

# Andrew D Griffiths

## List of Publications by Citations

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106  
papers

20,236  
citations

61  
h-index

113  
g-index

113  
ext. papers

22,302  
ext. citations

12.4  
avg, IF

6.48  
L-index

#	Paper	IF	Citations
106	Phage antibodies: filamentous phage displaying antibody variable domains. <i>Nature</i> , <b>1990</b> , 348, 552-4	50.4	1954
105	By-passing immunization. Human antibodies from V-gene libraries displayed on phage. <i>Journal of Molecular Biology</i> , <b>1991</b> , 222, 581-97	6.5	1440
104	Making antibodies by phage display technology. <i>Annual Review of Immunology</i> , <b>1994</b> , 12, 433-55	34.7	1355
103	Making antibody fragments using phage display libraries. <i>Nature</i> , <b>1991</b> , 352, 624-8	50.4	1028
102	Binding activities of a repertoire of single immunoglobulin variable domains secreted from <i>Escherichia coli</i> . <i>Nature</i> , <b>1989</b> , 341, 544-6	50.4	921
101	Multi-subunit proteins on the surface of filamentous phage: methodologies for displaying antibody (Fab) heavy and light chains. <i>Nucleic Acids Research</i> , <b>1991</b> , 19, 4133-7	20.1	918
100	Single-cell analysis and sorting using droplet-based microfluidics. <i>Nature Protocols</i> , <b>2013</b> , 8, 870-91	18.8	834
99	Ultrahigh-throughput screening in drop-based microfluidics for directed evolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2010</b> , 107, 4004-9	11.5	817
98	Man-made cell-like compartments for molecular evolution. <i>Nature Biotechnology</i> , <b>1998</b> , 16, 652-6	44.5	768
97	Fluorescence-activated droplet sorting (FADS): efficient microfluidic cell sorting based on enzymatic activity. <i>Lab on A Chip</i> , <b>2009</b> , 9, 1850-8	7.2	648
96	Droplet-based microfluidic platforms for the encapsulation and screening of Mammalian cells and multicellular organisms. <i>Chemistry and Biology</i> , <b>2008</b> , 15, 427-37		555
95	Drop-based microfluidic devices for encapsulation of single cells. <i>Lab on A Chip</i> , <b>2008</b> , 8, 1110-5	7.2	409
94	Quantitative and sensitive detection of rare mutations using droplet-based microfluidics. <i>Lab on A Chip</i> , <b>2011</b> , 11, 2156-66	7.2	389
93	Multiplex picodroplet digital PCR to detect KRAS mutations in circulating DNA from the plasma of colorectal cancer patients. <i>Clinical Chemistry</i> , <b>2013</b> , 59, 1722-31	5.5	377
92	Miniaturising the laboratory in emulsion droplets. <i>Trends in Biotechnology</i> , <b>2006</b> , 24, 395-402	15.1	285
91	Amplification of complex gene libraries by emulsion PCR. <i>Nature Methods</i> , <b>2006</b> , 3, 545-50	21.6	283
90	By-passing immunization: building high affinity human antibodies by chain shuffling. <i>Nature Biotechnology</i> , <b>1992</b> , 10, 779-83	44.5	270

