Andrew D Ellington

List of Publications by Year
in descending order

303 papers	32,666 citations	6613 79 h-index	4432 172 g-index
326 all docs	326 docs citations	326 times ranked	23238 citing authors

#	Article	IF	Citations
1	In vitro selection of RNA molecules that bind specific ligands. Nature, 1990, 346, 818-822.	27.8	8,658
2	Aptamers as therapeutics. Nature Reviews Drug Discovery, 2010, 9, 537-550.	46.4	1,780
3	Selection in vitro of single-stranded DNA molecules that fold into specific ligand-binding structures. Nature, 1992, 355, 850-852.	27.8	763
4	Applications of Aptamers as Sensors. Annual Review of Analytical Chemistry, 2009, 2, 241-264.	5.4	714
5	Aptamer Beacons for the Direct Detection of Proteins. Analytical Biochemistry, 2001, 294, 126-131.	2.4	569
6	Engineering Escherichia coli to see light. Nature, 2005, 438, 441-442.	27.8	565
7	Nucleic Acid Selection and the Challenge of Combinatorial Chemistry. Chemical Reviews, 1997, 97, 349-370.	47.7	503
8	A Synthetic Genetic Edge Detection Program. Cell, 2009, 137, 1272-1281.	28.9	442
9	Rational, modular adaptation of enzyme-free DNA circuits to multiple detection methods. Nucleic Acids Research, 2011, 39, e110-e110.	14.5	438
10	Machine learning-aided engineering of hydrolases for PET depolymerization. Nature, 2022, 604, 662-667.	27.8	396
11	Automated selection of anti-Protein aptamers. Bioorganic and Medicinal Chemistry, 2001, 9, 2525-2531.	3.0	358
12	Aptamer therapeutics advance. Current Opinion in Chemical Biology, 2006, 10, 282-289.	6.1	358
13	Adapting Selected Nucleic Acid Ligands (Aptamers) to Biosensors. Analytical Chemistry, 1998, 70, 3419-3425.	6.5	349
14	In-depth determination and analysis of the human paired heavy- and light-chain antibody repertoire. Nature Medicine, 2015, 21, 86-91.	30.7	345
15	Hachimoji DNA and RNA: A genetic system with eight building blocks. Science, 2019, 363, 884-887.	12.6	337
16	Micromechanical Detection of Proteins Using Aptamer-Based Receptor Molecules. Analytical Chemistry, 2004, 76, 3194-3198.	6.5	326
17	Aptamer-Based Sensor Arrays for the Detection and Quantitation of Proteins. Analytical Chemistry, 2004, 76, 4066-4075.	6.5	302
18	Designed Signaling Aptamers that Transduce Molecular Recognition to Changes in Fluorescence Intensity. Journal of the American Chemical Society, 2000, 122, 2469-2473.	13.7	272

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19	Molecular-level analysis of the serum antibody repertoire in young adults before and after seasonal influenza vaccination. Nature Medicine, 2016, 22, 1456-1464.	30.7	271
20	Synthetic DNA Synthesis and Assembly: Putting the Synthetic in Synthetic Biology. Cold Spring Harbor Perspectives in Biology, 2017, 9, a023812.	5.5	271
21	Aptamer:Toxin Conjugates that Specifically Target Prostate Tumor Cells. Cancer Research, 2006, 66, 5989-5992.	0.9	269
22	Diagnostic Applications of Nucleic Acid Circuits. Accounts of Chemical Research, 2014, 47, 1825-1835.	15.6	269
23	Quantum-Dot Aptamer Beacons for the Detection of Proteins. ChemBioChem, 2005, 6, 2163-2166.	2.6	258
24	In vitro selection of signaling aptamers. Nature Biotechnology, 2000, 18, 1293-1297.	17.5	257
25	Real-Time Detection of Isothermal Amplification Reactions with Thermostable Catalytic Hairpin Assembly. Journal of the American Chemical Society, 2013, 135, 7430-7433.	13.7	243
26	In vitro selection of an allosteric ribozyme that transduces analytes to amplicons. Nature Biotechnology, 1999, 17, 62-66.	17.5	242
27	Disulfide-Intact and -Reduced Lysozyme in the Gas Phase:Â Conformations and Pathways of Folding and Unfolding. Journal of Physical Chemistry B, 1997, 101, 3891-3900.	2.6	224
28	Stacking nonenzymatic circuits for high signal gain. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5386-5391.	7.1	223
29	Probing Spatial Organization of DNA Strands Using Enzyme-Free Hairpin Assembly Circuits. Journal of the American Chemical Society, 2012, 134, 13918-13921.	13.7	217
30	Using a Deoxyribozyme Ligase and Rolling Circle Amplification To Detect a Non-nucleic Acid Analyte, ATP. Journal of the American Chemical Society, 2005, 127, 2022-2023.	13.7	187
31	Large-scale sequence and structural comparisons of human naive and antigen-experienced antibody repertoires. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E2636-45.	7.1	179
32	Real-Time Rolling Circle Amplification for Protein Detection. Analytical Chemistry, 2007, 79, 3320-3329.	6.5	176
33	In vitro Evolution of Beta-glucuronidase into a Beta-galactosidase Proceeds Through Non-specific Intermediates. Journal of Molecular Biology, 2001, 305, 331-339.	4.2	171
34	Deep penetration of an Î±-helix into a widened RNA major groove in the HIV-1 rev peptideâ€"RNA aptamer complex. Nature Structural Biology, 1996, 3, 1026-1033.	9.7	170
35	Optimization of aptamer microarray technology for multiple protein targets. Analytica Chimica Acta, 2006, 564, 82-90.	5.4	167
36	Aptamer-Targeted Gold Nanoparticles As Molecular-Specific Contrast Agents for Reflectance Imaging. Bioconjugate Chemistry, 2008, 19, 1309-1312.	3.6	166

