Roberto De Philippis

List of Publications by Year
in descending order

126	7,054	57719	64755
papers	citations	44 h-index	79 g-index

134	134	134	5551
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Rhizosheathâ€“root system changes exopolysaccharide content but stabilizes bacterial community across contrasting seasons in a desert environment. Environmental Microbiomes, 2022, 17, 14.	2.2	13
2	Cyanobacterial biocrust induction: A comprehensive review on a soil rehabilitation-effective biotechnology. Geoderma, 2022, 415, 115766.	2.3	23
3	In vivo anti-inflammatory and antioxidant effects of microbial polysaccharides extracted from Euganean therapeutic muds. International Journal of Biological Macromolecules, 2022, 209, 1710-1719.	3.6	7
4	Overcoming field barriers to restore dryland soils by cyanobacteria inoculation. Soil and Tillage Research, 2021, 207, 104799.	2.6	18
5	Multiple diversity facets of crucial microbial groups in biological soil crusts promote soil multifunctionality. Global Ecology and Biogeography, 2021, 30, 1204-1217.	2.7	16
6	Drought-tolerant cyanobacteria and mosses as biotechnological tools to attain land degradation neutrality. Web Ecology, 2021, 21, 65-78.	0.4	14
7	Phylogenetic, morphological and biochemical studies on Thermospirulina andreolii gen. & sp. nov. (Cyanophyta) from the Euganean Thermal District (Italy). Phycologia, 2021, 60, 487-496.	0.6	2
8	The role of grain size and inoculum amount on biocrust formation by Leptolyngbya ohadii. Catena, 2020, 184, 104248.	2.2	27
9	Cyanoflan: A cyanobacterial sulfated carbohydrate polymer with emulsifying properties. Carbohydrate Polymers, 2020, 229, 115525.	5.1	36
10	A novel two-phase bioprocess for the production of Arthrospira (Spirulina) maxima LJGR1 at pilot plant scale during different seasons and for phycocyanin induction under controlled conditions. Bioresource Technology, 2020, 298, 122548.	4.8	34
11	Cyanobacteria inoculation as a potential tool for stabilization of burned soils. Restoration Ecology, 2020, 28, S106.	1.4	34
12	Monosaccharide composition of primary cell wall polysaccharides as a developmental level indicator of biological soil crusts. Catena, 2020, 195, 104782.	2.2	8
13	High Arctic biocrusts: characterization of the exopolysaccharidic matrix. Polar Biology, 2020, 43, 1805-1815.	0.5	4
14	Exopolysaccharide Features Influence Growth Success in Biocrust-forming Cyanobacteria, Moving From Liquid Culture to Sand Microcosms. Frontiers in Microbiology, 2020, 11, 568224.	1.5	21
15	Comment on â€˜Kidron, G. J. (2018). Biocrust research: A critical view on eight common hydrologicalâ€related paradigms and dubious theses. Ecohydrology, e2061â€™. Ecohydrology, 2020, 13, e2215.	1.1	1
16	Induced biological soil crusts and soil properties varied between slope aspect, slope gradient and plant canopy in the Hobq desert of China. Catena, 2020, 190, 104559.	2.2	34
17	Anti-Inflammatory Activity of Exopolysaccharides from Phormidium sp. ETS05, the Most Abundant Cyanobacterium of the Therapeutic Euganean Thermal Muds, Using the Zebrafish Model. Biomolecules, 2020, 10, 582.	1.8	35
18	The role of the tyrosine kinase Wzc (Sll0923) and the phosphatase Wzb (Slr0328) in the production of extracellular polymeric substances (EPS) by Synechocystis PCC 6803. MicrobiologyOpen, 2019, 8, e00753.	1.2	26

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19	Characterization and antitumor activity of the extracellular carbohydrate polymer from the cyanobacterium Synechocystis Î”sigF mutant. International Journal of Biological Macromolecules, 2019, 136, 1219-1227.	3.6	17
