Caixia Gao

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.

112 papers	12,952 citations	49 h-index	113 g-index
125 ext. papers	17,321 ext. citations	15.7 avg, IF	7.27 L-index

#	Paper	IF	Citations
112	Targeted genome modification of crop plants using a CRISPR-Cas system. *Nature Biotechnology*, **2013**, 31, 686-8	44.5	1266
111	Simultaneous editing of three homoeoalleles in hexaploid bread wheat confers heritable resistance to powdery mildew. *Nature Biotechnology*, **2014**, 32, 947-51	44.5	1161
110	CRISPR/Cas Genome Editing and Precision Plant Breeding in Agriculture. *Annual Review of Plant Biology*, **2019**, 70, 667-697	30.7	554
109	Precise base editing in rice, wheat and maize with a Cas9-cytidine deaminase fusion. *Nature Biotechnology*, **2017**, 35, 438-440	44.5	508
108	Efficient DNA-free genome editing of bread wheat using CRISPR/Cas9 ribonucleoprotein complexes. *Nature Communications*, **2017**, 8, 14261	17.4	503
107	Efficient and transgene-free genome editing in wheat through transient expression of CRISPR/Cas9 DNA or RNA. *Nature Communications*, **2016**, 7, 12617	17.4	465
106	Genome editing in rice and wheat using the CRISPR/Cas system. *Nature Protocols*, **2014**, 9, 2395-410	18.8	455
105	Targeted mutagenesis in Zea mays using TALENs and the CRISPR/Cas system. *Journal of Genetics and Genomics*, **2014**, 41, 63-8	4	435
104	The OsSPL16-GW7 regulatory module determines grain shape and simultaneously improves rice yield and grain quality. *Nature Genetics*, **2015**, 47, 949-54	36.3	349
103	Cytosine, but not adenine, base editors induce genome-wide off-target mutations in rice. *Science*, **2019**, 364, 292-295	33.3	324
102	Prime genome editing in rice and wheat. *Nature Biotechnology*, **2020**, 38, 582-585	44.5	299
101	Breeding crops to feed 10 billion. *Nature Biotechnology*, **2019**, 37, 744-754	44.5	296
100	Precision genome engineering and agriculture: opportunities and regulatory challenges. *PLoS Biology*, **2014**, 12, e1001877	9.7	288
99	Expanded base editing in rice and wheat using a Cas9-adenosine deaminase fusion. *Genome Biology* , **2018**, 19, 59	18.3	264
98	Progress and prospects in plant genome editing. *Nature Plants*, **2017**, 3, 17107	11.5	264
97	Establishing a CRISPR-Cas-like immune system conferring DNA virus resistance in plants. *Nature Plants*, **2015**, 1, 15144	11.5	252
96	Domestication of wild tomato is accelerated by genome editing. *Nature Biotechnology*, **2018**,	44.5	249

95	High-efficiency gene targeting in hexaploid wheat using DNA replicons and CRISPR/Cas9. *Plant Journal*, **2017**, 89, 1251-1262	6.9	226
94	Simultaneous modification of three homoeologs of TaEDR1 by genome editing enhances powdery mildew resistance in wheat. *Plant Journal*, **2017**, 91, 714-724	6.9	223
93	Gene replacements and insertions in rice by intron targeting using CRISPR-Cas9. *Nature Plants*, **2016**, 2, 16139	11.5	221
92	Creation of fragrant rice by targeted knockout of the OsBADH2 gene using TALEN technology. *Plant Biotechnology Journal*, **2015**, 13, 791-800	11.6	204
91	Rapid and efficient gene modification in rice and Brachypodium using TALENs. *Molecular Plant*, **2013**, 6, 1365-8	14.4	200
90	Efficient C-to-T base editing in plants using a fusion of nCas9 and human APOBEC3A. *Nature Biotechnology*, **2018**,	44.5	194
89	Brachypodium as a model for the grasses: today and the future. *Plant Physiology*, **2011**, 157, 3-13	6.6	190
88	Applications and potential of genome editing in crop improvement. *Genome Biology*, **2018**, 19, 210	18.3	188
87	Applications of CRISPR-Cas in agriculture and plant biotechnology. *Nature Reviews Molecular Cell Biology*, **2020**, 21, 661-677	48.7	176
86	Horizontal gene transfer of from fungus underlies head blight resistance in wheat. *Science*, **2020**, 368,	33.3	158
85	The future of CRISPR technologies in agriculture. *Nature Reviews Molecular Cell Biology*, **2018**, 19, 275-276	48.7	135
84	Targeted, random mutagenesis of plant genes with dual cytosine and adenine base editors. *Nature Biotechnology*, **2020**, 38, 875-882	44.5	133
83	Genome editing of upstream open reading frames enables translational control in plants. *Nature Biotechnology*, **2018**, 36, 894-898	44.5	128
82	Construction of a Genome-Wide Mutant Library in Rice Using CRISPR/Cas9. *Molecular Plant*, **2017**, 10, 1238-1241	14.4	127
81	Analysis of the functions of TaGW2 homoeologs in wheat grain weight and protein content traits. *Plant Journal*, **2018**, 94, 857-866	6.9	123
80	Generation of herbicide tolerance traits and a new selectable marker in wheat using base editing. *Nature Plants*, **2019**, 5, 480-485	11.5	116
79	Genome editing of bread wheat using biolistic delivery of CRISPR/Cas9 in vitro transcripts or ribonucleoproteins. *Nature Protocols*, **2018**, 13, 413-430	18.8	116
78	Targeted genome modification technologies and their applications in crop improvements. *Plant Cell Reports*, **2014**, 33, 575-83	5.1	114