89	Effects of RNA secondary structure on alternative splicing of pre-mRNA: is folding limited to a region behind the transcribing RNA polymerase?. <i>Cell</i> , <b>1988</b> , 54, 393-401	56.2	248
88	Droplet-based microreactors for the synthesis of magnetic iron oxide nanoparticles. <i>Angewandte Chemie - International Edition</i> , <b>2008</b> , 47, 6817-20	16.4	232
87	Multiplex digital PCR: breaking the one target per color barrier of quantitative PCR. <i>Lab on A Chip</i> , <b>2011</b> , 11, 2167-74	7.2	223
86	Directed evolution of an extremely fast phosphotriesterase by in vitro compartmentalization. <i>EMBO Journal</i> , <b>2003</b> , 22, 24-35	13	223
85	High-resolution dose-response screening using droplet-based microfluidics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 378-83	11.5	222
84	Strategies for selection of antibodies by phage display. <i>Current Opinion in Biotechnology</i> , <b>1998</b> , 9, 102-8	11.4	214
83	Droplet-based microfluidic systems for high-throughput single DNA molecule isothermal amplification and analysis. <i>Analytical Chemistry</i> , <b>2009</b> , 81, 4813-21	7.8	213
82	Emergence of a catalytic tetrad during evolution of a highly active artificial aldolase. <i>Nature Chemistry</i> , <b>2017</b> , 9, 50-56	17.6	184
81	Functional single-cell hybridoma screening using droplet-based microfluidics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 11570-5	11.5	184
80	Directed evolution by in vitro compartmentalization. <i>Nature Methods</i> , <b>2006</b> , 3, 561-70	21.6	183
79	High-throughput single-cell ChIP-seq identifies heterogeneity of chromatin states in breast cancer. <i>Nature Genetics</i> , <b>2019</b> , 51, 1060-1066	36.3	180
78	A completely in vitro ultrahigh-throughput droplet-based microfluidic screening system for protein engineering and directed evolution. <i>Lab on A Chip</i> , <b>2012</b> , 12, 882-91	7.2	180
77	High-throughput screens and selections of enzyme-encoding genes. <i>Current Opinion in Chemical Biology</i> , <b>2005</b> , 9, 210-6	9.7	170
76	High-throughput screening of enzyme libraries: in vitro evolution of a beta-galactosidase by fluorescence-activated sorting of double emulsions. <i>Chemistry and Biology</i> , <b>2005</b> , 12, 1291-300		168
75	Multi-step microfluidic droplet processing: kinetic analysis of an in vitro translated enzyme. <i>Lab on A Chip</i> , <b>2009</b> , 9, 2902-8	7.2	164
74	Miniaturizing chemistry and biology in microdroplets. <i>Chemical Communications</i> , <b>2007</b> , 1773-88	5.8	155
73	Kinetic aspects of emulsion stabilization by surfactants: a microfluidic analysis. <i>Langmuir</i> , <b>2009</b> , 25, 6088-93		154
72	Combinatorial infection and in vivo recombination: a strategy for making large phage antibody repertoires. <i>Nucleic Acids Research</i> , <b>1993</b> , 21, 2265-6	20.1	152

