

# Thomas B BrÃ¼ck

## List of Publications by Year in descending order

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Version: 2024-02-01

101  
papers

2,329  
citations

236925

25  
h-index

254184

43  
g-index

109  
all docs

109  
docs citations

109  
times ranked

2982  
citing authors

#	ARTICLE	IF	CITATIONS
1	Isolation and Investigation of Natural Rare Earth Metal Chelating Agents From <i>Calothrix brevissima</i> - A Step Towards Unraveling the Mechanisms of Metal Biosorption. <i>Frontiers in Bioengineering and Biotechnology</i> , 2022, 10, 833122.	4.1	9
2	FTIR differentiation based on genomic DNA for species identification of <i>Shigella</i> isolates from stool samples. <i>Scientific Reports</i> , 2022, 12, 2780.	3.3	8
3	Towards an understanding of oleate hydratases and their application in industrial processes. <i>Microbial Cell Factories</i> , 2022, 21, 58.	4.0	13
4	Biotechnological potential and initial characterization of two novel sesquiterpene synthases from Basidiomycota <i>Coniophora puteana</i> for heterologous production of $\beta$ -cadinol. <i>Microbial Cell Factories</i> , 2022, 21, 64.	4.0	9
5	Efficient Green Light Acclimation of the Green Algae <i>Picochlorum</i> sp. Triggering Geranylgeranylated Chlorophylls. <i>Frontiers in Bioengineering and Biotechnology</i> , 2022, 10, 885977.	4.1	4
6	Non-invasive Raman spectroscopy for time-resolved in-line lipidomics. <i>RSC Advances</i> , 2021, 11, 28565-28572.	3.6	4
7	Life cycle greenhouse gas emissions of microalgal fuel from thin-layer cascades. <i>Bioprocess and Biosystems Engineering</i> , 2021, 44, 2399-2406.	3.4	4
8	A Newly Designed Automatically Controlled, Sterilizable Flat Panel Photobioreactor for Axenic Algae Culture. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 697354.	4.1	13
9	Systems Biology Engineering of the Pantothenate Pathway to Enhance 3HB Productivity in <i>Escherichia coli</i> . <i>Biotechnology and Bioprocess Engineering</i> , 2021, 26, 621-629.	2.6	3
10	Kinetic and Structural Characterization of the First B3 Metallo- $\beta$ -Lactamase with an Active-Site Glutamic Acid. <i>Antimicrobial Agents and Chemotherapy</i> , 2021, 65, e0093621.	3.2	7
11	Identifying carbohydrate-active enzymes of <i>Cutaneotrichosporon oleaginosus</i> using systems biology. <i>Microbial Cell Factories</i> , 2021, 20, 205.	4.0	9
12	Oleaginous yeasts- substrate preference and lipid productivity: a view on the performance of microbial lipid producers. <i>Microbial Cell Factories</i> , 2021, 20, 220.	4.0	27
13	Greener aromatic antioxidants for aviation and beyond. <i>Sustainable Energy and Fuels</i> , 2020, 4, 2153-2163.	4.9	4
14	Optimization of protein isolation by proteomic qualification from <i>Cutaneotrichosporon oleaginosus</i> . <i>Analytical and Bioanalytical Chemistry</i> , 2020, 412, 449-462.	3.7	11
15	Towards a sustainable generation of pseudopterosin-type bioactives. <i>Green Chemistry</i> , 2020, 22, 6033-6046.	9.0	9
16	Structure and mechanism of potent bifunctional $\beta$ -lactam- and homoserine lactone-degrading enzymes from marine microorganisms. <i>Scientific Reports</i> , 2020, 10, 12882.	3.3	13
17	PtX $\oplus$ : Synergies Through Coupling of PtX Facilities with a Biorefinery. <i>Chemie-Ingenieur-Technik</i> , 2020, 92, 1797-1802.	0.8	1
18	The Impression of a Nonexisting Catalytic Effect: The Role of CotB2 in Guiding the Complex Biosynthesis of Cyclooctat-9-en-7-ol. <i>Journal of the American Chemical Society</i> , 2020, 142, 21562-21574.	13.7	20

