Elke Dittmann

List of Publications by Year
in descending order

104 papers	12,113 citations	26630 56 h-index	34986 98 g-index
111 all docs	111 docs citations	111 times ranked	7850 citing authors

#	Article	IF	Citations
1	Ribosomally synthesized and post-translationally modified peptide natural products: overview and recommendations for a universal nomenclature. Natural Product Reports, 2013, 30, 108-160.	10.3	1,692
2	Structural organization of microcystin biosynthesis in Microcystis aeruginosa PCC7806: an integrated peptideâ€“polyketide synthetase system. Chemistry and Biology, 2000, 7, 753-764.	6.0	852
3	New developments in RiPP discovery, enzymology and engineering. Natural Product Reports, 2021, 38, 130-239.	10.3	412
4	The Cyanobacterial Hepatotoxin Microcystin Binds to Proteins and Increases the Fitness of Microcystis under Oxidative Stress Conditions. PLoS ONE, 2011, 6, e17615.	2.5	367
5	Exploiting the mosaic structure of trans-acyltransferase polyketide synthases for natural product discovery and pathway dissection. Nature Biotechnology, 2008, 26, 225-233.	17.5	362
6	Insertional mutagenesis of a peptide synthetase gene that is responsible for hepatotoxin production in the cyanobacterium <i>Microcystis aeruginosa</i> PCC 7806. Molecular Microbiology, 1997, 26, 779-787.	2.5	361
7	Light and the Transcriptional Response of the Microcystin Biosynthesis Gene Cluster. Applied and Environmental Microbiology, 2000, 66, 3387-3392.	3.1	337
8	Cyanobacterial toxins - occurrence, biosynthesis and impact on human affairs. Molecular Nutrition and Food Research, 2006, 50, 7-17.	3.3	329
9	Evolutionary Implications of Bacterial Polyketide Synthases. Molecular Biology and Evolution, 2005, 22, 2027-2039.	8.9	323
10	Microcystin Biosynthesis in Planktothrix: Genes, Evolution, and Manipulation. Journal of Bacteriology, 2003, 185, 564-572.	2.2	317
11	Cyanobacterial toxins: biosynthetic routes and evolutionary roots. FEMS Microbiology Reviews, 2013, 37, 23-43.	8.6	282
12	Natural Product Biosynthetic Diversity and Comparative Genomics of the Cyanobacteria. Trends in Microbiology, 2015, 23, 642-652.	7.7	266
13	Environmental conditions that influence toxin biosynthesis in cyanobacteria. Environmental Microbiology, 2013, 15, 1239-1253.	3.8	262
14	Nonribosomal Peptide Synthesis and Toxigenicity of Cyanobacteria. Journal of Bacteriology, 1999, 181, 4089-4097.	2.2	243
15	Highly plastic genome of Microcystis aeruginosa PCC 7806, a ubiquitous toxic freshwater cyanobacterium. BMC Genomics, 2008, 9, 274.	2.8	210
16	Diversity of Microcystin Genes within a Population of the Toxic Cyanobacterium Microcystis spp. in Lake Wannsee (Berlin, Germany). Microbial Ecology, 2002, 43, 107-118.	2.8	195
17	Role of Microcystins in Poisoning and Food Ingestion Inhibition of <i>Daphnia galeata</i> Caused by the Cyanobacterium <i>Microcystis aeruginosa</i>. Applied and Environmental Microbiology, 1999, 65, 737-739.	3.1	194
18	Towards clarification of the biological role of microcystins, a family of cyanobacterial toxins. Environmental Microbiology, 2007, 9, 965-970.	3.8	187

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19	Distribution of Microcystin-Producing and Non-Microcystin-Producing Microcystis sp. in European Freshwater Bodies: Detection of Microcystins and Microcystin Genes in Individual Colonies. Systematic and Applied Microbiology, 2004, 27, 592-602.	2.8	184
