Bettina M Nestl

List of Publications by Year
in descending order

68 papers	2,506 citations	201674 27 h-index	206112 48 g-index
78 all docs	78 docs citations	78 times ranked	2262 citing authors

#	Article	IF	Citations
1	New Generation of Biocatalysts for Organic Synthesis. Angewandte Chemie - International Edition, 2014, 53, 3070-3095.	13.8	282
2	Recent progress in industrial biocatalysis. Current Opinion in Chemical Biology, 2011, 15, 187-193.	6.1	184
3	Engineering of Flexible Loops in Enzymes. ACS Catalysis, 2014, 4, 3201-3211.	11.2	132
4	Enzyme Toolbox: Novel Enantiocomplementary Imine Reductases. ChemBioChem, 2014, 15, 2201-2204.	2.6	98
5	Imine Reductaseâ€Catalyzed Intermolecular Reductive Amination of Aldehydes and Ketones. ChemCatChem, 2015, 7, 3239-3242.	3.7	96
6	Bacterial CYP153A monooxygenases for the synthesis of omega-hydroxylated fatty acids. Chemical Communications, 2012, 48, 5115.	4.1	92
7	Synthesis of Ï‰â€hydroxy dodecanoic acid based on an engineered <scp>CYP153A</scp> fusion construct. Microbial Biotechnology, 2013, 6, 694-707.	4.2	83
8	Squalene hopene cyclases are protonases for stereoselective BrÃ¸nsted acid catalysis. Nature Chemical Biology, 2015, 11, 121-126.	8.0	83
9	Regioselective Ï‰-hydroxylation of medium-chain n-alkanes and primary alcohols by CYP153 enzymes from Mycobacterium marinum and Polaromonas sp. strain JS666. Organic and Biomolecular Chemistry, 2011, 9, 6727.	2.8	82
10	Squalene hopene cyclases: highly promiscuous and evolvable catalysts for stereoselective C C and C X bond formation. Current Opinion in Chemical Biology, 2013, 17, 293-300.	6.1	65
11	Recent advances in imine reductase-catalyzed reactions. World Journal of Microbiology and Biotechnology, 2017, 33, 199.	3.6	61
12	Engineering Rieske Non-Heme Iron Oxygenases for the Asymmetric Dihydroxylation of Alkenes. Angewandte Chemie - International Edition, 2015, 54, 12952-12956.	13.8	56
13	Asymmetric Ketone Reduction by Imine Reductases. ChemBioChem, 2017, 18, 253-256.	2.6	50
14	Asymmetric Enzymatic Hydration of Unactivated, Aliphatic Alkenes. Angewandte Chemie - International Edition, 2019, 58, 173-177.	13.8	49
15	Synthesis of Heterocyclic Terpenoids by Promiscuous Squaleneâ€“Hopene Cyclases. ChemBioChem, 2013, 14, 436-439.	2.6	47
16	Squalene-hopene cyclasesâ€”evolution, dynamics and catalytic scope. Current Opinion in Structural Biology, 2016, 41, 73-82.	5.7	40
17	Variations in the stability of NCR ene reductase by rational enzyme loop modulation. Journal of Structural Biology, 2014, 185, 228-233.	2.8	38
18	Emulation of Racemase Activity by Employing a Pair of Stereocomplementary Biocatalysts. Chemistry - A European Journal, 2007, 13, 8271-8276.	3.3	37