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19	Microbial lipid production by oleaginous yeasts grown on <i>Scenedesmus obtusiusculus</i> microalgae biomass hydrolysate. <i>Bioprocess and Biosystems Engineering</i> , 2020, 43, 1629-1638.	3.4	27
20	Additive Analytics: Easy Transformation of Low-Cost Fused Deposition Modeling Three-Dimensional Printers for HPTLC Sample Application. <i>ACS Omega</i> , 2020, 5, 11147-11150.	3.5	5
21	Towards high-throughput optimization of microbial lipid production: from strain development to process monitoring. <i>Sustainable Energy and Fuels</i> , 2020, 4, 5958-5969.	4.9	6
22	Exploring the catalytic cascade of cembranoid biosynthesis by combination of genetic engineering and molecular simulations. <i>Computational and Structural Biotechnology Journal</i> , 2020, 18, 1819-1829.	4.1	3
23	High-Density Microalgae Cultivation in Open Thin-Layer Cascade Photobioreactors with Water Recycling. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 3883.	2.5	15
24	Understanding the role of active site residues in CotB2 catalysis using a cluster model. <i>Beilstein Journal of Organic Chemistry</i> , 2020, 16, 50-59.	2.2	11
25	Enzymatic Modification of Native Chitin and Conversion to Specialty Chemical Products. <i>Marine Drugs</i> , 2020, 18, 93.	4.6	42
26	Terbium Excitation Spectroscopy as a Detection Method for Chromatographic Separation of Lanthanide-Binding Biomolecules. <i>ACS Omega</i> , 2020, 5, 27050-27056.	3.5	1
27	Biogas yields and composition from oil-extracted halophilic algae residues in conventional biogas plants operated at high salinities. <i>Bioprocess and Biosystems Engineering</i> , 2019, 42, 1915-1922.	3.4	5
28	Engineering <i>Escherichia coli</i> FAB system using synthetic plant genes for the production of long chain fatty acids. <i>Microbial Cell Factories</i> , 2019, 18, 163.	4.0	19
29	Current understanding and biotechnological application of the bacterial diterpene synthase CotB2. <i>Beilstein Journal of Organic Chemistry</i> , 2019, 15, 2355-2368.	2.2	17
30	Species disparity response to mutagenesis of marine yeasts for the potential production of biodiesel. <i>Biotechnology for Biofuels</i> , 2019, 12, 129.	6.2	6
31	A sustainable, high-performance process for the economic production of waste-free microbial oils that can replace plant-based equivalents. <i>Energy and Environmental Science</i> , 2019, 12, 2717-2732.	30.8	45
32	Catalytic Decomposition of the Oleaginous Yeast <i>Cutaneotrichosporon Oleaginosus</i> and Subsequent Biocatalytic Conversion of Liberated Free Fatty Acids. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 6531-6540.	6.7	4
33	Multi-Factorial-Guided Media Optimization for Enhanced Biomass and Lipid Formation by the Oleaginous Yeast <i>Cutaneotrichosporon oleaginosus</i> . <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 54.	4.1	42
34	Editorial: Industrial Biotechnology Forum ( <a href="http://ibf-conference.org">http://ibf-conference.org</a> ). <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 434.	4.1	0
35	GFP Scaffold-Based Engineering for the Production of Unbranched Very Long Chain Fatty Acids in <i>Escherichia coli</i> With Oleic Acid and Cerulenin Supplementation. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 408.	4.1	4
36	Validated numerical fluid simulation of a thin-layer cascade photobioreactor in OpenFOAM. <i>Engineering in Life Sciences</i> , 2019, 19, 97-103.	3.6	7

