Tomas Macek

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5880398/publications.pdf

Version: 2024-02-01

137	7,220	71102	58581
papers	citations	41 h-index	82 g-index

155	155	155	6534
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	PHYTOREMEDIATION. Annual Review of Plant Biology, 2005, 56, 15-39.	18.7	1,728
2	Exploitation of plants for the removal of organics in environmental remediation. Biotechnology Advances, 2000, 18, 23-34.	11.7	482
3	Phytoextraction of Heavy Metals: A Promising Tool for Clean-Up of Polluted Environment?. Frontiers in Plant Science, 2018, 9, 1476.	3.6	294
4	Therapeutic application of peptides and proteins: parenteral forever?. Trends in Biotechnology, 2009, 27, 628-635.	9.3	279
5	Genetically modified plants in phytoremediation of heavy metal and metalloid soil and sediment pollution. Biotechnology Advances, 2009, 27, 799-810.	11.7	249
6	Polychlorinated Biphenyl (PCB)-Degrading Bacteria Associated with Trees in a PCB-Contaminated Site. Applied and Environmental Microbiology, 2006, 72, 2331-2342.	3.1	247
7	Novel roles for genetically modified plants in environmental protection. Trends in Biotechnology, 2008, 26, 146-152.	9.3	172
8	Polychlorinated Biphenyl Rhizoremediation by Pseudomonas fluorescens F113 Derivatives, Using a Sinorhizobium meliloti nod System To Drive bph Gene Expression. Applied and Environmental Microbiology, 2005, 71, 2687-2694.	3.1	146
9	Identification of Bacteria Utilizing Biphenyl, Benzoate, and Naphthalene in Long-Term Contaminated Soil. PLoS ONE, 2012, 7, e40653.	2.5	124
10	Stable isotope probing in the metagenomics era: A bridge towards improved bioremediation. Biotechnology Advances, 2013, 31, 154-165.	11.7	114
11	Biphenyl-Metabolizing Bacteria in the Rhizosphere of Horseradish and Bulk Soil Contaminated by Polychlorinated Biphenyls as Revealed by Stable Isotope Probing. Applied and Environmental Microbiology, 2009, 75, 6471-6477.	3.1	102
12	Effects of Secondary Plant Metabolites on Microbial Populations: Changes in Community Structure and Metabolic Activity in Contaminated Environments. International Journal of Molecular Sciences, 2016, 17, 1205.	4.1	102
13	The effect of ryegrass (Lolium perenne) on decrease of PAH content in long term contaminated soil. Chemosphere, 2008, 70, 1603-1608.	8.2	95
14	The Occurrence of the Amino Acid Nicotianamine in Plants and Microorganisms. A Reinvestigation. Biochemie Und Physiologie Der Pflanzen, 1985, 180, 557-563.	0.5	84
15	Accumulation of Cadmium by Transgenic Tobacco. Acta Biotechnologica, 2002, 22, 101-106.	0.9	78
16	Ferulic acid conjugates and betacyanins from cell cultures of Beta vulgaris. Phytochemistry, 1991, 30, 3261-3265.	2.9	77
17	DNA-based stable isotope probing: a link between community structure and function. Science of the Total Environment, 2009, 407, 3611-3619.	8.0	77
18	Matrix-Assisted Laser Desorption Ionization (MALDI)-Time of Flight Mass Spectrometry- and MALDI Biotyper-Based Identification of Cultured Biphenyl-Metabolizing Bacteria from Contaminated Horseradish Rhizosphere Soil. Applied and Environmental Microbiology, 2011, 77, 6858-6866.	3.1	77

