Petr Smykal

List of Publications by Year
in descending order

84	3,407	29	54
papers	citations	h-index (172457)	g-index (161849)

92	92	92	3099
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Legume Crops Phylogeny and Genetic Diversity for Science and Breeding. Critical Reviews in Plant Sciences, 2015, 34, 43-104.	5.7	248
2	iPBS: a universal method for DNA fingerprinting and retrotransposon isolation. Theoretical and Applied Genetics, 2010, 121, 1419-1430.	3.6	223
3	Pea (Pisum sativum L.) in the Genomic Era. Agronomy, 2012, 2, 74-115.	3.0	172
4	The genetic diversity and evolution of field pea (Pisum) studied by high throughput retrotransposon based insertion polymorphism (RBIP) marker analysis. BMC Evolutionary Biology, 2010, 10, 44.	3.2	169
5	The role of the testa during development and in establishment of dormancy of the legume seed. Frontiers in Plant Science, 2014, 5, 351.	3.6	154
6	The Impact of Genetic Changes during Crop Domestication. Agronomy, 2018, 8, 119.	3.0	146
7	Phylogeny, phylogeography and genetic diversity of the Pisum genus. Plant Genetic Resources: Characterisation and Utilisation, 2011, 9, 4-18.	0.8	128
8	Genetic diversity of cultivated flax (Linum usitatissimum L.) germplasm assessed by retrotransposon-based markers. Theoretical and Applied Genetics, 2011, 122, 1385-1397.	3.6	127
9	Assessment of genetic and epigenetic stability in long-term in vitro shoot culture of pea (Pisum) Tj ETQq1 1 0.784314 rgBT /Overlock 10	5.6	106
10	Potential and limits of exploitation of crop wild relatives for pea, lentil, and chickpea improvement. , 2020, 2, e36.		86
11	Genetic diversity and population structure of pea (Pisum sativum L.) varieties derived from combined retrotransposon, microsatellite and morphological marker analysis. Theoretical and Applied Genetics, 2008, 117, 413-424.	3.6	85
12	Genome-Wide Association Mapping for Agronomic and Seed Quality Traits of Field Pea (Pisum sativum) Tj ETQq0 0 0 rgBT /Overlock 10	3.6	83
13	Androgenesis: Affecting the fate of the male gametophyte. Physiologia Plantarum, 2001, 111, 1-8.	5.2	70
14	Patterns of Genetic Structure and Linkage Disequilibrium in a Large Collection of Pea Germplasm. G3: Genes, Genomes, Genetics, 2017, 7, 2461-2471.	1.8	65
15	Pollen Embryogenesis - The Stress Mediated Switch from Gametophytic to Sporophytic Development. Current Status and Future Prospects. Biologia Plantarum, 2000, 43, 481-489.	1.9	62
16	Genetic structure of wild pea (Pisum sativum subsp. elatius) populations in the northern part of the Fertile Crescent reflects moderate cross-pollination and strong effect of geographic but not environmental distance. PLoS ONE, 2018, 13, e0194056.	2.5	62
17	Genomic diversity and macroecology of the crop wild relatives of domesticated pea. Scientific Reports, 2017, 7, 17384.	3.3	59
18	Variety discrimination in pea (Pisum sativum L.) by molecular, biochemical and morphological markers. Journal of Applied Genetics, 2008, 49, 155-166.	1.9	53