20	Effects of Cell-Bound Microcystins on Survival and Feeding of Daphnia spp. Applied and Environmental Microbiology, 2001, 67, 3523-3529.	3.1	167
21	The Microcystin Composition of the Cyanobacterium Planktothrix agardhii Changes toward a More Toxic Variant with Increasing Light Intensity. Applied and Environmental Microbiology, 2005, 71, 5177-5181.	3.1	165
22	Inactivation of an ABC Transporter Gene, <i>mcyH</i> , Results in Loss of Microcystin Production in the Cyanobacterium <i>Microcystis aeruginosa</i> PCC 7806. Applied and Environmental Microbiology, 2004, 70, 6370-6378.	3.1	150
23	Ribosomal Synthesis of Tricyclic Depsipeptides in Bloomâ€Forming Cyanobacteria. Angewandte Chemie - International Edition, 2008, 47, 7756-7759.	13.8	145
24	Multiple Alternate Transcripts Direct the Biosynthesis of Microcystin, a Cyanobacterial. Applied and Environmental Microbiology, 2002, 68, 449-455.	3.1	126
25	Natural product biosyntheses in cyanobacteria: A treasure trove of unique enzymes. Beilstein Journal of Organic Chemistry, 2011, 7, 1622-1635.	2.2	126
26	Ingestion of microcystins by <i>Daphnia</i> : Intestinal uptake and toxic effects. Limnology and Oceanography, 2005, 50, 440-448.	3.1	114
27	Evolution of metabolic diversity: Insights from microbial polyketide synthases. Phytochemistry, 2009, 70, 1858-1866.	2.9	113
28	A mannan binding lectin is involved in cell-cell attachment in a toxic strain of Microcystis aeruginosa. Molecular Microbiology, 2006, 59, 893-906.	2.5	108
29	Microvirin, a Novel Î±(1,2)-Mannose-specific Lectin Isolated from Microcystis aeruginosa, Has Anti-HIV-1 Activity Comparable with That of Cyanovirin-N but a Much Higher Safety Profile. Journal of Biological Chemistry, 2010, 285, 24845-24854.	3.4	108
30	Microcyclamide Biosynthesis in Two Strains of<i>Microcystis aeruginosa</i>: from Structure to Genes and Vice Versa. Applied and Environmental Microbiology, 2008, 74, 1791-1797.	3.1	107
31	Altered expression of two light-dependent genes in a microcystin-lacking mutant of Microcystis aeruginosa PCC 7806. Microbiology (United Kingdom), 2001, 147, 3113-3119.	1.8	103
32	Bacterial type III polyketide synthases: phylogenetic analysis and potential for the production of novel secondary metabolites by heterologous expression in pseudomonads. Archives of Microbiology, 2006, 185, 28-38.	2.2	102
33	Natural Biocombinatorics in the Polyketide Synthase Genes of the Actinobacterium Streptomyces avermitilis. PLoS Computational Biology, 2006, 2, e132.	3.2	101
34	Biosynthesis and Structure of Aeruginoside 126A and 126B, Cyanobacterial Peptide Glycosides Bearing a 2-Carboxy-6-Hydroxyoctahydroindole Moiety. Chemistry and Biology, 2007, 14, 565-576.	6.0	101
35	Biochemical Dissection of the Natural Diversification of Microcystin Provides Lessons for Synthetic Biology of NRPS. Cell Chemical Biology, 2016, 23, 462-471.	5.2	99
36	The genetics, biosynthesis and regulation of toxic specialized metabolites of cyanobacteria. Harmful Algae, 2016, 54, 98-111.	4.8	98

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37	Biosynthesis and Function of Extracellular Glycans in Cyanobacteria. Life, 2015, 5, 164-180.	2.4	97
38	Insights into the Physiology and Ecology of the Brackish-Water-Adapted Cyanobacterium Nodularia spumigena CCY9414 Based on a Genome-Transcriptome Analysis. PLoS ONE, 2013, 8, e60224.	2.5	95
39	Toxic and non-toxic strains of the cyanobacteriumMicrocystis aeruginosacontain sequences homologous to peptide synthetase genes. FEMS Microbiology Letters, 1996, 135, 295-303.	1.8	94