20	The facilitative effects of shrub on induced biological soil crust development and soil properties. Applied Soil Ecology, 2019, 137, 129-138.	2.1	15
21	Increased algicidal activity ofAeromonas veroniiin response toMicrocystis aeruginosa: interspecies crosstalk and secondary metabolites synergism. Environmental Microbiology, 2019, 21, 1140-1150.	1.8	20
22	The alternative sigma factor SigF is a key player in the control of secretion mechanisms in Synechocystis sp. PCC 6803. Environmental Microbiology, 2019, 21, 343-359.	1.8	29
23	Identification of aqueous extracts from Artemisia ordosica and their allelopathic effects on desert soil algae. Chemoecology, 2019, 29, 61-71.	0.6	17
24	Soil Type and Cyanobacteria Species Influence the Macromolecular and Chemical Characteristics of the Polysaccharidic Matrix in Induced Biocrusts. Microbial Ecology, 2019, 78, 482-493.	1.4	48
25	Mixotrophic cultivation of Chlorococcum sp. under non-controlled conditions using a digestate from pig manure within a biorefinery. Journal of Applied Phycology, 2018, 30, 2847-2857.	1.5	22
26	Bread wastes to energy: Sequential lactic and photo-fermentation for hydrogen production. International Journal of Hydrogen Energy, 2018, 43, 9569-9576.	3.8	51
27	A novel method to evaluate nutrient retention by biological soil crust exopolymeric matrix. Plant and Soil, 2018, 429, 53-64.	1.8	20
28	Microbial extracellular polymeric substances improve water retention in dryland biological soil crusts. Soil Biology and Biochemistry, 2018, 116, 67-69.	4.2	144
29	Complex role of the polymeric matrix in biological soil crusts. Plant and Soil, 2018, 429, 19-34.	1.8	116
30	Development of the polysaccharidic matrix in biocrusts induced by a cyanobacterium inoculated in sand microcosms. Biology and Fertility of Soils, 2018, 54, 27-40.	2.3	72
31	Cyanobacteria Inoculation Improves Soil Stability and Fertility on Different Textured Soils: Gaining Insights for Applicability in Soil Restoration. Frontiers in Environmental Science, 2018, 6, .	1.5	159
32	The potential of the cyanobacterium Leptolyngbya ohadii as inoculum for stabilizing bare sandy substrates. Soil Biology and Biochemistry, 2018, 127, 318-328.	4.2	61
33	Acclimation strategy of Rhodopseudomonas palustris to high light irradiance. Microbiological Research, 2017, 197, 49-55.	2.5	32
34	Photosynthetic Purple Non Sulfur Bacteria in Hydrogen Producing Systems: New Approaches in the Use of Well Known and Innovative Substrates. , 2017, , 321-350.		11
35	Cyanobacterial inoculation (cyanobacterisation): Perspectives for the development of a standardized multifunctional technology for soil fertilization and desertification reversal. Earth-Science Reviews, 2017, 171, 28-43.	4.0	159
36	Biotransformation of water lettuce (Pistia stratiotes) to biohydrogen by Rhodopseudomonas palustris. Journal of Applied Microbiology, 2017, 123, 1438-1446.	1.4	9

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37	Agroindustrial residues and energy crops for the production of hydrogen and poly-Î²-hydroxybutyrate via photofermentation. Bioresource Technology, 2016, 216, 941-947.	4.8	28
38	Energy conversion of biomass crops and agroindustrial residues by combined biohydrogen/biomethane system and anaerobic digestion. Bioresource Technology, 2016, 211, 509-518.	4.8	45
39	Released polysaccharides (RPS) from Cyanothece sp. CCY 0110 as biosorbent for heavy metals bioremediation: interactions between metals and RPS binding sites. Applied Microbiology and Biotechnology, 2016, 100, 7765-7775.	1.7	72
40	Hydrogen production under salt stress conditions by a freshwater Rhodopseudomonas palustris strain. Applied Microbiology and Biotechnology, 2016, 100, 2917-2926.	1.7	26