71	Enhanced chemical synthesis at soft interfaces: a universal reaction-adsorption mechanism in microcompartments. <i>Physical Review Letters</i> , <b>2014</b> , 112, 028301	7.4	151
70	In vitro compartmentalization by double emulsions: sorting and gene enrichment by fluorescence activated cell sorting. <i>Analytical Biochemistry</i> , <b>2004</b> , 325, 151-7	3.1	137
69	Reliable microfluidic on-chip incubation of droplets in delay-lines. <i>Lab on A Chip</i> , <b>2009</b> , 9, 1344-8	7.2	130
68	A fast and efficient microfluidic system for highly selective one-to-one droplet fusion. <i>Lab on A Chip</i> , <b>2009</b> , 9, 2665-72	7.2	123
67	Droplets as microreactors for high-throughput biology. <i>ChemBioChem</i> , <b>2007</b> , 8, 263-72	3.8	122
66	Single-cell deep phenotyping of IgG-secreting cells for high-resolution immune monitoring. <i>Nature Biotechnology</i> , <b>2017</b> , 35, 977-982	44.5	121
65	Dynamics of molecular transport by surfactants in emulsions. <i>Soft Matter</i> , <b>2012</b> , 8, 10618	3.6	115
64	Miniaturization and parallelization of biological and chemical assays in microfluidic devices. <i>Chemistry and Biology</i> , <b>2010</b> , 17, 1052-65		109
63	New genotype-phenotype linkages for directed evolution of functional proteins. <i>Current Opinion in Structural Biology</i> , <b>2005</b> , 15, 472-8	8.1	109
62	Selective droplet coalescence using microfluidic systems. <i>Lab on A Chip</i> , <b>2012</b> , 12, 1800-6	7.2	108
61	Man-made enzymes—from design to in vitro compartmentalisation. <i>Current Opinion in Biotechnology</i> , <b>2000</b> , 11, 338-53	11.4	107
60	Selection of ribozymes that catalyse multiple-turnover Diels-Alder cycloadditions by using in vitro compartmentalization. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2005</b> , 102, 16170-5	11.5	94
59	Small binding proteins selected from a combinatorial repertoire of knottins displayed on phage. <i>Journal of Molecular Biology</i> , <b>1998</b> , 277, 317-32	6.5	91
58	Quantitative cell-based reporter gene assays using droplet-based microfluidics. <i>Chemistry and Biology</i> , <b>2010</b> , 17, 528-36		86
57	High-throughput screening of filamentous fungi using nanoliter-range droplet-based microfluidics. <i>Scientific Reports</i> , <b>2016</b> , 6, 27223	4.9	85
56	An automated two-phase microfluidic system for kinetic analyses and the screening of compound libraries. <i>Lab on A Chip</i> , <b>2010</b> , 10, 1302-7	7.2	84
55	Altering the sequence specificity of HaeIII methyltransferase by directed evolution using in vitro compartmentalization. <i>Protein Engineering, Design and Selection</i> , <b>2004</b> , 17, 3-11	1.9	83
54	Microbead display by in vitro compartmentalisation: selection for binding using flow cytometry. <i>FEBS Letters</i> , <b>2002</b> , 532, 455-8	3.8	83

53	Microfluidic platform for combinatorial synthesis in picolitre droplets. <i>Lab on A Chip</i> , <b>2012</b> , 12, 1320-6	7.2	77
52	Transient compartmentalization of RNA replicators prevents extinction due to parasites. <i>Science</i> , <b>2016</b> , 354, 1293-1296	33.3	76
51	High-throughput screening of enzymes by retroviral display using droplet-based microfluidics. <i>Chemistry and Biology</i> , <b>2010</b> , 17, 229-35		74
50	Droplet-based microfluidic high-throughput screening of heterologous enzymes secreted by the yeast <i>Yarrowia lipolytica</i> . <i>Microbial Cell Factories</i> , <b>2017</b> , 16, 18	6.4	72
49	Analogues with fluorescent leaving groups for screening and selection of enzymes that efficiently hydrolyze organophosphorus nerve agents. <i>Journal of Medicinal Chemistry</i> , <b>2006</b> , 49, 246-55	8.3	70
48	In vitro assembly of repertoires of antibody chains on the surface of phage by renaturation. <i>Journal of Molecular Biology</i> , <b>1994</b> , 239, 68-78	6.5	67
47	Droplet-based microfluidics platform for ultra-high-throughput bioprospecting of cellulolytic microorganisms. <i>Chemistry and Biology</i> , <b>2014</b> , 21, 1722-32		65
46	High-throughput single-cell activity-based screening and sequencing of antibodies using droplet microfluidics. <i>Nature Biotechnology</i> , <b>2020</b> , 38, 715-721	44.5	64
45	New generation of amino coumarin methyl sulfonate-based fluorogenic substrates for amidase assays in droplet-based microfluidic applications. <i>Analytical Chemistry</i> , <b>2011</b> , 83, 2852-7	7.8	61
44	Droplet-based microfluidics at the femtolitre scale. <i>Lab on A Chip</i> , <b>2015</b> , 15, 753-65	7.2	60
43	CotA laccase: high-throughput manipulation and analysis of recombinant enzyme libraries expressed in <i>E. coli</i> using droplet-based microfluidics. <i>Analyst, The</i> , <b>2014</b> , 139, 3314-23	5	56
42	Investigating the target recognition of DNA cytosine-5 methyltransferase HhaI by library selection using in vitro compartmentalisation. <i>Nucleic Acids Research</i> , <b>2002</b> , 30, 4937-44	20.1	53
41	Microtubule minus ends can be labelled with a phage display antibody specific to alpha-tubulin. <i>Journal of Molecular Biology</i> , <b>1996</b> , 259, 325-30	6.5	52
40	Microfluidic production of droplet pairs. <i>Langmuir</i> , <b>2008</b> , 24, 12073-6	4	50
39	Ultrahigh-throughput screening enables efficient single-round oxidase remodelling. <i>Nature Catalysis</i> , <b>2019</b> , 2, 740-747	36.5	47
38	Efficient laboratory evolution of computationally designed enzymes with low starting activities using fluorescence-activated droplet sorting. <i>Protein Engineering, Design and Selection</i> , <b>2016</b> , 29, 355-66	1.9	47
37	Using droplet-based microfluidics to improve the catalytic properties of RNA under multiple-turnover conditions. <i>Rna</i> , <b>2015</b> , 21, 458-69	5.8	47
36	Teaching single-cell digital analysis using droplet-based microfluidics. <i>Analytical Chemistry</i> , <b>2012</b> , 84, 1202-9	7.8	45

