

Elke Dittmann

List of Publications by Year in descending order

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103
papers

12,113
citations

26567

56
h-index

35952

97
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. <i>Natural Product Reports</i> , 2013, 30, 108-160.	5.2	1,692
2	Structural organization of microcystin biosynthesis in <i>Microcystis aeruginosa</i> PCC7806: an integrated peptide-polyketide synthetase system. <i>Chemistry and Biology</i> , 2000, 7, 753-764.	6.2	852
3	New developments in RiPP discovery, enzymology and engineering. <i>Natural Product Reports</i> , 2021, 38, 130-239.	5.2	412
4	The Cyanobacterial Hepatotoxin Microcystin Binds to Proteins and Increases the Fitness of <i>Microcystis</i> under Oxidative Stress Conditions. <i>PLoS ONE</i> , 2011, 6, e17615.	1.1	367
5	Exploiting the mosaic structure of trans-acyltransferase polyketide synthases for natural product discovery and pathway dissection. <i>Nature Biotechnology</i> , 2008, 26, 225-233.	9.4	362
6	Insertional mutagenesis of a peptide synthetase gene that is responsible for hepatotoxin production in the cyanobacterium <i>Microcystis aeruginosa</i> PCC 7806. <i>Molecular Microbiology</i> , 1997, 26, 779-787.	1.2	361
7	Light and the Transcriptional Response of the Microcystin Biosynthesis Gene Cluster. <i>Applied and Environmental Microbiology</i> , 2000, 66, 3387-3392.	1.4	337
8	Cyanobacterial toxins - occurrence, biosynthesis and impact on human affairs. <i>Molecular Nutrition and Food Research</i> , 2006, 50, 7-17.	1.5	329
9	Evolutionary Implications of Bacterial Polyketide Synthases. <i>Molecular Biology and Evolution</i> , 2005, 22, 2027-2039.	3.5	323
10	Microcystin Biosynthesis in <i>Planktothrix</i> : Genes, Evolution, and Manipulation. <i>Journal of Bacteriology</i> , 2003, 185, 564-572.	1.0	317
11	Cyanobacterial toxins: biosynthetic routes and evolutionary roots. <i>FEMS Microbiology Reviews</i> , 2013, 37, 23-43.	3.9	282
12	Natural Product Biosynthetic Diversity and Comparative Genomics of the Cyanobacteria. <i>Trends in Microbiology</i> , 2015, 23, 642-652.	3.5	266
13	Environmental conditions that influence toxin biosynthesis in cyanobacteria. <i>Environmental Microbiology</i> , 2013, 15, 1239-1253.	1.8	262
14	Nonribosomal Peptide Synthesis and Toxigenicity of Cyanobacteria. <i>Journal of Bacteriology</i> , 1999, 181, 4089-4097.	1.0	243
15	Highly plastic genome of <i>Microcystis aeruginosa</i> PCC 7806, a ubiquitous toxic freshwater cyanobacterium. <i>BMC Genomics</i> , 2008, 9, 274.	1.2	210
16	Diversity of Microcystin Genes within a Population of the Toxic Cyanobacterium <i>Microcystis</i> spp. in Lake Wannsee (Berlin, Germany). <i>Microbial Ecology</i> , 2002, 43, 107-118.	1.4	195
17	Role of Microcystins in Poisoning and Food Ingestion Inhibition of <i>Daphnia galeata</i> Caused by the Cyanobacterium <i>Microcystis aeruginosa</i> . <i>Applied and Environmental Microbiology</i> , 1999, 65, 737-739.	1.4	194
18	Towards clarification of the biological role of microcystins, a family of cyanobacterial toxins. <i>Environmental Microbiology</i> , 2007, 9, 965-970.	1.8	187