77	Genome engineering for crop improvement and future agriculture. *Cell*, **2021**, 184, 1621-1635	56.2	96
76	Hi-TOM: a platform for high-throughput tracking of mutations induced by CRISPR/Cas systems. *Science China Life Sciences*, **2019**, 62, 1-7	8.5	95
75	Current and future editing reagent delivery systems for plant genome editing. *Science China Life Sciences*, **2017**, 60, 490-505	8.5	87
74	A route to de novo domestication of wild allotetraploid rice. *Cell*, **2021**, 184, 1156-1170.e14	56.2	81
73	A CRISPR way for accelerating improvement of food crops. *Nature Food*, **2020**, 1, 200-205	14.4	79
72	Perfectly matched 20-nucleotide guide RNA sequences enable robust genome editing using high-fidelity SpCas9 nucleases. *Genome Biology*, **2017**, 18, 191	18.3	79
71	A Vnew lease of life∀FnCpf1 possesses DNA cleavage activity for genome editing in human cells. *Nucleic Acids Research*, **2017**, 45, 11295-11304	20.1	76
70	TALENs: customizable molecular DNA scissors for genome engineering of plants. *Journal of Genetics and Genomics*, **2013**, 40, 271-9	4	75
69	Targeted mutagenesis in wheat microspores using CRISPR/Cas9. *Scientific Reports*, **2018**, 8, 6502	4.9	72
68	Generation of thermosensitive male-sterile maize by targeted knockout of the ZmTMS5 gene. *Journal of Genetics and Genomics*, **2017**, 44, 465-468	4	67
67	O-GlcNAc-mediated interaction between VER2 and TaGRP2 elicits TaVRN1 mRNA accumulation during vernalization in winter wheat. *Nature Communications*, **2014**, 5, 4572	17.4	67
66	High-efficiency prime editing with optimized, paired pegRNAs in plants. *Nature Biotechnology*, **2021** , 39, 923-927	44.5	61
65	Prime editing efficiently generates W542L and S621I double mutations in two ALS genes in maize. *Genome Biology*, **2020**, 21, 257	18.3	59
64	Transcriptome Association Identifies Regulators of Wheat Spike Architecture. *Plant Physiology*, **2017**, 175, 746-757	6.6	56
63	Fine-tuning the amylose content of rice by precise base editing of the Wx gene. *Plant Biotechnology Journal*, **2021**, 19, 11-13	11.6	47
62	Rationally Designed APOBEC3B Cytosine Base Editors with Improved Specificity. *Molecular Cell*, **2020**, 79, 728-740.e6	17.6	45
61	Genotyping genome-edited mutations in plants using CRISPR ribonucleoprotein complexes. *Plant Biotechnology Journal*, **2018**, 16, 2053-2062	11.6	44
60	From Genetic Stock to Genome Editing: Gene Exploitation in Wheat. *Trends in Biotechnology*, **2018**, 36, 160-172	15.1	40