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37	Ribozyme Catalysis of Metabolism in the RNA World. Chemistry and Biodiversity, 2007, 4, 633-655.	2.1	165
38	Mismatches Improve the Performance of Strandâ€Displacement Nucleic Acid Circuits. Angewandte Chemie - International Edition, 2014, 53, 1845-1848.	13.8	164
39	Evolution of a T7 RNA polymerase variant that transcribes 2â€²-O-methyl RNA. Nature Biotechnology, 2004, 22, 1155-1160.	17.5	161
40	Engineered symbionts activate honey bee immunity and limit pathogens. Science, 2020, 367, 573-576.	12.6	161
41	Monitoring the Growth of a Bacteria Culture by MALDI-MS of Whole Cells. Analytical Chemistry, 1999, 71, 1990-1996.	6.5	159
42	Automated selection of aptamers against protein targets translated in vitro: from gene to aptamer. Nucleic Acids Research, 2002, 30, 108e-108.	14.5	155
43	Protein-dependent ribozymes report molecular interactions in real time. Nature Biotechnology, 2002, 20, 717-722.	17.5	154
44	Inhibition of Cell Proliferation by an Anti-EGFR Aptamer. PLoS ONE, 2011, 6, e20299.	2.5	149
45	Labeling tumor cells with fluorescent nanocrystalâ€"aptamer bioconjugates. Biosensors and Bioelectronics, 2006, 21, 1859-1866.	10.1	146
46	Phylogenetic and genetic evidence for base-triples in the catalytic domain of group I introns. Nature, 1990, 347, 578-580.	27.8	143
47	Ultra-high-throughput sequencing of the immune receptor repertoire from millions of lymphocytes. Nature Protocols, 2016, 11, 429-442.	12.0	140
48	Selective optimization of the Rev-binding element of HIV-1. Nucleic Acids Research, 1993, 21, 5509-5516.	14.5	139
49	Selection of fluorescent aptamer beacons that light up in the presence of zinc. Analytical and Bioanalytical Chemistry, 2008, 390, 1067-1075.	3.7	139
50	Automated RNA Selection. Biotechnology Progress, 1998, 14, 845-850.	2.6	138
51	In vitro genetic analysis of the Tetrahymena self-splicing intron. Nature, 1990, 347, 406-408.	27.8	136
52	Production and processing of aptamer microarrays. Methods, 2005, 37, 4-15.	3.8	135
53	Coupling Sensitive Nucleic Acid Amplification with Commercial Pregnancy Test Strips. Angewandte Chemie - International Edition, 2017, 56, 992-996.	13.8	135
54	Crystal structure of an RNA aptamerâ€"protein complex at 2.8 Ã… resolution. Nature Structural Biology, 1998, 5, 133-139.	9.7	134