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19	Distribution of Microcystin-Producing and Non-Microcystin-Producing <i>Microcystis</i> sp. in European Freshwater Bodies: Detection of Microcystins and Microcystin Genes in Individual Colonies. <i>Systematic and Applied Microbiology</i> , 2004, 27, 592-602.	1.2	184
20	Effects of Cell-Bound Microcystins on Survival and Feeding of <i>Daphnia</i> spp. <i>Applied and Environmental Microbiology</i> , 2001, 67, 3523-3529.	1.4	167
21	The Microcystin Composition of the Cyanobacterium <i>Planktothrix agardhii</i> Changes toward a More Toxic Variant with Increasing Light Intensity. <i>Applied and Environmental Microbiology</i> , 2005, 71, 5177-5181.	1.4	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. <i>Applied and Environmental Microbiology</i> , 2004, 70, 6370-6378.	1.4	150
23	Ribosomal Synthesis of Tricyclic Depsipeptides in Bloom-Forming Cyanobacteria. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 7756-7759.	7.2	145
24	Multiple Alternate Transcripts Direct the Biosynthesis of Microcystin, a Cyanobacterial. <i>Applied and Environmental Microbiology</i> , 2002, 68, 449-455.	1.4	126
25	Natural product biosyntheses in cyanobacteria: A treasure trove of unique enzymes. <i>Beilstein Journal of Organic Chemistry</i> , 2011, 7, 1622-1635.	1.3	126
26	Ingestion of microcystins by <i>Daphnia</i> : Intestinal uptake and toxic effects. <i>Limnology and Oceanography</i> , 2005, 50, 440-448.	1.6	114
27	Evolution of metabolic diversity: Insights from microbial polyketide synthases. <i>Phytochemistry</i> , 2009, 70, 1858-1866.	1.4	113
28	A mannan binding lectin is involved in cell-cell attachment in a toxic strain of <i>Microcystis aeruginosa</i> . <i>Molecular Microbiology</i> , 2006, 59, 893-906.	1.2	108
29	Microvirin, a Novel α -(1,2)-Mannose-specific Lectin Isolated from <i>Microcystis aeruginosa</i> , Has Anti-HIV-1 Activity Comparable with That of Cyanovirin-N but a Much Higher Safety Profile. <i>Journal of Biological Chemistry</i> , 2010, 285, 24845-24854.	1.6	108
30	Microcyclamide Biosynthesis in Two Strains of <i>Microcystis aeruginosa</i> : from Structure to Genes and Vice Versa. <i>Applied and Environmental Microbiology</i> , 2008, 74, 1791-1797.	1.4	107
31	Altered expression of two light-dependent genes in a microcystin-lacking mutant of <i>Microcystis aeruginosa</i> PCC 7806. <i>Microbiology (United Kingdom)</i> , 2001, 147, 3113-3119.	0.7	103
32	Bacterial type III polyketide synthases: phylogenetic analysis and potential for the production of novel secondary metabolites by heterologous expression in pseudomonads. <i>Archives of Microbiology</i> , 2006, 185, 28-38.	1.0	102
33	Natural Biocombinatorics in the Polyketide Synthase Genes of the Actinobacterium <i>Streptomyces avermitilis</i> . <i>PLoS Computational Biology</i> , 2006, 2, e132.	1.5	101
34	Biosynthesis and Structure of Aeruginoside 126A and 126B, Cyanobacterial Peptide Glycosides Bearing a 2-Carboxy-6-Hydroxyoctahydroindole Moiety. <i>Chemistry and Biology</i> , 2007, 14, 565-576.	6.2	101
35	Biochemical Dissection of the Natural Diversification of Microcystin Provides Lessons for Synthetic Biology of NRPS. <i>Cell Chemical Biology</i> , 2016, 23, 462-471.	2.5	99
36	The genetics, biosynthesis and regulation of toxic specialized metabolites of cyanobacteria. <i>Harmful Algae</i> , 2016, 54, 98-111.	2.2	98

