Ljudmilla Borisjuk

List of Publications by Year
in descending order

92 papers	7,135 citations	47006 47 h-index	60623 81 g-index
93 all docs	93 docs citations	93 times ranked	7437 citing authors

#	Article	IF	Citations
1	A chromosome conformation capture ordered sequence of the barley genome. Nature, 2017, 544, 427-433.	27.8	1,365
2	MOLECULAR PHYSIOLOGY OF LEGUME SEED DEVELOPMENT. Annual Review of Plant Biology, 2005, 56, 253-279.	18.7	446
3	The oxygen status of the developing seed. New Phytologist, 2009, 182, 17-30.	7.3	225
4	Controlling seed development and seed size in Vicia faba: a role for seed coat-associated invertases and carbohydrate state. Plant Journal, 1996, 10, 823-834.	5.7	200
5	Surveying the plantâ€™s world by magnetic resonance imaging. Plant Journal, 2012, 70, 129-146.	5.7	149
6	Ectopic Expression of an Amino Acid Transporter (VfAAP1) in Seeds of Vicia narbonensis and Pea Increases Storage Proteins. Plant Physiology, 2005, 137, 1236-1249.	4.8	145
7	Energy state and its control on seed development: starch accumulation is associated with high ATP and steep oxygen gradients within barley grains. Journal of Experimental Botany, 2004, 55, 1351-1359.	4.8	138
8	Highâ€resolution histographical mapping of glucose concentrations in developing cotyledons of Vicia faba in relation to mitotic activity and storage processes: glucose as a possible developmental trigger. Plant Journal, 1998, 15, 583-591.	5.7	135
9	Legume embryos develop in a hypoxic environment. Journal of Experimental Botany, 2002, 53, 1099-1107.	4.8	135
10	Physical, metabolic and developmental functions of the seed coat. Frontiers in Plant Science, 2014, 5, 510.	3.6	125
11	Repressing the Expression of the SUCROSE NONFERMENTING-1-RELATED PROTEIN KINASE Gene in Pea Embryo Causes Pleiotropic Defects of Maturation Similar to an Abscisic Acid-Insensitive Phenotype. Plant Physiology, 2006, 140, 263-278.	4.8	121
12	Nitriteâ€"nitric oxide control of mitochondrial respiration at the frontier of anoxia. Biochimica Et Biophysica Acta - Bioenergetics, 2008, 1777, 1268-1275.	1.0	121
13	Spatial Mapping of Lipids at Cellular Resolution in Embryos of Cotton. Plant Cell, 2012, 24, 622-636.	6.6	114
14	Spatial analysis of plant metabolism: Sucrose imaging within Vicia faba cotyledons reveals specific developmental patterns. Plant Journal, 2002, 29, 521-530.	5.7	112
15	Gradients of lipid storage, photosynthesis and plastid differentiation in developing soybean seeds. New Phytologist, 2005, 167, 761-776.	7.3	109
16	Seed Architecture Shapes Embryo Metabolism in Oilseed Rape Â. Plant Cell, 2013, 25, 1625-1640.	6.6	109
17	Sucrose metabolism during cotyledon development of Vicia faba L. is controlled by the concerted action of both sucrose-phosphate synthase and sucrose synthase: expression patterns, metabolic regulation and implications for seed development. Plant Journal, 1996, 9, 841-850.	5.7	108
18	Amino acid permeases in developing seeds of Vicia faba L.: expression precedes storage protein synthesis and is regulated by amino acid supply. Plant Journal, 2001, 28, 61-71.	5.7	107