#	Article	IF	Citations
19	Phyto/rhizoremediation studies using long-term PCB-contaminated soil. Environmental Science and Pollution Research, 2009, 16, 817-829.	5.3	76
20	Absorption and translocation of polybrominated diphenyl ethers (PBDEs) by plants from contaminated sewage sludge. Chemosphere, 2010, 81, 381-386.	8.2	76
21	Biodegradation of polychlorinated biphenyls by plant cells. International Biodeterioration and Biodegradation, 1997, 39, 317-325.	3.9	75
22	Plant metabolites of polychlorinated biphenyls in hairy root culture of black nightshade Solanum nigrum SNC-9O. Chemosphere, 2007, 69, 1221-1227.	8.2	71
23	Biotransformation of PCBs by plants and bacteria â€“ consequences of plant-microbe interactions. European Journal of Soil Biology, 2007, 43, 233-241.	3.2	67
24	Transgenic plants and hairy roots: exploiting the potential of plant species to remediate contaminants. New Biotechnology, 2016, 33, 625-635.	4.4	65
25	Arbuscular mycorrhiza decreases cadmium phytoextraction by transgenic tobacco with inserted metallothionein. Plant and Soil, 2005, 272, 29-40.	3.7	64
26	Title is missing!. Plant and Soil, 2000, 225, 109-115.	3.7	62
27	Enzymes in Plant Metabolism of PCBs and PAHs. Acta Biotechnologica, 2002, 22, 35-41.	0.9	57
28	Cloning the bacterial bphC gene into Nicotiana tabacum to improve the efficiency of PCB phytoremediation. Biotechnology and Bioengineering, 2009, 102, 29-37.	3.3	57
29	Isolation and characterization of different plant associated bacteria and their potential to degrade polychlorinated biphenyls. International Biodeterioration and Biodegradation, 2009, 63, 667-672.	3.9	57
30	Two approaches to biological decontamination of groundwater and soil polluted by aromatics-characterization of microbial populations. International Microbiology, 2005, 8, 205-11.	2.4	57
31	Plant secondary metabolite-induced shifts in bacterial community structure and degradative ability in contaminated soil. Applied Microbiology and Biotechnology, 2013, 97, 9245-9256.	3.6	56
32	Pseudomonads Rule Degradation of Polyaromatic Hydrocarbons in Aerated Sediment. Frontiers in Microbiology, 2015, 6, 1268.	3.5	54
33	Heavy Metal-Binding Peptides and Proteins in Plants. A Review. Collection of Czechoslovak Chemical Communications, 1999, 64, 1057-1086.	1.0	53
34	The introduction of genetically modified microorganisms designed for rhizoremediation induces changes on native bacteria in the rhizosphere but not in the surrounding soil. ISME Journal, 2007, 1, 215-223.	9.8	53
35	Degradation of polychlorinated biphenyls by hairy root culture of Solanum nigrum. Biotechnology Letters, 1997, 19, 787-790.	2.2	52
36	Cadmium-induced production of phytochelatins and speciation of intracellular cadmium in organs of Linum usitatissimum seedlings. Industrial Crops and Products, 2012, 36, 536-542.	5.2	49

