Sangsu Bae

List of Publications by Citations

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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.

86 papers	4,848 citations	23 h-index	69 g-index
97 ext. papers	6,269 ext. citations	9.8 avg, IF	6.02 L-index

#	Paper	IF	Citations
86	Cas-OFFinder: a fast and versatile algorithm that searches for potential off-target sites of Cas9 RNA-guided endonucleases. *Bioinformatics*, **2014**, 30, 1473-5	7.2	1015
85	Analysis of off-target effects of CRISPR/Cas-derived RNA-guided endonucleases and nickases. *Genome Research*, **2014**, 24, 132-41	9.7	966
84	Digenome-seq: genome-wide profiling of CRISPR-Cas9 off-target effects in human cells. *Nature Methods*, **2015**, 12, 237-43, 1 p following 243	21.6	652
83	Microhomology-based choice of Cas9 nuclease target sites. *Nature Methods*, **2014**, 11, 705-6	21.6	258
82	Functional Correction of Large Factor VIII Gene Chromosomal Inversions in Hemophilia A Patient-Derived iPSCs Using CRISPR-Cas9. *Cell Stem Cell*, **2015**, 17, 213-20	18	214
81	Cas-analyzer: an online tool for assessing genome editing results using NGS data. *Bioinformatics*, **2017**, 33, 286-288	7.2	198
80	DNA-free two-gene knockout in Chlamydomonas reinhardtii via CRISPR-Cas9 ribonucleoproteins. *Scientific Reports*, **2016**, 6, 30620	4.9	188
79	Cas-Designer: a web-based tool for choice of CRISPR-Cas9 target sites. *Bioinformatics*, **2015**, 31, 4014-6	7.2	149
78	Site-directed mutagenesis in Petunia□hybrida protoplast system using direct delivery of purified recombinant Cas9 ribonucleoproteins. *Plant Cell Reports*, **2016**, 35, 1535-44	5.1	131
77	Intrinsic Z-DNA is stabilized by the conformational selection mechanism of Z-DNA-binding proteins. *Journal of the American Chemical Society*, **2011**, 133, 668-71	16.4	76
76	Direct observation of DNA target searching and cleavage by CRISPR-Cas12a. *Nature Communications*, **2018**, 9, 2777	17.4	72
75	Web-based design and analysis tools for CRISPR base editing. *BMC Bioinformatics*, **2018**, 19, 542	3.6	70
74	Structural roles of guide RNAs in the nuclease activity of Cas9 endonuclease. *Nature Communications*, **2016**, 7, 13350	17.4	68
73	Photoautotrophic production of macular pigment in a Chlamydomonas reinhardtii strain generated by using DNA-free CRISPR-Cas9 RNP-mediated mutagenesis. *Biotechnology and Bioengineering*, **2018**, 115, 719-728	4.9	56
72	CUT-PCR: CRISPR-mediated, ultrasensitive detection of target DNA using PCR. *Oncogene*, **2017**, 36, 6823-6829	5.6	55
71	Selective disruption of an oncogenic mutant allele by CRISPR/Cas9 induces efficient tumor regression. *Nucleic Acids Research*, **2017**, 45, 7897-7908	20.1	54
70	Adenine base editors catalyze cytosine conversions in human cells. *Nature Biotechnology*, **2019**, 37, 1145-1148	41.5	51

69	Distinct Z-DNA binding mode of a PKR-like protein kinase containing a Z-DNA binding domain (PKZ). *Nucleic Acids Research*, **2014**, 42, 5937-48	20.1	40
68	Simultaneous targeting of duplicated genes in Petunia protoplasts for flower color modification via CRISPR-Cas9 ribonucleoproteins. *Plant Cell Reports*, **2021**, 40, 1037-1045	5.1	30
67	Cas-Database: web-based genome-wide guide RNA library design for gene knockout screens using CRISPR-Cas9. *Bioinformatics*, **2016**, 32, 2017-23	7.2	28
66	CRISPR/Cas9-mediated gene knockout screens and target identification via whole-genome sequencing uncover host genes required for picornavirus infection. *Journal of Biological Chemistry*, **2017**, 292, 10664-10671	5.4	27
65	Deletion of the chloroplast LTD protein impedes LHCI import and PSI-LHCI assembly in Chlamydomonas reinhardtii. *Journal of Experimental Botany*, **2018**, 69, 1147-1158	7	27
64	Current Status and Challenges of DNA Base Editing Tools. *Molecular Therapy*, **2020**, 28, 1938-1952	11.7	27
63	Response to "Unexpected mutations after CRISPR-Cas9 editing in vivo". *Nature Methods*, **2018**, 15, 239-240	24.6	22
62	CRISPR-Pass: Gene Rescue of Nonsense Mutations Using Adenine Base Editors. *Molecular Therapy*, **2019**, 27, 1364-1371	11.7	21
61	Construction of non-canonical PAM-targeting adenosine base editors by restriction enzyme-free DNA cloning using CRISPR-Cas9. *Scientific Reports*, **2019**, 9, 4939	4.9	21
60	Digenome-seq web tool for profiling CRISPR specificity. *Nature Methods*, **2017**, 14, 548-549	21.6	18
59	Cpf1-Database: web-based genome-wide guide RNA library design for gene knockout screens using CRISPR-Cpf1. *Bioinformatics*, **2018**, 34, 1077-1079	7.2	17
58	CRISPR/Cas9-targeted mutagenesis of F3?H, DFR and LDOX, genes related to anthocyanin biosynthesis in black rice (Oryza sativa L.). *Plant Biotechnology Reports*, **2019**, 13, 521-531	2.5	16
57	ID3 regulates the MDC1-mediated DNA damage response in order to maintain genome stability. *Nature Communications*, **2017**, 8, 903	17.4	14
56	Current trends in gene recovery mediated by the CRISPR-Cas system. *Experimental and Molecular Medicine*, **2020**, 52, 1016-1027	12.8	14
55	PE-Designer and PE-Analyzer: web-based design and analysis tools for CRISPR prime editing. *Nucleic Acids Research*, **2021**, 49, W499-W504	20.1	14
54	Increased PKM□activity impedes lateral movement of GluA2-containing AMPA receptors. *Molecular Brain*, **2017**, 10, 56	4.5	13
53	Autofocusing system based on optical astigmatism analysis of single-molecule images. *Optics Express*, **2012**, 20, 29353-60	3.3	13
52	Adenine base editing and prime editing of chemically derived hepatic progenitors rescue genetic liver disease. *Cell Stem Cell*, **2021**, 28, 1614-1624.e5	18	13

