

Karl Gruber

List of Publications by Citations

Source: <https://exaly.com/author-pdf/4064598/karl-gruber-publications-by-citations.pdf>

Version: 2024-04-20

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

197
papers

6,204
citations

45
h-index

65
g-index

208
ext. papers

7,011
ext. citations

6.4
avg, IF

5.53
L-index

#	Paper	IF	Citations
197	Enzymatic Surface Hydrolysis of PET: Effect of Structural Diversity on Kinetic Properties of Cutinases from <i>Thermobifida</i> . <i>Macromolecules</i> , 2011 , 44, 4632-4640	5.5	205
196	Vitamin B12-derivatives-enzyme cofactors and ligands of proteins and nucleic acids. <i>Chemical Society Reviews</i> , 2011 , 40, 4346-63	58.5	185
195	Asymmetric Bioreduction of C?C Bonds using Enoate Reductases OPR1, OPR3 and YqjM: Enzyme-Based Stereocontrol. <i>Advanced Synthesis and Catalysis</i> , 2008 , 350, 411-418	5.6	165
194	A biocatalytic Henry reaction--the hydroxynitrile lyase from <i>Hevea brasiliensis</i> also catalyzes nitroaldol reactions. <i>Angewandte Chemie - International Edition</i> , 2006 , 45, 3454-6	16.4	162
193	The Cofactor of Tetrachloroethene Reductive Dehalogenase of <i>Dehalospirillum multivorans</i> Is Norpseudob12, a New Type of a Natural Corrinoid. <i>Helvetica Chimica Acta</i> , 2003 , 86, 3698-3716	2	133
192	Thermophilic xylanase from <i>Thermomyces lanuginosus</i> : high-resolution X-ray structure and modeling studies. <i>Biochemistry</i> , 1998 , 37, 13475-85	3.2	129
191	Direct Evidence for the Conformational Deformation of the Corrin Ring by the Nucleotide Base in Vitamin B12: Synthesis and Solution Spectroscopic and Crystal Structure Analysis of Co.beta.-Cyanoimidazolylcobamide. <i>Inorganic Chemistry</i> , 1994 , 33, 4128-4139	5.1	128
190	Accurate Structural Data Demystify B12: High-Resolution Solid-State Structure of Aquocobalamin Perchlorate and Structure Analysis of the Aquocobalamin Ion in Solution. <i>Journal of the American Chemical Society</i> , 1995 , 117, 4654-4670	16.4	113
189	Radical Shuttling in a Protein: Ribose Pseudorotation Controls Alkyl-Radical Transfer in the Coenzyme B(12) Dependent Enzyme Glutamate Mutase This work was supported by the Österreichische Akademie der Wissenschaften (APART fellowship 614), the Österreichische Fonds zur Förderung der wissenschaftlichen Forschung (FWF project 41500), and the European Commission (Marie Curie Action, contract EV 5V-041).	16.4	109
188	A concerted mechanism for berberine bridge enzyme. <i>Nature Chemical Biology</i> , 2008 , 4, 739-41	11.7	108
187	Fusion of binding domains to <i>Thermobifida cellulolytica</i> cutinase to tune sorption characteristics and enhancing PET hydrolysis. <i>Biomacromolecules</i> , 2013 , 14, 1769-76	6.9	102
186	A New Esterase from <i>Thermobifida halotolerans</i> Hydrolyses Polyethylene Terephthalate (PET) and Polylactic Acid (PLA). <i>Polymers</i> , 2012 , 4, 617-629	4.5	100
185	Comprehensive step-by-step engineering of an (R)-hydroxynitrile lyase for large-scale asymmetric synthesis. <i>Angewandte Chemie - International Edition</i> , 2003 , 42, 4815-8	16.4	96
184	Surface engineering of a cutinase from <i>Thermobifida cellulolytica</i> for improved polyester hydrolysis. <i>Biotechnology and Bioengineering</i> , 2013 , 110, 2581-90	4.9	85
183	The hydroxynitrile lyase from almond: a lyase that looks like an oxidoreductase. <i>Structure</i> , 2001 , 9, 803-152		81
182	Role of the general base Glu268 in nitroglycerin bioactivation and mechanism-based superoxide formation by aldehyde dehydrogenase-2. <i>BMC Pharmacology</i> , 2009 , 9,		78
181	VASCo: computation and visualization of annotated protein surface contacts. <i>BMC Bioinformatics</i> , 2009 , 10, 32	3.6	63

