Craig S Pikaard

List of Publications by Year
in descending order

119 papers	14,826 citations	22153 59 h-index	19749 117 g-index
163 all docs	163 docs citations	163 times ranked	10780 citing authors

#	Article	IF	Citations
1	Gateway-compatible vectors for plant functional genomics and proteomics. Plant Journal, 2006, 45, 616-629.	5.7	1,658
2	Analysis of histone acetyltransferase and histone deacetylase families of Arabidopsis thaliana suggests functional diversification of chromatin modification among multicellular eukaryotes. Nucleic Acids Research, 2002, 30, 5036-5055.	14.5	672
3	Noncoding Transcription by RNA Polymerase Pol IVb/Pol V Mediates Transcriptional Silencing of Overlapping and Adjacent Genes. Cell, 2008, 135, 635-648.	28.9	645
4	Plant Nuclear RNA Polymerase IV Mediates siRNA and DNA Methylation-Dependent Heterochromatin Formation. Cell, 2005, 120, 613-622.	28.9	602
5	RNA polymerase V transcription guides ARGONAUTE4 to chromatin. Nature Genetics, 2009, 41, 630-634.	21.4	410
6	The Arabidopsis Chromatin-Modifying Nuclear siRNA Pathway Involves a Nucleolar RNA Processing Center. Cell, 2006, 126, 79-92.	28.9	399
7	Multisubunit RNA polymerases IV and V: purveyors of non-coding RNA for plant gene silencing. Nature Reviews Molecular Cell Biology, 2011, 12, 483-492.	37.0	356
8	An ARGONAUTE4-Containing Nuclear Processing Center Colocalized with Cajal Bodies in Arabidopsis thaliana. Cell, 2006, 126, 93-106.	28.9	350
9	Epigenetic silencing of RNA polymerase I transcription: a role for DNA methylation and histone modification in nucleolarâ€‰dominance. Genes and Development, 1997, 11, 2124-2136.	5.9	342
10	A Concerted DNA Methylation/Histone Methylation Switch Regulates rRNA Gene Dosage Control and Nucleolar Dominance. Molecular Cell, 2004, 13, 599-609.	9.7	336
11	Epigenetic Regulation in Plants. Cold Spring Harbor Perspectives in Biology, 2014, 6, a019315-a019315.	5.5	310
12	Epigenetic silencing of RNA polymerase I transcription. Nature Reviews Molecular Cell Biology, 2003, 4, 641-649.	37.0	270
13	Arabidopsis Histone Deacetylase HDA6 Is Required for Maintenance of Transcriptional Gene Silencing and Determines Nuclear Organization of rDNA Repeats. Plant Cell, 2004, 16, 1021-1034.	6.6	264
14	Chromosomal locus rearrangements are a rapid response to formation of the allotetraploid Arabidopsis suecica genome. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 18240-18245.	7.1	251
15	An SNF2 Protein Associated with Nuclear RNA Silencing and the Spread of a Silencing Signal between Cells in Arabidopsis. Plant Cell, 2007, 19, 1507-1521.	6.6	251
16	Transcriptional analysis of nucleolar dominance in polyploid plants: Biased expression/silencing of progenitor rRNA genes is developmentally regulated inâ€‰ <i>Brassica</i>. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 3442-3447.	7.1	246
17	An RNA polymerase II- and AGO4-associated protein acts in RNA-directed DNA methylation. Nature, 2010, 465, 106-109.	27.8	228
18	Identification of Pol IV and RDR2-dependent precursors of 24 nt siRNAs guiding de novo DNA methylation in Arabidopsis. ELife, 2015, 4, e09591.	6.0	228

