olivier Hamant

List of Publications by Year
in descending order

100 papers	8,253 citations	57758 44 h-index	53230 85 g-index
115 all docs	115 docs citations	115 times ranked	6093 citing authors

#	Article	IF	Citations
1	Fifteen compelling open questions in plant cell biology. Plant Cell, 2022, 34, 72-102.	6.6	27
2	Looking beyond the gene network â€“ metabolic and mechanical cell drivers of leaf morphogenesis. Journal of Cell Science, 2022, 135, .	2.0	22
3	Plant cell walls as mechanical signaling hubs for morphogenesis. Current Biology, 2022, 32, R334-R340.	3.9	16
4	How Mechanical Forces Shape Plant Organs. Current Biology, 2021, 31, R143-R159.	3.9	73
5	External Mechanical Cues Reveal a Katanin-Independent Mechanism behind Auxin-Mediated Tissue Bending in Plants. Developmental Cell, 2021, 56, 67-80.e3.	7.0	29
6	What is quantitative plant biology?. Quantitative Plant Biology, 2021, 2, .	2.0	43
7	Tissue folding at the organâ€“meristem boundary results in nuclear compression and chromatin compaction. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	19
8	Stem integrity in<i>Arabidopsis thaliana</i>requires a load-bearing epidermis. Development (Cambridge), 2021, 148, .	2.5	9
9	Mechanochemical feedback mediates tissue bending required for seedling emergence. Current Biology, 2021, 31, 1154-1164.e3.	3.9	43
10	Fluctuations shape plants through proprioception. Science, 2021, 372, .	12.6	38
11	Inducible depletion of PI(4,5)P2 by the synthetic iDePP system in Arabidopsis. Nature Plants, 2021, 7, 587-597.	9.3	29
12	Organ geometry channels reproductive cell fate in the Arabidopsis ovule primordium. ELife, 2021, 10, .	6.0	24
13	FERONIA and microtubules independently contribute to mechanical integrity in the Arabidopsis shoot. PLoS Biology, 2021, 19, e3001454.	5.6	32
14	The plasma membrane as a mechanotransducer in plants. Comptes Rendus - Biologies, 2021, 344, 389-407.	0.2	3
15	Plant scientists canâ€™t ignore Jevons paradox anymore. Nature Plants, 2020, 6, 720-722.	9.3	15
16	Is the plant nucleus a mechanical rheostat?. Current Opinion in Plant Biology, 2020, 57, 155-163.	7.1	13
17	Cortical tension overrides geometrical cues to orient microtubules in confined protoplasts. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 32731-32738.	7.1	48
18	Microtubule self-organisation during seed germination in Arabidopsis. BMC Biology, 2020, 18, 44.	3.8	10

