David Bikard

List of Publications by Year
in descending order

49 papers	8,154 citations	126907 33 h-index	182427 51 g-index
67 all docs	67 docs citations	67 times ranked	8826 citing authors

#	Article	IF	Citations
1	RNA-guided editing of bacterial genomes using CRISPR-Cas systems. Nature Biotechnology, 2013, 31, 233-239.	17.5	2,071
2	Programmable repression and activation of bacterial gene expression using an engineered CRISPR-Cas system. Nucleic Acids Research, 2013, 41, 7429-7437.	14.5	960
3	Exploiting CRISPR-Cas nucleases to produce sequence-specific antimicrobials. Nature Biotechnology, 2014, 32, 1146-1150.	17.5	718
4	PhageTerm: a tool for fast and accurate determination of phage termini and packaging mechanism using next-generation sequencing data. Scientific Reports, 2017, 7, 8292.	3.3	443
5	Cas9 specifies functional viral targets during CRISPRâ€“Cas adaptation. Nature, 2015, 519, 199-202.	27.8	330
6	CRISPR Interference Can Prevent Natural Transformation and Virulence Acquisition during InÂVivo Bacterial Infection. Cell Host and Microbe, 2012, 12, 177-186.	11.0	284
7	Divergent Evolution of Duplicate Genes Leads to Genetic Incompatibilities Within <i>A. thaliana</i>. Science, 2009, 323, 623-626.	12.6	264
8	Conditional tolerance of temperate phages via transcription-dependent CRISPR-Cas targeting. Nature, 2014, 514, 633-637.	27.8	257
9	Conjugative DNA Transfer Induces the Bacterial SOS Response and Promotes Antibiotic Resistance Development through Integron Activation. PLoS Genetics, 2010, 6, e1001165.	3.5	228
10	Consequences of Cas9 cleavage in the chromosome of<i>Escherichia coli</i>. Nucleic Acids Research, 2016, 44, 4243-4251.	14.5	225
11	A CRISPRi screen in E. coli reveals sequence-specific toxicity of dCas9. Nature Communications, 2018, 9, 1912.	12.8	203
12	Genome-wide CRISPR-dCas9 screens in E. coli identify essential genes and phage host factors. PLoS Genetics, 2018, 14, e1007749.	3.5	163
13	Folded DNA in Action: Hairpin Formation and Biological Functions in Prokaryotes. Microbiology and Molecular Biology Reviews, 2010, 74, 570-588.	6.6	161
14	Phages and their satellites encode hotspots of antiviral systems. Cell Host and Microbe, 2022, 30, 740-753.e5.	11.0	129
15	Class-A penicillin binding proteins do not contribute to cell shape but repair cell-wall defects. ELife, 2020, 9, .	6.0	108
16	Generating functional protein variants with variational autoencoders. PLoS Computational Biology, 2021, 17, e1008736.	3.2	106
17	Innate and adaptive immunity in bacteria: mechanisms of programmed genetic variation to fight bacteriophages. Current Opinion in Immunology, 2012, 24, 15-20.	5.5	96
18	Using CRISPR-Cas systems as antimicrobials. Current Opinion in Microbiology, 2017, 37, 155-160.	5.1	93