51	CRISPR-Cas9 Screening of Kaposi Sarcoma-Associated Herpesvirus-Transformed Cells Identifies XPO1 as a Vulnerable Target of Cancer Cells. *MBio*, **2019**, 10,	7.8	12
50	SIRT1-mediated downregulation of p27Kip1 is essential for overcoming contact inhibition of Kaposi sarcoma-associated herpesvirus transformed cells. *Oncotarget*, **2016**, 7, 75698-75711	3.3	12
49	Targeted genome editing, an alternative tool for trait improvement in horticultural crops. *Horticulture Environment and Biotechnology*, **2016**, 57, 531-543	2	11
48	Acquisition of seed dormancy breaking in rice (Oryza sativa L.) via CRISPR/Cas9-targeted mutagenesis of OsVP1 gene. *Plant Biotechnology Reports*, **2019**, 13, 511-520	2.5	10
47	Z-DNA stabilization is dominated by the Hofmeister effect. *Physical Chemistry Chemical Physics*, **2013**, 15, 15829-32	3.6	10
46	Anti-Atherogenic Effect of Stem Cell Nanovesicles Targeting Disturbed Flow Sites. *Small*, **2020**, 16, e2000012	11	9
45	Energetics of Z-DNA binding protein-mediated helicity reversals in DNA, RNA, and DNA-RNA duplexes. *Journal of Physical Chemistry B*, **2013**, 117, 13866-71	3.4	8
44	High-purity production and precise editing of DNA base editing ribonucleoproteins. *Science Advances*, **2021**, 7,	14.3	8
43	CRISPR-sub: Analysis of DNA substitution mutations caused by CRISPR-Cas9 in human cells. *Computational and Structural Biotechnology Journal*, **2020**, 18, 1686-1694	6.8	7
42	Adenine base editor engineering reduces editing of bystander cytosines. *Nature Biotechnology*, **2021**, 39, 1426-1433	44.5	7
41	Sensitive Surface Enhanced Raman Scattering-Based Detection of a BIGH3 Point Mutation Associated with Avellino Corneal Dystrophy. *Analytical Chemistry*, **2016**, 88, 11288-11292	7.8	6
40	Knockout of Gene (Encoding bHLH Transcription Factor Using CRISPR/Cas9 System Confers Male Sterility Phenotype in Tomato. *Plants*, **2020**, 9,	4.5	6
39	CRISPR-mediated gene correction links the ATP7A M1311V mutations with amyotrophic lateral sclerosis pathogenesis in one individual. *Communications Biology*, **2020**, 3, 33	6.7	5
38	Comprehensive analysis of prime editing outcomes in human embryonic stem cells.. *Nucleic Acids Research*, **2022**,	20.1	5
37	Questioning unexpected CRISPR off-target mutations in vivo		5
36	Safe scarless cassette-free selection of genome-edited human pluripotent stem cells using temporary drug resistance. *Biomaterials*, **2020**, 262, 120295	15.6	5
35	LPA2 protein is involved in photosystem II assembly in Chlamydomonas reinhardtii. *Plant Journal*, **2021**, 107, 1648-1662	6.9	5
34	Web-Based CRISPR Toolkits: Cas-OFFinder, Cas-Designer, and Cas-Analyzer. *Methods in Molecular Biology*, **2021**, 2162, 23-33	1.4	5

