Caixia Gao

List of Publications by Year
in descending order

115 papers	21,215 citations	20817 60 h-index	18647 119 g-index
125 all docs	125 docs citations	125 times ranked	12223 citing authors

#	Article	IF	Citations
1	Targeted genome modification of crop plants using a CRISPR-Cas system. Nature Biotechnology, 2013, 31, 686-688.	17.5	1,657
2	Simultaneous editing of three homoeoalleles in hexaploid bread wheat confers heritable resistance to powdery mildew. Nature Biotechnology, 2014, 32, 947-951.	17.5	1,635
3	CRISPR/Cas Genome Editing and Precision Plant Breeding in Agriculture. Annual Review of Plant Biology, 2019, 70, 667-697.	18.7	959
4	Efficient DNA-free genome editing of bread wheat using CRISPR/Cas9 ribonucleoprotein complexes. Nature Communications, 2017, 8, 14261.	12.8	751
5	Efficient and transgene-free genome editing in wheat through transient expression of CRISPR/Cas9 DNA or RNA. Nature Communications, 2016, 7, 12617.	12.8	710
6	Precise base editing in rice, wheat and maize with a Cas9-cytidine deaminase fusion. Nature Biotechnology, 2017, 35, 438-440.	17.5	690
7	Genome editing in rice and wheat using the CRISPR/Cas system. Nature Protocols, 2014, 9, 2395-2410.	12.0	627
8	Breeding crops to feed 10 billion. Nature Biotechnology, 2019, 37, 744-754.	17.5	577
9	Targeted Mutagenesis in Zea mays Using TALENs and the CRISPR/Cas System. Journal of Genetics and Genomics, 2014, 41, 63-68.	3.9	567
10	The OsSPL16-GW7 regulatory module determines grain shape and simultaneously improves rice yield and grain quality. Nature Genetics, 2015, 47, 949-954.	21.4	555
11	Prime genome editing in rice and wheat. Nature Biotechnology, 2020, 38, 582-585.	17.5	544
12	Cytosine, but not adenine, base editors induce genome-wide off-target mutations in rice. Science, 2019, 364, 292-295.	12.6	491
13	Domestication of wild tomato is accelerated by genome editing. Nature Biotechnology, 2018, 36, 1160-1163.	17.5	440
14	Applications of CRISPRâ€“Cas in agriculture and plant biotechnology. Nature Reviews Molecular Cell Biology, 2020, 21, 661-677.	37.0	433
15	Genome engineering for crop improvement and future agriculture. Cell, 2021, 184, 1621-1635.	28.9	405
16	Simultaneous modification of three homoeologs of <i>Ta<scp>EDR</scp>1</i> by genome editing enhances powdery mildew resistance in wheat. Plant Journal, 2017, 91, 714-724.	5.7	403
17	Horizontal gene transfer of <i>Fhb7</i> from fungus underlies <i>Fusarium</i> head blight resistance in wheat. Science, 2020, 368, .	12.6	398
18	Expanded base editing in rice and wheat using a Cas9-adenosine deaminase fusion. Genome Biology, 2018, 19, 59.	8.8	392

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19	Precision Genome Engineering and Agriculture: Opportunities and Regulatory Challenges. PLoS Biology, 2014, 12, e1001877.	5.6	367
20	Progress and prospects in plant genome editing. Nature Plants, 2017, 3, 17107.	9.3	349
21	Establishing a CRISPRâ€"Cas-like immune system conferring DNA virus resistance in plants. Nature Plants, 2015, 1, 15144.	9.3	337
22	Efficient C-to-T base editing in plants using a fusion of nCas9 and human APOBEC3A. Nature Biotechnology, 2018, 36, 950-953.	17.5	310
23	Highâ€efficiency gene targeting in hexaploid wheat using <scp>DNA</scp> replicons and <scp>CRISPR</scp>/Cas9. Plant Journal, 2017, 89, 1251-1262.	5.7	305
24	Gene replacements and insertions in rice by intron targeting using CRISPRâ€"Cas9. Nature Plants, 2016, 2, 16139.	9.3	303
25	Applications and potential of genome editing in crop improvement. Genome Biology, 2018, 19, 210.	8.8	286
26	Creation of fragrant rice by targeted knockout of the <i>Os<scp>BADH</scp>2</i> gene using <scp>TALEN</scp> technology. Plant Biotechnology Journal, 2015, 13, 791-800.	8.3	276
27	Targeted, random mutagenesis of plant genes with dual cytosine and adenine base editors. Nature Biotechnology, 2020, 38, 875-882.	17.5	259
28	A route to de novo domestication of wild allotetraploid rice. Cell, 2021, 184, 1156-1170.e14.	28.9	259
29	Rapid and Efficient Gene Modification in Rice and Brachypodium Using TALENs. Molecular Plant, 2013, 6, 1365-1368.	8.3	245
30	Genome editing of upstream open reading frames enables translational control in plants. Nature Biotechnology, 2018, 36, 894-898.	17.5	244
31	Hi-TOM: a platform for high-throughput tracking of mutations induced by CRISPR/Cas systems. Science China Life Sciences, 2019, 62, 1-7.	4.9	244
32	Brachypodium as a Model for the Grasses: Today and the Future Â. Plant Physiology, 2011, 157, 3-13.	4.8	243
33	Analysis of the functions of <i>Ta<scp>GW</scp>2</i> homoeologs in wheat grain weight and protein content traits. Plant Journal, 2018, 94, 857-866.	5.7	211
34	Generation of herbicide tolerance traits and a new selectable marker in wheat using base editing. Nature Plants, 2019, 5, 480-485.	9.3	210
35	Construction of a Genome-Wide Mutant Library inÂRice Using CRISPR/Cas9. Molecular Plant, 2017, 10, 1238-1241.	8.3	208
36	The future of CRISPR technologies in agriculture. Nature Reviews Molecular Cell Biology, 2018, 19, 275-276.	37.0	199

