Peter J Shaw

List of Publications by Year
in descending order

147 papers	9,327 citations	25034 57 h-index	43889 91 g-index
196 all docs	196 docs citations	196 times ranked	7171 citing authors

#	Article	IF	Citations
1	Chapter 13 Fluorescence Microscopy in Three Dimensions. Methods in Cell Biology, 1989, 30, 353-377.	1.1	595
2	The Nucleolus. Annual Review of Cell and Developmental Biology, 1995, 11, 93-121.	9.4	394
3	Proteomic Analysis of the Arabidopsis Nucleolus Suggests Novel Nucleolar Functions. Molecular Biology of the Cell, 2005, 16, 260-269.	2.1	352
4	An actin network is present in the cytoplasm throughout the cell cycle of carrot cells and associates with the dividing nucleus.. Journal of Cell Biology, 1987, 105, 387-395.	5.2	340
5	KOJAK encodes a cellulose synthase-like protein required for root hair cell morphogenesis in Arabidopsis. Genes and Development, 2001, 15, 79-89.	5.9	232
6	The Ph1 locus is needed to ensure specific somatic and meiotic centromere association. Nature, 2001, 411, 204-207.	27.8	217
7	Microinjected profilin affects cytoplasmic streaming in plant cells by rapidly depolymerizing actin microfilaments. Current Biology, 1994, 4, 215-219.	3.9	215
8	Dynamic reorientation of cortical microtubules, from transverse to longitudinal, in living plant cells.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 6050-6053.	7.1	197
9	Structure and function of the nucleolus in the spotlight. Current Opinion in Cell Biology, 2006, 18, 325-334.	5.4	192
10	High-throughput protein localization in Arabidopsis using Agrobacterium-mediated transient expression of GFP-ORF fusions. Plant Journal, 2004, 41, 162-174.	5.7	190
11	New Insights into Nucleolar Architecture and Activity. International Review of Cytology, 2006, 255, 177-235.	6.2	161
12	The pointâ€spread function of a confocal microscope: its measurement and use in deconvolution of 3â€D data. Journal of Microscopy, 1991, 163, 151-165.	1.8	156
13	The Movement of Coiled Bodies Visualized in Living Plant Cells by the Green Fluorescent Protein. Molecular Biology of the Cell, 1999, 10, 2297-2307.	2.1	138
14	Transcription Sites Are Not Correlated with Chromosome Territories in Wheat Nuclei. Journal of Cell Biology, 1998, 143, 5-12.	5.2	135
15	Homologue recognition during meiosis is associated with a change in chromatin conformation. Nature Cell Biology, 2004, 6, 906-908.	10.3	135
16	Chromatin organization and cell fate switch respond to positional information in Arabidopsis. Nature, 2006, 439, 493-496.	27.8	135
17	Exploiting the ZIP4 homologue within the wheat Ph1 locus has identified two lines exhibiting homoeologous crossover in wheat-wild relative hybrids. Molecular Breeding, 2017, 37, 95.	2.1	126
18	<i>Arabidopsis</i>POT1A interacts with TERT-V(I8), an N-terminal splicing variant of telomerase. Journal of Cell Science, 2007, 120, 3678-3687.	2.0	123