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19	Tuning dCas9's ability to block transcription enables robust, noiseless knockdown of bacterial genes. Molecular Systems Biology, 2018, 14, e7899.	7.2	92
20	Microbial defenses against mobile genetic elements and viruses: Who defends whom from what?. PLoS Biology, 2022, 20, e3001514.	5.6	83
21	Adapting to new threats: the generation of memory by <scp>CRISPRâ€Cas</scp> immune systems. Molecular Microbiology, 2014, 93, 1-9.	2.5	80
22	Inhibition of NHEJ repair by type II-A CRISPR-Cas systems in bacteria. Nature Communications, 2017, 8, 2094.	12.8	77
23	The impact of genetic diversity on gene essentiality within the Escherichia coli species. Nature Microbiology, 2021, 6, 301-312.	13.3	76
24	A Eukaryotic-like Serine/Threonine Kinase Protects Staphylococci against Phages. Cell Host and Microbe, 2016, 20, 471-481.	11.0	72
25	Editing the microbiome the CRISPR way. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20180103.	4.0	70
26	Phageâ€“host coevolution in natural populations. Nature Microbiology, 2022, 7, 1075-1086.	13.3	58
27	Structural Features of Single-Stranded Integron Cassette attC Sites and Their Role in Strand Selection. PLoS Genetics, 2009, 5, e1000632.	3.5	56
28	Microbial-derived products as potential new antimicrobials. Veterinary Research, 2018, 49, 66.	3.0	53
29	Mutations in Cas9 Enhance the Rate of Acquisition of Viral Spacer Sequences during the CRISPR-Cas Immune Response. Molecular Cell, 2017, 65, 168-175.	9.7	47
30	Impact of Different Target Sequences on Type III CRISPR-Cas Immunity. Journal of Bacteriology, 2016, 198, 941-950.	2.2	46
31	CRISPR Tools To Control Gene Expression in Bacteria. Microbiology and Molecular Biology Reviews, 2020, 84, .	6.6	46
32	Gene silencing with CRISPRi in bacteria and optimization of dCas9 expression levels. Methods, 2020, 172, 61-75.	3.8	45
33	On-target activity predictions enable improved CRISPRâ€“dCas9 screens in bacteria. Nucleic Acids Research, 2020, 48, e64-e64.	14.5	43
34	Control of gene expression by CRISPR-Cas systems. F1000prime Reports, 2013, 5, 47.	5.9	41
35	The synthetic integron: an in vivo genetic shuffling device. Nucleic Acids Research, 2010, 38, e153-e153.	14.5	35
36	Cellular pathways controlling integron cassette site folding. EMBO Journal, 2010, 29, 2623-2634.	7.8	32

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37	Atypical organizations and epistatic interactions of CRISPRs and cas clusters in genomes and their mobile genetic elements. Nucleic Acids Research, 2020, 48, 748-760.	14.5	32
38	A matter of background: DNA repair pathways as a possible cause for the sparse distribution of CRISPR-Cas systems in bacteria. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20180088.	4.0	30
39	Differences in Integron Cassette Excision Dynamics Shape a Trade-Off between Evolvability and Genetic Capacitance. MBio, 2017, 8, .	4.1	27
40	The Integron Integrase Efficiently Prevents the Melting Effect of Escherichia coli Single-Stranded DNA-Binding Protein on Folded <i>attC</i> Sites. Journal of Bacteriology, 2014, 196, 762-771.	2.2	17
41	Structure-specific DNA recombination sites: Design, validation, and machine learningâ€“based refinement. Science Advances, 2020, 6, eaay2922.	10.3	17
42	Lipoprotein DolP supports proper folding of BamA in the bacterial outer membrane promoting fitness upon envelope stress. ELife, 2021, 10, .	6.0	15
43	CRISPR screens in the era of microbiomes. Current Opinion in Microbiology, 2020, 57, 70-77.	5.1	15
44	Cellular pathways controlling integron cassette site folding. EMBO Journal, 2010, 29, 3745-3745.	7.8	8
45	High-throughput identification of viral termini and packaging mechanisms in virome datasets using PhageTermVirome. Scientific Reports, 2021, 11, 18319.	3.3	6
46	Shuffling of DNA Cassettes in a Synthetic Integron. Methods in Molecular Biology, 2013, 1073, 169-174.	0.9	5
47	Learning from Antibodies: Phage Host-Range Engineering. Cell Host and Microbe, 2019, 26, 445-446.	11.0	3
48	Guest editorial: CRISPRcas9: CRISPR-Cas systems: at the cutting edge of microbiology. Current Opinion in Microbiology, 2017, 37, vii-viii.	5.1	0
49	Methods for the Analysis and Characterization of Defense Mechanisms Against Horizontal Gene Transfer: CRISPR Systems. Methods in Molecular Biology, 2020, 2075, 235-249.	0.9	0