#	Article	IF	Citations
19	Identification of imine reductaseâ€specific sequence motifs. Proteins: Structure, Function and Bioinformatics, 2016, 84, 600-610.	2.6	36
20	Biocatalytic Racemization of Aliphatic, Arylaliphatic, and Aromatic Î±-Hydroxycarboxylic Acids. Journal of Organic Chemistry, 2005, 70, 4028-4032.	3.2	33
21	Crystal Structure Determination and Mutagenesis Analysis of the Ene Reductase NCR. ChemBioChem, 2012, 13, 2400-2407.	2.6	33
22	New imine-reducing enzymes fromÎ²-hydroxyacid dehydrogenases by single amino acid substitutions. Protein Engineering, Design and Selection, 2018, 31, 109-120.	2.1	33
23	Synthesis of 9â€Oxononanoic Acid, a Precursor for Biopolymers. ChemSusChem, 2013, 6, 2149-2156.	6.8	32
24	Biocatalytic approaches for the quantitative production of single stereoisomers from racemates. Biochemical Society Transactions, 2006, 34, 296.	3.4	31
25	Stereoselective Friedelâ€“Crafts alkylation catalyzed by squalene hopene cyclases. Tetrahedron, 2012, 68, 7624-7629.	1.9	31
26	Structural and functional insights into asymmetric enzymatic dehydration of alkenols. Nature Chemical Biology, 2017, 13, 275-281.	8.0	30
27	Optimized Reaction Conditions Enable the Hydration of Nonâ€natural Substrates by the Oleate Hydratase from Elizabethkingia meningoseptica. ChemCatChem, 2017, 9, 758-766.	3.7	30
28	Powering Artificial Enzymatic Cascades with Electrical Energy. Angewandte Chemie - International Edition, 2020, 59, 10929-10933.	13.8	29
29	Biocatalytic Access to Piperazines from Diamines and Dicarbonyls. ACS Catalysis, 2018, 8, 3727-3732.	11.2	28
30	Wholeâ€Cell Oneâ€Pot Biosynthesis of Azelaic Acid. ChemCatChem, 2014, 6, 1003-1009.	3.7	27
31	Switching the Cofactor Specificity of an Imine Reductase. ChemCatChem, 2018, 10, 183-187.	3.7	27
32	Selectivity in the Cyclization of Citronellal Introduced by Squalene Hopene Cyclase Variants. ChemCatChem, 2017, 9, 4364-4368.	3.7	24
33	H₂-driven biotransformation of n-octane to 1-octanol by a recombinant Pseudomonas putida strain co-synthesizing an O₂-tolerant hydrogenase and a P450 monooxygenase. Chemical Communications, 2015, 51, 16173-16175.	4.1	23
34	Semirational Engineering of the Naphthalene Dioxygenase from Pseudomonas sp. NCIB 9816â€4 towards Selective Asymmetric Dihydroxylation. ChemCatChem, 2018, 10, 178-182.	3.7	22
35	Biocatalytic Racemization of (Hetero)Aryl-aliphatic Î±-Hydroxycarboxylic Acids byLactobacillus spp. Proceeds via an Oxidationâ€“Reduction Sequence. European Journal of Organic Chemistry, 2006, 2006, 4573-4577.	2.4	21
36	Synthesis of N-heterocycles from diamines via H2-driven NADPH recycling in the presence of O2. Green Chemistry, 2019, 21, 1396-1400.	9.0	20

