Ta Gorshkova

List of Publications by Year
in descending order

89 papers	2,823 citations	159525 30 h-index	197736 49 g-index
90 all docs	90 docs citations	90 times ranked	1787 citing authors

#	Article	IF	Citations
1	Tensional stress generation in gelatinous fibres: a review and possible mechanism based on cell-wall structure and composition. Journal of Experimental Botany, 2012, 63, 551-565.	2.4	192
2	The snap point: a transition point in Linum usitatissimum bast fiber development. Industrial Crops and Products, 2003, 18, 213-221.	2.5	144
3	Plant Fiber Formation: State of the Art, Recent and Expected Progress, and Open Questions. Critical Reviews in Plant Sciences, 2012, 31, 201-228.	2.7	132
4	Secondary cell-wall assembly in flax phloem fibres: role of galactans. Planta, 2006, 223, 149-158.	1.6	118
5	Development of Cellulosic Secondary Walls in Flax Fibers Requires Î²-Galactosidase Â Â Â. Plant Physiology, 2011, 156, 1351-1363.	2.3	114
6	Specific type of secondary cell wall formed by plant fibers. Russian Journal of Plant Physiology, 2010, 57, 328-341.	0.5	90
7	Intrusive growth of flax phloem fibers is of intercalary type. Planta, 2005, 222, 565-574.	1.6	87
8	Aspen tension wood fibers contain Î²-(1â†’4)-galactans and acidic arabinogalactans retained by cellulose microfibrils in gelatinous walls. Plant Physiology, 2015, 169, pp.00690.2015.	2.3	86
9	Composition and Distribution of Cell Wall Phenolic Compounds in Flax (Linum usitatissimum L.) Stem Tissues. Annals of Botany, 2000, 85, 477-486.	1.4	76
10	Plant â€˜musclesâ€™: fibers with a tertiary cell wall. New Phytologist, 2018, 218, 66-72.	3.5	73
11	Intrusive growth of sclerenchyma fibers. Russian Journal of Plant Physiology, 2010, 57, 342-355.	0.5	69
12	Occurrence of cell-specific galactan is coinciding with bast fiber developmental transition in flax. Industrial Crops and Products, 2004, 19, 217-224.	2.5	59
13	Chitinase-Like (CTL) and Cellulose Synthase (CESA) Gene Expression in Gelatinous-Type Cellulosic Walls of Flax (Linum usitatissimum L.) Bast Fibers. PLoS ONE, 2014, 9, e97949.	1.1	59
14	Transcriptome portrait of cellulose-enriched flax fibres at advanced stage of specialization. Plant Molecular Biology, 2017, 93, 431-449.	2.0	58
15	Intrusive growth of primary and secondary phloem fibres in hemp stem determines fibre-bundle formation and structure. AoB PLANTS, 2015, 7, plv061.	1.2	54
16	Cold alkali can extract phenolic acids that are ether linked to cell wall components in dicotyledonous plants (buckwheat, soybean and flax). Phytochemistry, 1999, 50, 395-400.	1.4	53
17	Structural details of pectic galactan from the secondary cell walls of flax (Linum usitatissimum L.) phloem fibres. Carbohydrate Polymers, 2012, 87, 853-861.	5.1	53
18	Transcriptome Analysis of Intrusively Growing Flax Fibers Isolated by Laser Microdissection. Scientific Reports, 2018, 8, 14570.	1.6	52

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19	Polysaccharides, tightly bound to cellulose in cell wall of flax bast fibre: Isolation and identification. Carbohydrate Polymers, 2008, 72, 719-729.	5.1	46
20	Cellulosic fibres of flax recruit both primary and secondary cell wall cellulose synthases during deposition of thick tertiary cell walls and in the course of graviresponse. Functional Plant Biology, 2017, 44, 820.	1.1	45
21	Investigation of the Mechanical Properties of Flax Cell Walls during Plant Development: The Relation between Performance and Cell Wall Structure. Fibers, 2018, 6, 6.	1.8	45
22	The effect of soil drought on the phloem fiber development in long-fiber flax. Russian Journal of Plant Physiology, 2006, 53, 656-662.	0.5	43
23	Gelation of rhamnogalacturonan I is based on galactan side chain interaction and does not involve chemical modifications. Carbohydrate Polymers, 2017, 171, 143-151.	5.1	43
24	Elongating maize root: zone-specific combinations of polysaccharides from type I and type II primary cell walls. Scientific Reports, 2020, 10, 10956.	1.6	42
25	Flax fibers: assessing the non-cellulosic polysaccharides and an approach to supramolecular design of the cell wall. Cellulose, 2017, 24, 1985-2001.	2.4	36
26	Key Stages of Fiber Development as Determinants of Bast Fiber Yield and Quality. Fibers, 2018, 6, 20.	1.8	36
27	Homofusion of Golgi secretory vesicles in flax phloem fibers during formation of the gelatinous secondary cell wall. Protoplasma, 2008, 233, 269-273.	1.0	35
28	MALDI-TOF MS evidence for the linking of flax bast fibre galactan to rhamnogalacturonan backbone. Carbohydrate Polymers, 2007, 67, 86-96.	5.1	34
29	Arrangement of mixed-linkage glucan and glucuronoarabinoxylan in the cell walls of growing maize roots. Annals of Botany, 2014, 114, 1135-1145.	1.4	34
30	Metrics of rhamnogalacturonan I with Î²-(1â†'4)-linked galactan side chains and structural basis for its self-aggregation. Carbohydrate Polymers, 2017, 158, 93-101.	5.1	34
31	Spatial structure of plant cell wall polysaccharides and its functional significance. Biochemistry (Moscow), 2013, 78, 836-853.	0.7	31
32	Formation of plant cell wall supramolecular structure. Biochemistry (Moscow), 2010, 75, 159-172.	0.7	28
33	Development of distinct cell wall layers both in primary and secondary phloem fibers of hemp () Tj ETQq1 1 0.784314 rgBT /Overlock 10	2.5	28
34	Intrusive Growth of Phloem Fibers in Flax Stem: Integrated Analysis of miRNA and mRNA Expression Profiles. Plants, 2019, 8, 47.	1.6	28
35	CELL WALLS AND FIBERS | Fiber Formation. , 2003, , 87-96.		27
36	Spatial structures of rhamnogalacturonan I in gel and colloidal solution identified by 1D and 2D-FTIR spectroscopy. Carbohydrate Polymers, 2018, 192, 231-239.	5.1	27