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55	Directed evolution of genetic parts and circuits by compartmentalized partnered replication. Nature Biotechnology, 2014, 32, 97-101.	17.5	133
56	Robust Strand Exchange Reactions for the Sequence-Specific, Real-Time Detection of Nucleic Acid Amplicons. Analytical Chemistry, 2015, 87, 3314-3320.	6.5	128
57	Structure-Based Design of Supercharged, Highly Thermoresistant Antibodies. Chemistry and Biology, 2012, 19, 449-455.	6.0	127
58	Pattern transformation with DNA circuits. Nature Chemistry, 2013, 5, 1000-1005.	13.6	122
59	Real-Time Sequence-Validated Loop-Mediated Isothermal Amplification Assays for Detection of Middle East Respiratory Syndrome Coronavirus (MERS-CoV). PLoS ONE, 2015, 10, e0123126.	2.5	122
60	AANT: the Amino Acid-Nucleotide Interaction Database. Nucleic Acids Research, 2004, 32, 174D-181.	14.5	120
61	Synthetic evolutionary origin of a proofreading reverse transcriptase. Science, 2016, 352, 1590-1593.	12.6	119
62	Design and optimization of effector-activated ribozyme ligases. Nucleic Acids Research, 2000, 28, 1751-1759.	14.5	109
63	DNA Detection Using Origami Paper Analytical Devices. Analytical Chemistry, 2013, 85, 9713-9720.	6.5	109
64	Functional interrogation and mining of natively paired human VH:VL antibody repertoires. Nature Biotechnology, 2018, 36, 152-155.	17.5	109
65	In vitro selection of RNA lectins: using combinatorial chemistry to interpret ribozyme evolution. Chemistry and Biology, 1995, 2, 291-303.	6.0	108
66	A Simple, Cleated DNA Walker That Hangs on to Surfaces. ACS Nano, 2017, 11, 8047-8054.	14.6	107
67	Arginine-rich motifs present multiple interfaces for specific binding by RNA. Rna, 2005, 11, 1848-1857.	3.5	104
68	RNA Selection: Aptamers achieve the desired recognition. Current Biology, 1994, 4, 427-429.	3.9	99
69	Massively Parallel Biophysical Analysis of CRISPR-Cas Complexes on Next Generation Sequencing Chips. Cell, 2017, 170, 35-47.e13.	28.9	96
70	Effective design principles for leakless strand displacement systems. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E12182-E12191.	7.1	94
71	In vitro selection of molecular beacons. Nucleic Acids Research, 2003, 31, 5700-5713.	14.5	92
72	In vitro selection of nucleic acids for diagnostic applications. Reviews in Molecular Biotechnology, 2000, 74, 15-25.	2.8	90

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73	Technical and Biological Issues Relevant to Cell Typing with Aptamers. Journal of Proteome Research, 2009, 8, 2438-2448.	3.7	90
74	Adapting Enzyme-Free DNA Circuits to the Detection of Loop-Mediated Isothermal Amplification Reactions. Analytical Chemistry, 2012, 84, 8371-8377.	6.5	90
75	Functional RNA microarrays for high-throughput screening of antiprotein aptamers. Analytical Biochemistry, 2005, 338, 113-123.	2.4	88
76	In vitro selection of nucleoprotein enzymes. Nature Biotechnology, 2001, 19, 650-655.	17.5	87
77	Genetic Engineering of Bee Gut Microbiome Bacteria with a Toolkit for Modular Assembly of Broad-Host-Range Plasmids. ACS Synthetic Biology, 2018, 7, 1279-1290.	3.8	87
78	Gas-Phase DNA: Oligothymidine Ion Conformers. Journal of the American Chemical Society, 1997, 119, 9051-9052.	13.7	86
79	Strand Displacement Probes Combined with Isothermal Nucleic Acid Amplification for Instrument-Free Detection from Complex Samples. Analytical Chemistry, 2018, 90, 6580-6586.	6.5	86
80	Bioinformatic Analysis of the Contribution of Primer Sequences to Aptamer Structures. Journal of Molecular Evolution, 2008, 67, 95-102.	1.8	85
81	Expanding the limits of the second genetic code with ribozymes. Nature Communications, 2019, 10, 5097.	12.8	83
82	Group I aptazymes as genetic regulatory switches. BMC Biotechnology, 2002, 2, 21.	3.3	82
83	DNA circuits as amplifiers for the detection of nucleic acids on a paperfluidic platform. Lab on A Chip, 2012, 12, 2951.	6.0	80
84	Discovery of Novel Gain-of-Function Mutations Guided by Structure-Based Deep Learning. ACS Synthetic Biology, 2020, 9, 2927-2935.	3.8	80
85	Fine-tuning citrate synthase flux potentiates and refines metabolic innovation in the Lenski evolution experiment. ELife, 2015, 4, .	6.0	79
86	Dynamic Programming of a DNA Walker Controlled by Protons. ACS Nano, 2020, 14, 4007-4013.	14.6	78
87	Directed evolution of the surface chemistry of the reporter enzyme Î²-glucuronidase. Nature Biotechnology, 1999, 17, 696-701.	17.5	76
88	Selection and Characterization of Escherichia coli Variants Capable of Growth on an Otherwise Toxic Tryptophan Analogue. Journal of Bacteriology, 2001, 183, 5414-5425.	2.2	75
89	Recursive genomewide recombination and sequencing reveals a key refinement step in the evolution of a metabolic innovation in <i>Escherichia coli</i>. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 2217-2222.	7.1	75
90	Exponential growth by cross-catalytic cleavage of deoxyribozymogens. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 6416-6421.	7.1	74