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37	Biosynthesis and Function of Extracellular Glycans in Cyanobacteria. <i>Life</i> , 2015, 5, 164-180.	1.1	97
38	Insights into the Physiology and Ecology of the Brackish-Water-Adapted Cyanobacterium <i>Nodularia spumigena</i> CCY9414 Based on a Genome-Transcriptome Analysis. <i>PLoS ONE</i> , 2013, 8, e60224.	1.1	95
39	Toxic and non-toxic strains of the cyanobacterium <i>Microcystis aeruginosa</i> contain sequences homologous to peptide synthetase genes. <i>FEMS Microbiology Letters</i> , 1996, 135, 295-303.	0.7	94
40	Metabolomic analysis indicates a pivotal role of the hepatotoxin microcystin in high light adaptation of <i>Microcystis aeruginosa</i> . <i>Environmental Microbiology</i> , 2015, 17, 1497-1509.	1.8	94
41	Microcystin production revisited: conjugate formation makes a major contribution. <i>Environmental Microbiology</i> , 2013, 15, 1810-1820.	1.8	93
42	Plasticity and Evolution of Aeruginosin Biosynthesis in Cyanobacteria. <i>Applied and Environmental Microbiology</i> , 2009, 75, 2017-2026.	1.4	92
43	The Languages Spoken in the Water Body (or the Biological Role of Cyanobacterial Toxins). <i>Frontiers in Microbiology</i> , 2012, 3, 138.	1.5	90
44	Genetic contributions to the risk assessment of microcystin in the environment. <i>Toxicology and Applied Pharmacology</i> , 2005, 203, 192-200.	1.3	86
45	Consequences of impaired microcystin production for light-dependent growth and pigmentation of <i>Microcystis aeruginosa</i> PCC 7806. <i>FEMS Microbiology Ecology</i> , 2001, 37, 39-43.	1.3	84
46	Molecular biology of peptide and polyketide biosynthesis in cyanobacteria. <i>Applied Microbiology and Biotechnology</i> , 2001, 57, 467-473.	1.7	83
47	Exploiting the Natural Diversity of Microviridin Gene Clusters for Discovery of Novel Tricyclic Depsipeptides. <i>Applied and Environmental Microbiology</i> , 2010, 76, 3568-3574.	1.4	83
48	A community resource for paired genomic and metabolomic data mining. <i>Nature Chemical Biology</i> , 2021, 17, 363-368.	3.9	81
49	Non-collinear Polyketide Biosynthesis in the Aureothin and Neoaureothin Pathways: An Evolutionary Perspective. <i>ChemBioChem</i> , 2007, 8, 1841-1849.	1.3	75
50	Transcriptomics-Aided Dissection of the Intracellular and Extracellular Roles of Microcystin in <i>Microcystis aeruginosa</i> PCC 7806. <i>Applied and Environmental Microbiology</i> , 2015, 81, 544-554.	1.4	74
51	A Type III Polyketide Synthase from the Gram-Negative Bacterium <i>Stigmatella aurantiaca</i> Is Involved in Aurachin Alkaloid Biosynthesis. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 2712-2716.	7.2	73
52	Variation between strains of the cyanobacterium <i>Microcystis aeruginosa</i> isolated from a Portuguese river. <i>Journal of Applied Microbiology</i> , 2005, 99, 749-757.	1.4	71
53	Bioinformatic perspectives on NRPS/PKS megasynthases: Advances and challenges. <i>Natural Product Reports</i> , 2009, 26, 874.	5.2	67
54	An Extracellular Glycoprotein Is Implicated in Cell-Cell Contacts in the Toxic Cyanobacterium <i>Microcystis aeruginosa</i> PCC 7806. <i>Journal of Bacteriology</i> , 2008, 190, 2871-2879.	1.0	61