35	New glycosidase substrates for droplet-based microfluidic screening. <i>Analytical Chemistry</i> , <b>2013</b> , 85, 9807-14	7.8	43
34	Characterization of human variable domain antibody fragments against the U1 RNA-associated A protein, selected from a synthetic and patient-derived combinatorial V gene library. <i>European Journal of Immunology</i> , <b>1996</b> , 26, 629-39	6.1	43
33	Production of human antibodies using bacteriophage. <i>Current Opinion in Immunology</i> , <b>1993</b> , 5, 263-7	7.8	41
32	Preparation of monodisperse emulsions by hydrodynamic size fractionation. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 204103	3.4	28
31	Promiscuous methylation of non-canonical DNA sites by HaeIII methyltransferase. <i>Nucleic Acids Research</i> , <b>2002</b> , 30, 3880-5	20.1	28
30	Dynamic single-cell phenotyping of immune cells using the microfluidic platform DropMap. <i>Nature Protocols</i> , <b>2020</b> , 15, 2920-2955	18.8	24
29	Single-Virus Droplet Microfluidics for High-Throughput Screening of Neutralizing Epitopes on HIV Particles. <i>Cell Chemical Biology</i> , <b>2017</b> , 24, 751-757.e3	8.2	23
28	The Thermophilic CotA Laccase from <i>Bacillus subtilis</i> : Bioelectrocatalytic Evaluation of O <sub>2</sub> Reduction in the Direct and Mediated Electron Transfer Regime. <i>Electroanalysis</i> , <b>2011</b> , 23, 1781-1789	3	23
27	Lineage Tracking for Probing Heritable Phenotypes at Single-Cell Resolution. <i>PLoS ONE</i> , <b>2016</b> , 11, e0152395	3.95	22
26	Coupled catabolism and anabolism in autocatalytic RNA sets. <i>Nucleic Acids Research</i> , <b>2018</b> , 46, 9660-9666	60.1	22
25	The REAnimation Low Immune Status Markers (REALISM) project: a protocol for broad characterisation and follow-up of injury-induced immunosuppression in intensive care unit (ICU) critically ill patients. <i>BMJ Open</i> , <b>2017</b> , 7, e015734	3	21
24	Phosphotriesterase variants with high methylphosphonate activity and strong negative trade-off against phosphotriesters. <i>Protein Engineering, Design and Selection</i> , <b>2011</b> , 24, 151-9	1.9	17
23	Synthesis of new hydrophilic rhodamine based enzymatic substrates compatible with droplet-based microfluidic assays. <i>Chemical Communications</i> , <b>2017</b> , 53, 5437-5440	5.8	16
22	Determinants of cofactor binding to DNA methyltransferases: insights from a systematic series of structural variants of S-adenosylhomocysteine. <i>Organic and Biomolecular Chemistry</i> , <b>2005</b> , 3, 152-61	3.9	16
21	Interdomain interactions within the gene 3 protein of filamentous phage. <i>FEBS Letters</i> , <b>1999</b> , 463, 371-43.8	3.8	16
20	Enhanced imine synthesis in water: from surfactant-mediated catalysis to host-guest mechanisms. <i>Chemical Communications</i> , <b>2013</b> , 49, 11332-4	5.8	13
19	Highest paraoxonase turnover rate found in a bacterial phosphotriesterase variant. <i>Protein Engineering, Design and Selection</i> , <b>2011</b> , 24, 209-11	1.9	10
18	Selective gene amplification. <i>Protein Engineering, Design and Selection</i> , <b>2007</b> , 20, 577-81	1.9	10