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91	Simultaneous detection of diverse analytes with an aptazyme ligase array. Analytical Biochemistry, 2003, 312, 106-112.	2.4	73
92	Phosphorothioated Primers Lead to Loop-Mediated Isothermal Amplification at Low Temperatures. Analytical Chemistry, 2018, 90, 8290-8294.	6.5	73
93	Alternative Computational Protocols for Supercharging Protein Surfaces for Reversible Unfolding and Retention of Stability. PLoS ONE, 2013, 8, e64363.	2.5	73
94	Design and application of cotranscriptional non-enzymatic RNA circuits and signal transducers. Nucleic Acids Research, 2014, 42, e58-e58.	14.5	71
95	Generalized bacterial genome editing using mobile group II introns and Creâ€•lox. Molecular Systems Biology, 2013, 9, 685.	7.2	70
96	Supercharging enables organized assembly of synthetic biomolecules. Nature Chemistry, 2019, 11, 204-212.	13.6	70
97	Structural Characterization of Dihydrofolate Reductase Complexes by Top-Down Ultraviolet Photodissociation Mass Spectrometry. Journal of the American Chemical Society, 2015, 137, 9128-9135.	13.7	69
98	A Sweet Spot for Molecular Diagnostics: Coupling Isothermal Amplification and Strand Exchange Circuits to Glucometers. Scientific Reports, 2015, 5, 11039.	3.3	66
99	NMR Mapping of the Recombinant Mouse Major Urinary Protein I Binding Site Occupied by the Pheromone 2-<i>sec-</i>Butyl-4,5-dihydrothiazole. Biochemistry, 1999, 38, 9850-9861.	2.5	65
100	Evolutionary origins and directed evolution of RNA. International Journal of Biochemistry and Cell Biology, 2009, 41, 254-265.	2.8	65
101	Selection and design of high-affinity rna ligands for hiv-1 rev. Gene, 1993, 137, 19-24.	2.2	63
102	Synthetic evolution. Nature Biotechnology, 2019, 37, 730-743.	17.5	63
103	Increasing the thermal stability of an oligomeric protein, beta-glucuronidase. Journal of Molecular Biology, 2002, 315, 325-337.	4.2	62
104	Effect of Complementary Nucleobase Interactions on the Copolymer Composition of RAFT Copolymerizations. ACS Macro Letters, 2013, 2, 581-586.	4.8	62
105	Automated Acquisition of Aptamer Sequences. Combinatorial Chemistry and High Throughput Screening, 2002, 5, 289-299.	1.1	61
106	Retrons and their applications in genome engineering. Nucleic Acids Research, 2019, 47, 11007-11019.	14.5	60
107	Transcription yield of fully 2â€²-modified RNA can be increased by the addition of thermostabilizing mutations to T7 RNA polymerase mutants. Nucleic Acids Research, 2015, 43, 7480-7488.	14.5	57
108	A threeâ€“dimensional model of the Revâ€“binding element of HIVâ€“1 derived from analyses of aptamers. Nature Structural and Molecular Biology, 1994, 1, 293-300.	8.2	56