180	Reaction mechanism of hydroxynitrile lyases of the alpha/beta-hydrolase superfamily: the three-dimensional structure of the transient enzyme-substrate complex certifies the crucial role of LYS236. <i>Journal of Biological Chemistry</i> , 2004 , 279, 20501-10	5.4	63
179	Biocatalytic enantioselective oxidative C-C coupling by aerobic C-H activation. <i>Angewandte Chemie - International Edition</i> , 2011 , 50, 1068-71	16.4	62
178	Bioactivation of nitroglycerin by purified mitochondrial and cytosolic aldehyde dehydrogenases. <i>Journal of Biological Chemistry</i> , 2008 , 283, 17873-80	5.4	61
177	Asymmetric enzymatic hydration of hydroxystyrene derivatives. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 2293-7	16.4	59
176	Biocatalytic access to alpha,alpha-dialkyl-alpha-amino acids by a mechanism-based approach. <i>Angewandte Chemie - International Edition</i> , 2010 , 49, 121-4	16.4	59
175	Eine biokatalytische Henry-Reaktion [Die Hydroxynitrillyase aus <i>Hevea brasiliensis</i> katalysiert auch Nitroaldolreaktionen. <i>Angewandte Chemie</i> , 2006 , 118, 3532-3535	3.6	59
174	The solution structure of ParD, the antidote of the ParDE toxin antitoxin module, provides the structural basis for DNA and toxin binding. <i>Protein Science</i> , 2007 , 16, 1676-88	6.3	57
173	Oxidation of Monolignols by Members of the Berberine Bridge Enzyme Family Suggests a Role in Plant Cell Wall Metabolism. <i>Journal of Biological Chemistry</i> , 2015 , 290, 18770-81	5.4	55
172	Structural basis for antibody catalysis of a disfavored ring closure reaction. <i>Biochemistry</i> , 1999 , 38, 7062-7068	3.4	55
171	Structural insights into substrate specificity and solvent tolerance in alcohol dehydrogenase ADH-'A' from <i>Rhodococcus ruber</i> DSM 44541. <i>Chemical Communications</i> , 2010 , 46, 6314-6	5.8	54
170	Crystal structure of an (R)-selective α -transaminase from <i>Aspergillus terreus</i> . <i>PLoS ONE</i> , 2014 , 9, e87350	3.7	53
169	Identification of promiscuous ene-reductase activity by mining structural databases using active site constellations. <i>Nature Communications</i> , 2014 , 5, 4150	17.4	53
168	Bioreduction of alpha-methylcinnamaldehyde derivatives: chemo-enzymatic asymmetric synthesis of Lilial and Helional. <i>Dalton Transactions</i> , 2010 , 39, 8472-6	4.3	53
167	Investigation of lipase-catalyzed Michael-type carbon-carbon bond formations. <i>Tetrahedron</i> , 2009 , 65, 5663-5668	2.4	53
166	Entropy-driven binding of opioid peptides induces a large domain motion in human dipeptidyl peptidase III. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 6525-30	11.5	51
165	Laboratory evolved biocatalysts for stereoselective syntheses of substituted benzaldehyde cyanohydrins. <i>ChemBioChem</i> , 2008 , 9, 58-61	3.8	51
164	Access to organometallic arylcobaltcorrins through radical synthesis: 4-ethylphenylcobalamin, a potential "antivitamin B(12)". <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 2606-10	16.4	50
163	The first structure of dipeptidyl-peptidase III provides insight into the catalytic mechanism and mode of substrate binding. <i>Journal of Biological Chemistry</i> , 2008 , 283, 22316-24	5.4	50

162	Structure and function of YcnD from <i>Bacillus subtilis</i> , a flavin-containing oxidoreductase. <i>Biochemistry</i> , 2005 , 44, 13724-33	3.2	50
161	Characterization of a poly(butylene adipate-co-terephthalate)-hydrolyzing lipase from <i>Pelosinus fermentans</i> . <i>Applied Microbiology and Biotechnology</i> , 2016 , 100, 1753-1764	5.7	49
160	Structure-Based Mechanism of Oleate Hydratase from <i>Elizabethkingia meningoseptica</i> . <i>ChemBioChem</i> , 2015 , 16, 1730-4	3.8	49
159	Uneven twins: comparison of two enantiocomplementary hydroxynitrile lyases with alpha/beta-hydrolase fold. <i>Journal of Biotechnology</i> , 2009 , 141, 166-73	3.7	49
158	XAS spectroscopy reveals X-ray-induced photoreduction of free and protein-bound B12 cofactors. <i>Journal of Synchrotron Radiation</i> , 2000 , 7, 267-73	2.4	49
157	Molecular recognition determinants for type IV secretion of diverse families of conjugative relaxases. <i>Molecular Microbiology</i> , 2010 , 78, 1539-55	4.1	48
156	The 2.5 Å structure of the enterococcus conjugation protein TraM resembles VirB8 type IV secretion proteins. <i>Journal of Biological Chemistry</i> , 2013 , 288, 2018-28	5.4	47
155	Improving enzymatic polyurethane hydrolysis by tuning enzyme sorption. <i>Polymer Degradation and Stability</i> , 2016 , 132, 69-77	4.7	46
154	Old Yellow Enzyme-Catalyzed Dehydrogenation of Saturated Ketones. <i>Advanced Synthesis and Catalysis</i> , 2011 , 353, 268-274	5.6	46
153	Collapse of the native structure caused by a single amino acid exchange in human NAD(P)H:quinone oxidoreductase(1.). <i>FEBS Journal</i> , 2014 , 281, 4691-4704	5.7	45
152	Coenzyme B(12) dependent glutamate mutase. <i>Current Opinion in Chemical Biology</i> , 2002 , 6, 598-603	9.7	45
151	Hydrolysis of synthetic polyesters by <i>Clostridium botulinum</i> esterases. <i>Biotechnology and Bioengineering</i> , 2016 , 113, 1024-34	4.9	43
150	Inverting enantioselectivity of <i>Burkholderia gladioli</i> esterase EstB by directed and designed evolution. <i>Journal of Biotechnology</i> , 2007 , 129, 109-22	3.7	43
149	Regioselective Enzymatic α -Carboxylation of α -Hydroxy-styrene Derivatives Catalyzed by Phenolic Acid Decarboxylases. <i>Advanced Synthesis and Catalysis</i> , 2015 , 357, 1909-1918	5.6	41
148	Regioselective para-Carboxylation of Catechols with a Prenylated Flavin Dependent Decarboxylase. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 13893-13897	16.4	40
147	Carving the active site of almond R-HNL for increased enantioselectivity. <i>Angewandte Chemie - International Edition</i> , 2005 , 44, 4700-4	16.4	40
146	Serine 477 plays a crucial role in the interaction of the SARS-CoV-2 spike protein with the human receptor ACE2. <i>Scientific Reports</i> , 2021 , 11, 4320	4.9	40
145	Can electromagnetic fields influence the structure and enzymatic digest of proteins? A critical evaluation of microwave-assisted proteomics protocols. <i>Journal of Proteomics</i> , 2012 , 75, 5533-43	3.9	39