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19	A Distant Coilin Homologue Is Required for the Formation of Cajal Bodies in Arabidopsis. Molecular Biology of the Cell, 2006, 17, 2942-2951.	2.1	122
20	Plant nuclear bodies. Current Opinion in Plant Biology, 2004, 7, 614-620.	7.1	118
21	Systematic Spatial Analysis of Gene Expression during Wheat Caryopsis Development. Plant Cell, 2005, 17, 2172-2185.	6.6	112
22	Tilted view reconstruction in optical microscopy. Three-dimensional reconstruction of Drosophila melanogaster embryo nuclei. Biophysical Journal, 1989, 55, 101-110.	0.5	111
23	The<i>Ph1</i>Locus Suppresses Cdk2-Type Activity during Premeiosis and Meiosis in Wheat Â. Plant Cell, 2012, 24, 152-162.	6.6	109
24	Nucleoli: Composition, Function, and Dynamics. Plant Physiology, 2012, 158, 44-51.	4.8	109
25	Dual effect of the wheat Ph1 locus on chromosome synapsis and crossover. Chromosoma, 2017, 126, 669-680.	2.2	108
26	Endoplasmic microtubules connect the advancing nucleus to the tip of legume root hairs, but F-actin is involved in basipetal migration. Cytoskeleton, 1987, 8, 27-36.	4.4	105
27	Chromosomes form into seven groups in hexaploid and tetraploid wheat as a prelude to meiosis. Plant Journal, 2003, 36, 21-29.	5.7	101
28	Nucleus-associated microtubules help determine the division plane of plant epidermal cells: avoidance of four-way junctions and the role of cell geometry.. Journal of Cell Biology, 1990, 110, 1111-1122.	5.2	99
29	Dissecting the centromere of the human Y chromosome with cloned telomeric DNA. Human Molecular Genetics, 1994, 3, 1227-1237.	2.9	99
30	Effective chromosome pairing requires chromatin remodeling at the onset of meiosis. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6075-6080.	7.1	97
31	Magnesium Increases Homoeologous Crossover Frequency During Meiosis in ZIP4 (Ph1 Gene) Mutant Wheat-Wild Relative Hybrids. Frontiers in Plant Science, 2018, 9, 509.	3.6	96
32	Association of homologous chromosomes during floral development. Current Biology, 1997, 7, 905-908.	3.9	95
33	Clusters of multiple different small nucleolar RNA genes in plants are expressed as and processed from polycistronic pre-snoRNAs. EMBO Journal, 1997, 16, 5742-5751.	7.8	93
34	CycD1, a Putative G1 Cyclin from Antirrhinum majus, Accelerates the Cell Cycle in Cultured Tobacco BY-2 Cells by Enhancing Both G1/S Entry and Progression through S and G2 Phases. Plant Cell, 2004, 16, 2364-2379.	6.6	93
35	Aberrant mRNA Transcripts and the Nonsense-Mediated Decay Proteins UPF2 and UPF3 Are Enriched in the<i>Arabidopsis</i>Nucleolus Â. Plant Cell, 2009, 21, 2045-2057.	6.6	93
36	Licensing MLH1 sites for crossover during meiosis. Nature Communications, 2014, 5, 4580.	12.8	91

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37	Dynamic Behavior of<i>Arabidopsis</i>eIF4A-III, Putative Core Protein of Exon Junction Complex: Fast Relocation to Nucleolus and Splicing Speckles under Hypoxia. Plant Cell, 2009, 21, 1592-1606.	6.6	88
38	Association of Phosphatidylinositol 3-Kinase with Nuclear Transcription Sites in Higher Plants. Plant Cell, 2000, 12, 1679-1687.	6.6	87
39	Localization of telomeres in plant interphase nuclei by in situ hybridization and 3D confocal microscopy. Chromosoma, 1991, 100, 424-431.	2.2	86
40	Polyploidy Induces Centromere Association. Journal of Cell Biology, 2000, 148, 233-238.	5.2	80
41	<i>AHP2</i> is required for bivalent formation and for segregation of homologous chromosomes in <i>Arabidopsis</i> meiosis. Plant Journal, 2003, 36, 1-11.	5.7	78
42	Organization and dynamics of plant interphase chromosomes. Trends in Plant Science, 2011, 16, 273-281.	8.8	77
43	Chromatin: linking structure and function in the nucleolus. Chromosoma, 2009, 118, 11-23.	2.2	75
44	Physical clustering of <i>FLC</i> alleles during Polycomb-mediated epigenetic silencing in vernalization. Genes and Development, 2013, 27, 1845-1850.	5.9	74
45	Monoclonal antibodies to plant nuclear matrix reveal intermediate filament- related components within the nucleus. Journal of Cell Science, 1991, 98, 293-302.	2.0	74
46	Three-dimensional organization of ribosomal DNA in interphase nuclei ofPisum sativum by in situ hybridization and optical tomography. Chromosoma, 1990, 99, 143-151.	2.2	71
47	Chromosomes associate premeiotically and in xylem vessel cells via their telomeres and centromeres in diploid rice (Oryza sativa). Chromosoma, 2004, 112, 300-307.	2.2	71
48	PIS1, a negative regulator of the action of auxin transport inhibitors in Arabidopsis thaliana. Plant Journal, 1997, 12, 583-595.	5.7	69
49	Arabidopsis nucleolar protein database (AtNoPDB). Nucleic Acids Research, 2004, 33, D633-D636.	14.5	68
50	Dynamic microtubules under the radial and outer tangential walls of microinjected pea epidermal cells observed by computer reconstruction. Plant Journal, 1995, 7, 17-23.	5.7	67
51	Cell Differentiation and Development in<i>Arabidopsis</i>Are Associated with Changes in Histone Dynamics at the Single-Cell Level Â. Plant Cell, 2015, 26, 4821-4833.	6.6	66
52	Widely separated multiple transgene integration sites in wheat chromosomes are brought together at interphase. Plant Journal, 2000, 24, 713-723.	5.7	66
53	â€˜Open mindedâ€™ cells: how cells can change fate. Trends in Cell Biology, 2007, 17, 101-106.	7.9	63
54	Cell Typeâ€"Specific Chromatin Decondensation of a Metabolic Gene Cluster in Oats Â Â. Plant Cell, 2010, 21, 3926-3936.	6.6	63

