Rudi Fasan

List of Publications by Year
in descending order

94 papers	6,204 citations	66343 42 h-index	71685 76 g-index
111 all docs	111 docs citations	111 times ranked	4281 citing authors

#	Article	IF	Citations
1	MOrPH-PhD: A System for the Functional Selection of Genetically Encoded. Methods in Molecular Biology, 2022, 2371, 261-286.	0.9	1
2	Nanoparticleâ€Mediated Delivery of Micheliolide Analogs to Eliminate Leukemic Stem Cells in the Bone Marrow. Advanced Therapeutics, 2022, 5, 2100100.	3.2	3
3	Enantioselective Synthesis of Î±-Trifluoromethyl Amines via Biocatalytic Nâ€“H Bond Insertion with Acceptor-Acceptor Carbene Donors. Journal of the American Chemical Society, 2022, 144, 2590-2602.	13.7	37
4	Tuning Enzyme Thermostability via Computationally Guided Covalent Stapling and Structural Basis of Enhanced Stabilization. Biochemistry, 2022, 61, 1041-1054.	2.5	10
5	Highly stereoselective and enantiodivergent synthesis of cyclopropylphosphonates with engineered carbene transferases. Chemical Science, 2022, 13, 8550-8556.	7.4	11
6	Biocatalytic Strategy for the Highly Stereoselective Synthesis of CHF₂â€Containing Trisubstituted Cyclopropanes. Angewandte Chemie - International Edition, 2021, 60, 7072-7076.	13.8	40
7	Biocatalytic Strategy for the Highly Stereoselective Synthesis of CHF 2 â€Containing Trisubstituted Cyclopropanes. Angewandte Chemie, 2021, 133, 7148-7152.	2.0	7
8	A Diverse Library of Chiral Cyclopropane Scaffolds via Chemoenzymatic Assembly and Diversification of Cyclopropyl Ketones. Journal of the American Chemical Society, 2021, 143, 2221-2231.	13.7	45
9	Comprehensive Structureâ€“Activity Profiling of Micheliolide and its Targeted Proteome in Leukemia Cells via Probe-Guided Late-Stage Câ€“H Functionalization. ACS Central Science, 2021, 7, 841-857.	11.3	18
10	Engineered and artificial metalloenzymes for selective Câ€“H functionalization. Current Opinion in Green and Sustainable Chemistry, 2021, 31, 100494.	5.9	41
11	Cyclic peptides with a distinct arginine-fork motif recognize the HIV trans-activation response RNA inÂvitro and in cells. Journal of Biological Chemistry, 2021, 297, 101390.	3.4	6
12	Selective Functionalization of Aliphatic Amines via Myoglobin-Catalyzed Carbene Nâ€“H Insertion. Synlett, 2020, 31, 224-229.	1.8	16
13	Co-crystal structures of HIV TAR RNA bound to lab-evolved proteins show key roles for arginine relevant to the design of cyclic peptide TAR inhibitors. Journal of Biological Chemistry, 2020, 295, 16470-16486.	3.4	17
14	An Enzymatic Platform for the Highly Enantioselective and Stereodivergent Construction of Cyclopropylâ€Îâ€lactones. Angewandte Chemie - International Edition, 2020, 59, 21634-21639.	13.8	39
15	Strategies for the expression and characterization of artificial myoglobin-based carbene transferases. Methods in Enzymology, 2020, 644, 35-61.	1.0	2
16	An Enzymatic Platform for the Highly Enantioselective and Stereodivergent Construction of Cyclopropylâ€Îâ€lactones. Angewandte Chemie, 2020, 132, 21818-21823.	2.0	3
17	Enantioselective Synthesis of Chiral Amines via Biocatalytic Carbene Nâ€“H Insertion. ACS Catalysis, 2020, 10, 10967-10977.	11.2	33
