Ta Gorshkova

List of Publications by Citations

85 papers	2,017 citations	25 h-index	41 g-index
90 ext. papers	2,550 ext. citations	4.5 avg, IF	5.01 L-index

#	Paper	IF	Citations
85	Tensional stress generation in gelatinous fibres: a review and possible mechanism based on cell-wall structure and composition. *Journal of Experimental Botany*, **2012**, 63, 551-65	7	151
84	The snap point: a transition point in Linum usitatissimum bast fiber development. *Industrial Crops and Products*, **2003**, 18, 213-221	5.9	121
83	Secondary cell-wall assembly in flax phloem fibres: role of galactans. *Planta*, **2006**, 223, 149-58	4.7	108
82	Plant Fiber Formation: State of the Art, Recent and Expected Progress, and Open Questions. *Critical Reviews in Plant Sciences*, **2012**, 31, 201-228	5.6	100
81	Development of cellulosic secondary walls in flax fibers requires beta-galactosidase. *Plant Physiology*, **2011**, 156, 1351-63	6.6	84
80	Specific type of secondary cell wall formed by plant fibers. *Russian Journal of Plant Physiology*, **2010** , 57, 328-341	1.6	71
79	Intrusive growth of flax phloem fibers is of intercalary type. *Planta*, **2005**, 222, 565-74	4.7	69
78	Composition and Distribution of Cell Wall Phenolic Compounds in Flax (Linum usitatissimum L.) Stem Tissues. *Annals of Botany*, **2000**, 85, 477-486	4.1	64
77	Aspen Tension Wood Fibers Contain [illegible](1---> 4)-Galactans and Acidic Arabinogalactans Retained by Cellulose Microfibrils in Gelatinous Walls. *Plant Physiology*, **2015**, 169, 2048-63	6.6	54
76	Intrusive growth of sclerenchyma fibers. *Russian Journal of Plant Physiology*, **2010**, 57, 342-355	1.6	51
75	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	4	51
74	Structural details of pectic galactan from the secondary cell walls of flax (Linum usitatissimum L.) phloem fibres. *Carbohydrate Polymers*, **2012**, 87, 853-861	10.3	48
73	Polysaccharides, tightly bound to cellulose in cell wall of flax bast fibre: Isolation and identification. *Carbohydrate Polymers*, **2008**, 72, 719-729	10.3	42
72	Occurrence of cell-specific galactan is coinciding with bast fiber developmental transition in flax. *Industrial Crops and Products*, **2004**, 19, 217-224	5.9	42
71	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	3.7	41
70	The effect of soil drought on the phloem fiber development in long-fiber flax. *Russian Journal of Plant Physiology*, **2006**, 53, 656-662	1.6	41
69	Plant 'muscles': fibers with a tertiary cell wall. *New Phytologist*, **2018**, 218, 66-72	9.8	40

68	Intrusive growth of primary and secondary phloem fibres in hemp stem determines fibre-bundle formation and structure. *AoB PLANTS*, **2015**, 7,	2.9	39
67	Transcriptome portrait of cellulose-enriched flax fibres at advanced stage of specialization. *Plant Molecular Biology*, **2017**, 93, 431-449	4.6	32
66	Investigation of the Mechanical Properties of Flax Cell Walls during Plant Development: The Relation between Performance and Cell Wall Structure. *Fibers*, **2018**, 6, 6	3.7	32
65	Flax fibers: assessing the non-cellulosic polysaccharides and an approach to supramolecular design of the cell wall. *Cellulose*, **2017**, 24, 1985-2001	5.5	30
64	MALDI-TOF MS evidence for the linking of flax bast fibre galactan to rhamnogalacturonan backbone. *Carbohydrate Polymers*, **2007**, 67, 86-96	10.3	30
63	Metrics of rhamnogalacturonan I with [illegible](1->4)-linked galactan side chains and structural basis for its self-aggregation. *Carbohydrate Polymers*, **2017**, 158, 93-101	10.3	29
62	Arrangement of mixed-linkage glucan and glucuronoarabinoxylan in the cell walls of growing maize roots. *Annals of Botany*, **2014**, 114, 1135-45	4.1	29
61	Gelation of rhamnogalacturonan I is based on galactan side chain interaction and does not involve chemical modifications. *Carbohydrate Polymers*, **2017**, 171, 143-151	10.3	28
60	Spatial structure of plant cell wall polysaccharides and its functional significance. *Biochemistry (Moscow)*, **2013**, 78, 836-53	2.9	25
59	Formation of plant cell wall supramolecular structure. *Biochemistry (Moscow)*, **2010**, 75, 159-72	2.9	24
58	Transcriptome Analysis of Intrusively Growing Flax Fibers Isolated by Laser Microdissection. *Scientific Reports*, **2018**, 8, 14570	4.9	24
57	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, 820-831	2.7	23
56	Development of distinct cell wall layers both in primary and secondary phloem fibers of hemp (Cannabis sativa L.). *Industrial Crops and Products*, **2018**, 117, 97-109	5.9	23
55	Physicochemical properties of complex rhamnogalacturonan I from gelatinous cell walls of flax fibers. *Carbohydrate Polymers*, **2015**, 117, 853-861	10.3	22
54	Homofusion of Golgi secretory vesicles in flax phloem fibers during formation of the gelatinous secondary cell wall. *Protoplasma*, **2008**, 233, 269-73	3.4	22
53	Biogenesis of plant fibers. *Russian Journal of Developmental Biology*, **2007**, 38, 221-232	0.8	20
52	CELL WALLS AND FIBERS | Fiber Formation **2003**, 87-96		20
51	Cell wall-bound phenolics in cells of maize (Zea mays, Gramineae) and buckwheat (Fagopyrum tataricum, Polygonaceae) with different plant regeneration abilities. *Plant Science*, **2000**, 152, 79-85	5.3	18

