Andreas S Bommarius

List of Publications by Year
in descending order

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106 papers	5,401 citations	94269 37 h-index	88477 70 g-index
111 all docs	111 docs citations	111 times ranked	5190 citing authors

#	Article	IF	Citations
1	Periodic wet milling as a solution to size-based separation of crystal products from biocatalyst for continuous reactive crystallization. Chemical Engineering Research and Design, 2022, 177, 473-483.	2.7	8
2	Reactor Design and Optimization of Î±-Amino Ester Hydrolase- Catalyzed Synthesis of Cephalexin. Frontiers in Bioengineering and Biotechnology, 2022, 10, 826357.	2.0	3
3	Longâ€Term Biocatalyst Performance: Mechanistic Prediction and Continuous Nonâ€Isothermal Testing. ChemSusChem, 2022, , e202102701.	3.6	3
4	Reduced deactivation of mechanochemically delaminated hierarchical zeolite MCM-22 catalysts during 4-propylphenol cracking. Journal of Catalysis, 2022, 411, 187-192.	3.1	9
5	Continuous production of a chiral amine in a packed bed reactor with co-immobilized amine dehydrogenase and formate dehydrogenase. Chemical Engineering Journal, 2021, 407, 127065.	6.6	20
6	Reactive crystallization: a review. Reaction Chemistry and Engineering, 2021, 6, 364-400.	1.9	43
7	Sparged but not stirred: Rapid, ADH-NADH oxidase catalyzed deracemization of alcohols in a bubble column. Chemical Engineering Journal, 2021, 417, 127909.	6.6	12
8	Evaluation of ionic equilibria in mixed-buffer isothermal titration calorimetry and continuously stirred tank reactors. International Journal of Pharmaceutics, 2021, 594, 120170.	2.6	1
9	Purification of chimeric amine dehydrogenase using a tailor-made aqueous two-phase system - A case study. Journal of Molecular Liquids, 2021, 323, 114991.	2.3	4
10	Production of active pharmaceutical ingredients (APIs) from lignin-derived phenol and catechol. Green Chemistry, 2021, 23, 7488-7498.	4.6	23
11	Modeling Amyloid Aggregation Kinetics: A Case Study with Sup35NM. Journal of Physical Chemistry B, 2021, 125, 4955-4963.	1.2	3
12	Pore Blocking by Phenolates as Deactivation Path during the Cracking of 4-Propylphenol over ZSM-5. Catalysts, 2021, 11, 721.	1.6	8
13	In Situ Imaging Combined with Deep Learning for Crystallization Process Monitoring: Application to Cephalexin Production. Organic Process Research and Development, 2021, 25, 1670-1679.	1.3	22
14	Kinetic model development for Î±-amino ester hydrolase (AEH)-catalyzed synthesis of Î²-lactam antibiotics. Chemical Engineering Journal, 2021, 426, 131816.	6.6	4
15	Biocatalytic Reductive Amination by Native Amine Dehydrogenases to Access Short Chiral Alkyl Amines and Amino Alcohols. Frontiers in Catalysis, 2021, 1, .	1.8	6
16	Solvent Selection for Lignin Value Prior to Pulping. ChemSusChem, 2020, 13, 267-273.	3.6	9
17	Fully biological production of adipic acid analogs from branched catechols. Scientific Reports, 2020, 10, 13367.	1.6	21
18	Model development for enzymatic reactive crystallization of Î²-lactam antibiotics: a reactionâ€“diffusion-crystallization approach. Reaction Chemistry and Engineering, 2020, 5, 2064-2080.	1.9	9

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19	Tuning the Morphology of Proteinâ€“Inorganic Calciumâ€“Phosphate Supraparticles via Directed Assembly. Langmuir, 2020, 36, 15296-15308.	1.6	4
