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	Enzymatic Friedelâ€Crafts Alkylation Using Squaleneâ€Hopene Cyclases. ChemCatChem, 2021, 13, 3405-3409.	3.7	9
2	Purification and Characterization of Recombinant Expressed Apple Allergen Mal d 1. Methods and Protocols, 2021, 4, 3.	2.0	8
3	Inverting the Stereoselectivity of an NADHâ€Dependent Imineâ€Reductase Variant. ChemCatChem, 2021, 13, 5210-5215.	3.7	8
4	Engineering of Thermostable Î²â€Hydroxyacid Dehydrogenase for the Asymmetric Reduction of Imines. ChemBioChem, 2020, 21, 3511-3514.	2.6	5
5	Powering Artificial Enzymatic Cascades with Electrical Energy. Angewandte Chemie - International Edition, 2020, 59, 10929-10933.	13.8	29
6	KÃ¼nstliche Enzymkaskaden angetrieben mittels elektrischer Energie. Angewandte Chemie, 2020, 132, 11021-11025.	2.0	2
7	Surfactant Monolayer Bending Elasticity in Lipase Containing Bicontinuous Microemulsions. Frontiers in Chemistry, 2020, 8, 613388.	3.6	6
8	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
9	Cascade Biotransformation to Access 3â€Methylpiperidine in Whole Cells. ChemCatChem, 2019, 11, 5738-5742.	3.7	5
10	An Enzyme Cascade Synthesis of Vanillin. Catalysts, 2019, 9, 252.	3.5	16
11	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
12	Asymmetric Enzymatic Hydration of Unactivated, Aliphatic Alkenes. Angewandte Chemie, 2019, 131, 179-183.	2.0	17
13	Asymmetric Enzymatic Hydration of Unactivated, Aliphatic Alkenes. Angewandte Chemie - International Edition, 2019, 58, 173-177.	13.8	49
14	Switching the Cofactor Specificity of an Imine Reductase. ChemCatChem, 2018, 10, 183-187.	3.7	27
15	Biocatalytic Access to Piperazines from Diamines and Dicarbonyls. ACS Catalysis, 2018, 8, 3727-3732.	11.2	28
16	Semirational Engineering of the Naphthalene Dioxygenase from <i>Pseudomonas</i> sp. NCIB 9816â€4 towards Selective Asymmetric Dihydroxylation. ChemCatChem, 2018, 10, 178-182.	3.7	22
17	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
18	New imine-reducing enzymes from<i>Î²</i>-hydroxyacid dehydrogenases by single amino acid substitutions. Protein Engineering, Design and Selection, 2018, 31, 109-120.	2.1	33

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19	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
20	Structural and functional insights into asymmetric enzymatic dehydration of alkenols. Nature Chemical Biology, 2017, 13, 275-281.	8.0	30
21	Optimized Reaction Conditions Enable the Hydration of Nonâ€natural Substrates by the Oleate Hydratase from <i>Elizabethkingia meningoseptica</i>. ChemCatChem, 2017, 9, 758-766.	3.7	30
22	Synthesis of Sebacic Acid Using a Deâ€…Novo Designed Retroâ€Aldolase as a Key Catalyst. ChemCatChem, 2017, 9, 1378-1382.	3.7	14
23	Asymmetric Ketone Reduction by Imine Reductases. ChemBioChem, 2017, 18, 253-256.	2.6	50
24	Recent advances in imine reductase-catalyzed reactions. World Journal of Microbiology and Biotechnology, 2017, 33, 199.	3.6	61
25	Enzymatic Addition of Alcohols to Terpenes by Squalene Hopene Cyclase Variants. ChemBioChem, 2017, 18, 2222-2225.	2.6	16
26	Selectivity in the Cyclization of Citronellal Introduced by Squalene Hopene Cyclase Variants. ChemCatChem, 2017, 9, 4364-4368.	3.7	24
27	Loopâ€Grafted Old Yellow Enzymes in the Bienzymatic Cascade Reduction of Allylic Alcohols. ChemBioChem, 2016, 17, 561-565.	2.6	18
28	Identification of imine reductaseâ€specific sequence motifs. Proteins: Structure, Function and Bioinformatics, 2016, 84, 600-610.	2.6	36
29	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
30	Squalene-hopene cyclasesâ€"evolution, dynamics and catalytic scope. Current Opinion in Structural Biology, 2016, 41, 73-82.	5.7	40
31	Cover Image, Volume 84, Issue 5. Proteins: Structure, Function and Bioinformatics, 2016, 84, C4.	2.6	0
32	Î±â€Hydroxylation of Carboxylic Acids Catalyzed by Taurine Dioxygenase. ChemCatChem, 2016, 8, 1361-1366.	3.7	10
33	Engineering Rieske Non-Heme Iron Oxygenases for the Asymmetric Dihydroxylation of Alkenes. Angewandte Chemie - International Edition, 2015, 54, 12952-12956.	13.8	56
34	Imine Reductaseâ€Catalyzed Intermolecular Reductive Amination of Aldehydes and Ketones. ChemCatChem, 2015, 7, 3239-3242.	3.7	96
35	Hydrolysis of Hydrophobic Esters in a Bicontinuous Microemulsion Catalysed by Lipaseâ€…B from <i>Candida antarctica</i>. Chemistry - A European Journal, 2015, 21, 2691-2700.	3.3	19
36	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