18	Mechanism-Guided Design and Discovery of Efficient Cytochrome P450-Derived Câ€“H Amination Biocatalysts. Journal of the American Chemical Society, 2020, 142, 10343-10357.	13.7	47

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19	Expanded toolbox for directing the biosynthesis of macrocyclic peptides in bacterial cells. Chemical Science, 2020, 11, 6202-6208.	7.4	13
20	Organic solvent stability and longâ€term storage of myoglobinâ€based carbene transfer biocatalysts. Biotechnology and Applied Biochemistry, 2020, 67, 516-526.	3.1	11
21	Synergistic catalysis in an artificial enzyme. Nature Catalysis, 2020, 3, 184-185.	34.4	13
22	Câ^'H Amination via Nitrene Transfer Catalyzed by Mononuclear Nonâ€Heme Ironâ€Dependent Enzymes. ChemBioChem, 2020, 21, 1981-1987.	2.6	25
23	Blocking SHH/Patched Interaction Triggers Tumor Growth Inhibition through Patched-Induced Apoptosis. Cancer Research, 2020, 80, 1970-1980.	0.9	17
24	Highly Stereoselective Synthesis of Fused Cyclopropane-Î³-Lactams via Biocatalytic Iron-Catalyzed Intramolecular Cyclopropanation. ACS Catalysis, 2020, 10, 2308-2313.	11.2	51
25	MOrPH-PhD: An Integrated Phage Display Platform for the Discovery of Functional Genetically Encoded Peptide Macrocycles. ACS Central Science, 2020, 6, 368-381.	11.3	65
26	Structure of Sonic Hedgehog protein in complex with zinc(II) and magnesium(II) reveals ion-coordination plasticity relevant to peptide drug design. Acta Crystallographica Section D: Structural Biology, 2019, 75, 969-979.	2.3	3
27	Stereoselective Cyclopropanation of Electron-Deficient Olefins with a Cofactor Redesigned Carbene Transferase Featuring Radical Reactivity. ACS Catalysis, 2019, 9, 9683-9697.	11.2	77
28	A Continuing Career in Biocatalysis: Frances H. Arnold. ACS Catalysis, 2019, 9, 9775-9788.	11.2	26
29	Biocatalytic Strategy for Highly Diastereoâ€and Enantioselective Synthesis of 2,3â€Dihydrobenzofuranâ€Based Tricyclic Scaffolds. Angewandte Chemie, 2019, 131, 10254-10258.	2.0	7
30	Mechanistic Investigation of Biocatalytic Heme Carbenoid Siâ^'H Insertions. ChemCatChem, 2019, 11, 3101-3108.	3.7	20
31	Biocatalytic Strategy for Highly Diastereoâ€and Enantioselective Synthesis of 2,3â€Dihydrobenzofuranâ€Based Tricyclic Scaffolds. Angewandte Chemie - International Edition, 2019, 58, 10148-10152.	13.8	57
32	Stereodivergent Intramolecular Cyclopropanation Enabled by Engineered Carbene Transferases. Journal of the American Chemical Society, 2019, 141, 9145-9150.	13.7	81
33	Effect of proximal ligand substitutions on the carbene and nitrene transferase activity of myoglobin. Tetrahedron, 2019, 75, 2357-2363.	1.9	29
34	Origin of High Stereocontrol in Olefin Cyclopropanation Catalyzed by an Engineered Carbene Transferase. ACS Catalysis, 2019, 9, 1514-1524.	11.2	52
35	Transcriptional coactivator PGC-1Î± contains a novel CBP80-binding motif that orchestrates efficient target gene expression. Genes and Development, 2018, 32, 555-567.	5.9	18
36	Stabilization of the Reductase Domain in the Catalytically Selfâ€Sufficient Cytochrome P450_{BM3} by Consensusâ€Guided Mutagenesis. ChemBioChem, 2018, 19, 622-632.	2.6	19

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37	Cyclopropanations via Heme Carbenes: Basic Mechanism and Effects of Carbene Substituent, Protein Axial Ligand, and Porphyrin Substitution. Journal of the American Chemical Society, 2018, 140, 1649-1662.	13.7	106