20	Similarities in Recalcitrant Structures of Industrial Nonâ€Kraft and Kraft Lignin. ChemSusChem, 2020, 13, 4624-4632.	3.6	12
21	Separate Sets of Mutations Enhance Activity and Substrate Scope of Amine Dehydrogenase. ChemCatChem, 2020, 12, 2436-2439.	1.8	22
22	FOx News: Towards Methanolâ€driven Biocatalytic Oxyfunctionalisation Reactions. ChemCatChem, 2020, 12, 2713-2716.	1.8	15
23	Metagenomic Mining for Amine Dehydrogenase Discovery. Advanced Synthesis and Catalysis, 2020, 362, 2427-2436.	2.1	30
24	Proteinâ€inorganic calciumâ€phosphate supraparticles as a robust platform for enzyme coâ€immobilization. Biotechnology and Bioengineering, 2020, 117, 1979-1989.	1.7	13
25	Direct Observation of Growth Rate Dispersion in the Enzymatic Reactive Crystallization of Ampicillin. Processes, 2019, 7, 390.	1.3	7
26	Crystallization Kinetics of Cephalexin Monohydrate in the Presence of Cephalexin Precursors. Crystal Growth and Design, 2019, 19, 5065-5074.	1.4	14
27	Energising the E-factor: The E+-factor. Tetrahedron, 2019, 75, 1311-1314.	1.0	64
28	Cover Image, Volume 87, Issue 6. Proteins: Structure, Function and Bioinformatics, 2019, 87, C1-C1.	1.5	1
29	Continuous reactive crystallization of Î²-lactam antibiotics catalyzed by penicillin G acylase. Part II: Case study on ampicillin and product purity. Computers and Chemical Engineering, 2019, 126, 332-341.	2.0	14
30	Experimental evaluation of simulated moving bed reactor for transesterification reaction synthesis of glycol ether ester. Adsorption, 2019, 25, 795-807.	1.4	8
31	Engineered amine dehydrogenase exhibits altered kinetic mechanism compared to parent with implications for industrial application. Chemical Engineering Journal, 2019, 369, 634-640.	6.6	10
32	Amine dehydrogenases occur in nature. Nature Catalysis, 2019, 2, 288-289.	16.1	11
33	Bubble Column Enables Higher Reaction Rate for Deracemization of (R,S)â€1â€Phenylethanol with Coupled Alcohol Dehydrogenase/NADH Oxidase System. Advanced Synthesis and Catalysis, 2019, 361, 2574-2581.	2.1	22
34	Formiatâ€Oxidase (FOx) aus Aspergillus oryzae : ein Katalysator fÃ¼r verschiedene H 2 O 2 â€abhÃngige biokatalytische Oxidationen. Angewandte Chemie, 2019, 131, 7955-7959.	1.6	17
35	Formate Oxidase (FOx) from Aspergillus oryzae: One Catalyst Enables Diverse H₂O₂â€Dependent Biocatalytic Oxidation Reactions. Angewandte Chemie - International Edition, 2019, 58, 7873-7877.	7.2	67
36	Continuous reactive crystallization of Î²-lactam antibiotics catalyzed by penicillin G acylase. Part I: Model development. Computers and Chemical Engineering, 2019, 123, 331-343.	2.0	25

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37	Techno-economic analysis of water precipitation for lignin value prior to pulping. Chemical Engineering Research and Design, 2019, 143, 4-10.	2.7	6
38	The Shortâ€chain Dehydrogenase/Reductase Engineering Database (SDRED): A classification and analysis system for a highly diverse enzyme family. Proteins: Structure, Function and Bioinformatics, 2019, 87, 443-451.	1.5	32
39	Effect of peptide linker length and composition on immobilization and catalysis of leucine zipperâ€enzyme fusion proteins. AIChE Journal, 2018, 64, 2934-2946.	1.8	15
40	Mechanistic studies of formate oxidase from Aspergillus oryzae : A novel member of the glucose-Methanol-choline oxidoreductase enzyme superfamily that oxidizes carbon acids. Archives of Biochemistry and Biophysics, 2018, 643, 24-31.	1.4	13
