Elke Dittmann

List of Publications by Year
in descending order

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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	EntschlÃ¼sselung chemischer Mediatoren zur Regulierung des spezialisierten Stoffwechsels in einem symbiotischen Cyanobakterium. Angewandte Chemie, 2022, 134, .	2.0	0
2	Deciphering Chemical Mediators Regulating Specialized Metabolism in a Symbiotic Cyanobacterium. Angewandte Chemie - International Edition, 2022, 61, .	13.8	7
3	Cyanobacterial Genome Sequencing, Annotation, and Bioinformatics. Methods in Molecular Biology, 2022, 2489, 269-287.	0.9	1
4	New developments in RiPP discovery, enzymology and engineering. Natural Product Reports, 2021, 38, 130-239.	10.3	412
5	The Landscape of Recombination Events That Create Nonribosomal Peptide Diversity. Molecular Biology and Evolution, 2021, 38, 2116-2130.	8.9	37
6	A community resource for paired genomic and metabolomic data mining. Nature Chemical Biology, 2021, 17, 363-368.	8.0	81
7	Diel Variations of Extracellular Microcystin Influence the Subcellular Dynamics of RubisCO in Microcystis aeruginosa PCC 7806. Microorganisms, 2021, 9, 1265.	3.6	7
8	Depth profiles of protein-bound microcystin in KÃ¼Ã§Ã¼kÃ§ekmece Lagoon. Toxicon, 2021, 198, 156-163.	1.6	2
9	From Water into Sedimentâ€"Tracing Freshwater Cyanobacteria via DNA Analyses. Microorganisms, 2021, 9, 1778.	3.6	16
10	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
11	Tailoring Enzyme Stringency Masks the Multispecificity of a Lyngbyatoxin (Indolactam Alkaloid) Nonribosomal Peptide Synthetase. ChemBioChem, 2021, , .	2.6	4
12	Microviridins. , 2020, , 193-205.		2
13	Salt Shock Responses of Microcystis Revealed through Physiological, Transcript, and Metabolomic Analyses. Toxins, 2020, 12, 192.	3.4	15
14	Nonâ€¢canonical localization of RubisCO under highâ€light conditions in the toxic cyanobacterium Microcystis aeruginosa PCC7806. Environmental Microbiology, 2019, 21, 4836-4851.	3.8	26
15	Unlocking the Spatial Control of Secondary Metabolism Uncovers Hidden Natural Product Diversity in Nostoc punctiforme. ACS Chemical Biology, 2019, 14, 1271-1279.	3.4	32
16	Unique Biosynthetic Pathway in Bloom-Forming Cyanobacterial Genus Microcystis Jointly Assembles Cytotoxic Aeruginoguanidines and Microguanidines. ACS Chemical Biology, 2019, 14, 67-75.	3.4	25
17	Microcystin interferes with defense against high oxidative stress in harmful cyanobacteria. Harmful Algae, 2018, 78, 47-55.	4.8	60
18	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

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19	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
20	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
21	Draft Genome Sequences of Two Uncultured Armatimonadetes Associated with a Microcystis sp. () Tj ETQq1 1 0.784314 rgBT /Overlock	0.8	1
22	High-Density Cultivation of Terrestrial Nostoc Strains Leads to Reprogramming of Secondary Metabolome. Applied and Environmental Microbiology, 2017, 83, .	3.1	35
23	Prerequisites of Isopeptide Bond Formation in Microcystin Biosynthesis. ChemBioChem, 2017, 18, 2376-2379.	2.6	6
24	Nucleic Acid Extraction. , 2017, , 135-161.		0
25	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
26	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
27	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
28	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
29	The genetics, biosynthesis and regulation of toxic specialized metabolites of cyanobacteria. Harmful Algae, 2016, 54, 98-111.	4.8	98
30	Protective tunicate endosymbiont with extreme genome reduction. Environmental Microbiology, 2015, 17, 3430-3432.	3.8	5
31	Nostopeptolide plays a governing role during cellular differentiation of the symbiotic cyanobacterium Nostoc punctiforme. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1862-1867.	7.1	54
32	Biosynthesis and Function of Extracellular Glycans in Cyanobacteria. Life, 2015, 5, 164-180.	2.4	97
33	Natural Product Biosynthetic Diversity and Comparative Genomics of the Cyanobacteria. Trends in Microbiology, 2015, 23, 642-652.	7.7	266
34	Metabolomic analysis indicates a pivotal role of the hepatotoxin microcystin in high light adaptation of <scp>M</scp>icrocystis. Environmental Microbiology, 2015, 17, 1497-1509.	3.8	94
35	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
36	Functional assessment of mycosporineâ€like amino acids in <scp>M</scp>icrocystis aeruginosa strain <scp>PCC</scp> 7806. Environmental Microbiology, 2015, 17, 1548-1559.	3.8	43