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19	Subunit Compositions of the RNA-Silencing Enzymes Pol IV and Pol V Reveal Their Origins as Specialized Forms of RNA Polymerase II. Molecular Cell, 2009, 33, 192-203.	9.7	225
20	An Effector of RNA-Directed DNA Methylation in Arabidopsis Is an ARGONAUTE 4- and RNA-Binding Protein. Cell, 2009, 137, 498-508.	28.9	220
21	Erasure of histone acetylation by <i>Arabidopsis HDA6</i> mediates large-scale gene silencing in nucleolar dominance. Genes and Development, 2006, 20, 1283-1293.	5.9	219
22	50Âyears of Arabidopsis research: highlights and future directions. New Phytologist, 2016, 209, 921-944.	7.3	186
23	<i>In vitro</i> specificities of Arabidopsis coâ€activator histone acetyltransferases: implications for histone hyperacetylation in gene activation. Plant Journal, 2007, 52, 615-626.	5.7	181
24	InÂVitro Transcription Activities of Pol IV, Pol V, and RDR2 Reveal Coupling of Pol IV and RDR2 for dsRNA Synthesis in Plant RNA Silencing. Molecular Cell, 2012, 48, 811-818.	9.7	180
25	The epigenetics of nucleolar dominance. Trends in Genetics, 2000, 16, 495-500.	6.7	172
26	VIM1, a methylcytosine-binding protein required for centromeric heterochromatinization. Genes and Development, 2007, 21, 267-277.	5.9	167
27	RFLP and physical mapping with an rDNAâ€specific endonuclease reveals that nucleolus organizer regions of <i>Arabidopsis thaliana</i> adjoin the telomeres on chromosomes 2 and 4. Plant Journal, 1996, 9, 259-272.	5.7	160
28	Roles of RNA polymerase IV in gene silencing. Trends in Plant Science, 2008, 13, 390-397.	8.8	157
29	Molecular mechanisms governing species-specific transcription of ribosomal RNA. Cell, 1989, 59, 489-497.	28.9	153
30	ROS3 is an RNA-binding protein required for DNA demethylation in Arabidopsis. Nature, 2008, 455, 1259-1262.	27.8	150
31	Genomic change and gene silencing in polyploids. Trends in Genetics, 2001, 17, 675-677.	6.7	147
32	Multimegabase Silencing in Nucleolar Dominance Involves siRNA-Directed DNA Methylation and Specific Methylcytosine-Binding Proteins. Molecular Cell, 2008, 32, 673-684.	9.7	144
33	Mechanisms of HDA6-mediated rRNA gene silencing: suppression of intergenic Pol II transcription and differential effects on maintenance versus siRNA-directed cytosine methylation. Genes and Development, 2010, 24, 1119-1132.	5.9	143
34	Spatial and functional relationships among Pol V-associated loci, Pol IV-dependent siRNAs, and cytosine methylation in the <i>Arabidopsis</i> epigenome. Genes and Development, 2012, 26, 1825-1836.	5.9	137
35	Two-dimensional RFLP analyses reveal megabase-sized clusters of rRNA gene variants in Arabidopsis thaliana, suggesting local spreading of variants as the mode for gene homogenization during concerted evolution. Plant Journal, 1996, 9, 273-282.	5.7	136
36	rRNA gene silencing and nucleolar dominance: Insights into a chromosome-scale epigenetic on/off switch. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 2007, 1769, 383-392.	2.4	132

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37	Molecular characterization of the patatin multigene family of potato. Gene, 1988, 62, 27-44.	2.2	129
38	NRPD4, a protein related to the RPB4 subunit of RNA polymerase II, is a component of RNA polymerases IV and V and is required for RNA-directed DNA methylation. Genes and Development, 2009, 23, 318-330.	5.9	126
39	The RNAs of RNA-directed DNA methylation. Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms, 2017, 1860, 140-148.	1.9	126
40	Nucleolar dominance and silencing of transcription. Trends in Plant Science, 1999, 4, 478-483.	8.8	124
41	PHYTOCHROME B and HISTONE DEACETYLASE 6 Control Light-Induced Chromatin Compaction in Arabidopsis thaliana. PLoS Genetics, 2009, 5, e1000638.	3.5	123
42	Nucleolin Is Required for DNA Methylation State and the Expression of rRNA Gene Variants in Arabidopsis thaliana. PLoS Genetics, 2010, 6, e1001225.	3.5	121
43	Chromosome-specific NOR inactivation explains selective rRNA gene silencing and dosage control in <i>Arabidopsis</i>. Genes and Development, 2016, 30, 177-190.	5.9	117
44	Transcript Profiling in Arabidopsis Reveals Complex Responses to Global Inhibition of DNA Methylation and Histone Deacetylation*[boxs]. Journal of Biological Chemistry, 2005, 280, 796-804.	3.4	116
45	Subnuclear partitioning of rRNA genes between the nucleolus and nucleoplasm reflects alternative epiallelic states. Genes and Development, 2013, 27, 1545-1550.	5.9	115
46	Identification of Nucleolus-Associated Chromatin Domains Reveals a Role for the Nucleolus in 3D Organization of the A.Âthaliana Genome. Cell Reports, 2016, 16, 1574-1587.	6.4	113
47	Nucleolar dominance and ribosomal RNA gene silencing. Current Opinion in Cell Biology, 2010, 22, 351-356.	5.4	106
48	Nucleolar dominance: uniparental gene silencing on a multi-megabase scale in genetic hybrids. Plant Molecular Biology, 2000, 43, 163-177.	3.9	104
49	siRNA and miRNA processing: new functions for Cajal bodies. Current Opinion in Genetics and Development, 2008, 18, 197-203.	3.3	103
50	Arabidopsis Histone Lysine Methyltransferases. Advances in Botanical Research, 2010, 53, 1-22.	1.1	103
51	The RNA polymerase I transcription factor UBF is a sequence-tolerant HMG-box protein that can recognize structured nucleic acids. Nucleic Acids Research, 1994, 22, 2651-2657.	14.5	101
52	Transgene-induced RNA interference: a strategy for overcoming gene redundancy in polyploids to generate loss-of-function mutations. Plant Journal, 2003, 36, 114-121.	5.7	99
53	A Two-Step Process for Epigenetic Inheritance in Arabidopsis. Molecular Cell, 2014, 54, 30-42.	9.7	96
54	Reaction Mechanisms of Pol IV, RDR2, and DCL3 Drive RNA Channeling in the siRNA-Directed DNA Methylation Pathway. Molecular Cell, 2019, 75, 576-589.e5.	9.7	93

