	130
26	Why High-error-rate Random Mutagenesis Libraries are Enriched in Functional and Improved Proteins. Journal of Molecular Biology, 2005, 350, 806-816.	4.2	130
27	An Amphiphilic Folding Molecule That Undergoes an Irreversible Conformational Change. Journal of the American Chemical Society, 1999, 121, 2639-2640.	13.7	129
28	Isolation of high-affinity ligand-binding proteins by periplasmic expression with cytometric screening (PECS). Nature Biotechnology, 2001, 19, 537-542.	17.5	125
29	Adenine specific DNA chemical sequencing reaction. Nucleic Acids Research, 1987, 15, 7823-7830.	14.5	118
30	High-throughput screening of enzyme libraries. Current Opinion in Biotechnology, 2000, 11, 331-337.	6.6	118
31	Therapeutic enzyme deimmunization by combinatorial T-cell epitope removal using neutral drift. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 1272-1277.	7.1	114
32	Tunable Columnar Mesophases Utilizing C2Symmetric Aromatic Donor-Acceptor Complexes. Journal of the American Chemical Society, 2006, 128, 7995-8002.	13.7	109
33	A New Class of Polyintercalating Molecules. Journal of the American Chemical Society, 1997, 119, 7202-7210.	13.7	106
34	Flow cytometric screening of cell-based libraries. Journal of Immunological Methods, 2000, 243, 211-227.	1.4	106
35	Replacing Mn ²⁺ with Co ²⁺ in Human Arginase I Enhances Cytotoxicity toward Arginine Auxotrophic Cancer Cell Lines. ACS Chemical Biology, 2010, 5, 333-342.	3.4	105
36	Engineering of TEV protease variants by yeast ER sequestration screening (YESS) of combinatorial libraries. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 7229-7234.	7.1	105

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37	Synthesis and characterization of the "pocket" porphyrins. <i>Journal of the American Chemical Society</i> , 1983, 105, 3038-3052.	13.7	103
38	Design and chemical synthesis of a sequence-specific DNA-cleaving protein. <i>Journal of the American Chemical Society</i> , 1988, 110, 7572-7574.	13.7	100
39	Self-assembled luminescent CdSe/ZnS quantum dot bioconjugates prepared using engineered poly-histidine terminated proteins. <i>Analytica Chimica Acta</i> , 2005, 534, 63-67.	5.4	96
40	Effects of codon usage versus putative 5' mRNA structure on the expression of <i>Fusarium solani</i> cutinase in the <i>Escherichia coli</i> cytoplasm. <i>Protein Expression and Purification</i> , 2003, 27, 134-142.	1.3	94
41	Interaction of Sapphyrin with Phosphorylated Species of Biological Interest. <i>Journal of the American Chemical Society</i> , 1996, 118, 1608-1616.	13.7	91
42	Amyloid-like Behavior in Abiotic, Amphiphilic Foldamers. <i>Journal of the American Chemical Society</i> , 2008, 130, 1517-1524.	13.7	83
43	Highly active and selective endopeptidases with programmed substrate specificities. <i>Nature Chemical Biology</i> , 2008, 4, 290-294.	8.0	82
44	Betas are brought into the fold. <i>Nature</i> , 1997, 385, 113-115.	27.8	79
45	A Systematic Study of Thermochromic Aromatic Donor-Acceptor Materials. <i>Journal of Organic Chemistry</i> , 2010, 75, 7682-7690.	3.2	75
46	Using Aromatic Donor Acceptor Interactions to Affect Macromolecular Assembly. <i>Macromolecules</i> , 2006, 39, 5601-5603.	4.8	66
47	A sequence-specific threading tetra-intercalator with an extremely slow dissociation rate constant. <i>Nature Chemistry</i> , 2011, 3, 875-881.	13.6	64