38	Anticancer activity profiling of parthenolide analogs generated via P450-mediated chemoenzymatic synthesis. Bioorganic and Medicinal Chemistry, 2018, 26, 1365-1373.	3.0	32
39	Highly Diastereoâ€•and Enantioselective Synthesis of Nitrileâ€Substituted Cyclopropanes by Myoglobinâ€Mediated Carbene Transfer Catalysis. Angewandte Chemie - International Edition, 2018, 57, 15852-15856.	13.8	71
40	Highly Diastereoâ€•and Enantioselective Synthesis of Nitrileâ€Substituted Cyclopropanes by Myoglobinâ€Mediated Carbene Transfer Catalysis. Angewandte Chemie, 2018, 130, 16078-16082.	2.0	14
41	Myoglobinâ€Catalyzed Câ^'H Functionalization of Unprotected Indoles. Angewandte Chemie - International Edition, 2018, 57, 9911-9915.	13.8	113
42	Chemoselective Cyclopropanation over Carbene Yâ€“H Insertion Catalyzed by an Engineered Carbene Transferase. Journal of Organic Chemistry, 2018, 83, 7480-7490.	3.2	60
43	Myoglobinâ€Catalyzed Câ^'H Functionalization of Unprotected Indoles. Angewandte Chemie, 2018, 130, 10059-10063.	2.0	23
44	Metal Substitution Modulates the Reactivity and Extends the Reaction Scope of Myoglobin Carbene Transfer Catalysts. Advanced Synthesis and Catalysis, 2017, 359, 2076-2089.	4.3	121
45	New functional twists for P450s. Nature Chemistry, 2017, 9, 609-611.	13.6	13
46	Highly Diastereo- and Enantioselective Synthesis of Trifluoromethyl-Substituted Cyclopropanes via Myoglobin-Catalyzed Transfer of Trifluoromethylcarbene. Journal of the American Chemical Society, 2017, 139, 5293-5296.	13.7	165
47	Twoâ€Tier Screening Platform for Directed Evolution of Aminoacylâ€“tRNA Synthetases with Enhanced Stop Codon Suppression Efficiency. ChemBioChem, 2017, 18, 1109-1116.	2.6	25
48	Stereoselective Olefin Cyclopropanation under Aerobic Conditions with an Artificial Enzyme Incorporating an Iron-Chlorin e6 Cofactor. ACS Catalysis, 2017, 7, 7629-7633.	11.2	81
49	Exploiting and engineering hemoproteins for abiological carbene and nitrene transfer reactions. Current Opinion in Biotechnology, 2017, 47, 102-111.	6.6	253
50	Design and Evolution of a Macrocyclic Peptide Inhibitor of the Sonic Hedgehog/Patched Interaction. Journal of the American Chemical Society, 2017, 139, 12559-12568.	13.7	46
51	Enzyme stabilization via computationally guided protein stapling. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12472-12477.	7.1	55
52	Ribosomal Synthesis of Thioether-Bridged Bicyclic Peptides. Methods in Molecular Biology, 2017, 1495, 57-76.	0.9	12
53	Myoglobinâ€Catalyzed Olefination of Aldehydes. Angewandte Chemie, 2016, 128, 2558-2562.	2.0	34
54	Myoglobinâ€Catalyzed Olefination of Aldehydes. Angewandte Chemie - International Edition, 2016, 55, 2512-2516.	13.8	106

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55	Gramâ€Scale Synthesis of Chiral Cyclopropaneâ€Containing Drugs and Drug Precursors with Engineered Myoglobin Catalysts Featuring Complementary Stereoselectivity. Angewandte Chemie, 2016, 128, 16344-16348.	2.0	34
56	Side-chain-to-tail cyclization of ribosomally derived peptides promoted by aryl and alkyl amino-functionalized unnatural amino acids. Organic and Biomolecular Chemistry, 2016, 14, 5803-5812.	2.8	14