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55	Microcystin interferes with defense against high oxidative stress in harmful cyanobacteria. <i>Harmful Algae</i> , 2018, 78, 47-55.	2.2	60
56	Horizontal gene transfer of two cytoskeletal elements from a eukaryote to a cyanobacterium. <i>Current Biology</i> , 2007, 17, R757-R759.	1.8	58
57	Leader Peptide-Free In-Vitro Reconstitution of Microviridin Biosynthesis Enables Design of Synthetic Protease-Targeted Libraries. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 9398-9401.	7.2	55
58	The mcyF gene of the microcystin biosynthetic gene cluster from <i>Microcystis aeruginosa</i> encodes an aspartate racemase. <i>Biochemical Journal</i> , 2003, 373, 909-916.	1.7	54
59	Leader Peptide and a Membrane Protein Scaffold Guide the Biosynthesis of the Tricyclic Peptide Microviridin. <i>Chemistry and Biology</i> , 2011, 18, 1413-1421.	6.2	54
60	Nostopeptolide plays a governing role during cellular differentiation of the symbiotic cyanobacterium <i>Nostoc punctiforme</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 1862-1867.	3.3	54
61	Nonribosomal peptide synthetase genes occur in most cyanobacterial genera as evidenced by their distribution in axenic strains of the PCC. <i>Archives of Microbiology</i> , 2001, 176, 452-458.	1.0	48
62	Harnessing the Evolvability of Tricyclic Microviridins To Dissect Protease-Inhibitor Interactions. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 3735-3738.	7.2	46
63	A Genetic and Chemical Perspective on Symbiotic Recruitment of Cyanobacteria of the Genus <i>Nostoc</i> into the Host Plant <i>Blasia pusilla</i> L.. <i>Frontiers in Microbiology</i> , 2016, 7, 1693.	1.5	46
64	Phylogenomic Analysis of the Microviridin Biosynthetic Pathway Coupled with Targeted Chemo-Enzymatic Synthesis Yields Potent Protease Inhibitors. <i>ACS Chemical Biology</i> , 2017, 12, 1538-1546.	1.6	45
65	Functional assessment of mycosporine-like amino acids in <i>Microcystis aeruginosa</i> strain PCC 7806. <i>Environmental Microbiology</i> , 2015, 17, 1548-1559.	1.8	43
66	The Landscape of Recombination Events That Create Nonribosomal Peptide Diversity. <i>Molecular Biology and Evolution</i> , 2021, 38, 2116-2130.	3.5	37
67	High-Density Cultivation of Terrestrial <i>Nostoc</i> Strains Leads to Reprogramming of Secondary Metabolome. <i>Applied and Environmental Microbiology</i> , 2017, 83, .	1.4	35
68	Unlocking the Spatial Control of Secondary Metabolism Uncovers Hidden Natural Product Diversity in <i>Nostoc punctiforme</i> . <i>ACS Chemical Biology</i> , 2019, 14, 1271-1279.	1.6	32
69	Cyanobacteria as a Source of Natural Products. <i>Methods in Enzymology</i> , 2012, 517, 23-46.	0.4	31
70	Functional Analysis of Environmental DNA-Derived Microviridins Provides New Insights into the Diversity of the Tricyclic Peptide Family. <i>Applied and Environmental Microbiology</i> , 2014, 80, 1380-1387.	1.4	30
71	Evolutionary mechanisms underlying secondary metabolite diversity. , 2008, 65, 119-140.		29
72	Non-canonical localization of RubisCO under high-light conditions in the toxic cyanobacterium <i>Microcystis aeruginosa</i> PCC7806. <i>Environmental Microbiology</i> , 2019, 21, 4836-4851.	1.8	26