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109	The limits of specificity: an experimental analysis with RNA aptamers to MS2 coat protein variants. Molecular Diversity, 1998, 4, 75-89.	3.9	56
110	Direct selection of trans-acting ligase ribozymes by in vitro compartmentalization. Rna, 2005, 11, 1555-1562.	3.5	56
111	Selecting Nucleic Acids for Biosensor Applications. Combinatorial Chemistry and High Throughput Screening, 2002, 5, 263-270.	1.1	55
112	Addicting diverse bacteria to a noncanonical amino acid. Nature Chemical Biology, 2016, 12, 138-140.	8.0	55
113	Shaping up nucleic acid computation. Current Opinion in Biotechnology, 2010, 21, 392-400.	6.6	54
114	A Spinach molecular beacon triggered by strand displacement. Rna, 2014, 20, 1183-1194.	3.5	54
115	A proteomic survey of widespread protein aggregation in yeast. Molecular BioSystems, 2014, 10, 851.	2.9	53
116	Directed evolution of a synthetic phylogeny of programmable Trp repressors. Nature Chemical Biology, 2018, 14, 361-367.	8.0	53
117	Re-creating the RNA world. Current Biology, 1995, 5, 1017-1022.	3.9	52
118	RNA Molecules That Bind to and Inhibit the Active Site of a Tyrosine Phosphatase. Journal of Biological Chemistry, 1998, 273, 14309-14314.	3.4	52
119	High-Surety Isothermal Amplification and Detection of SARS-CoV-2. MSphere, 2021, 6, .	2.9	52
120	Directed Evolution of a Panel of Orthogonal T7 RNA Polymerase Variants for <i>in Vivo</i> or <i>in Vitro</i> Synthetic Circuitry. ACS Synthetic Biology, 2015, 4, 1070-1076.	3.8	51
121	Cofactor-Assisted Self-Cleavage in DNA Libraries with a 3â€²â€“5â€²-Phosphoramidate Bond. Angewandte Chemie International Edition in English, 1997, 36, 1321-1324.	4.4	50
122	In vitro selection of ribozymes dependent on peptides for activity. Rna, 2004, 10, 114-127.	3.5	47
123	Synthetic RNA circuits. Nature Chemical Biology, 2007, 3, 23-28.	8.0	47
124	Recombineering and MAGE. Nature Reviews Methods Primers, 2021, 1, .	21.2	47
125	Anchoring an extended HTLV-1 Rex peptide within an RNA major groove containing junctional base triples. Structure, 1999, 7, 1461-S12.	3.3	45
126	Bacteriophages use an expanded genetic code on evolutionary paths to higher fitness. Nature Chemical Biology, 2014, 10, 178-180.	8.0	44

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127	Retroelement-Based Genome Editing and Evolution. ACS Synthetic Biology, 2018, 7, 2600-2611.	3.8	44
128	High resolution matrix-assisted laser desorption/ionization time-of-flight analysis of single-stranded DNA of 27 to 68 nucleotides in length. Rapid Communications in Mass Spectrometry, 1995, 9, 1061-1066.	1.5	43
129	Design Principles for Ligand-Sensing, Conformation-Switching Ribozymes. PLoS Computational Biology, 2009, 5, e1000620.	3.2	43
130	Surprising fidelity of template-directed chemical ligation of oligonucleotides. Chemistry and Biology, 1997, 4, 595-605.	6.0	42
131	The scene of a frozen accident. Rna, 2000, 6, 485-498.	3.5	42
132	Real-time PCR detection of protein analytes with conformation-switching aptamers. Analytical Biochemistry, 2008, 380, 164-173.	2.4	42
133	The fidelity of template-directed oligonucleotide ligation and the inevitability of polymerase function. , 1999, 29, 375-390.		41
134	Evolving new genetic codes. Trends in Ecology and Evolution, 2004, 19, 69-75.	8.7	41
135	Ribozyme-Mediated Signal Augmentation on a Mass-Sensitive Biosensor. Journal of the American Chemical Society, 2006, 128, 15936-15937.	13.7	41
136	The search for missing links between self-replicating nucleic ACIDs and the RNA world. Origins of Life and Evolution of Biospheres, 1995, 25, 515-530.	1.9	40
137	Computational selection of nucleic acid biosensors via a slip structure model. Biosensors and Bioelectronics, 2007, 22, 1939-1947.	10.1	40
138	High-affinity RNA Aptamers Against the HIV-1 Protease Inhibit Both In Vitro Protease Activity and Late Events of Viral Replication. Molecular Therapy - Nucleic Acids, 2015, 4, e228.	5.1	40
139	Fingerprinting Non-Terran Biosignatures. Astrobiology, 2018, 18, 915-922.	3.0	40
140	Pattern Generation with Nucleic Acid Chemical Reaction Networks. Chemical Reviews, 2019, 119, 6370-6383.	47.7	40
141	Custom selenoprotein production enabled by laboratory evolution of recoded bacterial strains. Nature Biotechnology, 2018, 36, 624-631.	17.5	39
142	Artificial evolution and natural ribozymes. FASEB Journal, 1995, 9, 1183-1195.	0.5	38
143	Portable platform for rapid in-field identification of human fecal pollution in water. Water Research, 2018, 131, 186-195.	11.3	37
144	Evolution of phage with chemically ambiguous proteomes. BMC Evolutionary Biology, 2003, 3, 24.	3.2	36