48	Phosphate recognition by sapphyrin. A new approach to DNA binding. <i>Journal of the American Chemical Society</i> , 1993, 115, 11022-11023.	13.7	62
49	Noncompetitive Immunoassay of Small Analytes at the Femtomolar Level by Affinity Probe Capillary Electrophoresis: A Direct Analysis of Digoxin Using a Uniform-Labeled scFv Immunoreagent. <i>Analytical Chemistry</i> , 2000, 72, 5779-5786.	6.5	60
50	Synthetic Antibody Libraries Focused Towards Peptide Ligands. <i>Journal of Molecular Biology</i> , 2008, 378, 622-633.	4.2	60
51	The "pocket" porphyrin: a hemoprotein model with lowered carbon monoxide affinity. <i>Journal of the American Chemical Society</i> , 1981, 103, 2450-2452.	13.7	57
52	Enhanced crossover SCRATCHY: construction and high-throughput screening of a combinatorial library containing multiple non-homologous crossovers. <i>Nucleic Acids Research</i> , 2003, 31, 126e-126.	14.5	57
53	Evolution of highly active enzymes by homology-independent recombination. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 10082-10087.	7.1	54
54	Molecular recognition of anionic species by silica gel bound sapphyrin. <i>Journal of the American Chemical Society</i> , 1994, 116, 2663-2664.	13.7	50

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55	Substrate Specificity of the <i>Escherichia coli</i> Outer Membrane Protease OmpP. <i>Journal of Bacteriology</i> , 2007, 189, 522-530.	2.2	48
56	APEX 2-hybrid, a quantitative protein-protein interaction assay for antibody discovery and engineering. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 8247-8252.	7.1	48
57	E-clonal antibodies: selection of full-length IgG antibodies using bacterial periplasmic display. <i>Nature Protocols</i> , 2008, 3, 1766-1777.	12.0	46
58	Sapphyrin ⁺ Oligonucleotide Conjugates. Novel Sequence-Specific DNA Photomodifying Agents with Increased Binding Affinity. <i>Journal of the American Chemical Society</i> , 1996, 118, 12322-12330.	13.7	44
59	NMR Structural Analysis of a Modular Threading Tetraintercalator Bound to DNA. <i>Journal of the American Chemical Society</i> , 2004, 126, 14036-14042.	13.7	44
60	Engineering next generation proteases. <i>Current Opinion in Biotechnology</i> , 2009, 20, 390-397.	6.6	43
61	Laboratory evolution of glutathione biosynthesis reveals natural compensatory pathways. <i>Nature Chemical Biology</i> , 2011, 7, 101-105.	8.0	43
62	Selective cleavage of trityl protecting groups catalyzed by an antibody. <i>Journal of the American Chemical Society</i> , 1990, 112, 5320-5323.	13.7	40
63	2,4,6-Trinitrotoluene detection using recombinant antibodies. <i>Journal of Environmental Monitoring</i> , 2003, 5, 380.	2.1	40
64	The Evolution of Catalytic Efficiency and Substrate Promiscuity in Human Theta Class 1-1 Glutathione Transferase. <i>Journal of Molecular Biology</i> , 2006, 364, 400-410.	4.2	38
65	NDI and DAN DNA: Nucleic Acid-Directed Assembly of NDI and DAN. <i>Journal of Organic Chemistry</i> , 2014, 79, 2029-2037.	3.2	37
66	Peptide bis-intercalator binds DNA via threading mode with sequence specific contacts in the major groove. <i>Chemistry and Biology</i> , 2001, 8, 415-425.	6.0	36
67	A Periplasmic Fluorescent Reporter Protein and its Application in High-throughput Membrane Protein Topology Analysis. <i>Journal of Molecular Biology</i> , 2004, 341, 901-909.	4.2	36