40	Metabolomic analysis indicates a pivotal role of the hepatotoxin microcystin in high light adaptation of <scp><i>M</i></scp><i>icrocystis</i>. Environmental Microbiology, 2015, 17, 1497-1509.	3.8	94
41	Microcystin production revisited: conjugate formation makes a major contribution. Environmental Microbiology, 2013, 15, 1810-1820.	3.8	93
42	Plasticity and Evolution of Aeruginosin Biosynthesis in Cyanobacteria. Applied and Environmental Microbiology, 2009, 75, 2017-2026.	3.1	92
43	The Languages Spoken in the Water Body (or the Biological Role of Cyanobacterial Toxins). Frontiers in Microbiology, 2012, 3, 138.	3.5	90
44	Genetic contributions to the risk assessment of microcystin in the environment. Toxicology and Applied Pharmacology, 2005, 203, 192-200.	2.8	86
45	Consequences of impaired microcystin production for light-dependent growth and pigmentation of Microcystis aeruginosa PCC 7806. FEMS Microbiology Ecology, 2001, 37, 39-43.	2.7	84
46	Molecular biology of peptide and polyketide biosynthesis in cyanobacteria. Applied Microbiology and Biotechnology, 2001, 57, 467-473.	3.6	83
47	Exploiting the Natural Diversity of Microviridin Gene Clusters for Discovery of Novel Tricyclic Depsipeptides. Applied and Environmental Microbiology, 2010, 76, 3568-3574.	3.1	83
48	A community resource for paired genomic and metabolomic data mining. Nature Chemical Biology, 2021, 17, 363-368.	8.0	81
49	Nonâ€Colinear Polyketide Biosynthesis in the Aureothin and Neoaureothin Pathways: An Evolutionary Perspective. ChemBioChem, 2007, 8, 1841-1849.	2.6	75
50	Transcriptomics-Aided Dissection of the Intracellular and Extracellular Roles of Microcystin in Microcystis aeruginosa PCC 7806. Applied and Environmental Microbiology, 2015, 81, 544-554.	3.1	74
51	A Typeâ€‰II Polyketide Synthase from the Gram-Negative BacteriumStigmatella aurantiaca Is Involved in Aurachin Alkaloid Biosynthesis. Angewandte Chemie - International Edition, 2007, 46, 2712-2716.	13.8	73
52	Variation between strains of the cyanobacterium Microcystis aeruginosa isolated from a Portuguese river. Journal of Applied Microbiology, 2005, 99, 749-757.	3.1	71
53	Bioinformatic perspectives on NRPS/PKS megasynthases: Advances and challenges. Natural Product Reports, 2009, 26, 874.	10.3	67
54	An Extracellular Glycoprotein Is Implicated in Cell-Cell Contacts in the Toxic Cyanobacterium<i>Microcystis aeruginosa</i>PCC 7806. Journal of Bacteriology, 2008, 190, 2871-2879.	2.2	61

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55	Microcystin interferes with defense against high oxidative stress in harmful cyanobacteria. Harmful Algae, 2018, 78, 47-55.	4.8	60
56	Horizontal gene transfer of two cytoskeletal elements from a eukaryote to a cyanobacterium. Current Biology, 2007, 17, R757-R759.	3.9	58
57	Leader Peptideâ€Free Inâ€…Vitro Reconstitution of Microviridin Biosynthesis Enables Design of Synthetic Proteaseâ€Targeted Libraries. Angewandte Chemie - International Edition, 2016, 55, 9398-9401.	13.8	55
58	The mcyF gene of the microcystin biosynthetic gene cluster from Microcystis aeruginosa encodes an aspartate racemase. Biochemical Journal, 2003, 373, 909-916.	3.7	54
59	Leader Peptide and a Membrane Protein Scaffold Guide the Biosynthesis of the Tricyclic Peptide Microviridin. Chemistry and Biology, 2011, 18, 1413-1421.	6.0	54