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37	High-efficiency prime editing with optimized, paired pegRNAs in plants. Nature Biotechnology, 2021, 39, 923-927.	17.5	189
38	Genome-edited powdery mildew resistance in wheat without growth penalties. Nature, 2022, 602, 455-460.	27.8	181
39	Genome editing of bread wheat using biolistic delivery of CRISPR/Cas9 in vitro transcripts or ribonucleoproteins. Nature Protocols, 2018, 13, 413-430.	12.0	179
40	Targeted genome modification technologies and their applications in crop improvements. Plant Cell Reports, 2014, 33, 575-583.	5.6	158
41	Prime editing efficiently generates W542L and S621I double mutations in two ALS genes in maize. Genome Biology, 2020, 21, 257.	8.8	153
42	The CRISPR-Cas toolbox and gene editing technologies. Molecular Cell, 2022, 82, 333-347.	9.7	151
43	A CRISPR way for accelerating improvement of food crops. Nature Food, 2020, 1, 200-205.	14.0	125
44	Current and future editing reagent delivery systems for plant genome editing. Science China Life Sciences, 2017, 60, 490-505.	4.9	124
45	Generation of thermosensitive male-sterile maize by targeted knockout of the ZmTMS5 gene. Journal of Genetics and Genomics, 2017, 44, 465-468.	3.9	122
46	Perfectly matched 20-nucleotide guide RNA sequences enable robust genome editing using high-fidelity SpCas9 nucleases. Genome Biology, 2017, 18, 191.	8.8	111
47	O-GlcNAc-mediated interaction between VER2 and TaGRP2 elicits TaVRN1 mRNA accumulation during vernalization in winter wheat. Nature Communications, 2014, 5, 4572.	12.8	108
48	A â€˜new lease of lifeâ€™: FnCpf1 possesses DNA cleavage activity for genome editing in human cells. Nucleic Acids Research, 2017, 45, 11295-11304.	14.5	108
49	Rationally Designed APOBEC3B Cytosine Base Editors with Improved Specificity. Molecular Cell, 2020, 79, 728-740.e6.	9.7	104
50	Targeted mutagenesis in wheat microspores using CRISPR/Cas9. Scientific Reports, 2018, 8, 6502.	3.3	98
51	Fine-tuning sugar content in strawberry. Genome Biology, 2020, 21, 230.	8.8	97
52	TALENs: Customizable Molecular DNA Scissors for Genome Engineering of Plants. Journal of Genetics and Genomics, 2013, 40, 271-279.	3.9	95
53	Fineâ€tuning the amylose content of rice by precise base editing of the <i>Wx</i> gene. Plant Biotechnology Journal, 2021, 19, 11-13.	8.3	95
54	Transcriptome Association Identifies Regulators of Wheat Spike Architecture. Plant Physiology, 2017, 175, 746-757.	4.8	94