41	Transesterification of propylene glycol methyl ether by reactive simulated moving bed chromatography using homogeneous catalyst. Adsorption, 2018, 24, 309-324.	1.4	3
42	Modulation of the Formation of AÎ²-and Sup35NM-Based Amyloids by Complex Interplay of Specific and Nonspecific Ion Effects. Journal of Physical Chemistry B, 2018, 122, 4972-4981.	1.2	9
43	A high-throughput pH-based colorimetric assay: application focus on alpha/beta hydrolases. Analytical Biochemistry, 2018, 549, 80-90.	1.1	9
44	Mutual Influence of Furfural and Furancarboxylic Acids on Their Solubility in Aqueous Solutions: Experiments and Perturbed-Chain Statistical Associating Fluid Theory (PC-SAFT) Predictions. Journal of Chemical & Engineering Data, 2018, 63, 1460-1470.	1.0	12
45	Biomolecular Assemblies: Moving from Observation to Predictive Design. Chemical Reviews, 2018, 118, 11519-11574.	23.0	71
46	Oxidoreductase-Catalyzed Synthesis of Chiral Amines. ACS Catalysis, 2018, 8, 10985-11015.	5.5	150
47	Photoirradiation Generates an Ultrastable 8-Formyl FAD Semiquinone Radical with Unusual Properties in Formate Oxidase. Biochemistry, 2018, 57, 5818-5826.	1.2	16
48	Informing Efforts to Develop Nitroreductase for Amine Production. Molecules, 2018, 23, 211.	1.7	23
49	Recent Advances in Ï‰-Transaminase-Mediated Biocatalysis for the Enantioselective Synthesis of Chiral Amines. Catalysts, 2018, 8, 254.	1.6	139
50	Kinetic model discrimination of penicillin G acylase thermal deactivation by non-isothermal continuous activity assay. Chemical Engineering Science, 2018, 187, 79-86.	1.9	15
51	Long-term stability of influenza vaccine in a dissolving microneedle patch. Drug Delivery and Translational Research, 2017, 7, 195-205.	3.0	98
52	Enzymatic reactive crystallization for improving ampicillin synthesis. Chemical Engineering Science, 2017, 165, 81-88.	1.9	28
53	Mutagenesisâ€Independent Stabilization of Class B Flavin Monooxygenases in Operation. Advanced Synthesis and Catalysis, 2017, 359, 2121-2131.	2.1	28
54	Applying Direct Yellow 11 to a modified Simonsâ€™ staining assay. Cellulose, 2017, 24, 2367-2373.	2.4	12

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55	Enzyme-Mediated Conversion of Flavin Adenine Dinucleotide (FAD) to 8-Formyl FAD in Formate Oxidase Results in a Modified Cofactor with Enhanced Catalytic Properties. Biochemistry, 2017, 56, 3800-3807.	1.2	23
56	Crystallization Kinetics of Ampicillin Using Online Monitoring Tools and Robust Parameter Estimation. Industrial & Engineering Chemistry Research, 2016, 55, 2153-2162.	1.8	26
57	Model-based design and experimental validation of simulated moving bed reactor for production of glycol ether ester. Chemical Engineering Journal, 2016, 301, 188-199.	6.6	19
58	Transesterification of propylene glycol methyl ether in chromatographic reactors using anion exchange resin as a catalyst. Journal of Chromatography A, 2016, 1466, 84-95.	1.8	17
59	Contributions of the Prion Protein Sequence, Strain, and Environment to the Species Barrier. Journal of Biological Chemistry, 2016, 291, 1277-1288.	1.6	23
60	Reactive crystallization of Î²-lactam antibiotics: strategies to enhance productivity and purity of ampicillin. Reaction Chemistry and Engineering, 2016, 1, 321-329.	1.9	19
61	An effective chemical pretreatment method for lignocellulosic biomass with substituted imidazoles. Biotechnology Progress, 2015, 31, 25-34.	1.3	8