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19	How humans may co-exist with Earth? The case for suboptimal systems. Anthropocene, 2020, 30, 100245.	3.3	6
20	Microtubule Response to Tensile Stress Is Curbed by NEK6 to Buffer Growth Variation in the Arabidopsis Hypocotyl. Current Biology, 2020, 30, 1491-1503.e2.	3.9	39
21	Mechanical Shielding in Plant Nuclei. Current Biology, 2020, 30, 2013-2025.e3.	3.9	26
22	Flowering Plants in the Anthropocene: A Political Agenda. Trends in Plant Science, 2020, 25, 349-368.	8.8	28
23	Robust organ size requires robust timing of initiation orchestrated by focused auxin and cytokinin signalling. Nature Plants, 2020, 6, 686-698.	9.3	48
24	Yves Couder: Putting mechanics back into the shoot apical meristem. Comptes Rendus - Mecanique, 2020, 348, 679-684.	0.7	0
25	Mechanical Asymmetry of the Cell Wall Predicts Changes in Pavement Cell Geometry. Developmental Cell, 2019, 50, 9-10.	7.0	18
26	Global Topological Order Emerges through Local Mechanical Control of Cell Divisions in the Arabidopsis Shoot Apical Meristem. Cell Systems, 2019, 8, 53-65.e3.	6.2	74
27	Are microtubules tension sensors?. Nature Communications, 2019, 10, 2360.	12.8	191
28	Time-Lapse Imaging of Developing Shoot Meristems Using A Confocal Laser Scanning Microscope. Methods in Molecular Biology, 2019, 1992, 257-268.	0.9	14
29	ImageJ SurfCut: a user-friendly pipeline for high-throughput extraction of cell contours from 3D image stacks. BMC Biology, 2019, 17, 38.	3.8	41
30	Does resource availability help determine the evolutionary route to multicellularity?. Evolution & Development, 2019, 21, 115-119.	2.0	12
31	Mechanical Conflicts in Twisting Growth Revealed by Cell-Cell Adhesion Defects. Frontiers in Plant Science, 2019, 10, 173.	3.6	12
32	Paf1c defects challenge the robustness of flower meristem termination in<i>Arabidopsis thaliana</i>. Development (Cambridge), 2019, 146, .	2.5	11
33	Heterogeneity and Robustness in Plant Morphogenesis: From Cells to Organs. Annual Review of Plant Biology, 2018, 69, 469-495.	18.7	72
34	Why plants make puzzle cells, and how their shape emerges. ELife, 2018, 7, .	6.0	208
35	The contribution of mechanosensing to epidermal cell fate specification. Current Opinion in Genetics and Development, 2018, 51, 52-58.	3.3	11
36	A phosphoinositide map at the shoot apical meristem in Arabidopsis thaliana. BMC Biology, 2018, 16, 20.	3.8	34

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37	Mechanical Conflicts in Growth Heterogeneity. , 2018, , 193-207.		0
38	The self-organization of plant microtubules inside the cell volume yields their cortical localization, stable alignment, and sensitivity to external cues. PLoS Computational Biology, 2018, 14, e1006011.	3.2	67
39	An Image Analysis Pipeline to Quantify Emerging Cracks in Materials or Adhesion Defects in Living Tissues. Bio-protocol, 2018, 8, e3036.	0.4	2
40	A tension-adhesion feedback loop in plant epidermis. ELife, 2018, 7, .	6.0	110
41	The RNA Polymerase-Associated Factor 1 Complex Is Required for Plant Touch Responses. Journal of Experimental Botany, 2017, 68, erw439.	4.8	18
42	Mechano-devo. Mechanisms of Development, 2017, 145, 2-9.	1.7	6
43	Phyllotactic regularity requires the Paf1 complex in Arabidopsis. Development (Cambridge), 2017, 144, 4428-4436.	2.5	16
44	Nuclear envelope: a new frontier in plant mechanosensing?. Biophysical Reviews, 2017, 9, 389-403.	3.2	16
45	A mechanosensitive Ca2+ channel activity is dependent on the developmental regulator DEK1. Nature Communications, 2017, 8, 1009.	12.8	70
46	Clones of cells switch from reduction to enhancement of size variability in <i>Arabidopsis</i> sepals. Development (Cambridge), 2017, 144, 4398-4405.	2.5	24
47	Mechanical Shielding of Rapidly Growing Cells Buffers Growth Heterogeneity and Contributes to Organ Shape Reproducibility. Current Biology, 2017, 27, 3468-3479.e4.	3.9	77
48	Mechanochemical Polarization of Contiguous Cell Walls Shapes Plant Pavement Cells. Developmental Cell, 2017, 43, 290-304.e4.	7.0	132
49	Life behind the wall: sensing mechanical cues in plants. BMC Biology, 2017, 15, 59.	3.8	136
50	A Mechanical Feedback Restricts Sepal Growth and Shape in Arabidopsis. Current Biology, 2016, 26, 1019-1028.	3.9	187
51	Cell division plane orientation based on tensile stress in<i>Arabidopsis thaliana</i>. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E4294-303.	7.1	175
52	The impact of mechanical compression on cortical microtubules in Arabidopsis: a quantitative pipeline. Plant Journal, 2016, 88, 328-342.	5.7	42
53	Variable Cell Growth Yields Reproducible Organ Development through Spatiotemporal Averaging. Developmental Cell, 2016, 38, 15-32.	7.0	165
54	Meristem Biology Flourishes Under Mt. Tai. Molecular Plant, 2016, 9, 1224-1227.	8.3	0