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37	Harnessing the Evolvability of Tricyclic Microviridins To Dissect Proteaseâ€“Inhibitor Interactions. Angewandte Chemie - International Edition, 2014, 53, 3735-3738.	13.8	46
38	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
39	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
40	Environmental conditions that influence toxin biosynthesis in cyanobacteria. Environmental Microbiology, 2013, 15, 1239-1253.	3.8	262
41	Microcystin production revisited: conjugate formation makes a major contribution. Environmental Microbiology, 2013, 15, 1810-1820.	3.8	93
42	Cyanobacterial toxins: biosynthetic routes and evolutionary roots. FEMS Microbiology Reviews, 2013, 37, 23-43.	8.6	282
43	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
44	The Languages Spoken in the Water Body (or the Biological Role of Cyanobacterial Toxins). Frontiers in Microbiology, 2012, 3, 138.	3.5	90
45	Cyanobacteria as a Source of Natural Products. Methods in Enzymology, 2012, 517, 23-46.	1.0	31
46	Unique Properties of Eukaryote-Type Actin and Profilin Horizontally Transferred to Cyanobacteria. PLoS ONE, 2012, 7, e29926.	2.5	7
47	Casting a net: fibres produced by Microcystis sp. in field and laboratory populations. Environmental Microbiology Reports, 2012, 4, 342-349.	2.4	9
48	Cyanobacterial toxins: biosynthetic routes and evolutionary roots. FEMS Microbiology Reviews, 2012, , n/a-n/a.	8.6	2
49	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
50	A polyketide interferes with cellular differentiation in the symbiotic cyanobacterium Nostoc punctiforme. Environmental Microbiology Reports, 2011, 3, 550-558.	2.4	22
51	Natural product biosyntheses in cyanobacteria: A treasure trove of unique enzymes. Beilstein Journal of Organic Chemistry, 2011, 7, 1622-1635.	2.2	126
52	Synergistic in vitro anti-HIV type 1 activity of tenofovir with carbohydrate-binding agents (CBAs). Antiviral Research, 2011, 90, 200-204.	4.1	17
53	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
54	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

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55	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
56	Evolution of metabolic diversity: Insights from microbial polyketide synthases. Phytochemistry, 2009, 70, 1858-1866.	2.9	113
57	Plasticity and Evolution of Aeruginosin Biosynthesis in Cyanobacteria. Applied and Environmental Microbiology, 2009, 75, 2017-2026.	3.1	92
58	Bioinformatic perspectives on NRPS/PKS megasynthases: Advances and challenges. Natural Product Reports, 2009, 26, 874.	10.3	67
59	Ribosomal Synthesis of Tricyclic Depsipeptides in Bloomâ€Forming Cyanobacteria. Angewandte Chemie - International Edition, 2008, 47, 7756-7759.	13.8	145
60	Inside Cover: Ribosomal Synthesis of Tricyclic Depsipeptides in Bloom-Forming Cyanobacteria (Angew.) Tj ETQq0 0 0 rgBT /Overlock 10 T	13.8	0
61	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
62	Highly plastic genome of Microcystis aeruginosa PCC 7806, a ubiquitous toxic freshwater cyanobacterium. BMC Genomics, 2008, 9, 274.	2.8	210
63	Microcyclamide Biosynthesis in Two Strains ofMicrocystis aeruginosa: from Structure to Genes and Vice Versa. Applied and Environmental Microbiology, 2008, 74, 1791-1797.	3.1	107
64	Evolutionary mechanisms underlying secondary metabolite diversity. , 2008, 65, 119-140.		29
65	An Extracellular Glycoprotein Is Implicated in Cell-Cell Contacts in the Toxic CyanobacteriumMicrocystis aeruginosaPCC 7806. Journal of Bacteriology, 2008, 190, 2871-2879.	2.2	61
66	Nonâ€Colinear Polyketide Biosynthesis in the Aureothin and Neoaureothin Pathways: An Evolutionary Perspective. ChemBioChem, 2007, 8, 1841-1849.	2.6	75
67	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
68	Aurachin-Biosynthese im Gram-negativen Bakterium Stigmatella aurantiaca: Beteiligung einer Typ-II-Polyketidsynthase. Angewandte Chemie, 2007, 119, 2768-2772.	2.0	22
69	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
70	Towards clarification of the biological role of microcystins, a family of cyanobacterial toxins. Environmental Microbiology, 2007, 9, 965-970.	3.8	187
71	Horizontal gene transfer of two cytoskeletal elements from a eukaryote to a cyanobacterium. Current Biology, 2007, 17, R757-R759.	3.9	58
72	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