33	Structure-based elucidation of the regulatory mechanism for aminopeptidase activity. *Acta Crystallographica Section D: Biological Crystallography*, **2013**, 69, 1738-47		4
32	Structural and dynamic views of the CRISPR-Cas system at the single-molecule level. *BMB Reports*, **2016**, 49, 201-7	5.5	4
31	A novel method for high-frequency genome editing in rice, using the CRISPR/Cas9 system. *Journal of Plant Biotechnology*, **2017**, 44, 89-96	0.6	4
30	Targeted cytochrome P450 3045C1 (CYP3045C1) gene mutation via CRISPR-Cas9 ribonucleoproteins in the marine rotifer Brachionus koreanus. *Hydrobiologia*, **2019**, 844, 117-128	2.4	4
29	Generation of albino via SLC45a2 gene targeting by CRISPR/Cas9 in the marine medaka Oryzias melastigma. *Marine Pollution Bulletin*, **2020**, 154, 111038	6.7	3
28	DNA-free Genome Editing of Using CRISPR and Subsequent Mutant Analysis. *Bio-protocol*, **2017**, 7, e2352	0.9	3
27	Generation and Transcriptome Profiling of Slr1-d7 and Slr1-d8 Mutant Lines with a New Semi-Dominant Dwarf Allele of Using the CRISPR/Cas9 System in Rice. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	3
26	Transcriptomic and physiological analysis of OsCAO1 knockout lines using the CRISPR/Cas9 system in rice. *Plant Cell Reports*, **2021**, 40, 1013-1024	5.1	3
25	Therapeutic adenine base editing corrects nonsense mutation and improves visual function in a mouse model of Leber congenital amaurosis		3
24	Machine learning finds Cas9-edited genotypes. *Nature Biomedical Engineering*, **2018**, 2, 892-893	19	3
23	AC-motif: a DNA motif containing adenine and cytosine repeat plays a role in gene regulation. *Nucleic Acids Research*, **2021**, 49, 10150-10165	20.1	3
22	i-Silence, Please! An Alternative for Gene Disruption via Adenine Base Editors. *Molecular Therapy*, **2020**, 28, 348-349	11.7	2
21	The freshwater water flea Daphnia magna NIES strain genome as a resource for CRISPR/Cas9 gene targeting: The glutathione S-transferase omega 2 gene. *Aquatic Toxicology*, **2021**, 242, 106021	5.1	2
20	Arabidopsis ATXR2 represses de novo shoot organogenesis in the transition from callus to shoot formation. *Cell Reports*, **2021**, 37, 109980	10.6	2
19	Web-based design and analysis tools for CRISPR base editing		2
18	Analysis of NHEJ-Based DNA Repair after CRISPR-Mediated DNA Cleavage. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	2
17	Single-Molecule FRET Combined with Magnetic Tweezers at Low Force Regime. *Bulletin of the Korean Chemical Society*, **2016**, 37, 408-410	1.2	2
16	CReVIS-Seq: A highly accurate and multiplexable method for genome-wide mapping of lentiviral integration sites. *Molecular Therapy - Methods and Clinical Development*, **2021**, 20, 792-800	6.4	2

15	Purification of an Intact Human Protein Overexpressed from Its Endogenous Locus Direct Genome Engineering. *ACS Synthetic Biology*, **2020**, 9, 1591-1598	5.7	1
14	High expression of uracil DNA glycosylase determines C to T substitution in human pluripotent stem cells.. *Molecular Therapy - Nucleic Acids*, **2022**, 27, 175-183	10.7	1
13	Ex vivo therapeutic base and prime editing using chemically derived hepatic progenitors in a mouse model of tyrosinemia type 1		1
12	Comprehensive analysis of prime editing outcomes in human embryonic stem cells		1
11	In vivo gene editing via homology-independent targeted integration for adrenoleukodystrophy treatment. *Molecular Therapy*, **2021**,	11.7	1
10	Enhancing plant immunity by expression of pathogen-targeted CRISPR-Cas9 in plants **2021**, 1, 100001		1
9	Efficient Human Cell Coexpression System and Its Application to the Production of Multiple Coronavirus Antigens. *Advanced Biology*, **2021**, 5, e2000154		1
8	Quantitative assessment of engineered Cas9 variants for target specificity enhancement by single-molecule reaction pathway analysis. *Nucleic Acids Research*, **2021**, 49, 11312-11322	20.1	1
7	Multiple isogenic GNE-myopathy modeling with mutation specific phenotypes from human pluripotent stem cells by base editors.. *Biomaterials*, **2022**, 282, 121419	15.6	1
6	A thermodynamic understanding of the salt-induced B-to-Z transition of DNA containing BZ junctions. *Biochemical and Biophysical Research Communications*, **2021**, 583, 142-145	3.4	0
5	Current widely-used web-based tools for CRISPR nucleases, base editors, and prime editors **2021**, 1, 100004		0
4	Web-Based Base Editing Toolkits: BE-Designer and BE-Analyzer. *Methods in Molecular Biology*, **2021**, 2189, 81-88	1.4	0
3	Target-directed gene-editing approach for developing a new horticultural crop. *Acta Horticulturae*, **2016**, 289-294	0.3	
2	genome editing in single mammalian brain neurons through CRISPR-Cas9 and cytosine base editors. *Computational and Structural Biotechnology Journal*, **2021**, 19, 2477-2485	6.8	
1	Computational Tools for Target Design and Analysis **2022**, 61-72		