Carlos Guzman

List of Publications by Year in descending order

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96 papers	3,108 citations	172207 29 h-index	189595 50 g-index
99 all docs	99 docs citations	99 times ranked	2713 citing authors

#	Article	IF	Citations
1	Improving grain yield, stress resilience and quality of bread wheat using large-scale genomics. Nature Genetics, 2019, 51, 1530-1539.	9.4	216
2	Genomic Selection for Processing and Endâ€Use Quality Traits in the CIMMYT Spring Bread Wheat Breeding Program. Plant Genome, 2016, 9, plantgenome2016.01.0005.	1.6	161
3	Genomic Prediction of Gene Bank Wheat Landraces. G3: Genes, Genomes, Genetics, 2016, 6, 1819-1834.	0.8	159
4	Harnessing Diversity in Wheat to Enhance Grain Yield, Climate Resilience, Disease and Insect Pest Resistance and Nutrition Through Conventional and Modern Breeding Approaches. Frontiers in Plant Science, 2016, 7, 991.	1.7	143
5	Diversity analysis of 80,000 wheat accessions reveals consequences and opportunities of selection footprints. Nature Communications, 2020, 11, 4572.	5.8	129
6	Response to drought and heat stress on wheat quality, with special emphasis on bread-making quality, in durum wheat. Field Crops Research, 2016, 186, 157-165.	2.3	108
7	Variability in iron, zinc and phytic acid content in a worldwide collection of commercial durum wheat cultivars and the effect of reduced irrigation on these traits. Food Chemistry, 2017, 237, 499-505.	4.2	100
8	Wheat waxy proteins: polymorphism, molecular characterization and effects on starch properties. Theoretical and Applied Genetics, 2016, 129, 1-16.	1.8	87
9	Wheat quality improvement at CIMMYT and the use of genomic selection on it. Applied & Translational Genomics, 2016, 11, 3-8.	2.1	79
10	Assessing Genetic Diversity to Breed Competitive Biofortified Wheat With Enhanced Grain Zn and Fe Concentrations. Frontiers in Plant Science, 2018, 9, 1971.	1.7	79
11	Unlocking the genetic diversity of Creole wheats. Scientific Reports, 2016, 6, 23092.	1.6	75
12	Use of wheat genetic resources to develop biofortified wheat with enhanced grain zinc and iron concentrations and desirable processing quality. Journal of Cereal Science, 2014, 60, 617-622.	1.8	73
13	Grain quality traits of commercial durum wheat varieties and their relationships with drought stress and glutenins composition. Journal of Cereal Science, 2017, 75, 1-9.	1.8	62
14	Milling, processing and end-use quality traits of CIMMYT spring bread wheat germplasm under drought and heat stress. Field Crops Research, 2018, 215, 104-112.	2.3	62
15	Genetic impact of Rht dwarfing genes on grain micronutrients concentration in wheat. Field Crops Research, 2017, 214, 373-377.	2.3	61
16	Deep Kernel for Genomic and Near Infrared Predictions in Multi-environment Breeding Trials. G3: Genes, Genomes, Genetics, 2019, 9, 2913-2924.	0.8	61
17	A new standard water absorption criteria based on solvent retention capacity (SRC) to determine dough mixing properties, viscoelasticity, and bread-making quality. Journal of Cereal Science, 2015, 66, 59-65.	1.8	60
18	Effect of drought and elevated temperature on grain zinc and iron concentrations in CIMMYT spring wheat. Journal of Cereal Science, 2016, 69, 182-186.	1.8	54