68	Conjugated NDI ⁺ Donor Polymers: Exploration of Donor Size and Electrostatic Complementarity. <i>Macromolecules</i> , 2013, 46, 718-726.	4.8	36
69	Nonenzymatic sequence-specific cleavage of single-stranded DNA to nucleotide resolution. DNA methyl thioether probes. <i>Journal of the American Chemical Society</i> , 1987, 109, 1241-1243.	13.7	34
70	Binding and enrichment of <i>Escherichia coli</i> spheroplasts expressing inner membrane tethered scFv antibodies on surface immobilized antigens. <i>Biotechnology and Bioengineering</i> , 2007, 98, 39-47.	3.3	34
71	Screening of threading bis-intercalators binding to duplex DNA by electrospray ionization tandem mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2007, 18, 311-321.	2.8	34
72	Substrate specificity of human kallikreins 1 and 6 determined by phage display. <i>Protein Science</i> , 2008, 17, 664-672.	7.6	34

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73	Changing DNA Grooves ~ A 1,4,5,8-Naphthalene Tetracarboxylic Diimide Bis-Intercalator with the Linker (l ² -Ala)3-Lys in the Minor Groove. <i>Journal of the American Chemical Society</i> , 2002, 124, 2864-2865.	13.7	33
74	Crystal Structure of the Engineered Neutralizing Antibody M18 Complexed to Domain 4 of the Anthrax Protective Antigen. <i>Journal of Molecular Biology</i> , 2009, 387, 680-693.	4.2	33
75	Solution- and solid-state photophysical and stimuli-responsive behavior in conjugated monoalkoxynaphthalene~naphthalimide donor~acceptor dyads. <i>Journal of Materials Chemistry C</i> , 2015, 3, 12156-12163.	5.5	33
76	Anion Selectivity of a Sapphyrin-Modified Silica Gel HPLC Support. <i>Analytical Chemistry</i> , 1998, 70, 2516-2522.	6.5	32
77	Altered sequence specificity identified from a library of DNA-binding small molecules. <i>Chemistry and Biology</i> , 2000, 7, 1-8.	6.0	31
78	Profiling Protease Specificity: Combining Yeast ER Sequestration Screening (YESS) with Next Generation Sequencing. <i>ACS Chemical Biology</i> , 2017, 12, 510-518.	3.4	30
79	Engineering of recombinant antibody fragments to methamphetamine by anchored periplasmic expression. <i>Journal of Immunological Methods</i> , 2006, 308, 43-52.	1.4	29
80	A Pseudocatenane Structure Formed between DNA and A Cyclic Bisintercalator. <i>Journal of the American Chemical Society</i> , 2009, 131, 3499-3508.	13.7	29
81	The Influence of Hapten Size and Hydrophobicity on the Catalytic Activity of Elicited Polyclonal Antibodies. <i>Journal of the American Chemical Society</i> , 1996, 118, 251-252.	13.7	26
82	Directed Evolution of Highly Selective Proteases by Using a Novel FACS~Based Screen that Capitalizes on the p53 Regulator MDM2. <i>ChemBioChem</i> , 2012, 13, 649-653.	2.6	26
83	Threading Polyintercalators with Extremely Slow Dissociation Rates and Extended DNA Binding Sites. <i>Journal of the American Chemical Society</i> , 2013, 135, 12783-12789.	13.7	26
84	An Engineered Protease that Cleaves Specifically after Sulfated Tyrosine. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 7861-7863.	13.8	25
85	Engineering antibody fragments to fold in the absence of disulfide bonds. <i>Protein Science</i> , 2009, 18, 259-267.	7.6	24
86	Construction and flow cytometric screening of targeted enzyme libraries. <i>Nature Protocols</i> , 2009, 4, 893-901.	12.0	24