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55	Natural variation in nucleolar dominance reveals the relationship between nucleolus organizer chromatin topology and rRNA gene transcription in <i>Arabidopsis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 11418-11423.	7.1	85
56	Histone methyltransferases regulating rRNA gene dose and dosage control in <i>Arabidopsis</i>. Genes and Development, 2012, 26, 945-957.	5.9	81
57	Posttranscriptional gene silencing in nuclei. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 409-414.	7.1	80
58	Transgene-Induced RNA Interference as a Tool for Plant Functional Genomics. Methods in Enzymology, 2005, 392, 1-24.	1.0	78
59	A Transcription Fork Model for Pol IV and Pol V-Dependent RNA-Directed DNA Methylation. Cold Spring Harbor Symposia on Quantitative Biology, 2012, 77, 205-212.	1.1	73
60	Functional Diversification of Maize RNA Polymerase IV and V Subtypes via Alternative Catalytic Subunits. Cell Reports, 2014, 9, 378-390.	6.4	71
61	Postembryonic Establishment of Megabase-Scale Gene Silencing in Nucleolar Dominance. PLoS ONE, 2007, 2, e1157.	2.5	69
62	The minimal ribosomal RNA gene promoter of Arabidopsis thaliana includes a critical element at the transcription initiation site. Plant Journal, 1995, 8, 683-692.	5.7	63
63	Cytokinin Induction of RNA Polymerase I Transcription in Arabidopsis thaliana. Journal of Biological Chemistry, 1997, 272, 6799-6804.	3.4	63
64	RNA Polymerase V Functions in Arabidopsis Interphase Heterochromatin Organization Independently of the 24-nt siRNA-Directed DNA Methylation Pathway. Molecular Plant, 2009, 2, 700-710.	8.3	63
65	Use of RFLPs larger than 100 kbp to map the position and internal organization of the nucleolus organizer region on chromosome 2 in Arabidopsis thaliana. Plant Journal, 1995, 7, 273-286.	5.7	58
66	Selective nucleolus organizer inactivation in <i>Arabidopsis</i> is a chromosome position-effect phenomenon. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13426-13431.	7.1	57
67	Chromatin Turn Ons and Turn Offs of Ribosomal RNA Genes. Cell Cycle, 2004, 3, 878-881.	2.6	56
68	Metal A and Metal B Sites of Nuclear RNA Polymerases Pol IV and Pol V Are Required for siRNA-Dependent DNA Methylation and Gene Silencing. PLoS ONE, 2009, 4, e4110.	2.5	51
69	Hybrid incompatibility caused by an epiallele. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 3702-3707.	7.1	45
70	RNA Polymerase I Transcription in a Brassica Interspecific Hybrid and Its Progenitors: Tests of Transcription Factor Involvement in Nucleolar Dominance. Genetics, 1999, 152, 451-460.	2.9	45
71	Sex-Biased Lethality or Transmission of Defective Transcription Machinery in Arabidopsis. Genetics, 2008, 180, 207-218.	2.9	44
72	Heat Shock Proteins in Tobacco Cell Suspension during Growth Cycle. Plant Physiology, 1984, 75, 639-644.	4.8	43