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19	Genotype x environment interaction and genetic gain for grain yield and grain quality traits in Turkish spring wheat released between 1964 and 2010. PLoS ONE, 2019, 14, e0219432.	1.1	54
20	Validation of Candidate Gene-Based Markers and Identification of Novel Loci for Thousand-Grain Weight in Spring Bread Wheat. Frontiers in Plant Science, 2019, 10, 1189.	1.7	54
21	Breeding-assisted genomics: Applying meta-GWAS for milling and baking quality in CIMMYT wheat breeding program. PLoS ONE, 2018, 13, e0204757.	1.1	50
22	Genetic improvement of grain quality traits for CIMMYT semi-dwarf spring bread wheat varieties developed during 1965â€“2015: 50 years of breeding. Field Crops Research, 2017, 210, 192-196.	2.3	48
23	CIMMYT Series on Carbohydrates, Wheat, Grains, and Health: Wheat-Based Foods: Their Global and Regional Importance in the Food Supply, Nutrition, and Health[,]. Cereal Foods World, 2017, 62, 231-249.	0.7	48
24	Perspective: Whole and Refined Grains and Healthâ€”Evidence Supporting â€œMake Half Your Grains Wholeâ€• Advances in Nutrition, 2020, 11, 492-506.	2.9	43
25	Interspecific and intergeneric hybridization as a source of variation for wheat grain quality improvement. Theoretical and Applied Genetics, 2018, 131, 225-251.	1.8	40
26	Strategies for Selecting Crosses Using Genomic Prediction in Two Wheat Breeding Programs. Plant Genome, 2017, 10, plantgenome2016.12.0128.	1.6	37
27	Waxy genes from spelt wheat: new alleles for modern wheat breeding and new phylogenetic inferences about the origin of this species. Annals of Botany, 2012, 110, 1161-1171.	1.4	36
28	Use of rapid tests to predict quality traits of CIMMYT bread wheat genotypes grown under different environments. LWT - Food Science and Technology, 2016, 69, 327-333.	2.5	36
29	Almond by-products: Extraction and characterization of phenolic compounds and evaluation of their potential use in composite dough with wheat flour. LWT - Food Science and Technology, 2018, 89, 299-306.	2.5	35
30	Drought and Heat Stress Impacts on Phenolic Acids Accumulation in Durum Wheat Cultivars. Foods, 2021, 10, 2142.	1.9	34
31	Nitrogen fertilizer placement and timing affects bread wheat (Triticum aestivum) quality and yield in an irrigated bed planting system. Nutrient Cycling in Agroecosystems, 2016, 106, 185-199.	1.1	28
32	Identification of CIMMYT spring bread wheat germplasm maintaining superior grain yield and quality under heat-stress. Journal of Cereal Science, 2020, 93, 102981.	1.8	28
33	Evaluation of Grain Yield and Quality Traits of Bread Wheat Genotypes Cultivated in Northwest Turkey. Crop Science, 2016, 56, 73-84.	0.8	27
34	Definition of the low molecular weight glutenin subunit gene family members in a set of standard bread wheat (Triticum aestivum L.) varieties. Journal of Cereal Science, 2017, 74, 263-271.	1.8	27
35	Molecular characterisation of the Wx-B1 allelic variants identified in cultivated emmer wheat and comparison with those of durum wheat. Molecular Breeding, 2011, 28, 403-411.	1.0	26
36	Characterization of genetic diversity of puroindoline genes in Mexican wheat landraces. Euphytica, 2013, 190, 53-63.	0.6	25

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37	Genomeâ€based prediction of multiple wheat quality traits in multiple years. Plant Genome, 2020, 13, e20034.	1.6	25
38	Molecular characterization of a novel waxy allele (Wx-A u 1a) from Triticum urartu Thum. ex Gandil.. Genetic Resources and Crop Evolution, 2012, 59, 971-979.	0.8	24
39	Sources of the highly expressed wheat bread making (wbm) gene in CIMMYT spring wheat germplasm and its effect on processing and bread-making quality. Euphytica, 2016, 209, 689-692.	0.6	24
40	Molecular Marker-Based Selection Tools in Spring Bread Wheat Improvement: CIMMYT Experience and Prospects. Sustainable Development and Biodiversity, 2016, , 421-474.	1.4	24
41	Molecular characterization and diversity of the Pina and Pinb genes in cultivated and wild diploid wheat. Molecular Breeding, 2012, 30, 69-78.	1.0	22
42	Variation in Spanish cultivated einkorn wheat (Triticum monococcum L. ssp. monococcum) as determined by morphological traits and waxy proteins. Genetic Resources and Crop Evolution, 2009, 56, 601-604.	0.8	21
43	Molecular characterization of a new waxy allele with partial expression in spelt wheat. Planta, 2012, 235, 1331-1339.	1.6	20
44	Molecular characterization of two novel null waxy alleles in Mexican bread wheat landraces. Journal of Cereal Science, 2015, 62, 8-14.	1.8	20
45	Nutritional quality characterization of a set of durum wheat landraces from Iran and Mexico. LWT - Food Science and Technology, 2020, 124, 109198.	2.5	20
46	Characterization of the Wx gene in diploid Aegilops species and its potential use in wheat breeding. Genetic Resources and Crop Evolution, 2014, 61, 369-382.	0.8	19
47	Molecular characterization of novel LMW-i glutenin subunit genes from Triticum urartu Thum. ex Gandil.. Theoretical and Applied Genetics, 2015, 128, 2155-2165.	1.8	19
48	Variability for Glutenins, Gluten Quality, Iron, Zinc and Phytic Acid in a Set of One Hundred and Fifty-Eight Common Wheat Landraces from Iran. Agronomy, 2020, 10, 1797.	1.3	19
49	Genetic improvement of wheat grain quality at CIMMYT. Frontiers of Agricultural Science and Engineering, 2019, 6, 265.	0.9	19
50	Effects of glutenins (Glu-1 and Glu-3) allelic variation on dough properties and bread-making quality of CIMMYT bread wheat breeding lines. Field Crops Research, 2022, 284, 108585.	2.3	19
51	Molecular characterization of waxy alleles in three subspecies of hexaploid wheat and identification of two novel Wx-B1 alleles. Theoretical and Applied Genetics, 2015, 128, 2427-2435.	1.8	17
52	Genetic variation for waxy proteins and amylose content in Spanish spelt wheat (Triticum spelta L.). Genetic Resources and Crop Evolution, 2010, 57, 721-725.	0.8	16
53	SNPs and an insertion sequence in five Wx-A1 alleles as factors for variant Wx-A1 protein in wheat. Euphytica, 2013, 192, 325-338.	0.6	16
54	Yield and Quality in Purple-Grained Wheat Isogenic Lines. Agronomy, 2020, 10, 86.	1.3	16