144	Biocatalytic Friedel-Crafts Acylation and Fries Reaction. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 7615-7619	16.4	38
143	Chemoenzymatic Total Synthesis of Deoxy-, epi-, and Podophyllotoxin and a Biocatalytic Kinetic Resolution of Dibenzylbutyrolactones. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 8226-8230	16.4	37
142	Regioselective ortho-carboxylation of phenols catalyzed by benzoic acid decarboxylases: a biocatalytic equivalent to the Kolbe-Schmitt reaction. <i>RSC Advances</i> , 2014 , 4, 9673	3.7	37
141	Cofactor Specificity Engineering of <i>Streptococcus mutans</i> NADH Oxidase 2 for NAD(P)(+) Regeneration in Biocatalytic Oxidations. <i>Computational and Structural Biotechnology Journal</i> , 2014 , 9, e201402005	6.8	37
140	Structural and mechanistic studies reveal the functional role of bicovalent flavinylation in berberine bridge enzyme. <i>Journal of Biological Chemistry</i> , 2009 , 284, 19993-20001	5.4	36
139	Complete switch from β ,3- to β ,6-regioselectivity in <i>Pasteurella dagmatis</i> β -galactoside sialyltransferase by active-site redesign. <i>Chemical Communications</i> , 2015 , 51, 3083-6	5.8	35
138	Biochemical and structural characterization of a novel bacterial manganese-dependent hydroxynitrile lyase. <i>FEBS Journal</i> , 2013 , 280, 5815-28	5.7	35
137	Small cause, large effect: Structural characterization of cutinases from <i>Thermobifida cellulolytica</i> . <i>Biotechnology and Bioengineering</i> , 2017 , 114, 2481-2488	4.9	35
136	Observation of a short, strong hydrogen bond in the active site of hydroxynitrile lyase from <i>Hevea brasiliensis</i> explains a large pKa shift of the catalytic base induced by the reaction intermediate. <i>Journal of Biological Chemistry</i> , 2004 , 279, 3699-707	5.4	35
135	Biopolymers for biocatalysis: Structure and catalytic mechanism of hydroxynitrile lyases. <i>Journal of Polymer Science Part A</i> , 2004 , 42, 479-486	2.5	35
134	PpEst is a novel PBAT degrading polyesterase identified by proteomic screening of <i>Pseudomonas pseudoalcaligenes</i> . <i>Applied Microbiology and Biotechnology</i> , 2017 , 101, 2291-2303	5.7	34
133	Cutting Long Syntheses Short: Access to Non-Natural Tyrosine Derivatives Employing an Engineered Tyrosine Phenol Lyase. <i>Advanced Synthesis and Catalysis</i> , 2010 , 352, 731-736	5.6	34
132	Total Synthesis, Structure, and Biological Activity of Adenosylrhodibalamin, the Non-Natural Rhodium Homologue of Coenzyme B12. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 11281-6	16.4	33
131	Substrate binding in the FAD-dependent hydroxynitrile lyase from almond provides insight into the mechanism of cyanohydrin formation and explains the absence of dehydrogenation activity. <i>Biochemistry</i> , 2009 , 48, 3370-7	3.2	33
130	The structure of monoacylglycerol lipase from <i>Bacillus</i> sp. H257 reveals unexpected conservation of the cap architecture between bacterial and human enzymes. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2012 , 1821, 1012-21	5	32
129	A single intersubunit salt bridge affects oligomerization and catalytic activity in a bacterial quinone reductase. <i>FEBS Journal</i> , 2009 , 276, 5263-74	5.7	32
128	The active site of hydroxynitrile lyase from <i>Prunus amygdalus</i> : modeling studies provide new insights into the mechanism of cyanogenesis. <i>Protein Science</i> , 2002 , 11, 292-300	6.3	32
127	Directed evolution of <i>Alcaligenes faecalis</i> nitrilase. <i>Enzyme and Microbial Technology</i> , 2010 , 47, 140-146	3.8	32