57	Gramâ€Scale Synthesis of Chiral Cyclopropaneâ€Containing Drugs and Drug Precursors with Engineered Myoglobin Catalysts Featuring Complementary Stereoselectivity. Angewandte Chemie - International Edition, 2016, 55, 16110-16114.	13.8	137
58	Biocatalytic Synthesis of Allylic and Allenyl Sulfides through a Myoglobinâ€Catalyzed Doyleâ€“Kirmse Reaction. Angewandte Chemie - International Edition, 2016, 55, 13562-13566.	13.8	97
59	Aldehyde and Ketone Synthesis by P450â€Catalyzed Oxidative Deamination of Alkyl Azides. ChemCatChem, 2016, 8, 2609-2613.	3.7	16
60	Biocatalytic Synthesis of Allylic and Allenyl Sulfides through a Myoglobinâ€Catalyzed Doyleâ€“Kirmse Reaction. Angewandte Chemie, 2016, 128, 13760-13764.	2.0	27
61	Chemoenzymatic synthesis and antileukemic activity of novel C9- and C14-functionalized parthenolide analogs. Bioorganic and Medicinal Chemistry, 2016, 24, 3876-3886.	3.0	31
62	Efficient conversion of primary azides to aldehydes catalyzed by active site variants of myoglobin. Chemical Science, 2016, 7, 234-239.	7.4	40
63	InnenrÃ¼cktitelbild: Highly Diastereoselective and Enantioselective Olefin Cyclopropanation Using Engineered Myoglobin-Based Catalysts (Angew. Chem. 6/2015). Angewandte Chemie, 2015, 127, 1997-1997.	2.0	2
64	Enzymatic C(sp³)-H Amination: P450-Catalyzed Conversion of Carbonazidates into Oxazolidinones. ACS Catalysis, 2015, 5, 1685-1691.	11.2	147
65	Highly Diastereoselective and Enantioselective Olefin Cyclopropanation Using Engineered Myoglobinâ€Based Catalysts. Angewandte Chemie - International Edition, 2015, 54, 1744-1748.	13.8	242
66	Intermolecular carbene Sâ€“H insertion catalysed by engineered myoglobin-based catalysts. Chemical Science, 2015, 6, 2488-2494.	7.4	169
67	Ribosomal Synthesis of Macrocyclic Peptides in Vitro and in Vivo Mediated by Genetically Encoded Aminothiol Unnatural Amino Acids. ACS Chemical Biology, 2015, 10, 1805-1816.	3.4	37
68	Ribosomal Synthesis of Naturalâ€Productâ€Like Bicyclic Peptides in Escherichia coli. ChemBioChem, 2015, 16, 2011-2016.	2.6	34
69	Myoglobin-catalyzed intermolecular carbene Nâ€“H insertion with arylamine substrates. Chemical Communications, 2015, 51, 1532-1534.	4.1	161
70	Synthesis of Macrocyclic Organo-peptide Hybrids from Ribosomal Polypeptide Precursors via CuAAC-/Hydrazide-Mediated Cyclization. Methods in Molecular Biology, 2015, 1248, 23-38.	0.9	3
71	Enhancing the Efficiency and Regioselectivity of P450 Oxidation Catalysts by Unnatural Amino Acid Mutagenesis. ChemBioChem, 2014, 15, 1001-1010.	2.6	67
72	P450-Catalyzed Intramolecular sp³ Câ€“H Amination with Arylsulfonyl Azide Substrates. ACS Catalysis, 2014, 4, 546-552.	11.2	180

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73	Discovery of Potent Parthenolide-Based Antileukemic Agents Enabled by Late-Stage P450-Mediated Câ€”H Functionalization. ACS Chemical Biology, 2014, 9, 164-173.	3.4	94
74	Designer macrocyclic organo-peptide hybrids inhibit the interaction between p53 and HDM2/X by accommodating a functional l±-helix. Chemical Communications, 2014, 50, 5027-5030.	4.1	32
75	Bioinspired Strategy for the Ribosomal Synthesis of Thioether-Bridged Macrocyclic Peptides in Bacteria. ACS Chemical Biology, 2014, 9, 2008-2013.	3.4	34