60	Nostopeptolide plays a governing role during cellular differentiation of the symbiotic cyanobacterium <i>Nostoc punctiforme</i>. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1862-1867.	7.1	54
61	Nonribosomal peptide synthetase genes occur in most cyanobacterial genera as evidenced by their distribution in axenic strains of the PCC. Archives of Microbiology, 2001, 176, 452-458.	2.2	48
62	Harnessing the Evolvability of Tricyclic Microviridins To Dissect Proteaseâ€“Inhibitor Interactions. Angewandte Chemie - International Edition, 2014, 53, 3735-3738.	13.8	46
63	A Genetic and Chemical Perspective on Symbiotic Recruitment of Cyanobacteria of the Genus Nostoc into the Host Plant Blasia pusilla L.. Frontiers in Microbiology, 2016, 7, 1693.	3.5	46
64	Phylogenomic Analysis of the Microviridin Biosynthetic Pathway Coupled with Targeted Chemo-Enzymatic Synthesis Yields Potent Protease Inhibitors. ACS Chemical Biology, 2017, 12, 1538-1546.	3.4	45
65	Functional assessment of mycosporineâ€like amino acids in <scp><i>M</i></scp><i>icrocystis aeruginosa</i> strain <scp>PCC</scp> 7806. Environmental Microbiology, 2015, 17, 1548-1559.	3.8	43
66	The Landscape of Recombination Events That Create Nonribosomal Peptide Diversity. Molecular Biology and Evolution, 2021, 38, 2116-2130.	8.9	37
67	High-Density Cultivation of Terrestrial Nostoc Strains Leads to Reprogramming of Secondary Metabolome. Applied and Environmental Microbiology, 2017, 83, .	3.1	35
68	Unlocking the Spatial Control of Secondary Metabolism Uncovers Hidden Natural Product Diversity in <i>Nostoc punctiforme</i>. ACS Chemical Biology, 2019, 14, 1271-1279.	3.4	32
69	Cyanobacteria as a Source of Natural Products. Methods in Enzymology, 2012, 517, 23-46.	1.0	31
70	Functional Analysis of Environmental DNA-Derived Microviridins Provides New Insights into the Diversity of the Tricyclic Peptide Family. Applied and Environmental Microbiology, 2014, 80, 1380-1387.	3.1	30
71	Evolutionary mechanisms underlying secondary metabolite diversity. , 2008, 65, 119-140.		29
72	Nonâ€canonical localization of RubisCO under highâ€light conditions in the toxic cyanobacterium <i>Microcystis aeruginosa</i> PCC7806. Environmental Microbiology, 2019, 21, 4836-4851.	3.8	26

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73	Unique Biosynthetic Pathway in Bloom-Forming Cyanobacterial Genus <i>Microcystis</i> Jointly Assembles Cytotoxic Aeruginoguanidines and Microguanidines. ACS Chemical Biology, 2019, 14, 67-75.	3.4	25
74	Conserved sequences of peptide synthetase genes in the cyanobacterium Microcystis aeruginosa. Phycologia, 1996, 35, 62-67.	1.4	23
75	A New Rubisco-like Protein Coexists with a Photosynthetic Rubisco in the Planktonic Cyanobacteria Microcystis. Journal of Biological Chemistry, 2006, 281, 24462-24471.	3.4	22
76	Aurachin-Biosynthese im Gram-negativen Bakterium Stigmatella aurantiaca: Beteiligung einer Typ-II-Polyketidsynthase. Angewandte Chemie, 2007, 119, 2768-2772.	2.0	22
77	A polyketide interferes with cellular differentiation in the symbiotic cyanobacterium <i>Nostoc punctiforme</i>. Environmental Microbiology Reports, 2011, 3, 550-558.	2.4	22
78	Molecular Biology of Cyanobacterial Toxins. , 2005, , 25-40.		21
79	Toxic and non-toxic strains of the cyanobacterium Microcystis aeruginosa contain sequences homologous to peptide synthetase genes. FEMS Microbiology Letters, 1996, 135, 295-303.	1.8	20