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73	Chromosome and DNA methylation dynamics during meiosis in the autotetraploid Arabidopsis arenosa. Sexual Plant Reproduction, 2010, 23, 29-37.	2.2	42
74	Heterochromatic siRNAs and DDM1 Independently Silence Aberrant 5S rDNA Transcripts in Arabidopsis. PLoS ONE, 2009, 4, e5932.	2.5	42
75	Intersection of Small RNA Pathways in Arabidopsis thaliana Sub-Nuclear Domains. PLoS ONE, 2013, 8, e65652.	2.5	40
76	Histone Acetyltransferase and Protein Kinase Activities Copurify with a Putative <i>Xenopus</i> RNA Polymerase I Holoenzyme Self-Sufficient for Promoter-Dependent Transcription. Molecular and Cellular Biology, 1999, 19, 796-806.	2.3	38
77	Xenopus Ribosomal RNA Gene Intergenic Spacer Elements Conferring Transcriptional Enhancement and Nucleolar Dominance-like Competition in Oocytes. Journal of Biological Chemistry, 2002, 277, 31577-31584.	3.4	38
78	Sequence of two apparent pseudogenes of the major potato tuber protein, patatin. Nucleic Acids Research, 1986, 14, 5564-5566.	14.5	37
79	Species-specificity of rRNA gene transcription in plants manifested as a switch in RNA polymerase specificity. Nucleic Acids Research, 1996, 24, 4725-4732.	14.5	35
80	Chromatin turn ons and turn offs of ribosomal RNA genes. Cell Cycle, 2004, 3, 880-3.	2.6	28
81	Evidence for Nucleolus Organizer Regions as the Units of Regulation in Nucleolar Dominance in Arabidopsis thaliana Interecotype Hybrids. Genetics, 2004, 167, 931-939.	2.9	27
82	Mutation of <i>Arabidopsis SMC4</i> identifies condensin as a corepressor of pericentromeric transposons and conditionally expressed genes. Genes and Development, 2017, 31, 1601-1614.	5.9	25
83	Structure and RNA template requirements of <i>Arabidopsis</i> RNA-DEPENDENT RNA POLYMERASE 2. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	25
84	Locus-Specific Ribosomal RNA Gene Silencing in Nucleolar Dominance. PLoS ONE, 2007, 2, e815.	2.5	24
85	Relationships between transcription, silver staining, and chromatin organization of nucleolar organizers in Secale cereale. Protoplasma, 2007, 232, 55-59.	2.1	24
86	Functional Consequences of Subunit Diversity in RNA Polymerases II and V. Cell Reports, 2012, 1, 208-214.	6.4	24
87	Functional Dissection of the Pol V Largest Subunit CTD in RNA-Directed DNA Methylation. Cell Reports, 2017, 19, 2796-2808.	6.4	24
88	Catalytic properties of RNA polymerases IV and V: accuracy, nucleotide incorporation and rNTP/dNTP discrimination. Nucleic Acids Research, 2017, 45, 11315-11326.	14.5	22
89	Subunit compositions of Arabidopsis RNA polymerases I and III reveal Pol I- and Pol III-specific forms of the AC40 subunit and alternative forms of the C53 subunit. Nucleic Acids Research, 2015, 43, 4163-4178.	14.5	21
90	An Atypical Epigenetic Mechanism Affects Uniparental Expression of Pol IV-Dependent siRNAs. PLoS ONE, 2011, 6, e25756.	2.5	21