- 126 Vitamin B12: a methyl group without a job?. *Angewandte Chemie - International Edition*, **2006**, 45, 989-9316.4 32
- 125 Structural determinants of the enantioselectivity of the hydroxynitrile lyase from *Hevea brasiliensis*. *Journal of Biotechnology*, **2007**, 129, 87-97 3.7 31
- 124 Conformational plasticity and ligand binding of bacterial monoacylglycerol lipase. *Journal of Biological Chemistry*, **2013**, 288, 31093-104 5.4 30
- 123 Stereopreferences of Old Yellow Enzymes: Structure Correlations and Sequence Patterns in Enoate Reductases. *ChemCatChem*, **2011**, 3, 1562-1566 5.2 30
- 122 Characterization of squalene epoxidase of *Saccharomyces cerevisiae* by applying terbinafine-sensitive variants. *Antimicrobial Agents and Chemotherapy*, **2007**, 51, 275-84 5.9 30
- 121 Oligomethylene-Bridged Vitamin B12 Dimers. *Angewandte Chemie International Edition in English*, **1995**, 34, 84-86 30
- 120 Substrate complexes of human dipeptidyl peptidase III reveal the mechanism of enzyme inhibition. *Scientific Reports*, **2016**, 6, 23787 4.9 29
- 119 Efficient Biocatalytic Synthesis of (R)-Pantolactone. *Advanced Synthesis and Catalysis*, **2008**, 350, 1943-1948 29
- 118 Asymmetric Reductive Carbocyclization Using Engineered Ene Reductases. *Angewandte Chemie - International Edition*, **2018**, 57, 7240-7244 16.4 27
- 117 Role of the general base Glu-268 in nitroglycerin bioactivation and superoxide formation by aldehyde dehydrogenase-2. *Journal of Biological Chemistry*, **2009**, 284, 19878-86 5.4 27
- 116 Metal complexes of a biconcave porphyrin with D4-structure--versatile chiral shift agents. *Chemistry - A European Journal*, **2001**, 7, 2676-86 4.8 27
- 115 Biokatalytische enantioselektive oxidative C-C-Kupplung durch C-H-Aktivierung mit molekularem Sauerstoff. *Angewandte Chemie*, **2011**, 123, 1100-1103 3.6 26
- 114 Serine scanning: a tool to prove the consequences of N-glycosylation of proteins. *Journal of Biotechnology*, **2007**, 129, 50-61 3.7 26
- 113 Stufenweise molekulare Optimierung einer (R)-Hydroxynitrillyase für die asymmetrische Synthese im Produktionsmaßstab. *Angewandte Chemie*, **2003**, 115, 4963-4966 3.6 26
- 112 Crystal structure of *Dioclea violacea* lectin and a comparative study of vasorelaxant properties with *Dioclea rostrata* lectin. *International Journal of Biochemistry and Cell Biology*, **2013**, 45, 807-15 5.6 25
- 111 Inverting the regioselectivity of the berberine bridge enzyme by employing customized fluorine-containing substrates. *Chemistry - A European Journal*, **2012**, 18, 13173-9 4.8 25
- 110 Berberine bridge enzyme catalyzes the six electron oxidation of (S)-reticuline to dehydroscoulerine. *Phytochemistry*, **2009**, 70, 1092-1097 4 25
- 109 Elucidation of the mode of substrate binding to hydroxynitrile lyase from *Hevea brasiliensis*. *Proteins: Structure, Function and Bioinformatics*, **2001**, 44, 26-31 4.2 25