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37	Microalgae a Superior Source of Folates: Quantification of Folates in Halophile Microalgae by Stable Isotope Dilution Assay. <i>Frontiers in Bioengineering and Biotechnology</i> , 2019, 7, 481.	4.1	24
38	Molecular dynamics study of taxadiene synthase catalysis. <i>Journal of Computational Chemistry</i> , 2018, 39, 1215-1225.	3.3	18
39	Investigation of vertical mixing in thin-layer cascade reactors using computational fluid dynamics. <i>Chemical Engineering Research and Design</i> , 2018, 132, 436-444.	5.6	15
40	Carbon Capture and Sustainable Utilization by Algal Polyacrylonitrile Fiber Production: Process Design, Techno-Economic Analysis, and Climate Related Aspects. <i>Industrial &amp; Engineering Chemistry Research</i> , 2018, 57, 7922-7933.	3.7	22
41	A Seagrass-Based Biorefinery for Generation of Single-Cell Oils for Biofuel and Oleochemical Production. <i>Energy Technology</i> , 2018, 6, 1026-1038.	3.8	18
42	Modeling Microalgae Productivity in Industrial-Scale Vertical Flat Panel Photobioreactors. <i>Environmental Science &amp; Technology</i> , 2018, 52, 5490-5498.	10.0	21
43	<i>Rhodococcus erythropolis</i> Oleate Hydratase: a New Member in the Oleate Hydratase Family Tree—Biochemical and Structural Studies. <i>ChemCatChem</i> , 2018, 10, 407-414.	3.7	29
44	Studies on the scale-up of biomass production with <i>Scenedesmus</i> spp. in flat-plate gas-lift photobioreactors. <i>Bioprocess and Biosystems Engineering</i> , 2018, 41, 213-220.	3.4	16
45	From microbial upcycling to biology-oriented synthesis: combining whole-cell production and chemo-enzymatic functionalization for sustainable taxanoid delivery. <i>Green Chemistry</i> , 2018, 20, 5374-5384.	9.0	11
46	Identification of sesquiterpene synthases from the Basidiomycota <i>Coniophora puteana</i> for the efficient and highly selective $\beta^2$ -copaene and cubebol production in <i>E. coli</i> . <i>Microbial Cell Factories</i> , 2018, 17, 164.	4.0	37
47	Batch and Continuous Biogas Fermentation of the Fresh Water Algae <i>Chlorella Vulgaris</i> -Detailed Process Analysis. <i>Journal of Bioprocessing &amp; Biotechniques</i> , 2018, 08, .	0.2	1
48	Harvest of the Oleaginous Microalgae <i>Scenedesmus obtusiusculus</i> by Flocculation From Culture Based on Natural Water Sources. <i>Frontiers in Bioengineering and Biotechnology</i> , 2018, 6, 200.	4.1	19
49	Towards a comprehensive understanding of the structural dynamics of a bacterial diterpene synthase during catalysis. <i>Nature Communications</i> , 2018, 9, 3971.	12.8	57
50	Modular biomanufacturing for a sustainable production of terpenoid-based insect deterrents. <i>Green Chemistry</i> , 2018, 20, 2637-2650.	9.0	29
51	ChiBio: An Integrated Bio-refinery for Processing Chitin-Rich Bio-waste to Specialty Chemicals. <i>Grand Challenges in Biology and Biotechnology</i> , 2018, , 555-578.	2.4	22
52	Energy-Efficient Carbon Fiber Production with Concentrated Solar Power: Process Design and Techno-economic Analysis. <i>Industrial &amp; Engineering Chemistry Research</i> , 2018, 57, 7934-7945.	3.7	16
53	Strain selection of microalgae isolated from Tunisian coast: characterization of the lipid profile for potential biodiesel production. <i>Bioprocess and Biosystems Engineering</i> , 2018, 41, 1449-1459.	3.4	12
54	Matrix-free laser desorption ionization mass spectrometry as a functional tool for the analysis and differentiation of complex phenolic mixtures in propolis: a new approach to quality control. <i>Analytical and Bioanalytical Chemistry</i> , 2018, 410, 6187-6195.	3.7	11

