

Philipp Holliger

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

73 papers	5,700 citations	34 h-index	75 g-index
102 ext. papers	6,428 ext. citations	14.5 avg, IF	6.01 L-index

#	Paper	IF	Citations
73	New chemistries and enzymes for synthetic genetics. <i>Current Opinion in Biotechnology</i> , 2021 , 74, 129-136	11.4	5
72	Direct Mapping of Higher-Order RNA Interactions by SHAPE-JuMP. <i>Biochemistry</i> , 2021 , 60, 1971-1982	3.2	3
71	RNA Replication and the RNA Polymerase Ribozyme 2021 , 359-386		0
70	Discovery and evolution of RNA and XNA reverse transcriptase function and fidelity. <i>Nature Chemistry</i> , 2020 , 12, 683-690	17.6	22
69	Modified nucleic acids: replication, evolution, and next-generation therapeutics. <i>BMC Biology</i> , 2020 , 18, 112	7.3	25
68	Structural Studies of HNA Substrate Specificity in Mutants of an Archaeal DNA Polymerase Obtained by Directed Evolution. <i>Biomolecules</i> , 2020 , 10,	5.9	4
67	Selection of 2' Deoxy-2' Fluoroarabino Nucleic Acid (FANA) Aptamers That Bind HIV-1 Integrase with Picomolar Affinity. <i>ACS Chemical Biology</i> , 2019 , 14, 2166-2175	4.9	16
66	Beyond DNA and RNA: The Expanding Toolbox of Synthetic Genetics. <i>Cold Spring Harbor Perspectives in Biology</i> , 2019 , 11,	10.2	25
65	A synthetic genetic polymer with an uncharged backbone chemistry based on alkyl phosphonate nucleic acids. <i>Nature Chemistry</i> , 2019 , 11, 533-542	17.6	45
64	Non-Enzymatic Assembly of a Minimized RNA Polymerase Ribozyme. <i>ChemSystemsChem</i> , 2019 , 1, 1-4	3.1	14
63	Ribozyme-catalysed RNA synthesis using triplet building blocks. <i>ELife</i> , 2018 , 7,	8.9	55
62	Random-sequence genetic oligomer pools display an innate potential for ligation and recombination. <i>ELife</i> , 2018 , 7,	8.9	22
61	Selecting Fully-Modified XNA Aptamers Using Synthetic Genetics. <i>Current Protocols in Chemical Biology</i> , 2018 , 10, e44	1.8	14
60	Simple peptides derived from the ribosomal core potentiate RNA polymerase ribozyme function. <i>Nature Chemistry</i> , 2017 , 9, 325-332	17.6	43
59	Exploring the Chemistry of Genetic Information Storage and Propagation through Polymerase Engineering. <i>Accounts of Chemical Research</i> , 2017 , 50, 1079-1087	24.3	46
58	Engineering and application of polymerases for synthetic genetics. <i>Current Opinion in Biotechnology</i> , 2017 , 48, 168-179	11.4	32
57	Nucleic acids: function and potential for abiogenesis. <i>Quarterly Reviews of Biophysics</i> , 2017 , 50, e4	7	37