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55	An engineered prime editor with enhanced editing efficiency in plants. Nature Biotechnology, 2022, 40, 1394-1402.	17.5	89
56	Highly efficient heritable genome editing in wheat using an RNA virus and bypassing tissue culture. Molecular Plant, 2021, 14, 1787-1798.	8.3	85
57	Genome-wide specificity of prime editors in plants. Nature Biotechnology, 2021, 39, 1292-1299.	17.5	80
58	Modulating chromatin accessibility by transactivation and targeting proximal dsgRNAs enhances Cas9 editing efficiency in vivo. Genome Biology, 2019, 20, 145.	8.8	75
59	KTN80 confers precision to microtubule severing by specific targeting of katanin complexes in plant cells. EMBO Journal, 2017, 36, 3435-3447.	7.8	66
60	Roadmap for Accelerated Domestication of an Emerging Perennial Grain Crop. Trends in Plant Science, 2020, 25, 525-537.	8.8	65
61	From Genetic Stock to Genome Editing: Gene Exploitation in Wheat. Trends in Biotechnology, 2018, 36, 160-172.	9.3	63
62	Genotyping genomeâ€edited mutations in plants using <scp>CRISPR</scp> ribonucleoprotein complexes. Plant Biotechnology Journal, 2018, 16, 2053-2062.	8.3	62
63	Conferring DNA virus resistance with high specificity in plants using virus-inducible genome-editing system. Genome Biology, 2018, 19, 197.	8.8	59
64	A chromatin loop represses <i><scp>WUSCHEL</scp></i> expression in Arabidopsis. Plant Journal, 2018, 94, 1083-1097.	5.7	53
65	An Uncanonical CCCH-Tandem Zinc-Finger Protein Represses Secondary Wall Synthesis and Controls Mechanical Strength in Rice. Molecular Plant, 2018, 11, 163-174.	8.3	51
66	Manipulating mRNA splicing by base editing in plants. Science China Life Sciences, 2018, 61, 1293-1300.	4.9	50
67	Generating broad-spectrum tolerance to ALS-inhibiting herbicides in rice by base editing. Science China Life Sciences, 2021, 64, 1624-1633.	4.9	49
68	Precise, predictable multi-nucleotide deletions in rice and wheat using APOBECâ€“Cas9. Nature Biotechnology, 2020, 38, 1460-1465.	17.5	49
69	Prospects for the accelerated improvement of the resilient crop quinoa. Journal of Experimental Botany, 2020, 71, 5333-5347.	4.8	49
70	Robust genome editing of CRISPR-Cas9 at NAG PAMs in rice. Science China Life Sciences, 2018, 61, 122-125.	4.9	48
71	Manipulating gene translation in plants by CRISPRâ€“Cas9-mediated genome editing of upstream open reading frames. Nature Protocols, 2020, 15, 338-363.	12.0	48
72	MicroRNA393 is involved in nitrogen-promoted rice tillering through regulation of auxin signal transduction in axillary buds. Scientific Reports, 2016, 6, 32158.	3.3	44

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73	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.	8.3	42
74	Comparative analysis of transgenic tall fescue (Festuca arundinacea Schreb.) plants obtained by Agrobacterium-mediated transformation and particle bombardment. Plant Cell Reports, 2008, 27, 1601-1609.	5.6	41
75	SWISS: multiplexed orthogonal genome editing in plants with a Cas9 nickase and engineered CRISPR RNA scaffolds. Genome Biology, 2020, 21, 141.	8.8	38
76	High-fidelity SaCas9 identified by directional screening in human cells. PLoS Biology, 2020, 18, e3000747.	5.6	38
77	Transcriptional repression of <i>TaNOX10</i> by TaWRKY19 compromises ROS generation and enhances wheat susceptibility to stripe rust. Plant Cell, 2022, 34, 1784-1803.	6.6	37
78	Transient expression of a TaGRF4-TaGIF1 complex stimulates wheat regeneration and improves genome editing. Science China Life Sciences, 2022, 65, 731-738.	4.9	32
79	Genome editing in crops: from bench to field. National Science Review, 2015, 2, 13-15.	9.5	31
80	Generation of large numbers of transgenic Kentucky bluegrass (Poa pratensis L.) plants following biolistic gene transfer. Plant Cell Reports, 2006, 25, 19-25.	5.6	25
81	Targeted mutagenesis in ryegrass (<i>Lolium</i> spp.) using the CRISPR/Cas9 system. Plant Biotechnology Journal, 2020, 18, 1854-1856.	8.3	25
82	Genome editing in plants with MAD7 nuclease. Journal of Genetics and Genomics, 2021, 48, 444-451.	3.9	25
83	Comparison Between Agrobacterium-Mediated and Direct Gene Transfer Using the Gene Gun. Methods in Molecular Biology, 2013, 940, 3-16.	0.9	24
84	An efficient TALEN mutagenesis system in rice. Methods, 2014, 69, 2-8.	3.8	23
85	Biolistic Genetic Transformation of a Wide Range of Chinese Elite Wheat (Triticum aestivum L.) Varieties. Journal of Genetics and Genomics, 2015, 42, 39-42.	3.9	23
86	Boosting activity of high-fidelity CRISPR/Cas9 variants using a tRNAGln-processing system in human cells. Journal of Biological Chemistry, 2019, 294, 9308-9315.	3.4	23
87	Biolistic Delivery of CRISPR/Cas9 with Ribonucleoprotein Complex in Wheat. Methods in Molecular Biology, 2019, 1917, 327-335.	0.9	23
88	Identification and characterization of <i>Sr22b</i>, a new allele of the wheat stem rust resistance gene <i>Sr22</i> effective against the Ug99 race group. Plant Biotechnology Journal, 2022, 20, 554-563.	8.3	17
89	Genetic manipulations of TaARE1 boost nitrogen utilization and grain yield in wheat. Journal of Genetics and Genomics, 2021, 48, 950-953.	3.9	16
90	Accelerated Domestication of New Crops: Yield is Key. Plant and Cell Physiology, 2022, 63, 1624-1640.	3.1	16