41	H2 production in Rhodopseudomonas palustris as a way to cope with high light intensities. Research in Microbiology, 2016, 167, 350-356.	1.0	22
42	Pore characteristics in biological soil crusts are independent of extracellular polymeric substances. Soil Biology and Biochemistry, 2016, 103, 294-299.	4.2	21
43	Differentiation of microbial activity and functional diversity between various biocrust elements in a heterogeneous crustal community. Catena, 2016, 147, 138-145.	2.2	14
44	Draft genome sequence and overview of the purple non sulfur bacterium Rhodopseudomonas palustris 42OL. Standards in Genomic Sciences, 2016, 11, 24.	1.5	12
45	Exocellular Polysaccharides in Microalgae and Cyanobacteria: Chemical Features, Role and Enzymes and Genes Involved in Their Biosynthesis. , 2016, , 565-590.		59
46	Use of quantitative PCR with the chloroplast gene rps4 to determine moss abundance in the early succession stage of biological soil crusts. Biology and Fertility of Soils, 2016, 52, 595-599.	2.3	9
47	Differential proteomes of the cyanobacterium Cyanothece sp. CCY 0110 upon exposure to heavy metals. Data in Brief, 2015, 4, 152-158.	0.5	3
48	Differentiation of the characteristics of excreted extracellular polysaccharides reveals the heterogeneous primary succession of induced biological soil crusts. Journal of Applied Phycology, 2015, 27, 1935-1944.	1.5	23
49	Effects of heavy metals on Cyanothece sp. CCY 0110 growth, extracellular polymeric substances (EPS) production, ultrastructure and protein profiles. Journal of Proteomics, 2015, 120, 75-94.	1.2	95
50	Cyanobacteria in biofilms on stone temples of Bhubaneswar, Eastern India. Algological Studies (Stuttgart, Germany: 2007), 2015, 147, 67-93.	0.4	18
51	Role of Cyanobacterial Exopolysaccharides in Phototrophic Biofilms and in Complex Microbial Mats. Life, 2015, 5, 1218-1238.	1.1	291
52	Introducing capnophilic lactic fermentation in a combined dark-photo fermentation process: a route to unparalleled H2 yields. Applied Microbiology and Biotechnology, 2015, 99, 1001-1010.	1.7	21
53	Microbial fixation of CO2 in water bodies and in drylands to combat climate change, soil loss and desertification. New Biotechnology, 2015, 32, 109-120.	2.4	59
54	Microbial secreted exopolysaccharides affect the hydrological behavior of induced biological soil crusts in desert sandy soils. Soil Biology and Biochemistry, 2014, 68, 62-70.	4.2	199

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55	Photobioreactor design and illumination systems for H2 production with anoxygenic photosynthetic bacteria: A review. International Journal of Hydrogen Energy, 2014, 39, 3127-3141.	3.8	109
56	Microbial fixation of CO2 in water bodies and in drylands to combat climate change, soil loss and desertification. New Biotechnology, 2014, 31, S25.	2.4	0
57	Macromolecular and chemical features of the excreted extracellular polysaccharides in induced biological soil crusts of different ages. Soil Biology and Biochemistry, 2014, 78, 1-9.	4.2	89
58	Rhizosphere effect and salinity competing to shape microbial communities inPhragmites australis(Cav.) Trin. ex-Steud. FEMS Microbiology Letters, 2014, 359, 193-200.	0.7	41
59	Photosynthesis and Hydrogen Production in Purple Non Sulfur Bacteria: Fundamental and Applied Aspects. Advances in Photosynthesis and Respiration, 2014, , 269-290.	1.0	7
60	Characterization of exopolysaccharides produced by seven biofilm-forming cyanobacterial strains for biotechnological applications. Journal of Applied Phycology, 2013, 25, 1697-1708.	1.5	64