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55	Gluten protein response to heat and drought stress in durum wheat as measured by reverse phase - High performance liquid chromatography. Journal of Cereal Science, 2021, 100, 103267.	1.8	16
56	Characterization of grain protein content gene (GPC-B1) introgression lines and its potential use in breeding for enhanced grain zinc and iron concentration in spring wheat. Acta Physiologiae Plantarum, 2017, 39, 1.	1.0	15
57	Allelic diversity and molecular characterization of puroindoline genes in five diploid species of the Aegilops genus. Journal of Experimental Botany, 2013, 64, 5133-5143.	2.4	14
58	Preliminary characterization for grain quality traits and high and low molecular weight glutenins subunits composition of durum wheat landraces from Iran and Mexico. Journal of Cereal Science, 2019, 88, 47-56.	1.8	14
59	Genome-wide association analysis for arabinoxylan content in common wheat (T. Aestivum L.) flour. Journal of Cereal Science, 2021, 98, 103166.	1.8	14
60	Allelic Variation at Glutenin Loci (Glu-1, Glu-2 and Glu-3) in a Worldwide Durum Wheat Collection and Its Effect on Quality Attributes. Foods, 2021, 10, 2845.	1.9	14
61	Genomic Prediction and Genome-Wide Association Studies of Flour Yield and Alveograph Quality Traits Using Advanced Winter Wheat Breeding Material. Genes, 2019, 10, 669.	1.0	12
62	Diversity of phenotypic (plant and grain morphological) and genotypic (glutenin alleles in Glu-1 and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 Resources and Crop Evolution, 2016, 63, 465-475.	0.8	11
63	Recovery of Wheat Heritage for Traditional Food: Genetic Variation for High Molecular Weight Glutenin Subunits in Neglected/Underutilized Wheat. Agronomy, 2019, 9, 755.	1.3	11
64	Amylose content and starch properties in emmer and durum wheat lines with different waxy proteins composition. Journal of the Science of Food and Agriculture, 2011, 91, 1625-1629.	1.7	10
65	Assessment of the Glutenin Subunits Diversity in a Durum Wheat (T. turgidum ssp. durum) Collection from Morocco. Agronomy, 2020, 10, 957.	1.3	10
66	Are the agronomic performance and grain quality characteristics of bread wheat Mediterranean landraces related to the climate prevalent in their area of origin?. Journal of Cereal Science, 2022, 105, 103478.	1.8	10
67	Molecular characterization of the Glu-Ay gene from Triticum urartu for its potential use in quality wheat breeding. Plant Genetic Resources: Characterisation and Utilisation, 2011, 9, 334-337.	0.4	9
68	Wx gene in diploid wheat: molecular characterization of five novel alleles from einkorn (Triticum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2	1.0	9
69	Endogenous arabinoxylans variability in refined wheat flour and its relationship with quality traits. Journal of Cereal Science, 2020, 95, 103062.	1.8	9
70	SNP markers for low molecular glutenin subunits (LMW-GSs) at the Glu-A3 and Glu-B3 loci in bread wheat. PLoS ONE, 2020, 15, e0233056.	1.1	9
71	Molecular characterisation of the amino- and carboxyl-domains in different Glu-A1x alleles of Triticum urartu Thum. ex Gandil.. Theoretical and Applied Genetics, 2013, 126, 1703-1711.	1.8	8
72	Genetic diversity and molecular characterization of puroindoline genes (Pina-D1 and Pinb-D1) in bread wheat landraces from Andalusia (Southern Spain). Journal of Cereal Science, 2016, 71, 61-65.	1.8	8

