

# Sangsu Bae

## List of Publications by Year in descending order

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85  
papers

7,443  
citations

185998

28  
h-index

60497

81  
g-index

97  
all docs

97  
docs citations

97  
times ranked

9227  
citing authors

#	ARTICLE	IF	CITATIONS
1	Cas-OFFinder: a fast and versatile algorithm that searches for potential off-target sites of Cas9 RNA-guided endonucleases. <i>Bioinformatics</i> , 2014, 30, 1473-1475.	1.8	1,651
2	Analysis of off-target effects of CRISPR/Cas-derived RNA-guided endonucleases and nickases. <i>Genome Research</i> , 2014, 24, 132-141.	2.4	1,195
3	Digenome-seq: genome-wide profiling of CRISPR-Cas9 off-target effects in human cells. <i>Nature Methods</i> , 2015, 12, 237-243.	9.0	850
4	Microhomology-based choice of Cas9 nuclease target sites. <i>Nature Methods</i> , 2014, 11, 705-706.	9.0	336
5	Cas-analyzer: an online tool for assessing genome editing results using NGS data. <i>Bioinformatics</i> , 2017, 33, 286-288.	1.8	313
6	Cas-Designer: a web-based tool for choice of CRISPR-Cas9 target sites. <i>Bioinformatics</i> , 2015, 31, 4014-4016.	1.8	306
7	Functional Correction of Large Factor VIII Gene Chromosomal Inversions in Hemophilia A Patient-Derived iPSCs Using CRISPR-Cas9. <i>Cell Stem Cell</i> , 2015, 17, 213-220.	5.2	263
8	DNA-free two-gene knockout in <i>Chlamydomonas reinhardtii</i> via CRISPR-Cas9 ribonucleoproteins. <i>Scientific Reports</i> , 2016, 6, 30620.	1.6	253
9	Site-directed mutagenesis in <i>Petunia</i> – <i>Arabidopsis</i> protoplast system using direct delivery of purified recombinant Cas9 ribonucleoproteins. <i>Plant Cell Reports</i> , 2016, 35, 1535-1544.	2.8	186
10	Direct observation of DNA target searching and cleavage by CRISPR-Cas12a. <i>Nature Communications</i> , 2018, 9, 2777.	5.8	148
11	Web-based design and analysis tools for CRISPR base editing. <i>BMC Bioinformatics</i> , 2018, 19, 542.	1.2	127
12	Adenine base editors catalyze cytosine conversions in human cells. <i>Nature Biotechnology</i> , 2019, 37, 1145-1148.	9.4	95
13	Structural roles of guide RNAs in the nuclease activity of Cas9 endonuclease. <i>Nature Communications</i> , 2016, 7, 13350.	5.8	94
14	Intrinsic Z-DNA Is Stabilized by the Conformational Selection Mechanism of Z-DNA-Binding Proteins. <i>Journal of the American Chemical Society</i> , 2011, 133, 668-671.	6.6	92
15	Photoautotrophic production of macular pigment in a <i>Chlamydomonas reinhardtii</i> strain generated by using DNA-free CRISPR-Cas9 RNP-mediated mutagenesis. <i>Biotechnology and Bioengineering</i> , 2018, 115, 719-728.	1.7	92
16	Selective disruption of an oncogenic mutant allele by CRISPR/Cas9 induces efficient tumor regression. <i>Nucleic Acids Research</i> , 2017, 45, 7897-7908.	6.5	87
17	CUT-PCR: CRISPR-mediated, ultrasensitive detection of target DNA using PCR. <i>Oncogene</i> , 2017, 36, 6823-6829.	2.6	84
18	Current Status and Challenges of DNA Base Editing Tools. <i>Molecular Therapy</i> , 2020, 28, 1938-1952.	3.7	72