61	UV-B resistance as a criterion for the selection of desert microalgae to be utilized for inoculating desert soils. Journal of Applied Phycology, 2013, 25, 1009-1015.	1.5	32
62	Production and characterization of extracellular carbohydrate polymer from Cyanothece sp. CCY 0110. Carbohydrate Polymers, 2013, 92, 1408-1415.	5.1	89
63	Purple Bacteria: Electron Acceptors and Donors. , 2013, , 693-699.		5
64	Assembly and Export of Extracellular Polymeric Substances (EPS) in Cyanobacteria. Advances in Botanical Research, 2013, 65, 235-279.	0.5	28
65	Use of cyanobacterial polysaccharides to promote shrub performances in desert soils: a potential approach for the restoration of desertified areas. Biology and Fertility of Soils, 2013, 49, 143-152.	2.3	77
66	Shifting Species Interaction in Soil Microbial Community and Its Influence on Ecosystem Functions Modulating. Microbial Ecology, 2013, 65, 700-708.	1.4	28
67	Biosorption and Recovery of Chromium from Industrial Wastewaters By Using Saccharomyces cerevisiae in a Flow-Through System. Industrial & Engineering Chemistry Research, 2012, 51, 4452-4457.	1.8	8
68	Characteristics and role of the exocellular polysaccharides produced by five cyanobacteria isolated from phototrophic biofilms growing on stone monuments. Biofouling, 2012, 28, 215-224.	0.8	104
69	Gold biosorption by exopolysaccharide producing cyanobacteria and purple nonsulphur bacteria. Journal of Applied Microbiology, 2012, 113, 1380-1388.	1.4	23
70	Hydrogen Production: Photofermentation. , 2012, , 53-75.		14
71	A Rhodopseudomonas palustris nifA* mutant produces H2 from -containing vegetable wastes. International Journal of Hydrogen Energy, 2012, 37, 15893-15900.	3.8	46
72	Combined Systems for Maximum Substrate Conversion. , 2012, , 107-126.		7

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73	Selective biosorption and recovery of Ruthenium from industrial effluents with Rhodopseudomonas palustris strains. Applied Microbiology and Biotechnology, 2012, 95, 381-387.	1.7	30
74	Sustained outdoor H2 production with Rhodopseudomonas palustris cultures in a 50L tubular photobioreactor. International Journal of Hydrogen Energy, 2012, 37, 8840-8849.	3.8	65
75	The role of the exopolysaccharides in enhancing hydraulic conductivity of biological soil crusts. Soil Biology and Biochemistry, 2012, 46, 33-40.	4.2	148
76	Chemical composition of volatile oil from Artemisia ordosica and its allelopathic effects on desert soil microalgae, Palmellococcus miniatus. Plant Physiology and Biochemistry, 2012, 51, 153-158.	2.8	38
77	Effect of light and temperature on biomass, photosynthesis and capsular polysaccharides in cultured phototrophic biofilms. Journal of Applied Phycology, 2012, 24, 211-220.	1.5	50
78	Using extracellular polymeric substances (EPS)-producing cyanobacteria for the bioremediation of heavy metals: do cations compete for the EPS functional groups and also accumulate inside the cell?. Microbiology (United Kingdom), 2011, 157, 451-458.	0.7	118
79	Exopolysaccharide-producing cyanobacteria in heavy metal removal from water: molecular basis and practical applicability of the biosorption process. Applied Microbiology and Biotechnology, 2011, 92, 697-708.	1.7	246
80	Biosorption of Copper by Cyanobacterial Bloom-Derived Biomass Harvested from the Eutrophic Lake Dianchi in China. Current Microbiology, 2010, 61, 340-345.	1.0	17
81	Treatment of Cr(VI)-containing wastewaters with exopolysaccharide-producing cyanobacteria in pilot flow through and batch systems. Applied Microbiology and Biotechnology, 2010, 87, 1953-1961.	1.7	33