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55	How do plants read their own shapes?. New Phytologist, 2016, 212, 333-337.	7.3	73
56	Developing a â€˜thick skinâ€™: a paradoxical role for mechanical tension in maintaining epidermal integrity?. Development (Cambridge), 2016, 143, 3249-3258.	2.5	30
57	An epidermis-driven mechanism positions and scales stem cell niches in plants. Science Advances, 2016, 2, e1500989.	10.3	109
58	Interplay between miRNA regulation and mechanical stress for<i>CUC</i>gene expression at the shoot apical meristem. Plant Signaling and Behavior, 2016, 11, e1127497.	2.4	24
59	Mechanically, the Shoot Apical Meristem of Arabidopsis Behaves like a Shell Inflated by a Pressure of About 1 MPa. Frontiers in Plant Science, 2015, 6, 1038.	3.6	59
60	A Computational Framework for 3D Mechanical Modeling of Plant Morphogenesis with Cellular Resolution. PLoS Computational Biology, 2015, 11, e1003950.	3.2	110
61	Meristem size contributes to the robustness of phyllotaxis in Arabidopsis. Journal of Experimental Botany, 2015, 66, 1317-1324.	4.8	47
62	Mechanical stress contributes to the expression of the STM homeobox gene in Arabidopsis shoot meristems. ELife, 2015, 4, e07811.	6.0	137
63	Subcellular and supracellular mechanical stress prescribes cytoskeleton behavior in Arabidopsis cotyledon pavement cells. ELife, 2014, 3, e01967.	6.0	323
64	Matching Patterns of Gene Expression to Mechanical Stiffness at Cell Resolution through Quantitative Tandem Epifluorescence and Nanoindentation Â Â Â. Plant Physiology, 2014, 165, 1399-1408.	4.8	53
65	FibrilTool, an ImageJ plug-in to quantify fibrillar structures in raw microscopy images. Nature Protocols, 2014, 9, 457-463.	12.0	470
66	Time-Lapse Imaging of Developing Meristems Using Confocal Laser Scanning Microscope. Methods in Molecular Biology, 2014, 1080, 111-119.	0.9	29
67	An Auxin-Mediated Shift toward Growth Isotropy Promotes Organ Formation at the Shoot Meristem in Arabidopsis. Current Biology, 2014, 24, 2335-2342.	3.9	161
68	Widespread mechanosensing controls the structure behind the architecture in plants. Current Opinion in Plant Biology, 2013, 16, 654-660.	7.1	48
69	Plant science and agricultural productivity: Why are we hitting the yield ceiling?. Plant Science, 2013, 210, 159-176.	3.6	49
70	The mechanics behind cell division. Current Opinion in Plant Biology, 2013, 16, 774-779.	7.1	23
71	Impaired Cellulose Synthase Guidance Leads to Stem Torsion and Twists Phyllotactic Patterns in Arabidopsis. Current Biology, 2013, 23, 895-900.	3.9	50
72	Cell Biology: Cytoskeleton Network Topology Feeds Back on Its Regulation. Current Biology, 2013, 23, R963-R965.	3.9	2