108	The Hydrogenobyrin Acid Structure Reveals the Corrin Ligand as an Entatic State Module Empowering B Cofactors for Catalysis. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 10756-10760	16.4	24
107	An Esterase from Anaerobic <i>Clostridium hathewayi</i> Can Hydrolyze Aliphatic-Aromatic Polyesters. <i>Environmental Science & Technology</i> , 2016 , 50, 2899-907	10.3	24
106	Vascular bioactivation of nitroglycerin by aldehyde dehydrogenase-2: reaction intermediates revealed by crystallography and mass spectrometry. <i>Journal of Biological Chemistry</i> , 2012 , 287, 38124-34	5.4	24
105	Disruption of the methyltransferase-like 23 gene METTL23 causes mild autosomal recessive intellectual disability. <i>Human Molecular Genetics</i> , 2014 , 23, 4015-23	5.6	23
104	Hydroxynitrile lyase catalysed synthesis of heterocyclic (R)- and (S)-cyanohydrins. <i>Tetrahedron</i> , 2004 , 60, 10411-10418	2.4	23
103	Discovery and structural characterisation of new fold type IV-transaminases exemplify the diversity of this enzyme fold. <i>Scientific Reports</i> , 2016 , 6, 38183	4.9	23
102	Catalytic competence, structure and stability of the cancer-associated R139W variant of the human NAD(P)H:quinone oxidoreductase 1 (NQO1). <i>FEBS Journal</i> , 2017 , 284, 1233-1245	5.7	22
101	Evolving the Promiscuity of <i>Elizabethkingia meningoseptica</i> Oleate Hydratase for the Regio- and Stereoselective Hydration of Oleic Acid Derivatives. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 7480-7484	16.4	22
100	Improving the Properties of Bacterial R-Selective Hydroxynitrile Lyases for Industrial Applications. <i>ChemCatChem</i> , 2015 , 7, 325-332	5.2	22
99	High-resolution structure of a new Tn antigen-binding lectin from <i>Vatairea macrocarpa</i> and a comparative analysis of Tn-binding legume lectins. <i>International Journal of Biochemistry and Cell Biology</i> , 2015 , 59, 103-10	5.6	22
98	Stereocontrol Strategies in the Asymmetric Bioreduction of Alkenes. <i>Synlett</i> , 2012 , 23, 1857-1864	2.2	22
97	Atomic resolution crystal structures and quantum chemistry meet to reveal subtleties of hydroxynitrile lyase catalysis. <i>Journal of Biological Chemistry</i> , 2008 , 283, 21827-36	5.4	22
96	B12-retro-riboswitches: constitutional switching of B12 coenzymes induced by nucleotides. <i>Angewandte Chemie - International Edition</i> , 2005 , 44, 2284-8	16.4	22
95	Asymmetric Amination of Chiral Aliphatic Aldehydes via Dynamic Kinetic Resolution to Access Stereocomplementary Brivaracetam and Pregabalin Precursors. <i>Advanced Synthesis and Catalysis</i> , 2018 , 360, 768-778	5.6	22
94	Targeting the substrate binding site of <i>E. coli</i> nitrile reductase QueF by modeling, substrate and enzyme engineering. <i>Chemistry - A European Journal</i> , 2013 , 19, 7007-12	4.8	21
93	Hydroxynitrile lyases with hydrolase fold: two enzymes with almost identical 3D structures but opposite enantioselectivities and different reaction mechanisms. <i>ChemBioChem</i> , 2012 , 13, 1932-9	3.8	21
92	Homocoenzyme B12 and bishomocoenzyme B12: covalent structural mimics for homolyzed, enzyme-bound coenzyme B12. <i>Chemistry - A European Journal</i> , 2004 , 11, 81-93	4.8	21
91	Identification of Key Residues for Enzymatic Carboxylate Reduction. <i>Frontiers in Microbiology</i> , 2018 , 9, 250	5.7	20

90	Stereoselective biocatalytic synthesis of (S)-2-hydroxy-2-methylbutyric acid via substrate engineering by using "thio-disguised" precursors and oxynitrilase catalysis. <i>Chemistry - A European Journal</i> , 2007 , 13, 3369-76	4.8	20
89	Structure of a Berberine Bridge Enzyme-Like Enzyme with an Active Site Specific to the Plant Family Brassicaceae. <i>PLoS ONE</i> , 2016 , 11, e0156892	3.7	20
88	Structure of human dipeptidyl peptidase 10 (DPPY): a modulator of neuronal Kv4 channels. <i>Scientific Reports</i> , 2015 , 5, 8769	4.9	19
87	Structures of human DPP7 reveal the molecular basis of specific inhibition and the architectural diversity of proline-specific peptidases. <i>PLoS ONE</i> , 2012 , 7, e43019	3.7	19
86	Structural studies of an anti-inflammatory lectin from <i>Canavalia boliviana</i> seeds in complex with dimannosides. <i>PLoS ONE</i> , 2014 , 9, e97015	3.7	19
85	Chlorophyll-Derived Yellow Phyllobilins of Higher Plants as Medium-Responsive Chiral Photoswitches. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 15760-15765	16.4	18
84	Crystal structure of a pro-inflammatory lectin from the seeds of <i>Dioclea wilsonii</i> Standl. <i>Biochimie</i> , 2012 , 94, 525-32	4.6	18
83	Tailoring a stabilized variant of hydroxynitrile lyase from <i>Arabidopsis thaliana</i> . <i>ChemBioChem</i> , 2012 , 13, 797-802	3.8	18
82	A blue corrinoid from partial degradation of vitamin B12 in aqueous bicarbonate: spectra, structure, and interaction with proteins of B12 transport. <i>Biochemistry</i> , 2011 , 50, 8090-101	3.2	18
81	Radikalpendelmechanismus in einem Protein: Kontrolle des Alkylradikaltransfers durch Ribose-Pseudorotation in der Coenzym-B12-abhängigen Glutamatmutase. <i>Angewandte Chemie</i> , 2001 , 113, 3481-3484	3.6	18
80	Porphyrins with Biconcave Frameworks. <i>Angewandte Chemie International Edition in English</i> , 1994 , 33, 889-891		18
79	Crystal structure of the <i>Saccharomyces cerevisiae</i> monoglyceride lipase Yju3p. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2016 , 1861, 462-70	5	17
78	Zinc Substitution of Cobalt in Vitamin B : Zincoxyric acid and Zincoobalamin as Luminescent Structural B -Mimics. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 14568-14572	16.4	17
77	Polyester hydrolysis is enhanced by a truncated esterase: Less is more. <i>Biotechnology Journal</i> , 2017 , 12,	5.6	17
76	Enzyme discovery beyond homology: a unique hydroxynitrile lyase in the Bet v1 superfamily. <i>Scientific Reports</i> , 2017 , 7, 46738	4.9	16
75	Zugang zu metallorganischen Arylcobaltcorrinen durch radikalische Synthese: 4-Ethylphenylcobalamin, ein potenzielles Antivitamin B12. <i>Angewandte Chemie</i> , 2013 , 125, 2668-2672	3.6	16
74	Characterization of the PLP-dependent aminotransferase NikK from <i>Streptomyces tendae</i> and its putative role in nikkomycin biosynthesis. <i>FEBS Journal</i> , 2011 , 278, 4122-35	5.7	16
73	Structure and Catalytic Mechanism of a Bacterial Friedel-Crafts Acylase. <i>ChemBioChem</i> , 2019 , 20, 88-95	3.8	16