#	Article	IF	Citations
37	Hydrolysis of Hydrophobic Esters in a Bicontinuous Microemulsion Catalysed by Lipaseâ€...B from Candida antarctica. Chemistry - A European Journal, 2015, 21, 2691-2700.	3.3	19
38	Loopâ€Grafted Old Yellow Enzymes in the Bienzymatic Cascade Reduction of Allylic Alcohols. ChemBioChem, 2016, 17, 561-565.	2.6	18
39	The biochemical characterization of three imine-reducing enzymes from Streptosporangium roseum DSM43021, Streptomyces turgidiscabies and Paenibacillus elgii. Applied Microbiology and Biotechnology, 2016, 100, 10509-10520.	3.6	18
40	Asymmetric Enzymatic Hydration of Unactivated, Aliphatic Alkenes. Angewandte Chemie, 2019, 131, 179-183.	2.0	17
41	Highly Enantioselectivesec-Alkyl Sulfatase Activity ofSulfolobusacidocaldariusDSM 639. Organic Letters, 2004, 6, 5009-5010.	4.6	16
42	Physicochemical Aspects of Lipase B from Candida antarctica in Bicontinuous Microemulsions. Langmuir, 2014, 30, 2993-3000.	3.5	16
43	Cultivation and purification of two stereoselective imine reductases from Streptosporangium roseum and Paenibacillus elgii. Protein Expression and Purification, 2017, 133, 199-204.	1.3	16
44	Enzymatic Addition of Alcohols to Terpenes by Squalene Hopene Cyclase Variants. ChemBioChem, 2017, 18, 2222-2225.	2.6	16
45	An Enzyme Cascade Synthesis of Vanillin. Catalysts, 2019, 9, 252.	3.5	16
46	Stereoselective hydrolysis of sec-mono-alkyl sulfate esters with retention of configuration. Tetrahedron, 2005, 61, 1517-1521.	1.9	15
47	Biocatalytic racemization of synthetically important functionalized Î±-hydroxyketones using microbial cells. Tetrahedron: Asymmetry, 2007, 18, 1465-1474.	1.8	15
48	Biocatalytic racemization of Î±-hydroxycarboxylic acids using a stereo-complementary pair of Î±-hydroxycarboxylic acid dehydrogenases. Tetrahedron, 2009, 65, 7752-7755.	1.9	15
49	Biooxidation of n-butane to 1-butanol by engineered P450 monooxygenase under increased pressure. Journal of Biotechnology, 2014, 191, 86-92.	3.8	15
50	Highly enantioselective stereo-inverting sec-alkylsulfatase activity of hyperthermophilic Archaea. Organic and Biomolecular Chemistry, 2005, 3, 2652.	2.8	14
51	Biocatalytic racemization of sec-alcohols and Î±-hydroxyketones using lyophilized microbial cells. Applied Microbiology and Biotechnology, 2007, 76, 1001-1008.	3.6	14
52	Synthesis of Sebacic Acid Using a Deâ€...Novo Designed Retroâ€Aldolase as a Key Catalyst. ChemCatChem, 2017, 9, 1378-1382.	3.7	14
53	Activity of squalene-hopene cyclases in bicontinuous microemulsions. Colloids and Surfaces B: Biointerfaces, 2015, 135, 735-741.	5.0	12
54	Î±â€Hydroxylation of Carboxylic Acids Catalyzed by Taurine Dioxygenase. ChemCatChem, 2016, 8, 1361-1366.	3.7	10

#	Article	IF	Citations
55	Biocatalyst Screening with a Twist: Application of Oxygen Sensors Integrated in Microchannels for Screening Whole Cell Biocatalyst Variants. Bioengineering, 2018, 5, 30.	3.5	9
56	Enzymatic Friedelâ€Crafts Alkylation Using Squaleneâ€Hopene Cyclases. ChemCatChem, 2021, 13, 3405-3409.	3.7	9
57	Purification and Characterization of Recombinant Expressed Apple Allergen Mal d 1. Methods and Protocols, 2021, 4, 3.	2.0	8
58	Inverting the Stereoselectivity of an NADHâ€Dependent Imineâ€Reductase Variant. ChemCatChem, 2021, 13, 5210-5215.	3.7	8
59	Surfactant Monolayer Bending Elasticity in Lipase Containing Bicontinuous Microemulsions. Frontiers in Chemistry, 2020, 8, 613388.	3.6	6
60	Process Investigations on the One-Pot Synthesis of Rifamycin S Avoiding Chlorinated Solvents. Organic Process Research and Development, 2015, 19, 1544-1547.	2.7	5
61	Cascade Biotransformation to Access 3â€Methylpiperidine in Whole Cells. ChemCatChem, 2019, 11, 5738-5742.	3.7	5
62	Engineering of Thermostable Î²â€Hydroxyacid Dehydrogenase for the Asymmetric Reduction of Imines. ChemBioChem, 2020, 21, 3511-3514.	2.6	5
63	KÃ¼nstliche Enzymkaskaden angetrieben mittels elektrischer Energie. Angewandte Chemie, 2020, 132, 11021-11025.	2.0	2
64	Chemistry gets the assist. Nature Chemical Biology, 2013, 9, 470-471.	8.0	1
65	Whole-Cell One-Pot Biosynthesis of Azelaic Acid. ChemCatChem, 2014, 6, 899-899.	3.7	1
66	Highly Enantioselective sec-Alkyl Sulfatase Activity of Sulfolobus acidocaldarius DSM 639.. ChemInform, 2005, 36, no.	0.0	0
67	Cover Image, Volume 84, Issue 5. Proteins: Structure, Function and Bioinformatics, 2016, 84, C4.	2.6	0
68	Editorial overview: New pieces in the redox puzzle: oxidative and reductive transformations in biotechnology. Current Opinion in Chemical Biology, 2019, 49, A1-A3.	6.1	0