#	ARTICLE	IF	CITATIONS
73	How mechanical stress controls microtubule behavior and morphogenesis in plants: history, experiments and revisited theories. Plant Journal, 2013, 75, 324-338.	5.7	139
74	Integrative Cell Biology: Katanin at the Crossroads. Current Biology, 2013, 23, R206-R208.	3.9	3
75	A correlative microscopy approach relates microtubule behaviour, local organ geometry, and cell growth at the Arabidopsis shoot apical meristem. Journal of Experimental Botany, 2013, 64, 5753-5767.	4.8	45
76	Regulatory Role of Cell Division Rules on Tissue Growth Heterogeneity. Frontiers in Plant Science, 2012, 3, 174.	3.6	51
77	The mechanics behind cell polarity. Trends in Cell Biology, 2012, 22, 584-591.	7.9	81
78	Cracking the elusive alignment hypothesis: the microtubuleâ€"cellulose synthase nexus unraveled. Trends in Plant Science, 2012, 17, 666-674.	8.8	106
79	Mechanical Stress Acts via Katanin to Amplify Differences in Growth Rate between Adjacent Cells in Arabidopsis. Cell, 2012, 149, 439-451.	28.9	418
80	<i>Inâ€ƒvivo</i> analysis of local wall stiffness at the shoot apical meristem in Arabidopsis using atomic force microscopy. Plant Journal, 2011, 67, 1116-1123.	5.7	186
81	The Role of Mechanical Forces in Plant Morphogenesis. Annual Review of Plant Biology, 2011, 62, 365-385.	18.7	153
82	Organogenesis from stem cells in planta: multiple feedback loops integrating molecular and mechanical signals. Cellular and Molecular Life Sciences, 2011, 68, 2885-2906.	5.4	48
83	Quantitative imaging strategies pave the way for testable biological concepts. BMC Biology, 2011, 9, 10.	3.8	2
84	Is cell polarity under mechanical control in plants?. Plant Signaling and Behavior, 2011, 6, 137-139.	2.4	15
85	Alignment between PIN1 Polarity and Microtubule Orientation in the Shoot Apical Meristem Reveals a Tight Coupling between Morphogenesis and Auxin Transport. PLoS Biology, 2010, 8, e1000516.	5.6	392
86	Integrating physical stress, growth, and development. Current Opinion in Plant Biology, 2010, 13, 46-52.	7.1	33
87	The mechanics behind plant development. New Phytologist, 2010, 185, 369-385.	7.3	169
88	Regulation of shape and patterning in plant development. Current Opinion in Genetics and Development, 2010, 20, 454-459.	3.3	41
89	Plant development: A TALE story. Comptes Rendus - Biologies, 2010, 333, 371-381.	0.2	127
90	Turning a plant tissue into a living cell froth through isotropic growth. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 8453-8458.	7.1	107

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91	From genes to shape: Understanding the control of morphogenesis at the shoot meristem in higher plants using systems biology. Comptes Rendus - Biologies, 2009, 332, 974-985.	0.2	7
92	Maize AMEIOTIC1 is essential for multiple early meiotic processes and likely required for the initiation of meiosis. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 3603-3608.	7.1	113
93	Statistical Properties of Cell Topology and Geometry in a Tissue-Growth Model. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2009, , 971-979.	0.3	5
94	Developmental Patterning by Mechanical Signals in <i>Arabidopsis</i>. Science, 2008, 322, 1650-1655.	12.6	795
95	KNAT6: An Arabidopsis Homeobox Gene Involved in Meristem Activity and Organ Separation. Plant Cell, 2006, 18, 1900-1907.	6.6	183
96	GENETICS OF MEIOTIC PROPHASE I IN PLANTS. Annual Review of Plant Biology, 2006, 57, 267-302.	18.7	166
97	Alleles of<i>afd1</i>dissect REC8 functions during meiotic prophase I. Journal of Cell Science, 2006, 119, 3306-3315.	2.0	159
98	A REC8-Dependent Plant Shugoshin Is Required for Maintenance of Centromeric Cohesion during Meiosis and Has No Mitotic Functions. Current Biology, 2005, 15, 948-954.	3.9	99
99	The KNAT2 Homeodomain Protein Interacts with Ethylene and Cytokinin Signaling. Plant Physiology, 2002, 130, 657-665.	4.8	90
100	<i>KNAT2</i>. Plant Cell, 2001, 13, 1719-1734.	6.6	124