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19	Energy Status and Its Control on Embryogenesis of Legumes. Embryo Photosynthesis Contributes to Oxygen Supply and Is Coupled to Biosynthetic Fluxes. Plant Physiology, 2003, 132, 1196-1206.	4.8	106
20	Low oxygen sensing and balancing in plant seeds: a role for nitric oxide. New Phytologist, 2007, 176, 813-823.	7.3	103
21	Differentiation of legume cotyledons as related to metabolic gradients and assimilate transport into seeds. Journal of Experimental Botany, 2003, 54, 503-512.	4.8	98
22	Positional cues for the starch/lipid balance in maize kernels and resource partitioning to the embryo. Plant Journal, 2005, 42, 69-83.	5.7	97
23	Cell-type specific, coordinate expression of two ADP-glucose pyrophosphorylase genes in relation to starch biosynthesis during seed development of Vicia faba L.. Planta, 1995, 195, 352-61.	3.2	95
24	Expression of a yeast-derived invertase in developing cotyledons ofVicia narbonensisalters the carbohydrate state and affects storage functions. Plant Journal, 1998, 16, 163-172.	5.7	94
25	Evidence of a key role for photosynthetic oxygen release in oil storage in developing soybean seeds. New Phytologist, 2005, 167, 777-786.	7.3	93
26	Embryogenesis of Vicia faba L.: Histodifferentiation in Relation to Starch and Storage Protein Synthesis. Journal of Plant Physiology, 1995, 147, 203-218.	3.5	90
27	Temperature-dependent endogenous oxygen concentration regulates microsomal oleate desaturase in developing sunflower seeds. Journal of Experimental Botany, 2007, 58, 3171-3181.	4.8	87
28	Imaging heterogeneity of membrane and storage lipids in transgenic <i><scp>C</scp>amelina sativa</i> seeds with altered fatty acid profiles. Plant Journal, 2013, 76, 138-150.	5.7	84
29	Assimilate uptake and the regulation of seed development. Seed Science Research, 1998, 8, 331-346.	1.7	80
30	Barley Grain Development. International Review of Cell and Molecular Biology, 2010, 281, 49-89.	3.2	75
31	Spatial and Temporal Mapping of Key Lipid Species in <i>Brassica napus</i> Seeds. Plant Physiology, 2017, 173, 1998-2009.	4.8	72
32	Quantitative Multilevel Analysis of Central Metabolism in Developing Oilseeds of Oilseed Rape during in Vitro Culture. Plant Physiology, 2015, 168, 828-848.	4.8	71
33	Combined Noninvasive Imaging and Modeling Approaches Reveal Metabolic Compartmentation in the Barley Endosperm Â. Plant Cell, 2011, 23, 3041-3054.	6.6	70
34	Jekyll Encodes a Novel Protein Involved in the Sexual Reproduction of Barley. Plant Cell, 2006, 18, 1652-1666.	6.6	69
35	Dynamic ¹³C/¹H NMR imaging uncovers sugar allocation in the living seed. Plant Biotechnology Journal, 2011, 9, 1022-1037.	8.3	69
36	Energy status and its control on embryogenesis of legumes: ATP distribution within Vicia faba embryos is developmentally regulated and correlated with photosynthetic capacity. Plant Journal, 2003, 36, 318-329.	5.7	67