62	Engineering towards Nitroreductase Functionality in Eneâ€Reductase Scaffolds. ChemBioChem, 2015, 16, 811-818.	1.3	10
63	Green Fluorescent Protein with Anionic Tryptophan-Based Chromophore and Long Fluorescence Lifetime. Biophysical Journal, 2015, 109, 380-389.	0.2	56
64	Fluorescence imaging using synthetic GFP chromophores. Current Opinion in Chemical Biology, 2015, 27, 64-74.	2.8	120
65	Biocatalysis: A Status Report. Annual Review of Chemical and Biomolecular Engineering, 2015, 6, 319-345.	3.3	128
66	Reactive crystallization of selected enantiomers: Chemo-enzymatic stereoinversion of amino acids at supersaturated conditions. Chemical Engineering Science, 2015, 122, 416-425.	1.9	7
67	Conversion improvement for catalytic synthesis of propylene glycol methyl ether acetate by reactive chromatography: Experiments and parameter estimation. Chemical Engineering Journal, 2015, 259, 397-409.	6.6	15
68	Protein engineering of cellulases. Current Opinion in Biotechnology, 2014, 29, 139-145.	3.3	52
69	A novel chimeric amine dehydrogenase shows altered substrate specificity compared to its parent enzymes. Chemical Communications, 2014, 50, 14953-14955.	2.2	84
70	In situ mixed donor synthesis of ampicillin with ethylene glycol coâ€solvent. Biotechnology and Bioengineering, 2014, 111, 1054-1058.	1.7	7
71	Biphasic Reaction System Allows for Conversion of Hydrophobic Substrates by Amine Dehydrogenases. ACS Catalysis, 2014, 4, 4021-4026.	5.5	65
72	Optimization of reactive simulated moving bed systems with modulation of feed concentration for production of glycol ether ester. Journal of Chromatography A, 2014, 1360, 196-208.	1.8	20

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73	The Evolution of an Amine Dehydrogenase Biocatalyst for the Asymmetric Production of Chiral Amines. Advanced Synthesis and Catalysis, 2013, 355, 1780-1786.	2.1	126
74	Stabilizing biocatalysts. Chemical Society Reviews, 2013, 42, 6534.	18.7	396
75	Ion-specific Effects on Prion Nucleation and Strain Formation. Journal of Biological Chemistry, 2013, 288, 30300-30308.	1.6	21
76	Improved thermostability of AEH by combining B-FIT analysis and structure-guided consensus method. Journal of Biotechnology, 2012, 160, 214-221.	1.9	48
77	The role of residue C410 on activation of the human vitamin D receptor by various ligands. Journal of Steroid Biochemistry and Molecular Biology, 2012, 128, 76-86.	1.2	2
78	Development of an Amine Dehydrogenase for Synthesis of Chiral Amines. Angewandte Chemie - International Edition, 2012, 51, 3969-3972.	7.2	230
79	NAD(P)H oxidase V from Lactobacillus plantarum (NoxV) displays enhanced operational stability even in absence of reducing agents. Journal of Molecular Catalysis B: Enzymatic, 2011, 71, 159-165.	1.8	30
80	Status of protein engineering for biocatalysts: how to design an industrially useful biocatalyst. Current Opinion in Chemical Biology, 2011, 15, 194-200.	2.8	190
81	Biological pretreatment of cellulose: Enhancing enzymatic hydrolysis rate using cellulose-binding domains from cellulases. Bioresource Technology, 2011, 102, 2910-2915.	4.8	57
82	Ampicillin Synthesis Using a Twoâ€Enzyme Cascade with Both Î±â€Amino Ester Hydrolase and Penicillin G Acylase. ChemCatChem, 2010, 2, 987-991.	1.8	13
83	Amino ester hydrolase from Xanthomonas campestris pv. campestris, ATCC 33913 for enzymatic synthesis of ampicillin. Journal of Molecular Catalysis B: Enzymatic, 2010, 67, 21-28.	1.8	24