#	Article	IF	Citations
19	A Combined Comparative Transcriptomic, Metabolomic, and Anatomical Analyses of Two Key Domestication Traits: Pod Dehiscence and Seed Dormancy in Pea (Pisum sp.). Frontiers in Plant Science, 2017, 8, 542.	3.6	53
20	Evolutionary conserved lineage of Angela-family retrotransposons as a genome-wide microsatellite repeat dispersal agent. Heredity, 2009, 103, 157-167.	2.6	52
21	Core Hunter II: fast core subset selection based on multiple genetic diversity measures using Mixed Replica search. BMC Bioinformatics, 2012, 13, 312.	2.6	52
22	Development of an efficient retrotransposon-based fingerprinting method for rapid pea variety identification. Journal of Applied Genetics, 2006, 47, 221-230.	1.9	51
23	Legume genetic resources: management, diversity assessment, and utilization in crop improvement. Euphytica, 2011, 180, 27-47.	1.2	47
24	Chaperone activity of tobacco HSP18, a small heat-shock protein, is inhibited by ATP. Plant Journal, 2000, 23, 703-713.	5.7	45
25	Genetic diversity in European Pisum germplasm collections. Theoretical and Applied Genetics, 2012, 125, 367-380.	3.6	43
26	Flowering of strict photoperiodic Nicotiana varieties in non-inductive conditions by transgenic approaches. Plant Molecular Biology, 2007, 65, 233-242.	3.9	42
27	Molecular Evidence for Two Domestication Events in the Pea Crop. Genes, 2018, 9, 535.	2.4	42
28	Variation in wild pea (<i>Pisum sativum</i>subsp.<i>elatius</i>) seed dormancy and its relationship to the environment and seed coat traits. PeerJ, 2019, 7, e6263.	2.0	38
29	Agrobacterium-mediated transformation of Pisum sativum in vitro and in vivo. Biologia Plantarum, 2005, 49, 361-370.	1.9	33
30	Enhanced accumulation of cadmium in Linum usitatissimum L. plants due to overproduction of metallothionein Î±-domain as a fusion to Î²-glucuronidase protein. Plant Cell, Tissue and Organ Culture, 2013, 112, 321-330.	2.3	33
31	High-molecular-mass complexes formed in vivo contain smHSPs and HSP70 and display chaperone-like activity. FEBS Journal, 2000, 267, 2195-2207.	0.2	30
32	Identification of <scp>QTL</scp> controlling high levels of partial resistance to <i>Fusarium solani</i> f. sp. <i>pisi</i> in pea. Plant Breeding, 2015, 134, 446-453.	1.9	30
33	Marker assisted pea breeding: eIF4E allele specific markers to pea seed-borne mosaic virus (PSbMV) resistance. Molecular Breeding, 2010, 26, 425-438.	2.1	28
34	Molecular evidence of genetic diversity changes in pea (Pisum sativum L.) germplasm after long-term maintenance. Genetic Resources and Crop Evolution, 2011, 58, 439-451.	1.6	28
35	The bicentenary of the research on â€˜beautifulâ€™ vavilovia (Vavilovia formosa), a legume crop wild relative with taxonomic and agronomic potential. Botanical Journal of the Linnean Society, 2013, 172, 524-531.	1.6	28
36	The role of the testa during the establishment of physical dormancy in the pea seed. Annals of Botany, 2019, 123, 815-829.	2.9	27

#	Article	IF	Citations
37	Editorial: Wild Plants as Source of New Crops. Frontiers in Plant Science, 2020, 11, 591554.	3.6	27
38	From Mendelâ€™s discovery on pea to todayâ€™s plant genetics and breeding. Theoretical and Applied Genetics, 2016, 129, 2267-2280.	3.6	26
39	A comparison of seed germination coefficients using functional regression. Applications in Plant Sciences, 2020, 8, e11366.	2.1	26
40	Pea. Handbook of Plant Breeding, 2015, , 37-83.	0.1	25
41	Userâ€friendly markers linked to <scp>F</scp>usarium wilt race 1 resistance <scp><i>Fw</i></scp> gene for markerâ€assisted selection in pea. Plant Breeding, 2013, 132, 642-648.	1.9	22
42	How Could the Use of Crop Wild Relatives in Breeding Increase the Adaptation of Crops to Marginal Environments?. Frontiers in Plant Science, 0, 13, .	3.6	22
43	Reports on establishing an ex situ site for â€˜beautifulâ€™ vavilovia (Vavilovia formosa) in Armenia. Genetic Resources and Crop Evolution, 2010, 57, 1127-1134.	1.6	21
44	Modulation of flowering responses in different Nicotiana varieties. Plant Molecular Biology, 2004, 55, 253-262.	3.9	20
45	Pea (Pisum sativum L.) in biology prior and after Mendel's discovery. Czech Journal of Genetics and Plant Breeding, 2014, 50, 52-64.	0.8	20
46	Diversity of Naturalized Hairy Vetch (Vicia villosa Roth) Populations in Central Argentina as a Source of Potential Adaptive Traits for Breeding. Frontiers in Plant Science, 2020, 11, 189.	3.6	20
47	Geographical Gradient of the eIF4E Alleles Conferring Resistance to Potyviruses in Pea (Pisum) Germplasm. PLoS ONE, 2014, 9, e90394.	2.5	20
48	Peas. , 2013, , 41-80.		19
49	A comparative study of ancient DNA isolated from charred pea (Pisum sativum L.) seeds from an Early Iron Age settlement in southeast Serbia: inference for pea domestication. Genetic Resources and Crop Evolution, 2014, 61, 1533-1544.	1.6	19
50	The Impact of Genetic Changes during Crop Domestication on Healthy Food Development. Agronomy, 2018, 8, 26.	3.0	19
51	Genetic diversity of Albanian pea (Pisum sativum L.) landraces assessed by morphological traits and molecular markers. Czech Journal of Genetics and Plant Breeding, 2014, 50, 177-184.	0.8	17
52	Towards Better Understanding of Pea Seed Dormancy Using Laser Desorption/Ionization Mass Spectrometry. International Journal of Molecular Sciences, 2017, 18, 2196.	4.1	17
53	Molecular characterization of a calmodulin-like Dictyostelium protein CalB. FEBS Letters, 2000, 473, 323-327.	2.8	16
54	Spatial patterns and intraspecific diversity of the glacial relict legume species Vavilovia formosa (Stev.) Fed. in Eurasia. Plant Systematics and Evolution, 2017, 303, 267-282.	0.9	16