80	Structural and functional insights into the unique CBSâ€“CP12 fusion protein family in cyanobacteria. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 7141-7146.	7.1	20
81	Synergistic in vitro anti-HIV type 1 activity of tenofovir with carbohydrate-binding agents (CBAs). Antiviral Research, 2011, 90, 200-204.	4.1	17
82	From Water into Sedimentâ€"Tracing Freshwater Cyanobacteria via DNA Analyses. Microorganisms, 2021, 9, 1778.	3.6	16
83	Salt Shock Responses of Microcystis Revealed through Physiological, Transcript, and Metabolomic Analyses. Toxins, 2020, 12, 192.	3.4	15
84	Mycosporine-like amino acids (MAAs)â€"producing Microcystis in Lake Erie: Development of a qPCR assay and insight into its ecology. Harmful Algae, 2018, 77, 1-10.	4.8	14
85	Peptide Synthetase Genes Occur in Various Species of Cyanobacteria. , 1999, , 615-621.		11
86	Casting a net: fibres produced by <i>Microcystis</i> sp. in field and laboratory populations. Environmental Microbiology Reports, 2012, 4, 342-349.	2.4	9
87	Species-Level Spatio-Temporal Dynamics of Cyanobacteria in a Hard-Water Temperate Lake in the Southern Baltics. Frontiers in Microbiology, 2021, 12, 761259.	3.5	9
88	Unique Properties of Eukaryote-Type Actin and Profilin Horizontally Transferred to Cyanobacteria. PLoS ONE, 2012, 7, e29926.	2.5	7
89	Leader Peptideâ€Free Inâ€...Vitro Reconstitution of Microviridin Biosynthesis Enables Design of Synthetic Proteaseâ€Targeted Libraries. Angewandte Chemie, 2016, 128, 9544-9547.	2.0	7
90	Diel Variations of Extracellular Microcystin Influence the Subcellular Dynamics of RubisCO in Microcystis aeruginosa PCC 7806. Microorganisms, 2021, 9, 1265.	3.6	7

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91	Deciphering Chemical Mediators Regulating Specialized Metabolism in a Symbiotic Cyanobacterium. Angewandte Chemie - International Edition, 2022, 61, .	13.8	7
92	Prerequisites of Isopeptide Bond Formation in Microcystin Biosynthesis. ChemBioChem, 2017, 18, 2376-2379.	2.6	6
93	Combinatorial polyketide biosynthesis at higher stage. Molecular Systems Biology, 2005, 1, 2005.0025.	7.2	5
94	Protective tunicate endosymbiont with extreme genome reduction. Environmental Microbiology, 2015, 17, 3430-3432.	3.8	5
95	Tailoring Enzyme Stringency Masks the Multispecificity of a Lyngbyatoxin (Indolactam Alkaloid) Nonribosomal Peptide Synthetase. ChemBioChem, 2021, , .	2.6	4
96	Microviridins. , 2020, , 193-205.		2
97	Depth profiles of protein-bound microcystin in KÃ¼Ã§Ã¼kÃ§ekmece Lagoon. Toxicon, 2021, 198, 156-163.	1.6	2
98	Cyanobacterial toxins: biosynthetic routes and evolutionary roots. FEMS Microbiology Reviews, 2012, , n/a-n/a.	8.6	2
99	Draft Genome Sequences of Two Uncultured Armatimonadetes Associated with a Microcystis sp. () Tj ETQq1 1 0.784314 rgBT /Overlo	0.8	1
100	Cyanobacterial Genome Sequencing, Annotation, and Bioinformatics. Methods in Molecular Biology, 2022, 2489, 269-287.	0.9	1
101	Consequences of impaired microcystin production for light-dependent growth and pigmentation of Microcystis aeruginosa PCC 7806. FEMS Microbiology Ecology, 2001, 37, 39-43.	2.7	1
102	Inside Cover: Ribosomal Synthesis of Tricyclic Depsipeptides in Bloom-Forming Cyanobacteria (Angew.) Tj ETQq0 0 0 rgBT /Overlock 10	13.8	0
103	Nucleic Acid Extraction. , 2017, , 135-161.		0
104	EntschlÃ¼sselung chemischer Mediatoren zur Regulierung des spezialisierten Stoffwechsels in einem symbiotischen Cyanobakterium. Angewandte Chemie, 2022, 134, .	2.0	0