59	Conferring DNA virus resistance with high specificity in plants using virus-inducible genome-editing system. *Genome Biology*, **2018**, 19, 197	18.3	38
58	Manipulating mRNA splicing by base editing in plants. *Science China Life Sciences*, **2018**, 61, 1293-1300	8.5	37
57	Robust genome editing of CRISPR-Cas9 at NAG PAMs in rice. *Science China Life Sciences*, **2018**, 61, 122-125	8.5	36
56	KTN80 confers precision to microtubule severing by specific targeting of katanin complexes in plant cells. *EMBO Journal*, **2017**, 36, 3435-3447	13	35
55	Comparative analysis of transgenic tall fescue (Festuca arundinacea Schreb.) plants obtained by Agrobacterium-mediated transformation and particle bombardment. *Plant Cell Reports*, **2008**, 27, 1601-9	5.1	32
54	Genome-wide specificity of prime editors in plants. *Nature Biotechnology*, **2021**, 39, 1292-1299	44.5	32
53	MicroRNA393 is involved in nitrogen-promoted rice tillering through regulation of auxin signal transduction in axillary buds. *Scientific Reports*, **2016**, 6, 32158	4.9	29
52	An Uncanonical CCCH-Tandem Zinc-Finger Protein Represses Secondary Wall Synthesis and Controls Mechanical Strength in Rice. *Molecular Plant*, **2018**, 11, 163-174	14.4	27
51	A chromatin loop represses WUSCHEL expression in Arabidopsis. *Plant Journal*, **2018**, 94, 1083-1097	6.9	26
50	Modulating chromatin accessibility by transactivation and targeting proximal dsgRNAs enhances Cas9 editing efficiency in vivo. *Genome Biology*, **2019**, 20, 145	18.3	26
49	Fine-tuning sugar content in strawberry. *Genome Biology*, **2020**, 21, 230	18.3	26
48	Roadmap for Accelerated Domestication of an Emerging Perennial Grain Crop. *Trends in Plant Science*, **2020**, 25, 525-537	13.1	25
47	Generation of large numbers of transgenic Kentucky bluegrass (Poa pratensis L.) plants following biolistic gene transfer. *Plant Cell Reports*, **2006**, 25, 19-25	5.1	25
46	Manipulating gene translation in plants by CRISPR-Cas9-mediated genome editing of upstream open reading frames. *Nature Protocols*, **2020**, 15, 338-363	18.8	23
45	Precise, predictable multi-nucleotide deletions in rice and wheat using APOBEC-Cas9. *Nature Biotechnology*, **2020**, 38, 1460-1465	44.5	21
44	High-fidelity SaCas9 identified by directional screening in human cells. *PLoS Biology*, **2020**, 18, e3000747	9.7	21
43	Biolistic genetic transformation of a wide range of Chinese elite wheat (Triticum aestivum L.) varieties. *Journal of Genetics and Genomics*, **2015**, 42, 39-42	4	20
42	An efficient TALEN mutagenesis system in rice. *Methods*, **2014**, 69, 2-8	4.6	20

41	Prospects for the accelerated improvement of the resilient crop quinoa. *Journal of Experimental Botany*, **2020**, 71, 5333-5347	7	19
40	Genome editing in crops: from bench to field. *National Science Review*, **2015**, 2, 13-15	10.8	18
39	Generating broad-spectrum tolerance to ALS-inhibiting herbicides in rice by base editing. *Science China Life Sciences*, **2021**, 64, 1624-1633	8.5	18
38	SWISS: multiplexed orthogonal genome editing in plants with a Cas9 nickase and engineered CRISPR RNA scaffolds. *Genome Biology*, **2020**, 21, 141	18.3	18
37	The CRISPR-Cas toolbox and gene editing technologies.. *Molecular Cell*, **2021**,	17.6	15
36	Boosting activity of high-fidelity CRISPR/Cas9 variants using a tRNA-processing system in human cells. *Journal of Biological Chemistry*, **2019**, 294, 9308-9315	5.4	14
35	Genome-edited powdery mildew resistance in wheat without growth penalties.. *Nature*, **2022**,	50.4	14
34	Highly efficient heritable genome editing in wheat using an RNA virus and bypassing tissue culture. *Molecular Plant*, **2021**, 14, 1787-1798	14.4	14
33	Targeted mutagenesis in ryegrass (Lolium spp.) using the CRISPR/Cas9 system. *Plant Biotechnology Journal*, **2020**, 18, 1854-1856	11.6	12
32	Comparison between Agrobacterium-mediated and direct gene transfer using the gene gun. *Methods in Molecular Biology*, **2013**, 940, 3-16	1.4	12
31	Biolistic Delivery of CRISPR/Cas9 with Ribonucleoprotein Complex in Wheat. *Methods in Molecular Biology*, **2019**, 1917, 327-335	1.4	11
30	CRISPR editing-mediated antiviral immunity: a versatile source of resistance to combat plant virus infections. *Science China Life Sciences*, **2019**, 62, 1246-1249	8.5	9
29	Shortening the sgRNA-DNA interface enables SpCas9 and eSpCas9(1.1) to nick the target DNA strand. *Science China Life Sciences*, **2020**, 63, 1619-1630	8.5	8
28	Genome-edited crops: how to move them from laboratory to market. *Frontiers of Agricultural Science and Engineering*, **2020**, 7, 181	1.7	8
27	The vernalization-induced long non-coding RNA VAS functions with the transcription factor TaRF2b to promote TaVRN1 expression for flowering in hexaploid wheat. *Molecular Plant*, **2021**, 14, 1525-1538	14.4	8
26	Wheat AGAMOUS LIKE 6 transcription factors function in stamen development by regulating the expression of. *Development (Cambridge)*, **2019**, 146,	6.6	7
25	Precision plant breeding using genome editing technologies. *Transgenic Research*, **2019**, 28, 53-55	3.3	7
24	Agrobacterium-mediated transformation of meadow fescue (Festuca pratensis Huds.). *Plant Cell Reports*, **2009**, 28, 1431-7	5.1	7