76	Synthesis of bicyclic organo-peptide hybrids via oxime/intein-mediated macrocyclization followed by disulfide bond formation. Organic and Biomolecular Chemistry, 2014, 12, 1135-1142.	2.8	18
77	Natural, engineered, and artificial biocatalysts for organic synthesis. Bioorganic and Medicinal Chemistry, 2014, 22, 5537-5538.	3.0	1
78	Intramolecular C(sp3)H amination of arylsulfonyl azides with engineered and artificial myoglobin-based catalysts. Bioorganic and Medicinal Chemistry, 2014, 22, 5697-5704.	3.0	128
79	Macrocyclization of Organoâ€Peptide Hybrids through a Dual Bioâ€orthogonal Ligation: Insights from Structureâ€“Reactivity Studies. ChemBioChem, 2013, 14, 147-160.	2.6	33
80	Design, synthesis, and diversification of ribosomally derived peptide macrocycles. Current Opinion in Structural Biology, 2013, 23, 571-580.	5.7	32
81	Emerging Strategies to Access Peptide Macrocycles from Genetically Encoded Polypeptides. Journal of Organic Chemistry, 2013, 78, 3525-3531.	3.2	31
82	Controlled Oxidation of Remote sp³ Câ€“H Bonds in Artemisinin via P450 Catalysts with Fine-Tuned Regio- and Stereoselectivity. Journal of the American Chemical Society, 2012, 134, 18695-18704.	13.7	171
83	Tuning P450 Enzymes as Oxidation Catalysts. ACS Catalysis, 2012, 2, 647-666.	11.2	332
84	Diverse organo-peptide macrocyclesvia a fast and catalyst-free oxime/intein-mediated dual ligation. Chemical Communications, 2012, 48, 1461-1463.	4.1	31
85	P450 Fingerprinting Method for Rapid Discovery of Terpene Hydroxylating P450 Catalysts with Diversified Regioselectivity. Journal of the American Chemical Society, 2011, 133, 3242-3245.	13.7	96
86	Modular Assembly of Macrocyclic Organoâ€“Peptide Hybrids Using Synthetic and Genetically Encoded Precursors. Angewandte Chemie - International Edition, 2011, 50, 5075-5080.	13.8	56
87	Improved productâ€perâ€glucose yields in P450â€dependent propane biotransformations using engineered Escherichia coli. Biotechnology and Bioengineering, 2011, 108, 500-510.	3.3	49
88	Chemo-enzymatic fluorination of unactivated organic compounds. Nature Chemical Biology, 2009, 5, 26-28.	8.0	125
89	Evolutionary History of a Specialized P450 Propane Monooxygenase. Journal of Molecular Biology, 2008, 383, 1069-1080.	4.2	185
90	Engineered Alkaneâ€Hydroxylating Cytochrome P450_{BM3} Exhibiting Nativelike Catalytic Properties. Angewandte Chemie - International Edition, 2007, 46, 8414-8418.	13.8	221

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91	Protein Ligand Design:Â From Phage Display to Synthetic Protein Epitope Mimetics in Human Antibody Fc-Binding Peptidomimetics. Journal of the American Chemical Society, 2006, 128, 2726-2732.	13.7	84
92	Molecular basis of RNA recognition by the human alternative splicing factor Fox-1. EMBO Journal, 2006, 25, 163-173.	7.8	215
93	Structure-Activity Studies in a Family of Î²-Hairpin Protein Epitope Mimetic Inhibitors of the p53-HDM2 Protein-Protein Interaction. ChemBioChem, 2006, 7, 515-526.	2.6	124
94	Using aÎ²-Hairpin To Mimic anÎ±-Helix: Cyclic Peptidomimetic Inhibitors of the p53â€“HDM2 Proteinâ€“Protein Interaction. Angewandte Chemie - International Edition, 2004, 43, 2109-2112.	13.8	170