72	Asymmetric Enzymatic Hydration of Hydroxystyrene Derivatives. <i>Angewandte Chemie</i> , 2013 , 125, 2349-2353	3.5	15
71	Epoxide-hydrolase-initiated hydrolysis/rearrangement cascade of a methylene-interrupted bis-epoxide yields chiral THF moieties without involvement of a "cyclase". <i>ChemBioChem</i> , 2009 , 10, 1697-1704	3.8	15
70	Dipeptidyl peptidase 3 modulates the renin-angiotensin system in mice. <i>Journal of Biological Chemistry</i> , 2020 , 295, 13711-13723	5.4	14
69	The crystal structure of D-threonine aldolase from <i>Alcaligenes xylosoxidans</i> provides insight into a metal ion assisted PLP-dependent mechanism. <i>PLoS ONE</i> , 2015 , 10, e0124056	3.7	14
68	X-Ray Molecular Structure of a Red Bilin Derivative from <i>Chlorella protothecoides</i> . 4th communication on chlorophyll catabolism. <i>Helvetica Chimica Acta</i> , 1993 , 76, 2236-2238	2	14
67	Chemoenzymatische Totalsynthese von Deoxy-, epi- und Podophyllotoxin sowie biokatalytische kinetische Racematspaltung von Dibenzylbutyrolactonen. <i>Angewandte Chemie</i> , 2019 , 131, 8310-8315	3.6	13
66	Unique crystal structure of a novel surfactant protein from the foam nest of the frog <i>Leptodactylus vastus</i> . <i>ChemBioChem</i> , 2014 , 15, 393-8	3.8	13
65	Catalytic and structural role of a conserved active site histidine in berberine bridge enzyme. <i>Biochemistry</i> , 2012 , 51, 6139-47	3.2	13
64	Asymmetric biocatalytic hydrocyanation of pyrrole carboxaldehydes. <i>Tetrahedron</i> , 2005 , 61, 7661-7668	2.4	13
63	Engineering of the zinc-binding domain of an esterase from <i>Clostridium botulinum</i> towards increased activity on polyesters. <i>Catalysis Science and Technology</i> , 2017 , 7, 1440-1447	5.5	12
62	Coenzyme B12 Repurposed for Photoregulation of Gene Expression. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 5638-40	16.4	12
61	Converting Aspartase into a β Amino Acid Lyase by Cluster Screening. <i>ChemCatChem</i> , 2014 , 6, 965-968	5.2	12
60	Structural and functional characterization of NikO, an enolpyruvyl transferase essential in nikkomycin biosynthesis. <i>Journal of Biological Chemistry</i> , 2012 , 287, 31427-36	5.4	12
59	Enzymatic aerobic alkene cleavage catalyzed by a Mn(3+) -dependent proteinase a homologue. <i>ChemBioChem</i> , 2013 , 14, 2427-30	3.8	12
58	X-ray structural characterization of imidazolylcobalamin and histidinylcobalamin: cobalamin models for aquacobalamin bound to the B12 transporter protein transcobalamin. <i>Inorganic Chemistry</i> , 2007 , 46, 3613-8	5.1	12
57	The sustainable synthesis of levetiracetam by an enzymatic dynamic kinetic resolution and an ex-cell anodic oxidation. <i>Green Chemistry</i> , 2021 , 23, 388-395	10	12
56	Biocatalytic Friedel-Crafts Acylation and Fries Reaction. <i>Angewandte Chemie</i> , 2017 , 129, 7723-7727	3.6	11
55	Structural characterization of a <i>Vatairea macrocarpa</i> lectin in complex with a tumor-associated antigen: A new tool for cancer research. <i>International Journal of Biochemistry and Cell Biology</i> , 2016 , 72, 27-39	5.6	11