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73	Genome-wide identification of bZIP transcription factor genes related to starch synthesis in barley (Hordeum vulgare L.). Genome, 2021, 64, 1067-1080.	0.9	8
74	Solvent Retention Capacity and Gluten Protein Composition of Durum Wheat Flour as Influenced by Drought and Heat Stress. Plants, 2021, 10, 1000.	1.6	8
75	Strategic use of Iranian bread wheat landrace accessions for genetic improvement: Core set formulation and validation. Plant Breeding, 2021, 140, 87-99.	1.0	8
76	Identification and molecular characterization of novel LMW-m and -s glutenin genes, and a chimeric -m/-i glutenin gene in 1A chromosome of three diploid Triticum species. Journal of Cereal Science, 2017, 74, 46-55.	1.8	7
77	Molecular characterization of two novel alleles of Hordoindoline genes in Hordeum chilense Roem. et Schult.. Genetic Resources and Crop Evolution, 2014, 61, 307-312.	0.8	6
78	Cultivar, Trait and Management System Selection to Improve Soft-Red Winter Wheat Productivity in the Eastern United States. Frontiers in Plant Science, 2020, 11, 335.	1.7	6
79	Puroindoline (Pina-D1 and Pinb-D1) and waxy (Wx-1) genes in Iranian bread wheat (Triticum aestivum L.) landraces. Biotechnology and Biotechnological Equipment, 2020, 34, 1019-1027.	0.5	5
80	New Findings in the Amino Acid Profile and Gene Expression in Contrasting Durum Wheat Gluten Strength Genotypes during Grain Filling. Journal of Agricultural and Food Chemistry, 2020, 68, 5521-5528.	2.4	5
81	Molecular characterization of several Wx alleles in durum wheat. Biologia Plantarum, 2015, 59, 220-226.	1.9	4
82	Unlocking the Patterns of the Tunisian Durum Wheat Landraces Genetic Structure Based on Phenotypic Characterization in Relation to Farmerâ€™s Vernacular Name. Agronomy, 2021, 11, 634.	1.3	4
83	Analysis of starch structure and functional properties of tetraploid wheat (<scp>Triticum) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf Agriculture, 2022, 102, 5974-5983.	1.7	4
84	Wheat Quality. , 2022, , 177-193.		4
85	Potential Use of Wild Einkorn Wheat for Wheat Grain Quality Improvement: Evaluation and Characterization of Glu-1, Wx and Ha Loci. Agronomy, 2021, 11, 816.	1.3	3
86	Molecular characterization of five novel Wx-A1 alleles in common wheat including one silent allele by transposon insertion. Plant Science, 2021, 305, 110843.	1.7	3
87	A single base change at exon of Wxâ€A1 caused gene inactivation and starch properties modified in a wheat EMS mutant line. Journal of the Science of Food and Agriculture, 2021, , .	1.7	3
88	Do ancient wheats contain less gluten than modern bread wheat, in favour of better health?. Nutrition Bulletin, 2022, 47, 157-167.	0.8	3
89	Polymorphism of waxy proteins in Spanish hulled wheats. Plant Genetic Resources: Characterisation and Utilisation, 2011, 9, 330-333.	0.4	2
90	Characterization and sequence diversity of the Gsp-1 gene in diploid species of the Aegilops genus. Journal of Cereal Science, 2015, 63, 1-7.	1.8	2

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91	Molecular characterisation of novel LMW-m and LMW-s genes from four Aegilops species (Sitopsis) Tj ETQq1 1 0.784314 rgBT /Overlock Science, 2016, 67, 938.	0.7	2
92	Phenolic Compounds in Wheat Kernels: Genetic and Genomic Studies of Biosynthesis and Regulations. , 2020, , 225-253.		2
93	Starch and Starch-Associated Proteins: Impacts on Wheat Grain Quality. , 2020, , 21-38.		2
94	Analysis of the starch properties in tetraploid wheatâ€“Aegilops sharonensis amphidiploid. Cereal Research Communications, 0, , 1.	0.8	1
95	Suitability of the current breadmaking quality test to predict the breadmaking potential of healthy bread formulations. Cereal Chemistry, 2021, 98, 1091-1100.	1.1	1
96	Ancient wheats role in sustainable wheat cultivation. , 2021, , 29-66.		1