#	Article	IF	Citations
37	Transgenic plants to improve rhizoremediation of polychlorinated biphenyls (PCBs). Current Opinion in Biotechnology, 2009, 20, 242-247.	6.6	48
38	Whole-cell MALDI-TOF: Rapid screening method in environmental microbiology. International Biodeterioration and Biodegradation, 2012, 69, 82-86.	3.9	46
39	Defying Multidrug Resistance! Modulation of Related Transporters by Flavonoids and Flavonolignans. Journal of Agricultural and Food Chemistry, 2020, 68, 1763-1779.	5.2	46
40	Hydroxy-PCBs, Methoxy-PCBs and Hydroxy-Methoxy-PCBs: Metabolites of Polychlorinated Biphenyls Formed In Vitro by Tobacco Cells. Environmental Science & Technology, 2008, 42, 5746-5751.	10.0	45
41	Plants Rather than Mineral Fertilization Shape Microbial Community Structure and Functional Potential in Legacy Contaminated Soil. Frontiers in Microbiology, 2016, 7, 995.	3.5	43
42	Ability of bacterial biphenyl dioxygenases from Burkholderia sp. LB400 and Comamonas testosteroni B-356 to catalyse oxygenation of ortho-hydroxychlorobiphenyls formed from PCBs by plants. Environmental Pollution, 2004, 127, 41-48.	7.5	42
43	Accumulation of cadmium by hairy-root cultures of Solanum nigrum. Biotechnology Letters, 1994, 16, 621-624.	2.2	41
44	Determination of content of metallothionein and low molecular mass stress peptides in transgenic tobacco plants. Plant Cell, Tissue and Organ Culture, 2008, 94, 291-298.	2.3	40
45	Secondary compound hypothesis revisited: Selected plant secondary metabolites promote bacterial degradation of cis-1,2-dichloroethylene (cDCE). Scientific Reports, 2017, 7, 8406.	3.3	38
46	Cadmium tolerance and accumulation in transgenic tobacco plants with a yeast metallothionein combined with a polyhistidine tail. International Biodeterioration and Biodegradation, 2004, 54, 233-237.	3.9	37
47	Complete genome sequence of Pseudomonas alcaliphila JAB1 (=DSM 26533), a versatile degrader of organic pollutants. Standards in Genomic Sciences, 2018, 13, 3.	1.5	36
48	Osmotin, a Pathogenesis-Related Protein. Current Protein and Peptide Science, 2012, 13, 672-681.	1.4	35
49	The evaluation of cadmium, zinc and nickel accumulation ability of transgenic tobacco bearing different transgenes. Plant, Soil and Environment, 2004, 50, 513-517.	2.2	32
50	Multidrug Resistance Modulation Activity of Silybin Derivatives and Their Anti-Inflammatory Potential. Antioxidants, 2020, 9, 455.	5.1	31
51	Title is missing!. Biotechnology Letters, 2001, 23, 1355-1359.	2.2	29
52	Diversity of chlorobiphenyl-metabolizing bacteria and their biphenyl dioxygenases in contaminated sediment. Chemosphere, 2013, 93, 1548-1555.	8.2	28
53	Correlation of PCB Transformation by Plant Tissue Cultures with Their Morphology and Peroxidase Activity Changes. Collection of Czechoslovak Chemical Communications, 1999, 64, 1497-1509.	1.0	27
54	Influence of arbuscular mycorrhiza on the growth and cadmium uptake of tobacco with inserted metallothionein gene. Applied Soil Ecology, 2005, 29, 209-214.	4.3	27

#	Article	IF	Citations
55	Native Phytoremediation Potential of Urtica dioica for Removal of PCBs and Heavy Metals Can Be Improved by Genetic Manipulations Using Constitutive CaMV 35S Promoter. PLoS ONE, 2016, 11, e0167927.	2.5	27
56	First semi-synthetic preparation of sex pheromones. Green Chemistry, 2004, 6, 305-307.	9.0	26
57	The effect of EDDS chelate and inoculation with the arbuscular mycorrhizal fungus Glomus intraradices on the efficacy of lead phytoextraction by two tobacco clones. Applied Soil Ecology, 2007, 35, 163-173.	4.3	26
58	24-Epibrassinolide and 20-hydroxyecdysone affect photosynthesis differently in maize and spinach. Steroids, 2014, 85, 44-57.	1.8	26
59	Differential Impacts of Willow and Mineral Fertilizer on Bacterial Communities and Biodegradation in Diesel Fuel Oil-Contaminated Soil. Frontiers in Microbiology, 2016, 7, 837.	3.5	26
60	Biotransformation of 2-(4-methoxybenzyl)-1-cyclohexanone by means of Saccharomyces cerevisiae. Collection of Czechoslovak Chemical Communications, 1987, 52, 2326-2337.	1.0	26
61	Bacterial Biotransformation of Pentachlorophenol and Micropollutants Formed during Its Production Process. International Journal of Environmental Research and Public Health, 2016, 13, 1146.	2.6	25
62	Perspectives in biodegradation of alkanes and PCBs. Pure and Applied Chemistry, 1997, 69, 2357-2370.	1.9	23
63	Antioxidant, Anti-Inflammatory, and Multidrug Resistance Modulation Activity of Silychristin Derivatives. Antioxidants, 2019, 8, 303.	5.1	23
64	Potential of Biosorption Technology. , 2011, , 7-17.		22
65	Evaluation of the relation between the endogenous scopoletin and scopolin level of some solanaceous and papaver cell suspensions and their ability to bioconvert scopoletin to scopolin. Plant Science, 1997, 123, 205-210.	3.6	20
66	Decolorization of RBBR by plant cells and correlation with the transformation of PCBs. Chemosphere, 2002, 49, 739-748.	8.2	19
67	Monitoring Native Vegetation on a Dumpsite of PCB-Contaminated Soil. International Journal of Phytoremediation, 2007, 9, 71-78.	3.1	19
68	Approaches for diversity analysis of cultivable and non-cultivable bacteriain real soil. Plant, Soil and Environment, 2009, 55, 389-396.	2.2	18
69	Removal of 4-chlorobenzoic acid from spiked hydroponic solution by willow trees (Salix viminalis). Environmental Science and Pollution Research, 2010, 17, 1355-1361.	5.3	18
70	Bacterial community structure in treated sewage sludge with mesophilic and thermophilic anaerobic digestion. Folia Microbiologica, 2015, 60, 531-539.	2.3	18
71	Phytoremediation of Polychlorinated Biphenyls. , 2006, , 143-167.		18
72	The rate of ecdysteroid production in suspension cultured cells of the fern Pteridium aquilinum. Phytochemistry, 1994, 35, 651-654.	2.9	17