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37	Seed-specific expression of a bacterial phosphoenolpyruvate carboxylase in Vicia narbonensis increases protein content and improves carbon economy. Plant Biotechnology Journal, 2004, 2, 211-219.	8.3	67
38	Trehalose 6â€phosphate promotes seed filling by activating auxin biosynthesis. New Phytologist, 2021, 229, 1553-1565.	7.3	67
39	Clubroot Disease Stimulates Early Steps of Phloem Differentiation and Recruits SWEET Sucrose Transporters within Developing Galls. Plant Cell, 2018, 30, 3058-3073.	6.6	66
40	Gradients of seed photosynthesis and its role for oxygen balancing. BioSystems, 2011, 103, 302-308.	2.0	65
41	Quantitative imaging of oil storage in developing crop seeds. Plant Biotechnology Journal, 2008, 6, 31-45.	8.3	60
42	An imaging method for oxygen distribution, respiration and photosynthesis at a microscopic level of resolution. New Phytologist, 2012, 196, 926-936.	7.3	60
43	De-regulation of abscisic acid contents causes abnormal endosperm development in the barley mutant seg8. Plant Journal, 2010, 64, 589-603.	5.7	59
44	Peptide and Amino Acid Transporters Are Differentially Regulated during Seed Development and Germination in Faba Bean. Plant Physiology, 2003, 132, 1950-1960.	4.8	57
45	The Metabolic Role of the Legume Endosperm: A Noninvasive Imaging Study Â Â. Plant Physiology, 2009, 151, 1139-1154.	4.8	56
46	Genome and time-of-day transcriptome of <i>Wolffia australiana</i> link morphological minimization with gene loss and less growth control. Genome Research, 2021, 31, 225-238.	5.5	56
47	Seed-specific elevation of non-symbiotic hemoglobin AtHb1: beneficial effects and underlying molecular networks in Arabidopsis thaliana. BMC Plant Biology, 2011, 11, 48.	3.6	53
48	Transcript abundance on its own cannot be used to infer fluxes in central metabolism. Frontiers in Plant Science, 2014, 5, 668.	3.6	53
49	The genome of jojoba (<i>Simmondsia chinensis</i>): A taxonomically isolated species that directs wax ester accumulation in its seeds. Science Advances, 2020, 6, eaay3240.	10.3	53
50	A functional imaging study of germinating oilseed rape seed. New Phytologist, 2017, 216, 1181-1190.	7.3	49
51	Void space inside the developing seed of <i><scp>B</scp>rassica napus</i> and the modelling of its function. New Phytologist, 2013, 199, 936-947.	7.3	48
52	Antisense inhibition of the plastidial glucose-6-phosphate/phosphate translocator in Vicia seeds shifts cellular differentiation and promotes protein storage. Plant Journal, 2007, 51, 468-484.	5.7	42
53	A pea seed mutant affected in the differentiation of the embryonic epidermis is impaired in embryo growth and seed maturation. Development (Cambridge), 2002, 129, 1595-1607.	2.5	40
54	Nuclear magnetic resonance imaging of lipid in living plants. Progress in Lipid Research, 2013, 52, 465-487.	11.6	37

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55	Methodology and Significance of Microsensor-based Oxygen Mapping in Plant Seeds â€“ an Overview. Sensors, 2009, 9, 3218-3227.	3.8	36
56	Functions of maize genes encoding pyruvate phosphate dikinase in developing endosperm. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E24-E33.	7.1	35
57	A Noninvasive Platform for Imaging and Quantifying Oil Storage in Submillimeter Tobacco Seed Â Â. Plant Physiology, 2013, 161, 583-593.	4.8	33
58	Vacuolar processing enzyme 4 contributes to maternal control of grain size in barley by executing programmed cell death in the pericarp. New Phytologist, 2018, 218, 1127-1142.	7.3	30
59	A novel noninvasive procedure for highâ€throughput screening of major seed traits. Plant Biotechnology Journal, 2015, 13, 188-199.	8.3	29
60	Cofactome analyses reveal enhanced flux of carbon into oil for potential biofuel production. Plant Journal, 2011, 67, 1018-1028.	5.7	28
61	Transient expression of storage-protein genes during early embryogenesis ofVicia faba: synthesis and metabolization of vicilin and legumin in the embryo, suspensor and endosperm. Planta, 1995, 196, 765-774.	3.2	27
62	Discovery of key regulators of dark gland development and hypericin biosynthesis in St. John's Wort (<i>Hypericum perforatum</i>). Plant Biotechnology Journal, 2019, 17, 2299-2312.	8.3	27
63	Glucan phosphorylases in Vicia faba L.: cloning, structural analysis and expression patterns of cytosolic and plastidic forms in relation to starch. Planta, 1996, 199, 64-73.	3.2	26
64	The homeodomain transcription factor Ta HDZ ipIâ€2 from wheat regulates frost tolerance, flowering time and spike development in transgenic barley. New Phytologist, 2016, 211, 671-687.	7.3	26
65	A novel procedure for the quantitative analysis of metabolites, storage products and transcripts of laser microdissected seed tissues of Brassica napus. Plant Methods, 2011, 7, 19.	4.3	23
66	Micro Imaging Displays the Sucrose Landscape within and along Its Allocation Pathways. Plant Physiology, 2018, 178, 1448-1460.	4.8	23
67	Non-invasive Mapping of Lipids in Plant Tissue Using Magnetic Resonance Imaging. Methods in Molecular Biology, 2009, 579, 485-496.	0.9	23
68	Integration of carbohydrate and nitrogen metabolism during legume seed development: Implications for storage product synthesis. Journal of Plant Physiology, 1998, 152, 641-648.	3.5	22
69	Metabolic architecture of the cereal grain and its relevance to maximize carbon use efficiency. Plant Physiology, 2015, 169, pp.00981.2015.	4.8	22
70	The potential of nuclear magnetic resonance to track lipids in planta. Biochimie, 2016, 130, 97-108.	2.6	22
71	Expression patterns and subcellular localization of a 52 kDa sucrose-binding protein homologue of Vicia faba (VfSBPL) suggest different functions during development. Plant Molecular Biology, 2001, 47, 461-474.	3.9	21
72	Low and High Field Magnetic Resonance for in Vivo Analysis of Seeds. Materials, 2011, 4, 1426-1439.	2.9	19