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55	Deconvolution in 3-D optical microscopy. The Histochemical Journal, 1994, 26, 687-694.	0.6	60
56	The architecture of interphase chromosomes and gene positioning are altered by changes in DNA methylation and histone acetylation. Journal of Cell Science, 2002, 115, 4597-4605.	2.0	59
57	Small Nucleolar RNAs and Pre-rRNA Processing in Plants. Plant Cell, 1998, 10, 649-657.	6.6	58
58	The Nucleolus: Playing by Different Rules?. Cell Cycle, 2005, 4, 102-105.	2.6	57
59	Single ribosomal transcription units are linear, compacted Christmas trees in plant nucleoli. Plant Journal, 2001, 27, 223-233.	5.7	55
60	Crystallographic structure analysis of glucose 6-phosphate isomerase at 3Â·5 Ã… resolution. Journal of Molecular Biology, 1977, 109, 475-485.	4.2	54
61	Interphase chromosomes and the Rabl configuration: does genome size matter?. Journal of Microscopy, 2004, 214, 201-206.	1.8	51
62	Gibberellicâ€acidâ€induced reorientation of cortical microtubules in living plant cells. Journal of Microscopy, 1996, 181, 140-144.	1.8	48
63	Molecular characterisation of plant U14 small nucleolar RNA genes: closely linked genes are transcribed as polycistronic U14 transcripts. Nucleic Acids Research, 1994, 22, 5196-5203.	14.5	46
64	Three-dimensional architecture of the cell sheath and septa of Methanospirillum hungatei. Journal of Bacteriology, 1985, 161, 750-757.	2.2	46
65	Genome-Wide Transcription During Early Wheat Meiosis Is Independent of Synapsis, Ploidy Level, and the Ph1 Locus. Frontiers in Plant Science, 2018, 9, 1791.	3.6	44
66	The active site of glucose phosphate isomerase. FEBS Letters, 1976, 65, 50-55.	2.8	42
67	Immuno-gold localization of cytochrome f, light-harvesting complex, ATP synthase and ribulose 1,5-bisphosphate carboxylase/oxygenase. Planta, 1985, 165, 333-339.	3.2	42
68	Fluorescence in situ hybridization on vibratome sections of plant tissues. Nature Protocols, 2007, 2, 1831-1838.	12.0	42
69	Plant U13 orthologues and orphan snoRNAs identified by RNomics of RNA from Arabidopsis nucleoli. Nucleic Acids Research, 2010, 38, 3054-3067.	14.5	39
70	Cellâ€cycleâ€dependent changes in labelling of specific phosphoproteins by the monoclonal antibody MPMâ€2 in plant cells. Plant Journal, 1992, 2, 723-732.	5.7	37
71	Quantitative Dynamics of Telomere Bouquet Formation. PLoS Computational Biology, 2012, 8, e1002812.	3.2	37
72	Gene activation and deactivation related changes in the three-dimensional structure of chromatin. Chromosoma, 2005, 114, 331-337.	2.2	36