50	Cell Wall Polymers in Reaction Wood. *Springer Series in Wood Science*, **2014**, 37-106		18
49	Key Stages of Fiber Development as Determinants of Bast Fiber Yield and Quality. *Fibers*, **2018**, 6, 20	3.7	17
48	Development of gravitropic response: unusual behavior of flax phloem G-fibers. *Protoplasma*, **2017**, 254, 749-762	3.4	16
47	Elongating maize root: zone-specific combinations of polysaccharides from type I and type II primary cell walls. *Scientific Reports*, **2020**, 10, 10956	4.9	15
46	Spatial structures of rhamnogalacturonan I in gel and colloidal solution identified by 1D and 2D-FTIR spectroscopy. *Carbohydrate Polymers*, **2018**, 192, 231-239	10.3	15
45	Tissue-specific processes during cell wall formation in flax fiber. *Plant Biosystems*, **2005**, 139, 88-92	1.6	15
44	Plant fiber intrusive growth characterized by NMR method. *Russian Journal of Plant Physiology*, **2006**, 53, 163-168	1.6	15
43	Tissue-specific rhamnogalacturonan I forms the gel with hyperelastic properties. *Biochemistry (Moscow)*, **2015**, 80, 915-24	2.9	13
42	Galactosidase of plant fibers with gelatinous cell wall: Identification and localization. *Russian Journal of Plant Physiology*, **2012**, 59, 246-254	1.6	13
41	Functional diversity of rhamnogalacturonans I. *Russian Chemical Bulletin*, **2015**, 64, 1014-1023	1.7	13
40	Intrusive Growth of Phloem Fibers in Flax Stem: Integrated Analysis of miRNA and mRNA Expression Profiles. *Plants*, **2019**, 8,	4.5	12
39	Phloem fibres as motors of gravitropic behaviour of flax plants: level of transcriptome. *Functional Plant Biology*, **2018**, 45, 203-214	2.7	12
38	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	1.6	12
37	Cell wall components in torrefied softwood and hardwood samples. *Journal of Analytical and Applied Pyrolysis*, **2015**, 116, 102-113	6	11
36	Genes with bast fiber-specific expression in flax plants - Molecular keys for targeted fiber crop improvement. *Industrial Crops and Products*, **2020**, 152, 112549	5.9	11
35	AFM analysis reveals polymorphism of purified flax rhamnogalacturonans I of distinct functional types. *Carbohydrate Polymers*, **2019**, 216, 238-246	10.3	10
34	Glucuronoarabinoxylan extracted by treatment with endoxylanase from different zones of growing maize root. *Biochemistry (Moscow)*, **2012**, 77, 395-403	2.9	10
33	Free galactose and galactosidase activity in the course of flax fiber development. *Russian Journal of Plant Physiology*, **2009**, 56, 58-67	1.6	10