54	Engineering of choline oxidase from <i>Arthrobacter nicotianae</i> for potential use as biological bleach in detergents. <i>Applied Microbiology and Biotechnology</i> , 2010 , 87, 1743-52	5.7	11
53	Erhöhung der Enantioselektivität von Mandel-R-HNL durch rationales Design des aktiven Zentrums. <i>Angewandte Chemie</i> , 2005 , 117, 4778-4782	3.6	11
52	A convenient de novo synthesis of functionalised 2,4,6,8-tetraoxadamantanes. <i>Journal of the Chemical Society Chemical Communications</i> , 1995 , 797		11
51	Oligomethylenverbundene Vitamin-B12-Dimere. <i>Angewandte Chemie</i> , 1995 , 107, 66-69	3.6	11
50	Structural and kinetic studies on RosA, the enzyme catalysing the methylation of 8-demethyl-8-amino-d-riboflavin to the antibiotic roseoflavin. <i>FEBS Journal</i> , 2016 , 283, 1531-49	5.7	11
49	Structure and biochemical properties of recombinant human dimethylglycine dehydrogenase and comparison to the disease-related H109R variant. <i>FEBS Journal</i> , 2016 , 283, 3587-3603	5.7	11
48	Asymmetrische reduktive Carbocyclisierung durch modifizierte En-Reduktasen. <i>Angewandte Chemie</i> , 2018 , 130, 7360-7364	3.6	10
47	Thermostability improvement of endoglucanase Cel7B from <i>Hypocrea pseudokoningii</i> . <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2014 , 103, 16-23		10
46	The structure of glycerol trinitrate reductase NerA from <i>Agrobacterium radiobacter</i> reveals the molecular reason for nitro- and ene-reductase activity in OYE homologues. <i>ChemBioChem</i> , 2013 , 14, 836-45	3.8	10
45	B12-retro-Riboschalter: konstitutionelles Schalten von B12-Coenzymen durch Nucleotide. <i>Angewandte Chemie</i> , 2005 , 117, 2324-2328	3.6	10
44	Structure, biochemical and kinetic properties of recombinant Pst2p from <i>Saccharomyces cerevisiae</i> , a FMN-dependent NAD(P)H:quinone oxidoreductase. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2017 , 1865, 1046-1056	4	9
43	Structural and biochemical properties of LuxF from <i>Photobacterium leiognathi</i> . <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2015 , 1854, 1466-75	4	9
42	2,6,9-Trioxabicyclo[3.3.1]nona-3,7-dien-4-oyl and tetraoxadamantan-9-oyl functionalized aromatic di- and triamines: synthesis, stereochemistry and complexation. <i>Tetrahedron</i> , 2004 , 60, 2857-2867	2.4	9
41	Crystal structure of dipeptidyl peptidase III from the human gut symbiont <i>Bacteroides thetaiotaomicron</i> . <i>PLoS ONE</i> , 2017 , 12, e0187295	3.7	9
40	Controlling the Regioselectivity of Fatty Acid Hydroxylation (C10) at Band EPosition by CYP152A1 (P450Bs) Variants. <i>ChemCatChem</i> , 2019 , 11, 5642-5649	5.2	8
39	Die Hydrogenobyräure-Struktur enthüllt den Corrin-Liganden als entatisches Zustandsmodul zur Steigerung der Katalyseaktivität von B12-Cofaktoren. <i>Angewandte Chemie</i> , 2019 , 131, 10869-10873	3.6	8
38	Crystal Structure and Catalytic Mechanism of CouO, a Versatile C-Methyltransferase from <i>Streptomyces rishiriensis</i> . <i>PLoS ONE</i> , 2017 , 12, e0171056	3.7	8
37	Totalsynthese, Struktur und biologische Aktivität von Adenosylrhodibalamin, dem unnatürlichen Rhodiumhomologen von Coenzym B12. <i>Angewandte Chemie</i> , 2016 , 128, 11451-11456	3.6	7

36	Isovitamin B12: a vitamin B12 derivative that flips its tail. <i>Chemistry - A European Journal</i> , 2010 , 16, 10984-8	4.8	7
35	A crystalline B12 dimer from beta-cyano-neocobyrate. <i>Chemistry - A European Journal</i> , 2008 , 14, 7521-4	4.8	7
34	Vitamin B12: eine Methylgruppe ohne Aufgabe?. <i>Angewandte Chemie</i> , 2006 , 118, 1004-1008	3.6	6
33	Weiterentwicklung der Substrattoleranz von Elizabethkingia meningoseptica Oleathydratase zur regio- und stereoselektiven Hydratisierung von B ₁₂ -Derivaten. <i>Angewandte Chemie</i> , 2019 , 131, 7558-7563	3.6	5
32	A novel Porphyromonas gingivalis enzyme: An atypical dipeptidyl peptidase III with an ARM repeat domain. <i>PLoS ONE</i> , 2017 , 12, e0188915	3.7	5
31	Regioselektive para-Carboxylierung von Catecholen mit einer Prenylflavin-abhängigen Decarboxylase. <i>Angewandte Chemie</i> , 2017 , 129, 14081-14085	3.6	5
30	Rational Engineered C-Acyltransferase Transforms Sterically Demanding Acyl Donors. <i>ACS Catalysis</i> , 2020 , 10, 1094-1101	13.1	5
29	Anthranoyl-CoA monooxygenase/reductase from Azoarcus evansii possesses both FMN and FAD in two distinct and independent active sites. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2015 , 1854, 890-6	4	4
28	Von Chlorophyll abstammende gelbe Phyllobiline höherer Pflanzen als umgebungsgesteuerte, chirale Photoschalter. <i>Angewandte Chemie</i> , 2016 , 128, 15992-15997	3.6	4
27	Zinc Substitution of Cobalt in Vitamin B12: Zincobyrinic acid and Zincobalamin as Luminescent Structural B12-Mimics. <i>Angewandte Chemie</i> , 2019 , 131, 14710-14714	3.6	4
26	The crystal structure and characterization of a copper(II) complex with a guanosine-5'-monophosphate analog (acyclovir monophosphate). <i>Journal of Inorganic Biochemistry</i> , 1996 , 63, 41-48	4.2	4
25	Coenzym B12 Σ mfunktioniert für die Photoregulation der Genexpression. <i>Angewandte Chemie</i> , 2016 , 128, 5728-5730	3.6	4
24	Substituting the catalytic proline of 4-oxalocrotonate tautomerase with non-canonical analogues reveals a finely tuned catalytic system. <i>Scientific Reports</i> , 2019 , 9, 2697	4.9	4
23	A small molecule chaperone rescues the stability and activity of a cancer-associated variant of NAD(P)H:quinone oxidoreductase 1 in vitro. <i>FEBS Letters</i> , 2020 , 594, 424-438	3.8	4
22	A conserved inter-domain communication mechanism regulates the ATPase activity of the AAA-protein Drg1. <i>Scientific Reports</i> , 2017 , 7, 44751	4.9	3
21	Crystallization of a novel metal-containing cupin from Acidobacterium sp. and preliminary diffraction data analysis. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2012 , 68, 451-4		3
20	Structure-function correlations of two highly conserved motifs in Saccharomyces cerevisiae squalene epoxidase. <i>Antimicrobial Agents and Chemotherapy</i> , 2008 , 52, 1496-9	5.9	3
19	High-resolution Crystal Structures of Cobalamins 2007 , 335-347		3