17	Metabolic cost of rapid adaptation of single yeast cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 10660-10666	11.5	8
16	Activity-Fed Translation (AFT) Assay: A New High-Throughput Screening Strategy for Enzymes in Droplets. <i>ChemBioChem</i> , <b>2015</b> , 16, 1343-9	3.8	8
15	The establishment of variant surface glycoprotein monoallelic expression revealed by single-cell RNA-seq of <i>Trypanosoma brucei</i> in the tsetse fly salivary glands. <i>PLoS Pathogens</i> , <b>2021</b> , 17, e1009904	7.6	7
14	The Quantitative Assessment of the Secreted IgG Repertoire after Recall to Evaluate the Quality of Immunizations. <i>Journal of Immunology</i> , <b>2020</b> , 205, 1176-1184	5.3	6
13	Cell-free selection of domain antibodies by in vitro compartmentalization. <i>Methods in Molecular Biology</i> , <b>2012</b> , 911, 183-98	1.4	5
12	A competition-based assay for the screening of species-specific antibiotics. <i>Journal of Antimicrobial Chemotherapy</i> , <b>2009</b> , 64, 62-8	5.1	5
11	Darwinian properties and their trade-offs in autocatalytic RNA reaction networks. <i>Nature Communications</i> , <b>2021</b> , 12, 842	17.4	5
10	A competitive co-cultivation assay for cancer drug specificity evaluation. <i>Journal of Biomolecular Screening</i> , <b>2011</b> , 16, 818-24		4
9	Coupling the inhibition of viral transduction with a positive fluorescence signal. <i>Combinatorial Chemistry and High Throughput Screening</i> , <b>2010</b> , 13, 352-7	1.3	2
8	RNA diversification by a self-reproducing ribozyme revealed by deep sequencing and kinetic modelling. <i>Chemical Communications</i> , <b>2021</b> , 57, 7517-7520	5.8	2
7	Microfluidic Approaches for the Study of Emulsions: Transport of Solutes. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1530, 1		1
6	Monocyte Trajectories Endotypes Are Associated With Worsening in Septic Patients.. <i>Frontiers in Immunology</i> , <b>2021</b> , 12, 795052	8.4	1
5	Herpes DNAemia and TTV Viraemia in Intensive Care Unit Critically Ill Patients: A Single-Centre Prospective Longitudinal Study. <i>Frontiers in Immunology</i> , <b>2021</b> , 12, 698808	8.4	1
4	Metabolic Cost of Rapid Adaptation of Single Yeast Cells		1
3	Deep phenotypic characterization of immunization-induced antibacterial IgG repertoires in mice using a single-antibody bioassay. <i>Communications Biology</i> , <b>2020</b> , 3, 614	6.7	1
2	The establishment of variant surface glycoprotein monoallelic expression revealed by single-cell RNA-seq of <i>Trypanosoma brucei</i> in the tsetse fly salivary glands		1
1	High-throughput Screens and Selections of Enzyme-encoding Genes <b>2006</b> , 163-181		