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37	Genes with bast fiber-specific expression in flax plants - Molecular keys for targeted fiber crop improvement. Industrial Crops and Products, 2020, 152, 112549.	2.5	27
38	Physicochemical properties of complex rhamnogalacturonan I from gelatinous cell walls of flax fibers. Carbohydrate Polymers, 2015, 117, 853-861.	5.1	26
39	Development of gravitropic response: unusual behavior of flax phloem G-fibers. Protoplasma, 2017, 254, 749-762.	1.0	25
40	Cell Wall Polymers in Reaction Wood. Springer Series in Wood Science, 2014, , 37-106.	0.8	23
41	Biogenesis of plant fibers. Russian Journal of Developmental Biology, 2007, 38, 221-232.	0.1	22
42	Pectobacterium atrosepticum exopolysaccharides: identification, molecular structure, formation under stress and in planta conditions. Glycobiology, 2017, 27, 1016-1026.	1.3	21
43	Novel Insight into the Intricate Shape of Flax Fibre Lumen. Fibers, 2021, 9, 24.	1.8	21
44	Cell wall-bound phenolics in cells of maize (Zea mays, Gramineae) and buckwheat (Fagopyrum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 46	1.7	19
45	Flax rhamnogalacturonan lyases: phylogeny, differential expression and modeling of protein structure. Physiologia Plantarum, 2019, 167, 173-187.	2.6	19
46	Functional diversity of rhamnogalacturonans I. Russian Chemical Bulletin, 2015, 64, 1014-1023.	0.4	18
47	Phloem fibres as motors of gravitropic behaviour of flax plants: level of transcriptome. Functional Plant Biology, 2018, 45, 203.	1.1	18
48	Expression of cellulose synthase-like genes in two phenotypically distinct flax (Linum usitatissimum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	0.8	18
49	Tissue-specific processes during cell wall formation in flax fiber. Plant Biosystems, 2005, 139, 88-92.	0.8	17
50	Pathogenâ€induced conditioning of the primary xylem vessels â€" a prerequisite for the formation of bacterial emboli by <i>Pectobacterium atrosepticum</i>. Plant Biology, 2016, 18, 609-617.	1.8	17
51	Tissue-specific rhamnogalacturonan I forms the gel with hyperelastic properties. Biochemistry (Moscow), 2015, 80, 915-924.	0.7	16
52	AFM analysis reveals polymorphism of purified flax rhamnogalacturonans I of distinct functional types. Carbohydrate Polymers, 2019, 216, 238-246.	5.1	16
53	Plant fiber intrusive growth characterized by NMR method. Russian Journal of Plant Physiology, 2006, 53, 163-168.	0.5	15
54	Galactosidase of plant fibers with gelatinous cell wall: Identification and localization. Russian Journal of Plant Physiology, 2012, 59, 246-254.	0.5	15