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55	Insights Into the Bifunctional Aphidicolan-16-ÅŸ-ol Synthase Through Rapid Biomolecular Modeling Approaches. <i>Frontiers in Chemistry</i> , 2018, 6, 101.	3.6	6
56	A waste-free, microbial oil centered cyclic bio-refinery approach based on flexible macroalgae biomass. <i>Applied Energy</i> , 2018, 224, 1-12.	10.1	28
57	Transcriptome profiling of the Australian arid-land plant <i>Eremophila serrulata</i> (A.DC.) Druce (Scrophulariaceae) for the identification of monoterpene synthases. <i>Phytochemistry</i> , 2017, 136, 15-22.	2.9	6
58	Rapid salinity measurements for fluid flow characterisation using minimal invasive sensors. <i>Chemical Engineering Science</i> , 2017, 166, 161-167.	3.8	9
59	The effects of TORC signal interference on lipogenesis in the oleaginous yeast <i>Trichosporon oleaginosus</i> . <i>BMC Biotechnology</i> , 2017, 17, 27.	3.3	12
60	Extraction of microalgae derived lipids with supercritical carbon dioxide in an industrial relevant pilot plant. <i>Bioprocess and Biosystems Engineering</i> , 2017, 40, 911-918.	3.4	83
61	Chemisorption of CO <sub>2</sub> by chitosan oligosaccharide/DMSO: organic carbamateâ€“carbonate bond formation. <i>Green Chemistry</i> , 2017, 19, 4305-4314.	9.0	42
62	Enzymatic degradation of synthetic poly(3-hydroxybutyrates) as a tool for combinatorial microstructure determination. <i>Polymer Degradation and Stability</i> , 2017, 143, 176-185.	5.8	2
63	Opportunities and challenges for the sustainable production of structurally complex diterpenoids in recombinant microbial systems. <i>Beilstein Journal of Organic Chemistry</i> , 2017, 13, 845-854.	2.2	20
64	Opportunities and challenges in the development of <i>Cutaneotrichosporon oleaginosus</i> ATCC 20509 as a new cell factory for custom tailored microbial oils. <i>Microbial Cell Factories</i> , 2017, 16, 178.	4.0	45
65	In Vitro Bioconversion of Pyruvate to n-Butanol with Minimized Cofactor Utilization. <i>Frontiers in Bioengineering and Biotechnology</i> , 2016, 4, 74.	4.1	21
66	Identification, characterization and molecular adaptation of class I redox systems for the production of hydroxylated diterpenoids. <i>Microbial Cell Factories</i> , 2016, 15, 86.	4.0	9
67	Identification of amino acid networks governing catalysis in the closed complex of class I terpene synthases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, E958-67.	7.1	57
68	Thermal Reactor Model for Large-Scale Algae Cultivation in Vertical Flat Panel Photobioreactors. <i>Environmental Science &amp; Technology</i> , 2016, 50, 3920-3927.	10.0	23
69	Application of light-emitting diodes (LEDs) in cultivation of phototrophic microalgae: current state and perspectives. <i>Applied Microbiology and Biotechnology</i> , 2016, 100, 1077-1088.	3.6	90
70	Genetic engineering and production of modified fatty acids by the non-conventional oleaginous yeast <i>Trichosporon oleaginosus</i> ATCC 20509. <i>Green Chemistry</i> , 2016, 18, 2037-2046.	9.0	52
71	Stereoselective chemo-enzymatic oxidation routes for (1R,3E,7E,11S,12S)-3,7,18-dolabellatriene. <i>Frontiers in Microbiology</i> , 2015, 6, 1115.	3.5	8
72	Characterization of a new, recombinant thermo-active subtilisin-like serine protease derived from <i>Shewanella arctica</i> . <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2015, 116, 16-23.	1.8	16