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91	Development and characterization of markerâ€free and transgene insertion siteâ€defined transgenic wheat with improved grain storability and fatty acid content. Plant Biotechnology Journal, 2020, 18, 129-140.	8.3	15
92	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.	8.3	15
93	Wheat AGAMOUS LIKE 6 transcription factors function in stamen development by regulating the expression of Ta APETALA3. Development (Cambridge), 2019, 146, .	2.5	14
94	Genome-edited crops: how to move them from laboratory to market. Frontiers of Agricultural Science and Engineering, 2020, 7, 181.	1.4	14
95	CRISPR editing-mediated antiviral immunity: a versatile source of resistance to combat plant virus infections. Science China Life Sciences, 2019, 62, 1246-1249.	4.9	13
96	Precision plant breeding using genome editing technologies. Transgenic Research, 2019, 28, 53-55.	2.4	12
97	Generation of Stable Transgenic Rice (<i>Oryza sativa L</i>.) by <i>Agrobacterium</i>â€Mediated Transformation. Current Protocols in Plant Biology, 2016, 1, 235-246.	2.8	11
98	An unbiased method for evaluating the genome-wide specificity of base editors in rice. Nature Protocols, 2021, 16, 431-457.	12.0	11
99	Agrobacterium-mediated transformation of meadow fescue (Festuca pratensis Huds.). Plant Cell Reports, 2009, 28, 1431-1437.	5.6	10
100	The CRISPR/Cas9 Genome Editing Revolution. Journal of Genetics and Genomics, 2016, 43, 227-228.	3.9	10
101	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.	4.9	10
102	An Efficient Targeted Mutagenesis System Using CRISPR/Cas in Monocotyledons. Current Protocols in Plant Biology, 2016, 1, 329-344.	2.8	9
103	Genomeâ€wide identification of seed storage protein gene regulators in wheat through coexpression analysis. Plant Journal, 2021, 108, 1704-1720.	5.7	9
104	Recent advances in DNA-free editing and precise base editing in plants. Emerging Topics in Life Sciences, 2017, 1, 161-168.	2.6	8
105	Targeted Mutagenesis in Hexaploid Bread Wheat Using the TALEN and CRISPR/Cas Systems. Methods in Molecular Biology, 2017, 1679, 169-185.	0.9	7
106	Comparison of three selectable marker genes for transformation of tall fescue (Festuca arundinacea) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 658-666.	2.1	5
107	Developing CRISPR Technology in Major Crop Plants. , 2015, , 145-159.		5
108	Anything impossible with CRISPR/Cas9?. Science China Life Sciences, 2017, 60, 445-446.	4.9	5

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109	The florigen interactor BdES43 represses flowering in the model temperate grass <i>Brachypodium distachyon</i>. Plant Journal, 2020, 102, 262-275.	5.7	5
110	Gene Replacement by Intron Targeting with CRISPR-Cas9. Methods in Molecular Biology, 2019, 1917, 285-296.	0.9	4
111	Plant genome engineering from lab to fieldâ€"a Keystone Symposia report. Annals of the New York Academy of Sciences, 2021, 1506, 35-54.	3.8	4
112	Protoplast Isolation and Transfection in Wheat. Methods in Molecular Biology, 2022, 2464, 131-141.	0.9	3
113	Gene editing: from technologies to applications in research and beyond. Science China Life Sciences, 2022, 65, 657-659.	4.9	3
114	Preface to the special topic on genome editing research in China. National Science Review, 2019, 6, 389-390.	9.5	2
115	CRISPR Adventures in China. CRISPR Journal, 2021, 4, 304-306.	2.9	0