32	Pathogen-induced conditioning of the primary xylem vessels - a prerequisite for the formation of bacterial emboli by Pectobacterium atrosepticum. *Plant Biology*, **2016**, 18, 609-17	3.7	10
31	Plant oligosaccharides - outsiders among elicitors?. *Biochemistry (Moscow)*, **2015**, 80, 881-900	2.9	9
30	Differential expression of L-arabinofuranosidases during maize (Zea mays L.) root elongation. *Planta*, **2015**, 241, 1159-72	4.7	8
29	Pectobacterium atrosepticum exopolysaccharides: identification, molecular structure, formation under stress and in planta conditions. *Glycobiology*, **2017**, 27, 1016-1026	5.8	7
28	Novel Insight into the Intricate Shape of Flax Fibre Lumen. *Fibers*, **2021**, 9, 24	3.7	7
27	Pretreatment of Sugar Beet Pulp with Dilute Sulfurous Acid is Effective for Multipurpose Usage of Carbohydrates. *Applied Biochemistry and Biotechnology*, **2016**, 179, 307-20	3.2	6
26	Variability in the composition of tissue-specific galactan from flax fibers. *Russian Journal of Plant Physiology*, **2007**, 54, 782-789	1.6	6
25	Flax rhamnogalacturonan lyases: phylogeny, differential expression and modeling of protein structure. *Physiologia Plantarum*, **2019**, 167, 173-187	4.6	6
24	The Toolbox for Fiber Flax Breeding: A Pipeline From Gene Expression to Fiber Quality. *Frontiers in Genetics*, **2020**, 11, 589881	4.5	5
23	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	6.2	5
22	Assessment of Primary Cell Wall Nanomechanical Properties in Internal Cells of Non-Fixed Maize Roots. *Plants*, **2019**, 8,	4.5	4
21	Plants at Bodybuilding: Development of Plant Muscles **2018**, 141-163		4
20	Processes of protoplast senescence and death in flax fibers: An ultrastructural analysis. *Russian Journal of Developmental Biology*, **2012**, 43, 94-100	0.8	4
19	Systemic use of imping enzymes in plant cell walls. *Russian Journal of Plant Physiology*, **2017**, 64, 808-821	1.6	4
18	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	1	4
17	Plant Cell Wall Is a Stumbling Stone for Molecular Biologists. *Russian Journal of Plant Physiology*, **2005**, 52, 392-409	1.6	4
16	Evidence and quantitative evaluation of tensile maturation strain in flax phloem through longitudinal splitting. *Botany*, **2020**, 98, 9-19	1.3	4
15	Character of oligosaccharin OS-RG participation in the IAA-induced formation of adventitious roots. *Russian Journal of Plant Physiology*, **2015**, 62, 171-178	1.6	3

14	Expression of cellulose synthase-like genes in two phenotypically distinct flax (Linum usitatissimum L.) subspecies. *Genetic Resources and Crop Evolution*, **2020**, 67, 1821-1837	2	3
13	Stimulation of adventitious root formation by the oligosaccharin OSRG at the transcriptome level. *Plant Signaling and Behavior*, **2020**, 15, 1703503	2.5	3
12	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	6.2	3
11	Forgotten Actors: Glycoside Hydrolases During Elongation Growth of Maize Primary Root.. *Frontiers in Plant Science*, **2021**, 12, 802424	6.2	2
10	Gradients of cell wall nano-mechanical properties along and across elongating primary roots of maize. *Journal of Experimental Botany*, **2021**, 72, 1764-1781	7	2
9	Elongation of wood fibers combines features of diffuse and tip growth. *New Phytologist*, **2021**, 232, 673-681	9.8	2
8	The Living Fossil Has Cortical Fibers With Mannan-Based Cell Wall Matrix. *Frontiers in Plant Science*, **2020**, 11, 488	6.2	1
7	On the origin of bast fiber dislocations in flax. *Industrial Crops and Products*, **2022**, 176, 114382	5.9	1
6	Composition of cellular walls in callus cultures of strawberries with different capacity to morphogenesis. *Biopolymers and Cell*, **1996**, 12, 56-61	0.3	1
5	FIBexDB: a new online transcriptome platform to analyze development of plant cellulosic fibers. *New Phytologist*, **2021**, 231, 512-515	9.8	1
4	Screenplay of flax phloem fiber behavior during gravitropic reaction. *Plant Signaling and Behavior*, **2018**, 13, e1486144	2.5	1
3	Dynamics of cell wall polysaccharides during the elongation growth of rye primary roots.. *Planta*, **2022**, 255, 108	4.7	1
2	Configuration of the microtubule cytoskeleton in elongating fibers of flax (Linum usitatissimum L). *Cell Biology International*, **2003**, 27, 225	4.5	
1	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	1.6	