82	Hydrogen-producing purple non-sulfur bacteria isolated from the trophic lake Averno (Naples, Italy). International Journal of Hydrogen Energy, 2010, 35, 12216-12223.	3.8	56
83	New and traditional energy resources from microbial activities in the agroindustrial system. Italian Journal of Agronomy, 2009, 4, 141.	0.4	0
84	Complexity of cyanobacterial exopolysaccharides: composition, structures, inducing factors and putative genes involved in their biosynthesis and assembly. FEMS Microbiology Reviews, 2009, 33, 917-941.	3.9	522
85	Capsular polysaccharides of cultured phototrophic biofilms. Biofouling, 2009, 25, 495-504.	0.8	45
86	Heavy Metal Removal with Exopolysaccharide-Producing Cyanobacteria. Advances in Industrial and Hazardous Wastes Treatment Series, 2009, , .	0.0	4
87	Characterizing cultivable soil microbial communities from copper fungicide-amended olive orchard and vineyard soils. World Journal of Microbiology and Biotechnology, 2008, 24, 309-318.	1.7	38
88	Hydrogen production during stationary phase in purple photosynthetic bacteria. International Journal of Hydrogen Energy, 2008, 33, 6525-6534.	3.8	63
89	Selectivity in the heavy metal removal by exopolysaccharide-producing cyanobacteria. Journal of Applied Microbiology, 2008, 105, 88-94.	1.4	91
90	Sheathless Mutant of Cyanobacterium Gloeothece sp. Strain PCC 6909 with Increased Capacity To Remove Copper Ions from Aqueous Solutions. Applied and Environmental Microbiology, 2008, 74, 2797-2804.	1.4	47

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91	Sheathless Mutant of Cyanobacterium Gloeothece sp. Strain PCC 6909 with Increased Capacity To Remove Copper Ions from Aqueous Solutions. Applied and Environmental Microbiology, 2008, 74, 5266-5266.	1.4	1
92	Control of Lunar and Martian Dustâ€"Experimental Insights from Artificial and Natural Cyanobacterial and Algal Crusts in the Desert of Inner Mongolia, China. Astrobiology, 2008, 8, 75-86.	1.5	51
93	Heavy metal sorption by released polysaccharides and whole cultures of two exopolysaccharide-producing cyanobacteria. Biodegradation, 2007, 18, 181-187.	1.5	77
94	Optimization of copper sorbing?desorbing cycles with confined cultures of the exopolysaccharide-producing cyanobacterium Cyanospira capsulata. Journal of Applied Microbiology, 2006, 101, 1351-1356.	1.4	37
95	Exopolysaccharides of Two Cyanobacterial Strains from Roman Hypogea. Geomicrobiology Journal, 2006, 23, 301-310.	1.0	25
96	Seasonal succession of phototrophic biofilms in an Italian wastewater treatment plant: biovolume, spatial structure and exopolysaccharides. Aquatic Microbial Ecology, 2006, 45, 301-312.	0.9	28
97	Populations of exopolysaccharide-producing cyanobacteria and diatoms in the mucilaginous benthic aggregates of the Tyrrhenian Sea (Tuscan Archipelago). Science of the Total Environment, 2005, 353, 360-368.	3.9	34
98	Exopolysaccharides in cyanobacterial biofilms from Roman catacombs. Algological Studies, 2005, 117, 117-132.	0.1	7
99	Effectiveness ofCyanothece spp. andCyanospira capsulata exocellular polysaccharides as antiadhesive agents for blocking attachment ofHelicobacter pylori to human gastric cells. Folia Microbiologica, 2004, 49, 64-70.	1.1	19
100	Leptolyngbya strains from Roman hypogea: cytochemical and physico-chemical characterisation of exopolysaccharides. Journal of Applied Phycology, 2003, 15, 193-200.	1.5	33
101	Carbohydrate synthesis by two Navicula strains isolated from benthic and pelagic mucilages in the Tyrrhenian Sea (Tuscan Archipelago). Journal of Applied Phycology, 2003, 15, 259-261.	1.5	7
102	Assessment of the metal removal capability of two capsulated cyanobacteria, Cyanospira capsulata and Nostoc PCC7936. Journal of Applied Phycology, 2003, 15, 155-161.	1.5	69