23	An Efficient Targeted Mutagenesis System Using CRISPR/Cas in Monocotyledons. *Current Protocols in Plant Biology*, **2016**, 1, 329-344	2.8	7
22	Development and characterization of marker-free and transgene insertion site-defined transgenic wheat with improved grain storability and fatty acid content. *Plant Biotechnology Journal*, **2020**, 18, 129-140	11.6	7
21	Generation of Stable Transgenic Rice (Oryza sativa L.) by Agrobacterium-Mediated Transformation. *Current Protocols in Plant Biology*, **2016**, 1, 235-246	2.8	6
20	Recent advances in DNA-free editing and precise base editing in plants. *Emerging Topics in Life Sciences*, **2017**, 1, 161-168	3.5	5
19	An unbiased method for evaluating the genome-wide specificity of base editors in rice. *Nature Protocols*, **2021**, 16, 431-457	18.8	5
18	Targeted Mutagenesis in Hexaploid Bread Wheat Using the TALEN and CRISPR/Cas Systems. *Methods in Molecular Biology*, **2017**, 1679, 169-185	1.4	4
17	Comparison of three selectable marker genes for transformation of tall fescue (Festuca arundinacea Schreb.) plants by particle bombardment. *In Vitro Cellular and Developmental Biology - Plant*, **2011**, 47, 658-666	2.3	4
16	Transcriptional Repression of TaNOX10 by TaWRKY19 Compromises ROS Generation and Enhances Wheat Susceptibility to Stripe Rust.. *Plant Cell*, **2022**,	11.6	4
15	Genome editing in plants with MAD7 nuclease. *Journal of Genetics and Genomics*, **2021**, 48, 444-451	4	4
14	Transient expression of a TaGRF4-TaGIF1 complex stimulates wheat regeneration and improves genome editing. *Science China Life Sciences*, **2021**, 1	8.5	4
13	An engineered prime editor with enhanced editing efficiency in plants.. *Nature Biotechnology*, **2022**,	44.5	4
12	Identification and characterization of Sr22b, a new allele of the wheat stem rust resistance gene Sr22 effective against the Ug99 race group. *Plant Biotechnology Journal*, **2021**,	11.6	3
11	Prime editing efficiently generates W542L and S621I double mutations in two ALS genes in maize		3
10	The wheat cytosolic glutamine synthetaseGS1.1modulates N assimilation and spike development by characterizing CRISPR-edited mutants		3
9	Gene Replacement by Intron Targeting with CRISPR-Cas9. *Methods in Molecular Biology*, **2019**, 1917, 285-296	1.4	3
8	Preface to the special topic on genome editing research in China. *National Science Review*, **2019**, 6, 389-390	16.8	2
7	Developing CRISPR Technology in Major Crop Plants **2015**, 145-159		2
6	The MYB family transcription factor TuODORANT1 from Triticum urartu and the homolog TaODORANT1 from Triticum aestivum inhibit seed storage protein synthesis in wheat. *Plant Biotechnology Journal*, **2021**, 19, 1863-1877	11.6	2

5	Genetic manipulations of TaARE1 boost nitrogen utilization and grain yield in wheat. *Journal of Genetics and Genomics*, **2021**, 48, 950-953	4	2
4	Genome-wide identification of seed storage protein gene regulators in wheat through coexpression analysis. *Plant Journal*, **2021**,	6.9	1
3	Hi-TOM: a platform for high-throughput tracking of mutations induced by CRISPR/Cas systems		1
2	The florigen interactor BdES43 represses flowering in the model temperate grass Brachypodium distachyon. *Plant Journal*, **2020**, 102, 262-275	6.9	1
1	Protoplast Isolation and Transfection in Wheat.. *Methods in Molecular Biology*, **2022**, 2464, 131-141	1.4	0