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37	Activity of squalene-hopene cyclases in bicontinuous microemulsions. Colloids and Surfaces B: Biointerfaces, 2015, 135, 735-741.	5.0	12
38	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
39	Squalene hopene cyclases are protonases for stereoselective BrÃ¸nsted acid catalysis. Nature Chemical Biology, 2015, 11, 121-126.	8.0	83
40	Biooxidation of n-butane to 1-butanol by engineered P450 monooxygenase under increased pressure. Journal of Biotechnology, 2014, 191, 86-92.	3.8	15
41	Whole-Cell One-Pot Biosynthesis of Azelaic Acid. ChemCatChem, 2014, 6, 899-899.	3.7	1
42	New Generation of Biocatalysts for Organic Synthesis. Angewandte Chemie - International Edition, 2014, 53, 3070-3095.	13.8	282
43	Enzyme Toolbox: Novel Enantiocomplementary Imine Reductases. ChemBioChem, 2014, 15, 2201-2204.	2.6	98
44	Wholeâ€Cell Oneâ€Pot Biosynthesis of Azelaic Acid. ChemCatChem, 2014, 6, 1003-1009.	3.7	27
45	Engineering of Flexible Loops in Enzymes. ACS Catalysis, 2014, 4, 3201-3211.	11.2	132
46	Physicochemical Aspects of Lipase B from <i>Candida antarctica</i> in Bicontinuous Microemulsions. Langmuir, 2014, 30, 2993-3000.	3.5	16
47	Variations in the stability of NCR ene reductase by rational enzyme loop modulation. Journal of Structural Biology, 2014, 185, 228-233.	2.8	38
48	Chemistry gets the assist. Nature Chemical Biology, 2013, 9, 470-471.	8.0	1
49	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
50	Synthesis of Heterocyclic Terpenoids by Promiscuous Squaleneâ€"Hopene Cyclases. ChemBioChem, 2013, 14, 436-439.	2.6	47
51	Synthesis of 9â€Oxononanoic Acid, a Precursor for Biopolymers. ChemSusChem, 2013, 6, 2149-2156.	6.8	32
52	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
53	Crystal Structure Determination and Mutagenesis Analysis of the Ene Reductase NCR. ChemBioChem, 2012, 13, 2400-2407.	2.6	33
54	Stereoselective Friedelâ€"Crafts alkylation catalyzed by squalene hopene cyclases. Tetrahedron, 2012, 68, 7624-7629.	1.9	31

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55	Bacterial CYP153A monooxygenases for the synthesis of omega-hydroxylated fatty acids. Chemical Communications, 2012, 48, 5115.	4.1	92
56	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
57	Recent progress in industrial biocatalysis. Current Opinion in Chemical Biology, 2011, 15, 187-193.	6.1	184
58	Biocatalytic racemization of Î±-hydroxycarboxylic acids using a stereo-complementary pair of Î±-hydroxycarboxylic acid dehydrogenases. Tetrahedron, 2009, 65, 7752-7755.	1.9	15
59	Emulation of Racemase Activity by Employing a Pair of Stereocomplementary Biocatalysts. Chemistry - A European Journal, 2007, 13, 8271-8276.	3.3	37
60	Biocatalytic racemization of synthetically important functionalized Î±-hydroxyketones using microbial cells. Tetrahedron: Asymmetry, 2007, 18, 1465-1474.	1.8	15
61	Biocatalytic racemization of sec-alcohols and Î±-hydroxyketones using lyophilized microbial cells. Applied Microbiology and Biotechnology, 2007, 76, 1001-1008.	3.6	14
62	Biocatalytic approaches for the quantitative production of single stereoisomers from racemates. Biochemical Society Transactions, 2006, 34, 296.	3.4	31
63	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
64	Stereoselective hydrolysis of sec-mono-alkyl sulfate esters with retention of configuration. Tetrahedron, 2005, 61, 1517-1521.	1.9	15
65	Highly Enantioselective sec-Alkyl Sulfatase Activity of Sulfolobus acidocaldarius DSM 639.. ChemInform, 2005, 36, no.	0.0	0
66	Highly enantioselective stereo-inverting sec-alkylsulfatase activity of hyperthermophilic Archaea. Organic and Biomolecular Chemistry, 2005, 3, 2652.	2.8	14
67	Biocatalytic Racemization of Aliphatic, Arylaliphatic, and Aromatic Î±-Hydroxycarboxylic Acids. Journal of Organic Chemistry, 2005, 70, 4028-4032.	3.2	33
68	Highly Enantioselectivesec-Alkyl Sulfatase Activity ofSulfolobusacidocaldariusDSM 639. Organic Letters, 2004, 6, 5009-5010.	4.6	16