#	Article	IF	Citations
55	Physical Dormancy Release in Medicago truncatula Seeds Is Related to Environmental Variations. Plants, 2020, 9, 503.	3.5	15
56	Beauty will save the world, but will the world save beauty? The case of the highly endangered Vavilovia formosa (Stev.) Fed.. Planta, 2014, 240, 1139-1146.	3.2	14
57	From wild harvest towards precision agriculture: Use of Ecological Niche Modelling to direct potential cultivation of wild medicinal plants in Crete. Science of the Total Environment, 2019, 694, 133681.	8.0	14
58	The loss of polyphenol oxidase function is associated with hilum pigmentation and has been selected during pea domestication. New Phytologist, 2022, 235, 1807-1821.	7.3	14
59	Molecular analysis of temporal genetic structuring in pea (Pisum sativum L.) cultivars bred in the Czech Republic and in former Czechoslovakia since the mid-20th century. Czech Journal of Genetics and Plant Breeding, 2012, 48, 61-73.	0.8	13
60	Developing biotechnology tools for â€˜beautifulâ€™ vavilovia (Vavilovia formosa), a legume crop wild relative with taxonomic and agronomic potential. Plant Cell, Tissue and Organ Culture, 2016, 127, 637-648.	2.3	13
61	The Key to the Future Lies in the Past: Insights from Grain Legume Domestication and Improvement Should Inform Future Breeding Strategies. Plant and Cell Physiology, 2022, 63, 1554-1572.	3.1	13
62	Gregor J. Mendel - genetics founding father. Czech Journal of Genetics and Plant Breeding, 2014, 50, 43-51.	0.8	12
63	Allelic Diversity of Acetyl Coenzyme A Carboxylase accD/bccp Genes Implicated in Nuclear-Cytoplasmic Conflict in the Wild and Domesticated Pea (Pisum sp.). International Journal of Molecular Sciences, 2019, 20, 1773.	4.1	12
64	Legume Genetics and Biology: From Mendelâ€™s Pea to Legume Genomics. International Journal of Molecular Sciences, 2020, 21, 3336.	4.1	10
65			

#	Article	IF	Citations
73	Advances in Pea Genomics. , 2014, , 301-337.		5
74	Inheritance and Expressivity of Neoplasm Trait in Crosses between the Domestic Pea (Pisum sativum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	3.0	5
75	The legume manifesto: (Net)workers on Fabaceae, unite!. Ratarstvo I Povrtarstvo, 2011, 48, 253-258.	0.5	5
76	Combination of electronically driven micromanipulation with laser desorption ionization mass spectrometry â€“ The unique tool for analysis of seed coat layers and revealing the mystery of seed dormancy. Talanta, 2022, 242, 123303.	5.5	4
77	A novel Brassica napus L. pollen-specific gene belongs to a nucleic-acid-binding protein family. Sexual Plant Reproduction, 2000, 13, 127-134.	2.2	3
78	Effect of environmental and genetic factors on the stability of pea (Pisum sativum L.) isozyme and DNA markers. Czech Journal of Genetics and Plant Breeding, 2009, 45, 57-71.	0.8	3
79	Release of Medicago truncatula Gaertn. and Pisum sativum subsp. elatius (M. Bieb.) Asch. et Graebn. Seed Dormancy Tested in Soil Conditions. Agronomy, 2020, 10, 1026.	3.0	2
80	Endangered Wild Crop Relatives of the Fertile Crescent. , 2022, , 673-682.		2
81	Addendum: CechovÃ¡, M. et al. Towards Better Understanding of Pea Seed Dormancy Using Laser Desorption/Ionization Mass Spectrometry. Int. J. Mol. Sci. 2017, 18, 2196. International Journal of Molecular Sciences, 2017, 18, 2771.	4.1	0
82	Spontaneous Gene Flow between Cultivated and Naturalized Vicia villosa Roth Populations Increases the Physical Dormancy Seed in a Semiarid Agroecosystem. Agronomy, 2021, 11, 955.	3.0	0
83	ANALYSIS OF THE LOCAL ENVIRONMENTAL CONDITIONS OF LEGUMES USING GLOBAL DATASETS. , 2017, , .		0
84	Aleksandar MikiÄ‡, the legume (re)searcher. , 0, , .		0