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73	A cyclin-dependent protein kinase, CDKC2, colocalizes with and modulates the distribution of spliceosomal components in Arabidopsis. Plant Journal, 2008, 54, 220-235.	5.7	36
74	A pea homologue of human DNA helicase I is localized within the dense fibrillar component of the nucleolus and stimulated by phosphorylation with CK2 and cdc2 protein kinases. Plant Journal, 2001, 25, 9-17.	5.7	36
75	Inducing chromosome pairing through premature condensation: analysis of wheat interspecific hybrids. Functional and Integrative Genomics, 2010, 10, 603-608.	3.5	35
76	Genome-wide identification of physically clustered genes suggests chromatin-level co-regulation in male reproductive development in Arabidopsis thaliana. Nucleic Acids Research, 2017, 45, 3253-3265.	14.5	35
77	Confocal laser microscopy and threeâ€dimensional reconstruction of nucleusâ€associated microtubules in the division plane of vacuolated plant cells. Journal of Microscopy, 1992, 166, 99-109.	1.8	34
78	The architecture of interphase chromosomes and nucleolar transcription sites in plants. Journal of Structural Biology, 2002, 140, 31-38.	2.8	34
79	Comparison of Widefield/Deconvolution and Confocal Microscopy for Three-Dimensional Imaging. , 2006, , 453-467.		34
80	Localization of ribosomal and telomeric DNA sequences in intact plant nuclei by <i>inâ€situ</i> hybridization and threeâ€dimensional optical microscopy. Journal of Microscopy, 1990, 157, 83-89.	1.8	33
81	Improving the chances of finding the right partner. Current Opinion in Genetics and Development, 2009, 19, 99-104.	3.3	33
82	Insights into Chromatin Structure and Dynamics in Plants. Biology, 2013, 2, 1378-1410.	2.8	33
83	Cloning and Characterization of a Dihydrolipoamide Acetyltransferase (E2) Subunit of the Pyruvate Dehydrogenase Complex from Arabidopsis thaliana. Journal of Biological Chemistry, 1995, 270, 5412-5417.	3.4	32
84	Splicing-independent processing of plant box C/D and box H/ACA small nucleolar RNAs. Plant Molecular Biology, 1999, 39, 1091-1100.	3.9	32
85	Assembly of cell-wall glycoproteins of Chlamydomonas reinhardii: Oligosaccharides are added in medial and trans Golgi compartments. Planta, 1987, 171, 302-312.	3.2	31
86	Interplay of Ribosomal DNA Loci in Nucleolar Dominance: Dominant NORs Are Up-Regulated by Chromatin Dynamics in the Wheat-Rye System. PLoS ONE, 2008, 3, e3824.	2.5	31
87	AtTRB1, a telomeric DNA-binding protein from Arabidopsis, is concentrated in the nucleolus and shows highly dynamic association with chromatin. Plant Journal, 2010, 61, 637-649.	5.7	29
88	Three-dimensional fluorescence microscopy. Progress in Biophysics and Molecular Biology, 1991, 56, 187-213.	2.9	28
89	The zygote cell wall of Chlamydomonas reinhardii: a structural, chemical and immunological approach. Planta, 1987, 170, 433-445.	3.2	27
90	ATP-dependent regulation of nuclear Ca2+levels in plant cells. FEBS Letters, 2000, 476, 145-149.	2.8	27