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73	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
74	Cyanobacterial toxins - occurrence, biosynthesis and impact on human affairs. Molecular Nutrition and Food Research, 2006, 50, 7-17.	3.3	329
75	Natural Biocombinatorics in the Polyketide Synthase Genes of the Actinobacterium Streptomyces avermitilis. PLoS Computational Biology, 2006, 2, e132.	3.2	101
76	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
77	Ingestion of microcystins by Daphnia : Intestinal uptake and toxic effects. Limnology and Oceanography, 2005, 50, 440-448.	3.1	114
78	Variation between strains of the cyanobacterium Microcystis aeruginosa isolated from a Portuguese river. Journal of Applied Microbiology, 2005, 99, 749-757.	3.1	71
79	Genetic contributions to the risk assessment of microcystin in the environment. Toxicology and Applied Pharmacology, 2005, 203, 192-200.	2.8	86
80	Combinatorial polyketide biosynthesis at higher stage. Molecular Systems Biology, 2005, 1, 2005.0025.	7.2	5
81	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
82	Evolutionary Implications of Bacterial Polyketide Synthases. Molecular Biology and Evolution, 2005, 22, 2027-2039.	8.9	323
83	Molecular Biology of Cyanobacterial Toxins. , 2005, , 25-40.		21
84	Inactivation of an ABC Transporter Gene, mcyH , Results in Loss of Microcystin Production in the Cyanobacterium Microcystis aeruginosa PCC 7806. Applied and Environmental Microbiology, 2004, 70, 6370-6378.	3.1	150
85	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
86	Microcystin Biosynthesis in Planktothrix: Genes, Evolution, and Manipulation. Journal of Bacteriology, 2003, 185, 564-572.	2.2	317
87	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
88	Multiple Alternate Transcripts Direct the Biosynthesis of Microcystin, a Cyanobacterial. Applied and Environmental Microbiology, 2002, 68, 449-455.	3.1	126
89	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
90	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

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91	Molecular biology of peptide and polyketide biosynthesis in cyanobacteria. Applied Microbiology and Biotechnology, 2001, 57, 467-473.	3.6	83
92	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
93	Effects of Cell-Bound Microcystins on Survival and Feeding of Daphnia spp. Applied and Environmental Microbiology, 2001, 67, 3523-3529.	3.1	167
94	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
95	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
96	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
97	Light and the Transcriptional Response of the Microcystin Biosynthesis Gene Cluster. Applied and Environmental Microbiology, 2000, 66, 3387-3392.	3.1	337
98	Role of Microcystins in Poisoning and Food Ingestion Inhibition of Daphnia galeata Caused by the Cyanobacterium Microcystis aeruginosa. Applied and Environmental Microbiology, 1999, 65, 737-739.	3.1	194
99	Peptide Synthetase Genes Occur in Various Species of Cyanobacteria. , 1999, , 615-621.		11
100	Nonribosomal Peptide Synthesis and Toxigenicity of Cyanobacteria. Journal of Bacteriology, 1999, 181, 4089-4097.	2.2	243
101	Insertional mutagenesis of a peptide synthetase gene that is responsible for hepatotoxin production in the cyanobacterium Microcystis aeruginosa PCC 7806. Molecular Microbiology, 1997, 26, 779-787.	2.5	361
102	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
103	Conserved sequences of peptide synthetase genes in the cyanobacterium Microcystis aeruginosa. Phycologia, 1996, 35, 62-67.	1.4	23
104	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