#	Article	IF	Citations
73	Some Aspects of PCB Metabolism by Horseradish Cells. International Journal of Phytoremediation, 2001, 3, 401-414.	3.1	17
74	Cloning the bacterialbphC geneintoNicotiana tabacumto improve the efficiency of phytoremediation of polychlorinated biphenyls. Bioengineered Bugs, 2010, 1, 419-423.	1.7	16
75	Metabolites of 2,2â€²-dichlorobiphenyl and 2,6-dichlorobiphenyl in hairy root culture of black nightshade Solanum nigrum SNC-9O. Chemosphere, 2012, 89, 383-388.	8.2	16
76	Diversity of root-associated microbial populations of Tamarix parviflora cultivated under various conditions. Applied Soil Ecology, 2018, 125, 264-272.	4.3	16
77	Bacterial Degradation of Polychlorinated Biphenyls. , 2010, , 347-366.		16
78	Reduction of 2-substituted cyclohexanones by Saccharomyces cerevisiae under aerobic and anaerobic conditions. Enzyme and Microbial Technology, 1992, 14, 197-202.	3.2	15
79	Characterization of Transgenic Tobacco Plants Containing Bacterial bphc Gene and Study of Their Phytoremediation Ability. International Journal of Phytoremediation, 2014, 16, 937-946.	3.1	15
80	Analytical Procedure for the Estimation of Polychlorinated Biphenyl Transformation by Plant Tissue Cultures. Analytical Communications, 1997, 34, 287-290.	2.2	14
81	Synthesis of (20S)-2Î±,3Î±-Dihydroxy-6-oxo-7-oxa-7a-homo-5Î±-pregnane-20-carboxylic Acid as a Brassinosteroid Part of Ligands for Binding to Affinity Chromatography Carriers. Collection of Czechoslovak Chemical Communications, 2000, 65, 1754-1761.	1.0	14
82	Phytoremediation. , 2016, , .		14
83	Biotransformation of ergot alkaloids by plant cell cultures with high peroxidase activity. Biotechnology Letters, 1995, 17, 1213-1218.	2.2	13
84	Bacterial acquisition of hexachlorobenzene-derived carbon in contaminated soil. Chemosphere, 2014, 113, 141-145.	8.2	13
85	Introduction of Green Plants for the Control of Metals and Organics in Environmental Remediation. , 1998, , 71-84.		13
86	Advances in Phytoremediation and Rhizoremediation. Soil Biology, 2009, , 257-277.	0.8	12
87	ByDioscorea deltoidea free and immobilized plant cells. Biotechnology Letters, 1989, 11, 243-248.	2.2	11
88	Production of ecdysteroids by plant cell culture of Pteridium aquilinum. Biotechnology Letters, 1990, 12, 727-730.	2.2	11
89	Bacteria Degrading PCBs and CBs Isolated from Long-Term PCB Contaminated Soil. Water, Air and Soil Pollution, 2003, 3, 47-55.	0.8	11
90	BIODEGRADATION OF PAHS IN LONG-TERM CONTAMINATED SOIL CULTIVATED WITH EUROPEAN WHITE BIRCH (BETULA PENDULA) AND RED MULBERRY (MORUS RUBRA) TREE. International Journal of Phytoremediation, 2009, 11, 65-80.	3.1	11