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19	Simultaneous targeting of duplicated genes in <i>Petunia</i> protoplasts for flower color modification via CRISPR-Cas9 ribonucleoproteins. <i>Plant Cell Reports</i> , 2021, 40, 1037-1045.	2.8	72
20	PE-Designer and PE-Analyzer: web-based design and analysis tools for CRISPR prime editing. <i>Nucleic Acids Research</i> , 2021, 49, W499-W504.	6.5	57
21	Adenine base editor engineering reduces editing of bystander cytosines. <i>Nature Biotechnology</i> , 2021, 39, 1426-1433.	9.4	50
22	Comprehensive analysis of prime editing outcomes in human embryonic stem cells. <i>Nucleic Acids Research</i> , 2022, 50, 1187-1197.	6.5	49
23	Distinct Z-DNA binding mode of a PKR-like protein kinase containing a Z-DNA binding domain (PKZ). <i>Nucleic Acids Research</i> , 2014, 42, 5937-5948.	6.5	46
24	Cas-Database: web-based genome-wide guide RNA library design for gene knockout screens using CRISPR-Cas9. <i>Bioinformatics</i> , 2016, 32, 2017-2023.	1.8	46
25	High-purity production and precise editing of DNA base editing ribonucleoproteins. <i>Science Advances</i> , 2021, 7, .	4.7	43
26	Deletion of the chloroplast LTD protein impedes LHCI import and PSI $\alpha$ -LHCI assembly in <i>Chlamydomonas reinhardtii</i> . <i>Journal of Experimental Botany</i> , 2018, 69, 1147-1158.	2.4	37
27	Adenine base editing and prime editing of chemically derived hepatic progenitors rescue genetic liver disease. <i>Cell Stem Cell</i> , 2021, 28, 1614-1624.e5.	5.2	35
28	CRISPR-Pass: Gene Rescue of Nonsense Mutations Using Adenine Base Editors. <i>Molecular Therapy</i> , 2019, 27, 1364-1371.	3.7	34
29	CRISPR/Cas9-mediated gene knockout screens and target identification via whole-genome sequencing uncover host genes required for picornavirus infection. <i>Journal of Biological Chemistry</i> , 2017, 292, 10664-10671.	1.6	33
30	CRISPR/Cas9-targeted mutagenesis of F3 $\beta$ , DFR and LDOX, genes related to anthocyanin biosynthesis in black rice ( <i>Oryza sativa</i> L.). <i>Plant Biotechnology Reports</i> , 2019, 13, 521-531.	0.9	32
31	Digenome-seq web tool for profiling CRISPR specificity. <i>Nature Methods</i> , 2017, 14, 548-549.	9.0	31
32	Current trends in gene recovery mediated by the CRISPR-Cas system. <i>Experimental and Molecular Medicine</i> , 2020, 52, 1016-1027.	3.2	30
33	Construction of non-canonical PAM-targeting adenosine base editors by restriction enzyme-free DNA cloning using CRISPR-Cas9. <i>Scientific Reports</i> , 2019, 9, 4939.	1.6	29
34	Analysis of NHEJ-Based DNA Repair after CRISPR-Mediated DNA Cleavage. <i>International Journal of Molecular Sciences</i> , 2021, 22, 6397.	1.8	26
35	Cpf1-Database: web-based genome-wide guide RNA library design for gene knockout screens using CRISPR-Cpf1. <i>Bioinformatics</i> , 2018, 34, 1077-1079.	1.8	22
36	Response to $\alpha$ -Unexpected mutations after CRISPR-Cas9 editing in vivo. <i>Nature Methods</i> , 2018, 15, 239-240.	9.0	22