84	Utilizing simple biochemical measurements to predict lifetime output of biocatalysts in continuous isothermal processes. Chemical Engineering Science, 2010, 65, 2118-2124.	1.9	83
85	The Hofmeister effect on amyloid formation using yeast prion protein. Protein Science, 2010, 19, 47-56.	3.1	66
86	Modeling cellulase kinetics on lignocellulosic substrates. Biotechnology Advances, 2009, 27, 833-848.	6.0	347
87	Deactivation of TEMâ€1 Î²â€Lactamase Investigated by Isothermal Batch and Nonâ€Isothermal Continuous Enzyme Membrane Reactor Methods. ChemCatChem, 2009, 1, 131-137.	1.8	12
88	Identifying interacting residues using Boolean Learning and Support Vector Machines: Case study on mRFP and DsRed proteins. Biotechnology Journal, 2008, 3, 63-73.	1.8	0
89	Accelerated Biocatalyst Stability Testing for Process Optimization. Biotechnology Progress, 2008, 21, 762-774.	1.3	27
90	Cellulase kinetics as a function of cellulose pretreatment. Metabolic Engineering, 2008, 10, 370-381.	3.6	157

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91	Coupling chiral homogeneous biocatalytic reactions with benign heterogeneous separation. Green Chemistry, 2007, 9, 888.	4.6	26
92	Development of a Thermostable Glucose Dehydrogenase by a Structureâ€Guided Consensus Concept. ChemBioChem, 2007, 8, 2295-2301.	1.3	117
93	Stability of biocatalysts. Current Opinion in Chemical Biology, 2007, 11, 220-225.	2.8	367
94	Better library design: data-driven protein engineering. Biotechnology Journal, 2007, 2, 180-191.	1.8	80
95	The Crystal Structure of NAD(P)H Oxidase fromLactobacillus sanfranciscensis:Â Insights into the Conversion of O2into Two Water Molecules by the Flavoenzymeâ€,â€¡. Biochemistry, 2006, 45, 9648-9659.	1.2	85
96	Pooling for Improved Screening of Combinatorial Libraries for Directed Evolution. Biotechnology Progress, 2006, 22, 961-967.	1.3	31
97	High-throughput screening for enhanced protein stability. Current Opinion in Biotechnology, 2006, 17, 606-610.	3.3	83
98	Structure-guided consensus approach to create a more thermostable penicillin G acylase. Biotechnology Journal, 2006, 1, 531-536.	1.8	78
99	Biocatalytic Reaction And Recycling by Using CO2-Induced Organicâ€“Aqueous Tunable Solvents. Angewandte Chemie - International Edition, 2006, 45, 4670-4673.	7.2	27
100	Deactivation of Formate Dehydrogenase (FDH) in Solution and at Gas-Liquid Interfaces. Biotechnology Progress, 2005, 21, 1663-1672.	1.3	64
101	Established and novel tools to investigate biocatalyst stability. Biocatalysis and Biotransformation, 2005, 23, 125-139.	1.1	45
102	Hydrogen peroxide-producing NADH oxidase (nox-1) from Lactococcus lactis. Tetrahedron: Asymmetry, 2004, 15, 2939-2944.	1.8	59
103	The membrane reactor in the fine chemicals industry. Applied Catalysis A: General, 2001, 221, 171-185.	2.2	54
104	Synthesis and use of enantiomerically pure tert-leucine. Tetrahedron: Asymmetry, 1995, 6, 2851-2888.	1.8	248
105	Xanthine Oxidase Reactivity in Reversed Micellar Systems: A Contribution to the Prediction of Enzymic Activity in Organized Media. Journal of the American Chemical Society, 1995, 117, 4515-4523.	6.6	45
106	Enzymes in reversed micelles as catalysts for organic-phase synthesis reactions. Industrial & Engineering Chemistry Fundamentals, 1986, 25, 603-612.	0.7	151