#	Article	IF	Citations
91	New findings in potential applications of tobacco osmotin. Protein Expression and Purification, 2017, 129, 84-93.	1.3	11
92	Stereochemistry of the Enzymatic Reduction of 2-(4-Methoxybenzyl)-1-Cyclohexanone by Solanum Aviculare Cells in vitro. Biocatalysis, 1989, 2, 265-272.	0.9	10
93	Affinity chromatography reveals RuBisCO as an ecdysteroid-binding protein. Steroids, 2008, 73, 1433-1440.	1.8	10
94	Plant cells immobilized in pectate gel: Biotransformation of verbenol isomers bySolanum aviculare free and immobilized cells. Biotechnology Letters, 1989, 3, 411-414.	0.5	9
95	Transgenic plants for effective phytoremediation of persistent toxic organic pollutants present in the environment. Journal of Biotechnology, 2007, 131, S38.	3.8	9
96	Exogenously applied 20-hydroxyecdysone increases the net photosynthetic rate but does not affect the photosynthetic electron transport or the content of photosynthetic pigments in Tetragonia tetragonioides L.. Acta Physiologiae Plantarum, 2013, 35, 3489-3495.	2.1	9
97	The use of phosphomannose isomerase selection system forAgrobacterium-mediated transformation of tobacco and flax aimed for phytoremediation. Journal of Environmental Science and Health - Part B Pesticides, Food Contaminants, and Agricultural Wastes, 2017, 52, 338-345.	1.5	9
98	Recombinant expression of osmotin in barley improves stress resistance and food safety during adverse growing conditions. PLoS ONE, 2019, 14, e0212718.	2.5	9
99	Phytoremediation of Metals and Inorganic Pollutants. Soil Biology, 2004, , 135-157.	0.8	9
100	Occurrence of betulinic acid in different callus cultures of Solanum aviculare. Phytochemistry, 1985, 24, 3064-3065.	2.9	8
101	Bioreductions by Saccharomyces cerevisiae. Journal of Biotechnology, 1992, 26, 173-181.	3.8	8
102	Genetically modified plants with improved properties for phytoremediation purposes. , 2006, , 85-108.		8
103	Putative P1B-type ATPase from the bacterium Achromobacter xylosoxidans A8 alters Pb2+/Zn2+/Cd2+-resistance and accumulation in Saccharomyces cerevisiae. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 1338-1343.	2.6	8
104	The effect of exogenous 24-epibrassinolide on the ecdysteroid content in the leaves of Spinacia oleracea L.. Steroids, 2015, 97, 107-112.	1.8	8
105	Phytoremediation: biological cleaning of a polluted environment. Reviews on Environmental Health, 2004, 19, 63-82.	2.4	8
106	Flavonolignans from silymarin modulate antibiotic resistance and virulence in Staphylococcus aureus. Biomedicine and Pharmacotherapy, 2022, 149, 112806.	5.6	8
107	Biotransformation of 2-(4-methoxybenzyl)-l-cyclohexanone by cell cultures ofSolatium aviculare. Biologia Plantarum, 1987, 29, 88-93.	1.9	7
108	Scopoletin-glucosyltransferase Activity from Duboisia myoporoides; Improvement of Cultivation Conditions and Crude Extract Preparation Procedure. Journal of Plant Physiology, 1995, 146, 503-507.	3.5	6