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73	Unique Biosynthetic Pathway in Bloom-Forming Cyanobacterial Genus <i>Microcystis</i> Jointly Assembles Cytotoxic Aeruginoguanidines and Microguanidines. <i>ACS Chemical Biology</i> , 2019, 14, 67-75.	1.6	25
74	Conserved sequences of peptide synthetase genes in the cyanobacterium <i>Microcystis aeruginosa</i> . <i>Phycologia</i> , 1996, 35, 62-67.	0.6	23
75	A New Rubisco-like Protein Coexists with a Photosynthetic Rubisco in the Planktonic Cyanobacteria <i>Microcystis</i> . <i>Journal of Biological Chemistry</i> , 2006, 281, 24462-24471.	1.6	22
76	Aurachin-Biosynthese im Gram-negativen Bakterium <i>Stigmatella aurantiaca</i> : Beteiligung einer Typ-II-Polyketidsynthase. <i>Angewandte Chemie</i> , 2007, 119, 2768-2772.	1.6	22
77	A polyketide interferes with cellular differentiation in the symbiotic cyanobacterium <i>Nostoc punctiforme</i> . <i>Environmental Microbiology Reports</i> , 2011, 3, 550-558.	1.0	22
78	Molecular Biology of Cyanobacterial Toxins. , 2005, , 25-40.		21
79	Toxic and non-toxic strains of the cyanobacterium <i>Microcystis aeruginosa</i> contain sequences homologous to peptide synthetase genes. <i>FEMS Microbiology Letters</i> , 1996, 135, 295-303.	0.7	20
80	Structural and functional insights into the unique CBS-CP12 fusion protein family in cyanobacteria. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 7141-7146.	3.3	20
81	Synergistic in vitro anti-HIV type 1 activity of tenofovir with carbohydrate-binding agents (CBAs). <i>Antiviral Research</i> , 2011, 90, 200-204.	1.9	17
82	From Water into Sediment—Tracing Freshwater Cyanobacteria via DNA Analyses. <i>Microorganisms</i> , 2021, 9, 1778.	1.6	16
83	Salt Shock Responses of <i>Microcystis</i> Revealed through Physiological, Transcript, and Metabolomic Analyses. <i>Toxins</i> , 2020, 12, 192.	1.5	15
84	Mycosporine-like amino acids (MAAs)-producing <i>Microcystis</i> in Lake Erie: Development of a qPCR assay and insight into its ecology. <i>Harmful Algae</i> , 2018, 77, 1-10.	2.2	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. <i>Environmental Microbiology Reports</i> , 2012, 4, 342-349.	1.0	9
87	Species-Level Spatio-Temporal Dynamics of Cyanobacteria in a Hard-Water Temperate Lake in the Southern Baltics. <i>Frontiers in Microbiology</i> , 2021, 12, 761259.	1.5	9
88	Unique Properties of Eukaryote-Type Actin and Profilin Horizontally Transferred to Cyanobacteria. <i>PLoS ONE</i> , 2012, 7, e29926.	1.1	7
89	Leader Peptide-Free In Vitro Reconstitution of Microviridin Biosynthesis Enables Design of Synthetic Protease-Targeted Libraries. <i>Angewandte Chemie</i> , 2016, 128, 9544-9547.	1.6	7
90	Diel Variations of Extracellular Microcystin Influence the Subcellular Dynamics of RubisCO in <i>Microcystis aeruginosa</i> PCC 7806. <i>Microorganisms</i> , 2021, 9, 1265.	1.6	7

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91	Deciphering Chemical Mediators Regulating Specialized Metabolism in a Symbiotic Cyanobacterium. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	7
92	Prerequisites of Isopeptide Bond Formation in Microcystin Biosynthesis. <i>ChemBioChem</i> , 2017, 18, 2376-2379.	1.8	6
93	Combinatorial polyketide biosynthesis at higher stage. <i>Molecular Systems Biology</i> , 2005, 1, 2005.0025.	3.2	5
94	Protective tunicate endosymbiont with extreme genome reduction. <i>Environmental Microbiology</i> , 2015, 17, 3430-3432.	1.8	5
95	Tailoring Enzyme Stringency Masks the Multispecificity of a Lyngbyatoxin (Indolactam Alkaloid) Nonribosomal Peptide Synthetase. <i>ChemBioChem</i> , 2021, , .	1.3	4
96	Microviridins. , 2020, , 193-205.		2
97	Depth profiles of protein-bound microcystin in KÄ¼ÄŠÄ¼kÄŠekmece Lagoon. <i>Toxicon</i> , 2021, 198, 156-163.	0.8	2
98	Cyanobacterial toxins: biosynthetic routes and evolutionary roots. <i>FEMS Microbiology Reviews</i> , 2012, , n/a-n/a.	3.9	2
99	Draft Genome Sequences of Two Uncultured Armatimonadetes Associated with a <i>Microcystis</i> sp. () Tj ETQq1 1 0.784314 rgBT /Overlo 0.8	0.8	1
100	Cyanobacterial Genome Sequencing, Annotation, and Bioinformatics. <i>Methods in Molecular Biology</i> , 2022, 2489, 269-287.	0.4	1
101	Inside Cover: Ribosomal Synthesis of Tricyclic Depsipeptides in Bloom-Forming Cyanobacteria (<i>Angew.</i>) Tj ETQq1 1 0.784314 rgBT /Over 7.2	7.2	0
102	Nucleic Acid Extraction. , 2017, , 135-161.		0
103	EntschlÄ¼sslung chemischer Mediatoren zur Regulierung des spezialisierten Stoffwechsels in einem symbiotischen Cyanobakterium. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	0