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73	Cloning, expression and characterization of the recombinant cold-active type-I pullulanase from <i>Shewanella arctica</i> . <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2015, 116, 70-77.	1.8	23
74	Genomics and Transcriptomics Analyses of the Oil-Accumulating Basidiomycete Yeast <i>Trichosporon oleaginosus</i> : Insights into Substrate Utilization and Alternative Evolutionary Trajectories of Fungal Mating Systems. <i>MBio</i> , 2015, 6, e00918.	4.1	63
75	Identification and characterization of a highly thermostable crotonase from <i>Meiothermus ruber</i> . <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2015, 112, 40-44.	1.8	2
76	Identification and optimization of a novel thermo- and solvent stable ketol-acid reductoisomerase for cell free isobutanol biosynthesis. <i>Biochimie</i> , 2015, 108, 76-84.	2.6	9
77	Detailed Structure-Function Correlations of <i>Bacillus subtilis</i> Acetolactate Synthase. <i>ChemBioChem</i> , 2015, 16, 110-118.	2.6	20
78	Biosorption of Neodymium by Selected Photoautotrophic and Heterotrophic Species. <i>Journal of Chemical Engineering &amp; Process Technology</i> , 2015, 06, .	0.1	4
79	Metabolite and transcriptome analysis of an Australian eremohila plant and its correlation to antibacterial effects. <i>Planta Medica</i> , 2015, 81, .	1.3	0
80	Ecoefficient production of coral derived pseudopterosin in engineered <i>E. coli</i> . <i>Planta Medica</i> , 2015, 81, .	1.3	0
81	Production of Macrocyclic Sesqui- and Diterpenes in Heterologous Microbial Hosts: A Systems Approach to Harness Nature's Molecular Diversity. <i>ChemCatChem</i> , 2014, 6, 1142-1165.	3.7	11
82	Purification and characterization of a cold-adapted pullulanase from a psychrophilic bacterial isolate. <i>Extremophiles</i> , 2014, 18, 1095-1102.	2.3	15
83	<i>Meiothermus ruber</i> thiolase – A new process stable enzyme for improved butanol synthesis. <i>Biochimie</i> , 2014, 103, 16-22.	2.6	4
84	The effect of proteolysis on the induction of cell death by monomeric alpha-lactalbumin. <i>Biochimie</i> , 2014, 97, 138-143.	2.6	11
85	The first structure of a bacterial diterpene cyclase: CotB2. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2014, 70, 1528-1537.	2.5	48
86	Characterization of a highly thermostable $\gamma$ -hydroxybutyryl CoA dehydrogenase from <i>Clostridium acetobutylicum</i> ATCC 824. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2013, 98, 138-144.	1.8	9
87	Catalytic deoxygenation of microalgae oil to green hydrocarbons. <i>Green Chemistry</i> , 2013, 15, 1720.	9.0	285
88	Targeted Engineering of Cyclooctatetraene $\gamma$ -Col Synthase: A Stereospecific Access to Two New Non-natural Fusicoccane-type Diterpenes. <i>ChemCatChem</i> , 2013, 5, 3289-3298.	3.7	30
89	Cell-Free Metabolic Engineering: Production of Chemicals by Minimized Reaction Cascades. <i>ChemSusChem</i> , 2012, 5, 2165-2172.	6.8	219
90	4 Algae symbiosis with eukaryotic partners. , 2012, , 55-86.		0

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91	Oxidative metabolism of the anti-cancer agent mitoxantrone by horseradish, lacto-and lignin peroxidase. <i>Biochimie</i> , 2011, 93, 217-226.	2.6	20
92	Comparison of the anaerobic microbiota of deep-water <i>Geodia</i> spp. and sandy sediments in the Straits of Florida. <i>ISME Journal</i> , 2010, 4, 686-699.	9.8	35
93	A New Prokaryotic Farnesyl diphosphate Synthase from the Octocoral <i>Eunicea Fusca</i> : Differential Display, Inverse PCR, Cloning, and Characterization. <i>Marine Biotechnology</i> , 2009, 11, 62-73.	2.4	3
94	Comparative Proteomic Analysis of Matched Primary and Metastatic Melanoma Cell Lines. <i>Journal of Proteome Research</i> , 2008, 7, 4107-4118.	3.7	39
95	The diversity of the bacterial communities associated with the azooxanthellate hexacoral <i>Cirripathes lutkeni</i> . <i>ISME Journal</i> , 2007, 1, 654-659.	9.8	31
96	Diversity of the Bacterial Communities Associated with the Azooxanthellate Deep Water Octocorals <i>Leptogorgia minimata</i> , <i>Iciligorgia schrammi</i> , and <i>Swiftia exerta</i> . <i>Marine Biotechnology</i> , 2007, 9, 561-576.	2.4	47
97	Purification and kinetic properties of elisabethatriene synthase from the coral <i>Pseudopterogorgia elisabethae</i> . <i>Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology</i> , 2006, 143, 269-278.	1.6	13
98	Oxidation of mitoxantrone by lactoperoxidase. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2003, 1649, 154-163.	2.3	7
99	Oxidation of thioanisole and p-methoxythioanisole by lignin peroxidase: kinetic evidence of a direct reaction between compound II and a radical cation. <i>Biochemical Journal</i> , 2003, 374, 761-766.	3.7	4
100	Spectrophotometric investigations with hexa-coordinate ferric lignin peroxidase: does water retention at the active site influence catalysis?. <i>Biochemical and Biophysical Research Communications</i> , 2002, 297, 406-411.	2.1	1
101	Mechanism of nitrite-stimulated catalysis by lactoperoxidase. <i>FEBS Journal</i> , 2001, 268, 3214-3222.	0.2	38