87	Increased Antibody Affinity Confers Broad <i>In Vitro</i> Protection against Escape Mutants of Severe Acute Respiratory Syndrome Coronavirus. <i>Journal of Virology</i> , 2012, 86, 9113-9121.	3.4	24
88	Reactions of Brominated Naphthalene Diimide with Bis(tributylstannyl)acetylene: A Simple Approach for Conjugated Polymers and Versatile Coupling Intermediates. <i>Organic Letters</i> , 2012, 14, 2706-2709.	4.6	24
89	YESS 2.0, a Tunable Platform for Enzyme Evolution, Yields Highly Active TEV Protease Variants. <i>ACS Synthetic Biology</i> , 2021, 10, 63-71.	3.8	24
90	More than Meets the Eye: Conformational Switching of a Stacked Dialkoxynaphthalene~Naphthalenetetracarboxylic diimide (DAN~NDI) Foldamer to an NDI~NDI Fibril Aggregate. <i>Chemistry - A European Journal</i> , 2013, 19, 11598-11602.	3.3	23

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91	Structural Characterization of a Rigidified Threading Bisintercalator. <i>Journal of the American Chemical Society</i> , 2007, 129, 1304-1311.	13.7	22
92	Characterization of aromatic residue-controlled protein retention in the endoplasmic reticulum of <i>Saccharomyces cerevisiae</i> . <i>Journal of Biological Chemistry</i> , 2017, 292, 20707-20719.	3.4	22
93	Molecular Recognition of a Monoclonal Antibody (AC1106) Cross-Reactive for Derivatives of Ru(bpy) ₃ ²⁺ and Ru(phen) ₃ ²⁺ . <i>Journal of the American Chemical Society</i> , 1996, 118, 3192-3201.	13.7	21
94	Generation by Electron Transfer of an Emitting State Not Observed by Photoexcitation in a Linked Ru(bpy) ₃ ²⁺ -Methyl Viologen. <i>Journal of the American Chemical Society</i> , 1996, 118, 3656-3660.	13.7	19
95	Separation of Mono-, Di-, and Triphosphate Nucleotides by Cytosine Substituted, Silica-Bound Sapphyrin Solid Supports. <i>Supramolecular Chemistry</i> , 1996, 8, 45-52.	1.2	19
96	A Quantitative Immunoassay Utilizing <i>Escherichia coli</i> Cells Possessing Surface-Expressed Single Chain Fv Molecules. <i>Biotechnology Progress</i> , 1996, 12, 572-574.	2.6	18
97	Enhanced DNA photocleavage and binding properties of sapphyrin-polyamine conjugates. <i>Bioorganic and Medicinal Chemistry Letters</i> , 1997, 7, 1433-1436.	2.2	18
98	An octakis-intercalating molecule. <i>Bioorganic and Medicinal Chemistry</i> , 2001, 9, 1141-1148.	3.0	17
99	Synthesis and DNA binding studies of bis-intercalators with a novel spiro-cyclic linker. <i>Tetrahedron</i> , 2006, 62, 5536-5548.	1.9	17
100	Assembly of multimeric phage nanostructures through leucine zipper interactions. <i>Biotechnology and Bioengineering</i> , 2006, 95, 539-545.	3.3	17
101	Polyclonal Antibodies Elicited via Immunization with a Ru(bpy) ₃ ²⁺ -Methyl Viologen Conjugate: Is a Polyclonal Antibody Immune Response Always Heterogeneous?. <i>Journal of the American Chemical Society</i> , 1995, 117, 2673-2674.	13.7	16
102	Time-Dependent Solid-State Polymorphism of a Series of Donor-Acceptor Dyads. <i>Crystal Growth and Design</i> , 2014, 14, 290-299.	3.0	15
103	Polyclonal antibodies and catalysis. <i>Bioorganic and Medicinal Chemistry</i> , 1994, 2, 653-658.	3.0	14
104	Phosphate versus Phosphorothioate Haptens for the Production of Catalytic Polyclonal Antibodies. <i>Journal of the American Chemical Society</i> , 1994, 116, 2181-2182.	13.7	14