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145	A General RNA Motif for Cellular Transfection. Molecular Therapy, 2012, 20, 616-624.	8.2	36
146	Continuous directed evolution for strain and protein engineering. Current Opinion in Biotechnology, 2018, 53, 158-163.	6.6	36
147	Optimization and optimality of a short ribozyme ligase that joins non-Watsonâ€"Crick base pairings. Rna, 2001, 7, 513-523.	3.5	35
148	Using fungible biosensors to evolve improved alkaloid biosyntheses. Nature Chemical Biology, 2022, 18, 981-989.	8.0	35
149	Beyond allostery: Catalytic regulation of a deoxyribozyme through an entropy-driven DNA amplifier. Journal of Systems Chemistry, 2010, 1, .	1.7	34
150	Characterization of trimethoprim resistant E. coli dihydrofolate reductase mutants by mass spectrometry and inhibition by propargyl-linked antifolates. Chemical Science, 2017, 8, 4062-4072.	7.4	34
151	An amino acid depleted cell-free protein synthesis system for the incorporation of non-canonical amino acid analogs into proteins. Journal of Biotechnology, 2014, 178, 12-22.	3.8	33
152	Evolving Orthogonal Suppressor tRNAs To Incorporate Modified Amino Acids. ACS Synthetic Biology, 2017, 6, 108-119.	3.8	33
153	Photoactivated DNA cleavage via charge transfer promoted N2 release from tris[3-hydroxy-1,2,3-benzotriazine-4(3H)-one]iron(III). Chemical Communications, 2000, , 69-70.	4.1	32
154	Proliferation and migration of tumor cells in tapered channels. Biomedical Microdevices, 2013, 15, 635-643.	2.8	32
155	Evolution of a Thermophilic Strand-Displacing Polymerase Using High-Temperature Isothermal Compartmentalized Self-Replication. Biochemistry, 2018, 57, 4607-4619.	2.5	32
156	Evolving a Generalist Biosensor for Bicyclic Monoterpenes. ACS Synthetic Biology, 2022, 11, 265-272.	3.8	31
157	In Vitro Selection Using Modified or Unnatural Nucleotides. Current Protocols in Nucleic Acid Chemistry, 2014, 56, 9.6.1-33.	0.5	30
158	Peptide-Templated Nucleic Acid Ligation. Journal of Molecular Evolution, 2003, 56, 607-615.	1.8	29
159	Binding of herpes simplex virus-1 US11 to specific RNA sequences. Nucleic Acids Research, 2005, 33, 6090-6100.	14.5	28
160	Exploration of plasticizer and plastic explosive detection and differentiation with serum albumin cross-reactive arrays. Chemical Science, 2012, 3, 1773.	7.4	28
161	Ribosomal incorporation of cyclic Î²-amino acids into peptides using <i>in vitro</i> translation. Chemical Communications, 2020, 56, 5597-5600.	4.1	28
162	Anti-Rex Aptamers as Mimics of the Rex-Binding Element. Journal of Virology, 1999, 73, 4962-4971.	3.4	28