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91	An optical imaging chamber for viewing living plant cells and tissues at high resolution for extended periods. Plant Methods, 2015, 11, 22.	4.3	24
92	A Co-Expression Network in Hexaploid Wheat Reveals Mostly Balanced Expression and Lack of Significant Gene Loss of Homeologous Meiotic Genes Upon Polyploidization. Frontiers in Plant Science, 2019, 10, 1325.	3.6	24
93	Nucleolar organizer expression inAllium cepa L. chromosomes. Chromosoma, 1996, 105, 12-19.	2.2	23
94	Centromeres Cluster De Novo at the Beginning of Meiosis in Brachypodium distachyon. PLoS ONE, 2012, 7, e44681.	2.5	23
95	Dmc1 is a candidate for temperature tolerance during wheat meiosis. Theoretical and Applied Genetics, 2020, 133, 809-828.	3.6	23
96	Large-scale chromatin decondensation induced in a developmentally activated transgene locus. Journal of Cell Science, 2005, 118, 1021-1031.	2.0	22
97	Widely dispersed DNA within plant and animal nucleoli visualised by 3-D fluorescence microscopy. Chromosoma, 1992, 101, 478-482.	2.2	21
98	Threeâ€dimensional modelling of wheat endosperm development. New Phytologist, 2005, 168, 253-262.	7.3	21
99	A streamlined method for systematic, high resolution in situ analysis of mRNA distribution in plants. Plant Methods, 2005, 1, 8.	4.3	21
100	Ca2+Oscillations in Plant Cells: Initiation by Rapid Elevation in Cytosolic Free Ca2+Levels. Biochemical and Biophysical Research Communications, 1997, 234, 690-694.	2.1	20
101	The nucleus: a highly organized but dynamic structure. Journal of Microscopy, 2000, 198, 199-207.	1.8	20
102	Three-dimensional structure of pig muscle phosphoglucose isomerase at 6 Å… resolution. Journal of Molecular Biology, 1974, 89, 195-203.	4.2	19
103	An analysis of seed development inPisum sativum V. Fluorescence triple staining for investigating cotyledon cell development. Protoplasma, 1987, 140, 164-172.	2.1	18
104	Confocal microscopy and image processing in the study of plant nuclear structure. Journal of Microscopy, 1992, 166, 87-97.	1.8	18
105	Identification and localisation of a nucleoporin-like protein component of the plant nuclear matrix. Planta, 1992, 187, 414-20.	3.2	17
106	Scale biogenesis in the green alga,Mesostigma viride. Protoplasma, 1992, 167, 19-32.	2.1	17
107	The low-resolution structure of human muscle aldolase. Philosophical Transactions of the Royal Society of London Series B, Biological Sciences, 1981, 293, 209-214.	2.3	16
108	Association of Multiple GTP-Binding Proteins with the Plant Cytoskeleton and Nuclear Matrix. Biochemical and Biophysical Research Communications, 1995, 210, 7-13.	2.1	16

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109	Meiosis: vive la difference!. Current Opinion in Plant Biology, 1998, 1, 458-462.	7.1	16
110	The use of vibratome sections of cereal spikelets to study anther development and meiosis. Plant Journal, 1998, 14, 503-508.	5.7	16
111	Three-dimensional structure of a cell wall glycoprotein. Journal of Molecular Biology, 1982, 162, 459-471.	4.2	15
112	Microinjection of fluorescent tubulin into plant cells provides a representative picture of the cortical microtubule array. Plant Journal, 1997, 12, 229-234.	5.7	14
113	Tilted specimen in the electron microscope: A simple specimen holder and the calculation of tilt angles for crystalline specimens. Micron (1969), 1981, 12, 279-282.	0.1	12
114	Constrained least-squares fitting of the lattice lines in three-dimensional reconstruction of monolayer crystals. Ultramicroscopy, 1984, 14, 363-365.	1.9	12
115	Microtubules rich in post-translationally modified Î±-tubulin form distinct arrays in frog lens epithelial cells. Experimental Eye Research, 1991, 52, 743-753.	2.6	11
116	In situ methods to localize transgenes and transcripts in interphase nuclei: a tool for transgenic plant research. Plant Methods, 2006, 2, 18.	4.3	11
117	Preparation of Arabidopsis Nuclei and Nucleoli. Methods in Molecular Biology, 2008, 463, 67-75.	0.9	11
118	Chromosome organization in wheat endosperm and embryo. Cytogenetic and Genome Research, 2005, 109, 175-180.	1.1	10
119	3D gold <i>in situ</i> labelling in the EM. Plant Journal, 2002, 29, 237-243.	5.7	9
120	Proximalâ€“distal patterns of transcription factor gene expression during Arabidopsis root development. Journal of Experimental Botany, 2008, 59, 235-245.	4.8	9
121	The Structure of rDNA Chromatin. , 2011, , 43-55.		9
122	Subunit arrangement of spinach ribulose 1,5-bisphosphate carboxylase/oxygenase. Planta, 1985, 163, 141-144.	3.2	8
123	Effect of 5-azacytidine and trichostatin A on somatic centromere association in wheat. Genome, 2004, 47, 399-403.	2.0	8
124	Mass spectrometry in plant proteomic analysis. Plant Biosystems, 2010, 144, 703-714.	1.6	8
125	A pea homologue of human DNA helicase I is localized within the dense fibrillar component of the nucleolus and stimulated by phosphorylation with CK2 and cdc2 protein kinases. Plant Journal, 2001, 25, 9-17.	5.7	7
126	Chromatin and Arabidopsis root development. Seminars in Cell and Developmental Biology, 2008, 19, 580-585.	5.0	7