103	Generation of superoxide anion and SOD activity in haemocytes and muscle of American white shrimp () Tj ETQq1 1 0.784314 rgBT /Ov 353-366.	1.6	217
104	Exopolysaccharide-producing cyanobacteria and their possible exploitation: A review. Journal of Applied Phycology, 2001, 13, 293-299.	1.5	240
105	Title is missing!. Journal of Applied Phycology, 2000, 12, 401-407.	1.5	38
106	Title is missing!. World Journal of Microbiology and Biotechnology, 2000, 16, 655-661.	1.7	27
107	Exocellular polysaccharides from cyanobacteria and their possible applications. FEMS Microbiology Reviews, 1998, 22, 151-175.	3.9	346
108	Exocellular polysaccharides from cyanobacteria and their possible applications. FEMS Microbiology Reviews, 1998, 22, 151-175.	3.9	272

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109	Potential of Unicellular Cyanobacteria from Saline Environments as Exopolysaccharide Producers. Applied and Environmental Microbiology, 1998, 64, 1130-1132.	1.4	125
110	H and poly-Î²-hydroxybutyrate, two alternative chemicals from purple non sulfur bacteria. Biotechnology Letters, 1997, 19, 759-762.	1.1	51
111	Response of an exopolysaccharide-producing heterocystous cyanobacterium to changes in metabolic carbon flux. Journal of Applied Phycology, 1996, 8, 275-281.	1.5	42
112	Stability of molecular and rheological properties of the exopolysaccharide produced byCyanospira capsulata cultivated under different growth conditions. Journal of Applied Phycology, 1993, 5, 539-541.	1.5	24
113	Exopolysaccharide production by a unicellular cyanobacterium isolated from a hypersaline habitat. Journal of Applied Phycology, 1993, 5, 387-394.	1.5	114
114	Glycogen and poly-Â-hydroxybutyrate synthesis in Spirulina maxima. Journal of General Microbiology, 1992, 138, 1623-1628.	2.3	84
115	Factors affecting poly-Î²-hydroxybutyrate accumulation in cyanobacteria and in purple non-sulfur bacteria. FEMS Microbiology Letters, 1992, 103, 187-194.	0.7	2
116	Factors affecting poly-ÃŽÂ²-hydroxybutyrate accumulation in cyanobacteria and in purple non-sulfur bacteria. FEMS Microbiology Letters, 1992, 103, 187-194.	0.7	32
117	Rheology of culture broths and exopolysaccharide of Cyanospira capsulata at different stages of growth. Carbohydrate Polymers, 1992, 17, 1-10.	5.1	23
118	Effects of growth conditions on exopolysaccharide production by Cyanospira capsulata. Bioresource Technology, 1991, 38, 101-104.	4.8	54
119	Occurrence of poly-beta-hydroxybutyrate in Spirulina species. Journal of Bacteriology, 1990, 172, 2791-2792.	1.0	74
120	Studies on exopolysaccharide release by diazotrophic batch cultures of Cyanospira capsulata. Applied Microbiology and Biotechnology, 1990, 34, 392-396.	1.7	64
121	The role of hydrogen metabolism in photoheterotrophic cultures of the cyanobacterium Nostoc sp. strain Cc isolated from Cycas circinalis L.. Journal of General Microbiology, 1990, 136, 1009-1015.	2.3	10
122	Heterotrophic metabolism and diazotrophic growth of Nostoc sp. from Cycas circinalis. , 1989, , 63-70.		4
123	Heterotrophic metabolism and diazotrophic growth ofNostoc sp. fromCycas circinalis. Plant and Soil, 1988, 110, 199-206.	1.8	14
124	Two halophilic Ectothiorhodospira strains with unusual morphological, physiological and biochemical characters. Archives of Microbiology, 1988, 149, 273-279.	1.0	17
125	Marine Cyanobacteria as a Potential Source of Biomass and Chemicals. International Journal of Solar Energy, 1988, 6, 235-246.	0.2	4
126	Ammonia photoproduction byCyanospira rippkae cells â€˜entrappedâ€™ in dialysis tube. Experientia, 1986, 42, 1040-1043.	1.2	13