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37	Knockout of SIMS10 Gene (Solyc02g079810) Encoding bHLH Transcription Factor Using CRISPR/Cas9 System Confers Male Sterility Phenotype in Tomato. <i>Plants</i> , 2020, 9, 1189.	1.6	21
38	ID3 regulates the MDC1-mediated DNA damage response in order to maintain genome stability. <i>Nature Communications</i> , 2017, 8, 903.	5.8	20
39	CRISPR-Cas9 Screening of Kaposi's Sarcoma-Associated Herpesvirus-Transformed Cells Identifies XPO1 as a Vulnerable Target of Cancer Cells. <i>MBio</i> , 2019, 10, .	1.8	20
40	Therapeutic base editing and prime editing of COL7A1 mutations in recessive dystrophic epidermolysis bullosa. <i>Molecular Therapy</i> , 2022, 30, 2664-2679.	3.7	20
41	Acquisition of seed dormancy breaking in rice ( <i>Oryza sativa</i> L.) via CRISPR/Cas9-targeted mutagenesis of OsVP1 gene. <i>Plant Biotechnology Reports</i> , 2019, 13, 511-520.	0.9	19
42	SIRT1-mediated downregulation of p27Kip1 is essential for overcoming contact inhibition of Kaposi's sarcoma-associated herpesvirus transformed cells. <i>Oncotarget</i> , 2016, 7, 75698-75711.	0.8	18
43	Safe scarless cassette-free selection of genome-edited human pluripotent stem cells using temporary drug resistance. <i>Biomaterials</i> , 2020, 262, 120295.	5.7	17
44	CRISPR-sub: Analysis of DNA substitution mutations caused by CRISPR-Cas9 in human cells. <i>Computational and Structural Biotechnology Journal</i> , 2020, 18, 1686-1694.	1.9	17
45	Arabidopsis ATXR2 represses de novo shoot organogenesis in the transition from callus to shoot formation. <i>Cell Reports</i> , 2021, 37, 109980.	2.9	16
46	Autofocusing system based on optical astigmatism analysis of single-molecule images. <i>Optics Express</i> , 2012, 20, 29353.	1.7	15
47	Increased PKM $\eta$ activity impedes lateral movement of GluA2-containing AMPA receptors. <i>Molecular Brain</i> , 2017, 10, 56.	1.3	15
48	Mg <sup>2+</sup> -dependent conformational rearrangements of CRISPR-Cas12a R-loop complex are mandatory for complete double-stranded DNA cleavage. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	15
49	Generation and Transcriptome Profiling of Slr1-d7 and Slr1-d8 Mutant Lines with a New Semi-Dominant Dwarf Allele of SLR1 Using the CRISPR/Cas9 System in Rice. <i>International Journal of Molecular Sciences</i> , 2020, 21, 5492.	1.8	14
50	Antiatherogenic Effect of Stem Cell Nanovesicles Targeting Disturbed Flow Sites. <i>Small</i> , 2020, 16, e2000012.	5.2	14
51	AC-motif: a DNA motif containing adenine and cytosine repeat plays a role in gene regulation. <i>Nucleic Acids Research</i> , 2021, 49, 10150-10165.	6.5	14
52	Web-Based CRISPR Toolkits: Cas-OFFinder, Cas-Designer, and Cas-Analyzer. <i>Methods in Molecular Biology</i> , 2021, 2162, 23-33.	0.4	14
53	The freshwater water flea <i>Daphnia magna</i> NIES strain genome as a resource for CRISPR/Cas9 gene targeting: The glutathione S-transferase omega 2 gene. <i>Aquatic Toxicology</i> , 2022, 242, 106021.	1.9	14
54	Z-DNA stabilization is dominated by the Hofmeister effect. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 15829.	1.3	13