#	Article	IF	Citations
109	Preparation of transgenic flax with enhanced metal tolerance. Journal of Biotechnology, 2007, 131, S38-S39.	3.8	6
110	Affinity chromatography as the method for brassinosteroid-binding protein isolation. Journal of Biotechnology, 2010, 150, 490-490.	3.8	6
111	Advances in Phytoremediation: Phytotransformation. , 2002, , 115-140.		6
112	Influence of Root Exudates on the Bacterial Degradation of Chlorobenzoic Acids. Scientific World Journal, The, 2013, 2013, 1-8.	2.1	5
113	Glucosidation of digitoxigenin by tissue culture ofDigitalis lanata. Biotechnology Letters, 1986, 8, 859-862.	2.2	3
114	Chemical sterilization of nutrient media for plant cell cultures using diethylpyrocarbonate. Biotechnology Letters, 1994, 8, 885-888.	0.5	3
115	Diethylpyrocarbonateâ€"An effective agent for the sterilization of different types of nutrient media. Plant Cell, Tissue and Organ Culture, 1995, 43, 185-190.	2.3	3
116	Biotransformation of Chanoclavine byEuphorbia calyptrataCell Culture. Journal of Natural Products, 1996, 59, 481-484.	3.0	3
117	Rhizoremediation for decontamination of long-term PCB contaminated soil with focus on microbial diversity. Journal of Biotechnology, 2007, 131, S243.	3.8	3
118	Treatment and Containment of Contaminated Sediments. , 2006, , 137-178.		3
119	Transgenic Approaches to Improve Phytoremediation of Heavy Metal Polluted Soils. Environmental Pollution, 2011, , 409-438.	0.4	2
120	Antibacterial effect of compounds of peptide nature contained in aqueous extract of Brassica napus and Solanum lycopersicum and Tetragonia tetragonioides leaves. Journal of Microbiology, Biotechnology and Food Sciences, 2015, 04, 427-433.	0.8	2
121	Can tobacco have a potentially beneficial effect to our health?. Zeitschrift Fur Naturforschung - Section C Journal of Biosciences, 2005, 60, 292-9.	1.4	2
122	Transformation of PCB degradation products (chlorobenzoic acids) by plant cells. Journal of Biotechnology, 2007, 131, S248.	3.8	1
123	Bioremediation of Chlorobenzoic Acids. , 2013, , .		1
124	Effect of Chain Elongation on Biological Properties of the Toxin Paralysin Î²â€Alanylâ€tyrosine. Chemical Biology and Drug Design, 2014, 83, 418-426.	3.2	1
125	Preparation of vectors with metallothionein gene enriched by additional metal binding domain and their transient expression in Nicotiana tabacum. Biologia Plantarum, 2015, 59, 394-398.	1.9	1
126	Galactose oxidase production by immobilized cells ofDactylium dendroides. Biotechnology Letters, 1992, 6, 309-312.	0.5	0

#	Article	IF	Citations
127	A novel approach to analysis microbial population in PCB-contaminated sediment. Journal of Biotechnology, 2008, 136, S703.	3.8	0
128	Genetically modified plants with improved phytoremediation properties. Journal of Biotechnology, 2010, 150, 118-118.	3.8	0
129	Purification and characterization of antimicrobial peptides from fleshfly Neobellieria bullata. Journal of Biotechnology, 2010, 150, 451-452.	3.8	0
130	Expression of osmotin, an antifungal protein from Nicotiana tabacum in Escherichia coli. , 2011, , .		0
131	Title is missing!. , 2012, 7, e40653.		0
132	Title is missing!. , 2012, 7, e40653.		0
133	Title is missing!. , 2012, 7, e40653.		0
134	Title is missing!. , 2012, 7, e40653.		0
135	Title is missing!. , 2016, 11, e0167927.		0
136	Title is missing!. , 2016, 11, e0167927.		0
137	Title is missing!. , 2016, 11, e0167927.		0