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127	Mapping chromatin conformation. F1000 Biology Reports, 2010, 2, .	4.0	7
128	Native and Artificial Reticuloplasmins Co-Accumulate in Distinct Domains of the Endoplasmic Reticulum and in Post-Endoplasmic Reticulum Compartments. Plant Physiology, 2001, 127, 1212-1223.	4.8	6
129	Nucleolar organizer expression in Allium cepa L. chromosomes. Chromosoma, 1996, 105, 12-19.	2.2	6
130	The cell wall of the chlamydomonad flagellate,Gloeomonas kupfferi (Volvocales, Chlorophyta). Protoplasma, 1992, 168, 95-105.	2.1	5
131	Widely separated multiple transgene integration sites in wheat chromosomes are brought together at interphase. Plant Journal, 2000, 24, 713-723.	5.7	5
132	In situ Analysis of Gene Expression in Plants. Methods in Molecular Biology, 2009, 513, 229-242.	0.9	5
133	The Plant Nucleolus. , 2013, , 65-76.		4
134	Immunolabeling and In Situ Labeling of Isolated Plant Interphase Nuclei. Methods in Molecular Biology, 2016, 1429, 65-76.	0.9	4
135	Cell wall glycoproteins of : Negative stain electron microscopy and epitope mapping of the molecules. Cell Biology International Reports, 1990, 14, 47-58.	0.6	2
136	Small Nucleolar RNAs and Pre-rRNA Processing in Plants. Plant Cell, 1998, 10, 649.	6.6	2
137	Plasticity of Chromatin Organization in the Plant Interphase Nucleus. , 2015, , 57-79.		2
138	Isolation of Nuclei and Nucleoli. Methods in Molecular Biology, 2017, 1511, 31-44.	0.9	2
139	Two-Photon Photoactivation to Measure Histone Exchange Dynamics in Plant Root Cells. Bio-protocol, 2015, 5, .	0.4	2
140	The formation of two-dimensional arrays of isometric plant viruses in the presence of polyethylene glycol. Micron (1969), 1981, 12, 37-45.	0.1	1
141	A flat-bed scanning microdensitometer for computer image processing of electron micrographs. Micron (1969), 1981, 12, 123-130.	0.1	1
142	Nuclear Ca2+-fluxes and phosphoinositides in plants. Biochemical Society Transactions, 1995, 23, 581S-581S.	3.4	1
143	The formation of two-dimensional arrays of isometric plant viruses in the presence of polyethylene glycol. Micron (1969), 1980, 11, 373-374.	0.1	0
144	Monoclonal antibodies to the plant nuclear matrix. Cell Biology International Reports, 1987, 11, 244.	0.6	0

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145	Cell biology: From molecules to cells to organisms. Current Opinion in Plant Biology, 1999, 2, 437-439.	7.1	0
146	Association of Phosphatidylinositol 3-Kinase with Nuclear Transcription Sites in Higher Plants. Plant Cell, 2000, 12, 1679.	6.6	0
147	Confocal microscopy, image restoration, and nuclear structure. Proceedings Annual Meeting Electron Microscopy Society of America, 1993, 51, 146-147.	0.0	0