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55	Targeted genome editing, an alternative tool for trait improvement in horticultural crops. <i>Horticulture Environment and Biotechnology</i> , 2016, 57, 531-543.	0.7	13
56	Transcriptomic and physiological analysis of OsCAO1 knockout lines using the CRISPR/Cas9 system in rice. <i>Plant Cell Reports</i> , 2021, 40, 1013-1024.	2.8	12
57	High expression of uracil DNA glycosylase determines C to T substitution in human pluripotent stem cells. <i>Molecular Therapy - Nucleic Acids</i> , 2022, 27, 175-183.	2.3	12
58	Energetics of Z-DNA Binding Protein-Mediated Helicity Reversals in DNA, RNA, and DNA-RNA Duplexes. <i>Journal of Physical Chemistry B</i> , 2013, 117, 13866-13871.	1.2	11
59	Generation of albino via SLC45a2 gene targeting by CRISPR/Cas9 in the marine medaka <i>Oryzias latipes</i> . <i>Marine Pollution Bulletin</i> , 2020, 154, 111038.	2.3	11
60	LPA2 protein is involved in photosystem II assembly in <i>Chlamydomonas reinhardtii</i> . <i>Plant Journal</i> , 2021, 107, 1648-1662.	2.8	11
61	Multiple isogenic GNE-myopathy modeling with mutation specific phenotypes from human pluripotent stem cells by base editors. <i>Biomaterials</i> , 2022, 282, 121419.	5.7	11
62	Web-Based Base Editing Toolkits: BE-Designer and BE-Analyzer. <i>Methods in Molecular Biology</i> , 2021, 2189, 81-88.	0.4	9
63	CRISPR-Seq: A highly accurate and multiplexable method for genome-wide mapping of lentiviral integration sites. <i>Molecular Therapy - Methods and Clinical Development</i> , 2021, 20, 792-800.	1.8	9
64	In vivo gene editing via homology-independent targeted integration for adrenoleukodystrophy treatment. <i>Molecular Therapy</i> , 2022, 30, 119-129.	3.7	9
65	Quantitative assessment of engineered Cas9 variants for target specificity enhancement by single-molecule reaction pathway analysis. <i>Nucleic Acids Research</i> , 2021, 49, 11312-11322.	6.5	9
66	Sensitive Surface Enhanced Raman Scattering-Based Detection of a BIGH3 Point Mutation Associated with Avellino Corneal Dystrophy. <i>Analytical Chemistry</i> , 2016, 88, 11288-11292.	3.2	8
67	Targeted cytochrome P450 3045C1 (CYP3045C1) gene mutation via CRISPR-Cas9 ribonucleoproteins in the marine rotifer <i>Brachionus koreanus</i> . <i>Hydrobiologia</i> , 2019, 844, 117-128.	1.0	6
68	CRISPR-mediated gene correction links the ATP7A M1311V mutations with amyotrophic lateral sclerosis pathogenesis in one individual. <i>Communications Biology</i> , 2020, 3, 33.	2.0	6
69	Current widely-used web-based tools for CRISPR nucleases, base editors, and prime editors. <i>Gene and Genome Editing</i> , 2021, 1, 100004.	1.3	6
70	Machine learning finds Cas9-edited genotypes. <i>Nature Biomedical Engineering</i> , 2018, 2, 892-893.	11.6	5
71	DNA-free Genome Editing of <i>Chlamydomonas reinhardtii</i> Using CRISPR and Subsequent Mutant Analysis. <i>Bio-protocol</i> , 2017, 7, e2352.	0.2	5
72	Identification and Characterization of PSEUDO-RESPONSE REGULATOR (PRR) 1a and 1b Genes by CRISPR/Cas9-Targeted Mutagenesis in Chinese Cabbage ( <i>Brassica rapa</i> L.). <i>International Journal of Molecular Sciences</i> , 2022, 23, 6963.	1.8	5

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73	Structure-based elucidation of the regulatory mechanism for aminopeptidase activity. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2013, 69, 1738-1747.	2.5	4
74	Structural and dynamic views of the CRISPR-Cas system at the single-molecule level. <i>BMB Reports</i> , 2016, 49, 201-207.	1.1	4
75	A novel method for high-frequency genome editing in rice, using the CRISPR/Cas9 system. <i>Journal of Plant Biotechnology</i> , 2017, 44, 89-96.	0.1	4
76	i-Silence, Please! An Alternative for Gene Disruption via Adenine Base Editors. <i>Molecular Therapy</i> , 2020, 28, 348-349.	3.7	3
77	Exploring the dynamic nature of divalent metal ions involved in DNA cleavage by CRISPR-Cas12a. <i>Chemical Communications</i> , 2022, 58, 1978-1981.	2.2	3
78	Single-Molecule FRET Combined with Magnetic Tweezers at Low Force Regime. <i>Bulletin of the Korean Chemical Society</i> , 2016, 37, 408-410.	1.0	2
79	Enhancing plant immunity by expression of pathogen-targeted CRISPR-Cas9 in plants. <i>Gene and Genome Editing</i> , 2021, 1, 100001.	1.3	2
80	A thermodynamic understanding of the salt-induced B-to-Z transition of DNA containing BZ junctions. <i>Biochemical and Biophysical Research Communications</i> , 2021, 583, 142-145.	1.0	2
81	Purification of an Intact Human Protein Overexpressed from Its Endogenous Locus via Direct Genome Engineering. <i>ACS Synthetic Biology</i> , 2020, 9, 1591-1598.	1.9	1
82	Efficient Human Cell Coexpression System and Its Application to the Production of Multiple Coronavirus Antigens. <i>Advanced Biology</i> , 2021, 5, 2000154.	1.4	1
83	Development of negative muonium ion source for muon acceleration. <i>Physical Review Accelerators and Beams</i> , 2021, 24, .	0.6	1
84	In vivo genome editing in single mammalian brain neurons through CRISPR-Cas9 and cytosine base editors. <i>Computational and Structural Biotechnology Journal</i> , 2021, 19, 2477-2485.	1.9	1
85	Target-directed gene-editing approach for developing a new horticultural crop. <i>Acta Horticulturae</i> , 2016, , 289-294.	0.1	0