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55	Distribution and structure of mixed linkage glucan at different stages of elongation of maize root cells. Russian Journal of Plant Physiology, 2012, 59, 339-347.	0.5	15
56	Cell Wall Layer Induced in Xylem Fibers of Flax Upon Gravistimulation Is Similar to Constitutively Formed Cell Walls of Bast Fibers. Frontiers in Plant Science, 2021, 12, 660375.	1.7	15
57	Cell wall components in torrefied softwood and hardwood samples. Journal of Analytical and Applied Pyrolysis, 2015, 116, 102-113.	2.6	13
58	Free galactose and galactosidase activity in the course of flax fiber development. Russian Journal of Plant Physiology, 2009, 56, 58-67.	0.5	12
59	Plant oligosaccharides â€" outsiders among elicitors?. Biochemistry (Moscow), 2015, 80, 881-900.	0.7	12
60	The Toolbox for Fiber Flax Breeding: A Pipeline From Gene Expression to Fiber Quality. Frontiers in Genetics, 2020, 11, 589881.	1.1	12
61	Elongation of wood fibers combines features of diffuse and tip growth. New Phytologist, 2021, 232, 673-691.	3.5	12
62	Glucuronoarabinoxylan extracted by treatment with endoxylanase from different zones of growing maize root. Biochemistry (Moscow), 2012, 77, 395-403.	0.7	11
63	Assessment of Primary Cell Wall Nanomechanical Properties in Internal Cells of Non-Fixed Maize Roots. Plants, 2019, 8, 172.	1.6	11
64	Differential expression of Î±-l-arabinofuranosidases during maize (Zea mays L.) root elongation. Planta, 2015, 241, 1159-1172.	1.6	10
65	On the origin of bast fiber dislocations in flax. Industrial Crops and Products, 2022, 176, 114382.	2.5	10
66	Pretreatment of Sugar Beet Pulp with Dilute Sulfurous Acid is Effective for Multipurpose Usage of Carbohydrates. Applied Biochemistry and Biotechnology, 2016, 179, 307-320.	1.4	9
67	Gene Expression Patterns for Proteins With Lectin Domains in Flax Stem Tissues Are Related to Deposition of Distinct Cell Wall Types. Frontiers in Plant Science, 2021, 12, 634594.	1.7	9
68	Forgotten Actors: Glycoside Hydrolases During Elongation Growth of Maize Primary Root. Frontiers in Plant Science, 2021, 12, 802424.	1.7	9
69	Evidence and quantitative evaluation of tensile maturation strain in flax phloem through longitudinal splitting. Botany, 2020, 98, 9-19.	0.5	8
70	Review: Tertiary cell wall of plant fibers as a source of inspiration in material design. Carbohydrate Polymers, 2022, 295, 119849.	5.1	8
71	The Living Fossil Psilotum nudum Has Cortical Fibers With Mannan-Based Cell Wall Matrix. Frontiers in Plant Science, 2020, 11, 488.	1.7	7
72	The Modification of Plant Cell Wall Polysaccharides in Potato Plants during Pectobacterium atrosepticum-Caused Infection. Plants, 2021, 10, 1407.	1.6	7

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73	Variability in the composition of tissue-specific galactan from flax fibers. Russian Journal of Plant Physiology, 2007, 54, 782-789.	0.5	6
74	FIBexDB: a new online transcriptome platform to analyze development of plant cellulosic fibers. New Phytologist, 2021, 231, 512-515.	3.5	6
75	Identification of genes involved in the formation of soluble dietary fiber in winter rye grain and their expression in cultivars with different viscosities of wholemeal water extract. Crop Journal, 2022, 10, 532-549.	2.3	6
76	Plant Cell Wall Is a Stumbling Stone for Molecular Biologists. Russian Journal of Plant Physiology, 2005, 52, 392-409.	0.5	5
77	Plants at Bodybuilding: Development of Plant â€œMusclesâ€•, 2018, , 141-163.		5
78	Gradients of cell wall nano-mechanical properties along and across elongating primary roots of maize. Journal of Experimental Botany, 2021, 72, 1764-1781.	2.4	5
79	Structural characterization of tissue-specific galactan from flax fibers by 1H NMR and MALDI TOF mass spectrometry. Russian Journal of Bioorganic Chemistry, 2006, 32, 558-567.	0.3	4
80	Processes of protoplast senescence and death in flax fibers: An ultrastructural analysis. Russian Journal of Developmental Biology, 2012, 43, 94-100.	0.1	4
81	Systemic use of â€œlimpingâ€•enzymes in plant cell walls. Russian Journal of Plant Physiology, 2017, 64, 808-821.	0.5	4
82	Stimulation of adventitious root formation by the oligosaccharin OSRG at the transcriptome level. Plant Signaling and Behavior, 2020, 15, 1703503.	1.2	4
83	Dynamics of cell wall polysaccharides during the elongation growth of rye primary roots. Planta, 2022, 255, 108.	1.6	4
84	Character of oligosaccharin OS-RG participation in the IAA-induced formation of adventitious roots. Russian Journal of Plant Physiology, 2015, 62, 171-178.	0.5	3
85	Screenplay of flax phloem fiber behavior during gravitropic reaction. Plant Signaling and Behavior, 2018, 13, e1486144.	1.2	2
86	Configuration of the microtubule cytoskeleton in elongating fibers of flax (L.). Cell Biology International, 2003, 27, 225.	1.4	1
87	The Influence of Effectors of the Ca2+ Signaling System and Oligosaccharin OSRG on IAA-Induced Formation of Adventitious Roots on Explants of Buckwheat Hypocotyls. Russian Journal of Plant Physiology, 2020, 67, 626-635.	0.5	1
88	Composition of cellular walls in callus cultures of strawberries with different capacity to morphogenesis. Biopolymers and Cell, 1996, 12, 56-61.	0.1	1
89	Growing Maize Root: Lectins Involved in Consecutive Stages of Cell Development. Plants, 2022, 11, 1799.	1.6	0