105	Proteases That Can Distinguish among Different Post-translational Forms of Tyrosine Engineered Using Multicolor Flow Cytometry. <i>Journal of the American Chemical Society</i> , 2009, 131, 18186-18190.	13.7	14
106	Yeast Endoplasmic Reticulum Sequestration Screening for the Engineering of Proteases from Libraries Expressed in Yeast. <i>Methods in Molecular Biology</i> , 2015, 1319, 81-93.	0.9	14
107	Prompting Fab Yeast Surface Display Efficiency by ER Retention and Molecular Chaperon Co-expression. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 362.	4.1	14
108	Quantitative Analysis of the Substrate Specificity of Human Rhinovirus 3C Protease and Exploration of Its Substrate Recognition Mechanisms. <i>ACS Chemical Biology</i> , 2020, 15, 63-73.	3.4	14

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109	Rapid, High-Yield Recovery of a Recombinant Digoxin Binding Single Chain Fv from Escherichia coli. <i>Biotechnology Progress</i> , 1995, 11, 112-114.	2.6	12
110	Synthesis of a Sapphyrin-EDTA Conjugate and Preliminary Cleavage Results Using a Supercoiled Plasmid DNA Assay. <i>Journal of Organic Chemistry</i> , 1995, 60, 6616-6620.	3.2	12
111	Mechanistic Analysis of Solid-State Colorimetric Switching: Monoalkoxynaphthalene-Naphthalimide Donor-Acceptor Dyads. <i>Journal of the American Chemical Society</i> , 2020, 142, 17630-17643.	13.7	11
112	The synthesis and screening of 1,4,5,8-naphthalenetetracarboxylic diimide-peptide conjugates with antibacterial activity. <i>Bioorganic and Medicinal Chemistry</i> , 2001, 9, 2015-2024.	3.0	10
113	Design, synthesis, and characterization of polyintercalating ligands. <i>Methods in Enzymology</i> , 2001, 340, 556-570.	1.0	9
114	Ribozymes, recognition and evolution. <i>Chemistry and Biology</i> , 1995, 2, 67-70.	6.0	8
115	An investigation of antibody acyl hydrolysis catalysis using a large set of related haptens. <i>Bioorganic and Medicinal Chemistry</i> , 2000, 8, 413-426.	3.0	8
116	Rapid Screen for Tyrosine Kinase Inhibitor Resistance Mutations and Substrate Specificity. <i>ACS Chemical Biology</i> , 2019, 14, 1888-1895.	3.4	8
117	Isolation of trans-acting genes that enhance soluble expression of scFv antibodies in the E. coli cytoplasm by lambda phage display. <i>Journal of Immunological Methods</i> , 2007, 321, 164-173.	1.4	7
118	Evolution of Catalytic Activity throughout a Polyclonal Immune Response Elicited by a Transition-State Analog Hapten. <i>Israel Journal of Chemistry</i> , 1996, 36, 215-220.	2.3	4
119	Development of reagents and assays for the detection of pathogenic Burkholderia species. <i>Faraday Discussions</i> , 2011, 149, 23-36.	3.2	4
120	Using Spectator Ligands to Enhance Nanocrystal-to-Molecule Electron Transfer. <i>Journal of Physical Chemistry Letters</i> , 2022, , 1416-1423.	4.6	4
121	Evaluating the Effect of Dye-Dye Interactions of Xanthene-Based Fluorophores in the Fluorosequencing of Peptides. <i>Bioconjugate Chemistry</i> , 2022, 33, 1156-1165.	3.6	3
122	The "pocket" porphyrins: Hemoprotein models with lowered CO affinities. <i>Inorganica Chimica Acta</i> , 1983, 79, 101-102.	2.4	1
123	Biomedical applications of expanded porphyrins. <i>Journal of Inorganic Biochemistry</i> , 1995, 59, 189.	3.5	1
124	A fertile and dynamic sea. <i>Nature</i> , 1998, 395, 133-133.	27.8	0