56	Nanostructures from Synthetic Genetic Polymers. <i>ChemBioChem</i> , 2016 , 17, 1107-10	3.8	38
55	Freeze-thaw cycles as drivers of complex ribozyme assembly. <i>Nature Chemistry</i> , 2015 , 7, 502-8	17.6	83
54	Directed evolution of artificial enzymes (XNAzymes) from diverse repertoires of synthetic genetic polymers. <i>Nature Protocols</i> , 2015 , 10, 1625-42	18.8	31
53	Selection of 2'-deoxy-2'-fluoroarabinonucleotide (FANA) aptamers that bind HIV-1 reverse transcriptase with picomolar affinity. <i>Nucleic Acids Research</i> , 2015 , 43, 9587-99	20.1	80
52	A polymerase engineered for bisulfite sequencing. <i>Nucleic Acids Research</i> , 2015 , 43, e155	20.1	7
51	Catalysts from synthetic genetic polymers. <i>Nature</i> , 2015 , 518, 427-30	50.4	187
50	Enzymatische Synthese von Nukleinsäuren mit definierten regioisomeren 2'-5'-Verknüpfungen. <i>Angewandte Chemie</i> , 2015 , 127, 15791-15794	3.6	1
49	Enzymatic Synthesis of Nucleic Acids with Defined Regioisomeric 2'-5' Linkages. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 15570-3	16.4	18
48	Isoguanine and 5-methyl-isocytosine bases, in vitro and in vivo. <i>Chemistry - A European Journal</i> , 2015 , 21, 5009-22	4.8	25
47	Subunit disassembly and inhibition of TNF α by a semi-synthetic bicyclic peptide. <i>Protein Engineering, Design and Selection</i> , 2015 , 28, 45-52	1.9	27
46	Towards XNA nanotechnology: new materials from synthetic genetic polymers. <i>Trends in Biotechnology</i> , 2014 , 32, 321-8	15.1	91
45	A synthetic approach to abiogenesis. <i>Nature Methods</i> , 2014 , 11, 495-8	21.6	29
44	Non-canonical 3'-5' extension of RNA with prebiotically plausible ribonucleoside 2'-3'-cyclic phosphates. <i>Journal of the American Chemical Society</i> , 2014 , 136, 5193-6	16.4	21
43	Compartmentalized Self-Tagging for In Vitro-Directed Evolution of XNA Polymerases. <i>Current Protocols in Nucleic Acid Chemistry</i> , 2014 , 57, 9.9.1-18	0.5	17
42	Towards applications of synthetic genetic polymers in diagnosis and therapy. <i>Current Opinion in Chemical Biology</i> , 2014 , 22, 79-84	9.7	37
41	In-ice evolution of RNA polymerase ribozyme activity. <i>Nature Chemistry</i> , 2013 , 5, 1011-8	17.6	177
40	Synthetic polymers and their potential as genetic materials. <i>BioEssays</i> , 2013 , 35, 113-22	4.1	31
39	Chemical fidelity of an RNA polymerase ribozyme. <i>Chemical Science</i> , 2013 , 4, 2804	9.4	22

38	Structures of an apo and a binary complex of an evolved archeal B family DNA polymerase capable of synthesising highly cy-dye labelled DNA. <i>PLoS ONE</i> , 2013 , 8, e70892	3.7	25
37	The XNA world: progress towards replication and evolution of synthetic genetic polymers. <i>Current Opinion in Chemical Biology</i> , 2012 , 16, 245-52	9.7	143
36	Reversible fluorescence photoswitching in DNA. <i>Journal of Physical Chemistry B</i> , 2012 , 116, 10290-3	3.4	11
35	Synthetic genetic polymers capable of heredity and evolution. <i>Science</i> , 2012 , 336, 341-4	33.3	515
34	A short adaptive path from DNA to RNA polymerases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 8067-72	11.5	78
33	Ribozyme-catalyzed transcription of an active ribozyme. <i>Science</i> , 2011 , 332, 209-12	33.3	280
32	Molecular breeding of polymerases for resistance to environmental inhibitors. <i>Nucleic Acids Research</i> , 2011 , 39, e51	20.1	51
31	CyDNA: synthesis and replication of highly Cy-dye substituted DNA by an evolved polymerase. <i>Journal of the American Chemical Society</i> , 2010 , 132, 5096-104	16.4	87
30	Ice as a protocellular medium for RNA replication. <i>Nature Communications</i> , 2010 , 1, 76	17.4	89
29	Polymerase engineering: towards the encoded synthesis of unnatural biopolymers. <i>Chemical Communications</i> , 2009 , 4619-31	5.8	63
28	Darwinian chemistry: towards the synthesis of a simple cell. <i>Molecular BioSystems</i> , 2009 , 5, 686-94		23
27	Evolving a polymerase for hydrophobic base analogues. <i>Journal of the American Chemical Society</i> , 2009 , 131, 14827-37	16.4	64
26	Molecular breeding of polymerases for amplification of ancient DNA. <i>Nature Biotechnology</i> , 2007 , 25, 939-43	44.5	99
25	Compartmentalized self-replication: a novel method for the directed evolution of polymerases and other enzymes. <i>Methods in Molecular Biology</i> , 2007 , 352, 237-48	1.4	15
24	Directed evolution of DNA polymerase, RNA polymerase and reverse transcriptase activity in a single polypeptide. <i>Journal of Molecular Biology</i> , 2006 , 361, 537-50	6.5	80
23	Effect of a Hydrogen Bonding Carboxamide Group on Universal Bases. <i>Collection of Czechoslovak Chemical Communications</i> , 2006 , 71, 899-911		9
22	Engineering high affinity superantigens by phage display. <i>Journal of Molecular Biology</i> , 2005 , 347, 107-20	6.5	18
21	Engineered antibody fragments and the rise of single domains. <i>Nature Biotechnology</i> , 2005 , 23, 1126-36	44.5	1456