18	A Fungal Ascorbate Oxidase with Unexpected Laccase Activity. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	3
17	Structural basis for inhibition of the AAA-ATPase Drg1 by diazaborine. <i>Nature Communications</i> , 2021 , 12, 3483	17.4	3
16	Efficient Entropy-Driven Inhibition of Dipeptidyl Peptidase III by Hydroxyethylene Transition-State Peptidomimetics. <i>Chemistry - A European Journal</i> , 2021 , 27, 14108-14120	4.8	3
15	Crystallization and preliminary X-ray diffraction of the surfactant protein Lv-ranaspumin from the frog <i>Leptodactylus vastus</i> . <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2012 , 68, 321-3		2
14	Crystallization and preliminary X-ray diffraction analysis of human dipeptidyl peptidase 10 (DPPY), a component of voltage-gated potassium channels. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2012 , 68, 214-7		2
13	Band Eoxygenated aldehydes derived from DielsAlder reactions as substrates for hydroxynitrile lyases. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2009 , 61, 268-273		2
12	Binding of dipeptidyl peptidase III to the oxidative stress cell sensor Kelch-like ECH-associated protein 1 is a two-step process. <i>Journal of Biomolecular Structure and Dynamics</i> , 2021 , 39, 6870-6881	3.6	2
11	The catalytic machinery of the FAD-dependent AtBBE-like protein 15 for alcohol oxidation: Y193 and Y479 form a catalytic base, Q438 and R292 an alkoxide binding site. <i>Archives of Biochemistry and Biophysics</i> , 2021 , 700, 108766	4.1	2
10	SARS-CoV-2 Entry Protein TMPRSS2 and Its Homologue, TMPRSS4 Adopts Structural Fold Similar to Blood Coagulation and Complement Pathway Related Proteins		2
9	Structures of almond hydroxynitrile lyase isoenzyme 5 provide a rationale for the lack of oxidoreductase activity in flavin dependent HNLs. <i>Journal of Biotechnology</i> , 2016 , 235, 24-31	3.7	2
8	Small-Molecule Inhibitors Targeting Lipolysis in Human Adipocytes.. <i>Journal of the American Chemical Society</i> , 2022 ,	16.4	2
7	Structure and stability of an unusual zinc-binding protein from <i>Bacteroides thetaiotaomicron</i> . <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2014 , 1844, 2298-305	4	1
6	Crystallization of the novel S-adenosyl-L-methionine-dependent C-methyltransferase CouO from <i>Streptomyces rishiriensis</i> and preliminary diffraction data analysis. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2012 , 68, 698-700		1
5	Methylmalonyl CoA Mutase 2011 ,		1
4	Residue-Specific Incorporation of the Non-Canonical Amino Acid Norleucine Improves Lipase Activity on Synthetic Polyesters.. <i>Frontiers in Bioengineering and Biotechnology</i> , 2022 , 10, 769830	5.8	1
3	Oxidative cyclization of -methyl-dopa by a fungal flavoenzyme of the amine oxidase family. <i>Journal of Biological Chemistry</i> , 2018 , 293, 17021-17032	5.4	1
2	Innentitelbild: Von Chlorophyll abstammende gelbe Phyllobiline hBerer Pflanzen als umgebungsgesteuerte, chirale Photoschalter (Angew. Chem. 51/2016). <i>Angewandte Chemie</i> , 2016 , 128, 15912-15912	3.6	
1	Two promising biocatalytic tools: regioselective carboxylation of aromatics and asymmetric hydration of alkenes. <i>New Biotechnology</i> , 2014 , 31, S1	6.4	