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91	Extra views on RNA-dependent DNA methylation and MBD6-dependent heterochromatin formation in nucleolar dominance. Nucleus, 2010, 1, 254-259.	2.2	20
92	A DCL3 dicing code within Pol IV-RDR2 transcripts diversifies the siRNA pool guiding RNA-directed DNA methylation. ELife, 2022, 11, .	6.0	20
93	RNA Polymerase I Holoenzyme-Promoter Interactions. Journal of Biological Chemistry, 2000, 275, 37173-37180.	3.4	19
94	RNA polymerase I holoenzyme-promoter complexes include an associated CK2-like protein kinase. Plant Molecular Biology, 2001, 47, 449-460.	3.9	19
95	Patterns of fatty acid deposition during development of soybean seed. Phytochemistry, 1984, 23, 2183-2186.	2.9	18
96	RNA Polymerase I: A Multifunctional Molecular Machine. Cell, 2007, 131, 1224-1225.	28.9	18
97	Transcription and Tyranny in the Nucleolus: The Organization, Activation, Dominance and Repression of Ribosomal RNA Genes.. The Arabidopsis Book, 2002, 1, e0083.	0.5	16
98	Assembly of a dsRNA synthesizing complex: RNA-DEPENDENT RNA POLYMERASE 2 contacts the largest subunit of NUCLEAR RNA POLYMERASE IV. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	16
99	Extra views on RNA-dependent DNA methylation and MBD6-dependent heterochromatin formation in nucleolar dominance. Nucleus, 2010, 1, 254-259.	2.2	15
100	The NRPD1 N-terminus contains a Pol IV-specific motif that is critical for genome surveillance in Arabidopsis. Nucleic Acids Research, 2019, 47, 9037-9052.	14.5	14
101	RNA-Silencing Enzymes Pol IV and Pol V in Maize: More than one Flavor?. PLoS Genetics, 2009, 5, e1000736.	3.5	13
102	Reconstitution of siRNA Biogenesis In Vitro: Novel Reaction Mechanisms and RNA Channeling in the RNA-Directed DNA Methylation Pathway. Cold Spring Harbor Symposia on Quantitative Biology, 2019, 84, 195-201.	1.1	13
103	Heterochromatin: condense or excise. Nature Cell Biology, 2007, 9, 19-20.	10.3	12
104	Uniting the paths to gene silencing. Nature Genetics, 2002, 32, 340-341.	21.4	10
105	Maintenance of Normal or Supranormal Protein Accumulation in Developing Ovules of Glycine max L. Merr. during PEG-Induced Water Stress. Plant Physiology, 1984, 75, 176-180.	4.8	9
106	Methylating the DNA of the Most Repressed: Special Access Required. Molecular Cell, 2013, 49, 1021-1022.	9.7	9
107	The Pol IV largest subunit CTD quantitatively affects siRNA levels guiding RNA-directed DNA methylation. Nucleic Acids Research, 2019, 47, 9024-9036.	14.5	8
108	Plant Multisubunit RNA Polymerases IV and V. Nucleic Acids and Molecular Biology, 2014, , 289-308.	0.2	8

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109	Chromosome Topologyâ€"Organizing Genes by Loops and Bounds. Plant Cell, 1998, 10, 1229-1232.	6.6	7
110	Nucleolar Dominance and rRNA Gene Dosage Control: A Paradigm for Transcriptional Regulation via an Epigenetic On/Off Switch. , 0, , 201-222.		6
111	Analysis of rRNA Gene Methylation in Arabidopsis thaliana by CHEF-Conventional 2D Gel Electrophoresis. Methods in Molecular Biology, 2016, 1455, 183-202.	0.9	6
112	Targeted Enrichment of rRNA Gene Tandem Arrays for Ultra-Long Sequencing by Selective Restriction Endonuclease Digestion. Frontiers in Plant Science, 2021, 12, 656049.	3.6	6
113	Purification and Transcriptional Analysis of RNA Polymerase I Holoenzymes from Broccoli (Brassica) Tj ETQq1 1 0.784314 rgBT /Overlock	1.0	4
114	Detecting Differential Expression of Parental or Progenitor Alleles in Genetic Hybrids and Allopolyploids. Methods in Enzymology, 2005, 395, 554-569.	1.0	4
115	Developing a new interdisciplinary lab course for undergraduate and graduate students: Plant cells and proteins. Biochemistry and Molecular Biology Education, 2007, 35, 410-415.	1.2	4
116	Targeting Argonaute to chromatin. Genes and Development, 2016, 30, 2649-2650.	5.9	4
117	Chromosome Topology-Organizing Genes by Loops and Bounds. Plant Cell, 1998, 10, 1229.	6.6	3
118	Nuclear Biology: Whatâ€™s Been Most Surprising?. Cell, 2013, 152, 1207-1208.	28.9	3
119	Analysis of siRNA Precursors Generated by RNA Polymerase IV and RNA-Dependent RNA Polymerase 2 in Arabidopsis. Methods in Molecular Biology, 2019, 1933, 33-48.	0.9	1