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73	Cellular Plasticity in Response to Suppression of Storage Proteins in the Brassica napus Embryo. Plant Cell, 2020, 32, 2383-2401.	6.6	19
74	Systematic identification of factors involved in post-transcriptional processes in wheat grain. Plant Molecular Biology, 2006, 62, 637-653.	3.9	17
75	Adaptation Strategies of Halophytic Barley Hordeum marinum ssp. marinum to High Salinity and Osmotic Stress. International Journal of Molecular Sciences, 2020, 21, 9019.	4.1	17
76	Nitric oxide is a versatile sensor of low oxygen stress in plants. Plant Signaling and Behavior, 2008, 3, 391-393.	2.4	16
77	A mechanistic view on lodging resistance in rye and wheat: a multiscale comparative study. Plant Biotechnology Journal, 2021, 19, 2646-2661.	8.3	16
78	A pea seed mutant affected in the differentiation of the embryonic epidermis is impaired in embryo growth and seed maturation. Development (Cambridge), 2002, 129, 1595-607.	2.5	16
79	Grain filling in barley relies on developmentally controlled programmed cell death. Communications Biology, 2021, 4, 428.	4.4	15
80	Planar Oxygen Sensors for Non Invasive Imaging in Experimental Biology. , 0, , .		13
81	Subtissue-Specific Evaluation of Promoter Efficiency by Quantitative Fluorometric Assay in Laser Microdissected Tissues of Rapeseed. Plant Physiology, 2011, 157, 563-573.	4.8	9
82	Fertility in barley flowers depends on <i>Jekyll</i> functions in male and female sporophytes. New Phytologist, 2012, 194, 142-157.	7.3	9
83	The Role of Persulfide Metabolism During Arabidopsis Seed Development Under Light and Dark Conditions. Frontiers in Plant Science, 2018, 9, 1381.	3.6	8
84	The highly divergent Jekyll genes, required for sexual reproduction, are lineage specific for the related grass tribes Triticeae and Bromeae. Plant Journal, 2019, 98, 961-974.	5.7	7
85	The metabolic environment of the developing embryo: A multidisciplinary approach on oilseed rapeseed. Journal of Plant Physiology, 2021, 265, 153505.	3.5	7
86	MultiSense: A Multimodal Sensor Tool Enabling the High-Throughput Analysis of Respiration. Methods in Molecular Biology, 2017, 1670, 47-56.	0.9	4
87	The process of seed maturation is influenced by mechanical constraints. New Phytologist, 2021, 229, 19-23.	7.3	4
88	Seed Coat: Associated Invertases of Fava Bean Control Both Unloading and Storage Functions: Cloning of cDNAs and Cell Type: Specific Expression. Plant Cell, 1995, 7, 1835.	6.6	3
89	Probing the Metabolic Landscape of Plant Vascular Bundles by Infrared Fingerprint Analysis, Imaging and Mass Spectrometry. Biomolecules, 2021, 11, 1717.	4.0	3
90	Tracking metabolite dynamics in plants via indirect 13C chemical shift imaging with an interleaved variable density acquisition weighted sampling pattern. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2015, 28, 127-134.	2.0	2

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91	Advances in the understanding of barley plant physiology: factors determining grain development, composition, and chemistry. Burleigh Dodds Series in Agricultural Science, 2020, , 53-96.	0.2	2
92	Quantitative monitoring of paramagnetic contrast agents and their allocation in plant tissues via DCE-MRI. Plant Methods, 2022, 18, 47.	4.3	1