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163	A modified consensus approach to mutagenesis inverts the cofactor specificity of Bacillus stearothermophilus lactate dehydrogenase. Protein Engineering, Design and Selection, 2005, 18, 369-377.	2.1	27
164	In vitro evolution of thermostable p53 variants. Protein Science, 1999, 8, 731-740.	7.6	27
165	Charge Shielding Prevents Aggregation of Supercharged GFP Variants at High Protein Concentration. Molecular Pharmaceutics, 2017, 14, 3269-3280.	4.6	27
166	Directed Evolution of Streptavidin Variants Using In Vitro Compartmentalization. Chemistry and Biology, 2008, 15, 979-989.	6.0	26
167	A biopolymer by any other name would bind as well: a comparison of the ligand-binding pockets of nucleic acids and proteins. Structure, 1997, 5, 729-734.	3.3	25
168	The descent of polymerization. , 2001, 8, 580-582.		25
169	In vitro selection of proteins via emulsion compartments. Methods, 2013, 60, 75-80.	3.8	24
170	Direct nucleic acid analysis of mosquitoes for high fidelity species identification and detection of Wolbachia using a cellphone. PLoS Neglected Tropical Diseases, 2018, 12, e0006671.	3.0	24
171	3D Printing with Nucleic Acid Adhesives. ACS Biomaterials Science and Engineering, 2015, 1, 19-26.	5.2	23
172	<i>In Vitro</i> Selection for Small-Molecule-Triggered Strand Displacement and Riboswitch Activity. ACS Synthetic Biology, 2015, 4, 1144-1150.	3.8	23
173	Single-Molecule Mechanistic Study of Enzyme Hysteresis. ACS Central Science, 2019, 5, 1691-1698.	11.3	23
174	Kinetic optimization of a proteinâ€responsive aptamer beacon. Biotechnology and Bioengineering, 2009, 103, 1049-1059.	3.3	22
175	Chemical Tools To Decipher Regulation of Phosphatases by Proline Isomerization on Eukaryotic RNA Polymerase II. ACS Chemical Biology, 2015, 10, 2405-2414.	3.4	22
176	Thinking combinatorially. Current Opinion in Chemical Biology, 1999, 3, 256-259.	6.1	21
177	Using RNA Aptamers and the Proximity Ligation Assay for the Detection of Cell Surface Antigens. Methods in Molecular Biology, 2008, 504, 385-398.	0.9	21
178	Direct selection for ribozyme cleavage activity in cells. Rna, 2009, 15, 2035-2045.	3.5	21
179	Coupling Sensitive Nucleic Acid Amplification with Commercial Pregnancy Test Strips. Angewandte Chemie, 2017, 129, 1012-1016.	2.0	21
180	Genetic alphabet expansion transcription generating functional RNA molecules containing a five-letter alphabet including modified unnatural and natural base nucleotides by thermostable T7 RNA polymerase variants. Chemical Communications, 2017, 53, 12309-12312.	4.1	21

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181	Training ribozymes to switch. , 1999, 6, 992-994.		20
182	Structure-based non-canonical amino acid design to covalently crosslink an antibodyâ€“antigen complex. Journal of Structural Biology, 2014, 185, 215-222.	2.8	20
183	A primerless molecular diagnostic: phosphorothioated-terminal hairpin formation and self-priming extension (PS-THSP). Analytical and Bioanalytical Chemistry, 2016, 408, 8583-8591.	3.7	20
184	Purification of single-stranded DNA by co-polymerization with acrylamide and electrophoresis. BioTechniques, 2017, 62, 275-282.	1.8	20
185	One-Enzyme Reverse Transcription qPCR Using Taq DNA Polymerase. Biochemistry, 2020, 59, 4638-4645.	2.5	20
186	Improved Bst DNA Polymerase Variants Derived <i>via</i> a Machine Learning Approach. Biochemistry, 2023, 62, 410-418.	2.5	20
187	Compartmentalized partnered replication for the directed evolution of genetic parts and circuits. Nature Protocols, 2017, 12, 2493-2512.	12.0	19
188	Differential array sensing for cancer cell classification and novelty detection. Organic and Biomolecular Chemistry, 2017, 15, 9866-9874.	2.8	19
189	Polyvalent Rev Decoys Act as Artificial Rev-Responsive Elements. Journal of Virology, 1999, 73, 4341-4349.	3.4	19
190	Deoxyribozymes that recode sequence information. Nucleic Acids Research, 2006, 34, 2166-2172.	14.5	18
191	Modelling amorphous computations with transcription networks. Journal of the Royal Society Interface, 2009, 6, S523-33.	3.4	18
192	Directed evolution of the substrate specificity of biotin ligase. Biotechnology and Bioengineering, 2014, 111, 1071-1081.	3.3	18
193	Construction of synthetic T7 RNA polymerase expression systems. Methods, 2018, 143, 110-120.	3.8	18
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