20	A novel emulsion mixture for in vitro compartmentalization of transcription and translation in the rabbit reticulocyte system. <i>Protein Engineering, Design and Selection</i> , 2004 , 17, 201-4	1.9	31
19	Generic expansion of the substrate spectrum of a DNA polymerase by directed evolution. <i>Nature Biotechnology</i> , 2004 , 22, 755-9	44.5	152
18	Autocrine costimulation: tumor-specific CD28-mediated costimulation of T cells by in situ production of a bifunctional B7-anti-CEA diabody fusion protein. <i>Cancer Gene Therapy</i> , 2002 , 9, 275-81	5.4	12
17	Expression of antibody fragments in <i>Pichia pastoris</i> . <i>Methods in Molecular Biology</i> , 2002 , 178, 349-57	1.4	2
16	Isolation of receptor-ligand pairs by capture of long-lived multivalent interaction complexes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002 , 99, 8530-5	11.5	25
15	Methods for generating multivalent and bispecific antibody fragments. <i>Methods in Enzymology</i> , 2000 , 326, 461-79	1.7	17
14	Engineering antibodies for the clinic. <i>Cancer and Metastasis Reviews</i> , 1999 , 18, 411-9	9.6	13
13	CD3X anti-nitrophenyl bispecific diabodies: universal immunotherapeutic tools for retargeting T cells to tumors. <i>International Journal of Cancer</i> , 1999 , 82, 700-8	7.5	11
12	Crystal structure of the two N-terminal domains of g3p from filamentous phage fd at 1.9 Å: evidence for conformational lability. <i>Journal of Molecular Biology</i> , 1999 , 288, 649-57	6.5	93
11	The C-terminal domain of TolA is the coreceptor for filamentous phage infection of <i>E. coli</i> . <i>Cell</i> , 1997 , 90, 351-60	56.2	165
10	Retargeting serum immunoglobulin with bispecific diabodies. <i>Nature Biotechnology</i> , 1997 , 15, 632-6	44.5	66
9	A conserved infection pathway for filamentous bacteriophages is suggested by the structure of the membrane penetration domain of the minor coat protein g3p from phage fd. <i>Structure</i> , 1997 , 5, 265-75	5.2	71
8	Mimicking somatic hypermutation: affinity maturation of antibodies displayed on bacteriophage using a bacterial mutator strain. <i>Journal of Molecular Biology</i> , 1996 , 260, 359-68	6.5	188
7	Specific killing of lymphoma cells by cytotoxic T-cells mediated by a bispecific diabody. <i>Protein Engineering, Design and Selection</i> , 1996 , 9, 299-305	1.9	69
6	Crystal structure of a diabody, a bivalent antibody fragment. <i>Structure</i> , 1994 , 2, 1217-26	5.2	174
5	Engineering bispecific antibodies. <i>Current Opinion in Biotechnology</i> , 1993 , 4, 446-9	11.4	71
4	Site-directed mutagenesis of bovine pancreatic ribonuclease: lysine-41 and aspartate-121. <i>FEBS Letters</i> , 1991 , 281, 275-7	3.8	38
3	Self-Replication in Chemistry and Biology439-466		

2	Innate potential of random genetic oligomer pools for recombination	1
1	Hydrophobic-cationic peptides enhance RNA polymerase ribozyme activity by accretion	2