

Florian Hollfelder

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3050187/publications.pdf>

Version: 2024-02-01

151
papers

9,503
citations

38660

50
h-index

43802

91
g-index

176
all docs

176
docs citations

176
times ranked

8857
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Microdroplets in Microfluidics: An Evolving Platform for Discoveries in Chemistry and Biology. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 5846-5868. | 7.2 | 903 |
| 2 | Microdroplets: A sea of applications?. <i>Lab on A Chip</i> , 2008, 8, 1244. | 3.1 | 579 |
| 3 | Static microdroplet arrays: a microfluidic device for droplet trapping, incubation and release for enzymatic and cell-based assays. <i>Lab on A Chip</i> , 2009, 9, 692-698. | 3.1 | 303 |
| 4 | The role of protein dynamics in the evolution of new enzyme function. <i>Nature Chemical Biology</i> , 2016, 12, 944-950. | 3.9 | 252 |
| 5 | Continuous-Flow Polymerase Chain Reaction of Single-Copy DNA in Microfluidic Microdroplets. <i>Analytical Chemistry</i> , 2009, 81, 302-306. | 3.2 | 240 |
| 6 | Ultrahigh-throughput discovery of promiscuous enzymes by picodroplet functional metagenomics. <i>Nature Communications</i> , 2015, 6, 10008. | 5.8 | 225 |
| 7 | Ultrahigh-throughput "directed enzyme evolution by absorbance-activated droplet sorting (AADS). <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, E7383-E7389. | 3.3 | 210 |
| 8 | Picoliter Cell Lysate Assays in Microfluidic Droplet Compartments for Directed Enzyme Evolution. <i>Chemistry and Biology</i> , 2012, 19, 1001-1009. | 6.2 | 195 |
| 9 | Development of Quantitative Cell-Based Enzyme Assays in Microdroplets. <i>Analytical Chemistry</i> , 2008, 80, 3890-3896. | 3.2 | 191 |
| 10 | Ultrarapid Generation of Femtoliter Microfluidic Droplets for Single-Molecule-Counting Immunoassays. <i>ACS Nano</i> , 2013, 7, 5955-5964. | 7.3 | 188 |
| 11 | Controlling the Retention of Small Molecules in Emulsion Microdroplets for Use in Cell-Based Assays. <i>Analytical Chemistry</i> , 2009, 81, 3008-3016. | 3.2 | 182 |
| 12 | Off-the-shelf proteins that rival tailor-made antibodies as catalysts. <i>Nature</i> , 1996, 383, 60-63. | 13.7 | 177 |
| 13 | Cross-talk between Histone Modifications in Response to Histone Deacetylase Inhibitors. <i>Journal of Biological Chemistry</i> , 2007, 282, 4408-4416. | 1.6 | 177 |
| 14 | What makes an enzyme promiscuous?. <i>Current Opinion in Chemical Biology</i> , 2010, 14, 200-207. | 2.8 | 176 |
| 15 | An Integrated Device for Monitoring Time-Dependent in vitro Expression From Single Genes in Picolitre Droplets. <i>ChemBioChem</i> , 2008, 9, 439-446. | 1.3 | 172 |
| 16 | One in a Million: Flow Cytometric Sorting of Single Cell-Lysate Assays in Monodisperse Picolitre Double Emulsion Droplets for Directed Evolution. <i>Analytical Chemistry</i> , 2014, 86, 2526-2533. | 3.2 | 170 |
| 17 | Self-Organization of Mouse Stem Cells into an Extended Potential Blastoid. <i>Developmental Cell</i> , 2019, 51, 698-712.e8. | 3.1 | 157 |
| 18 | Microfluidic droplets: new integrated workflows for biological experiments. <i>Current Opinion in Chemical Biology</i> , 2010, 14, 548-555. | 2.8 | 155 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | The nature of the transition state for enzyme-catalyzed phosphoryl transfer. Hydrolysis of O-aryl phosphorothioates by alkaline phosphatase. <i>Biochemistry</i> , 1995, 34, 12255-12264. | 1.2 | 151 |
| 20 | Simultaneous Determination of Gene Expression and Enzymatic Activity in Individual Bacterial Cells in Microdroplet Compartments. <i>Journal of the American Chemical Society</i> , 2009, 131, 15251-15256. | 6.6 | 151 |
| 21 | Evolution of enzyme catalysts caged in biomimetic gel-shell beads. <i>Nature Chemistry</i> , 2014, 6, 791-796. | 6.6 | 140 |
| 22 | A double droplet trap system for studying mass transport across a droplet-droplet interface. <i>Lab on A Chip</i> , 2010, 10, 1281. | 3.1 | 138 |
| 23 | The antibiotic microcin B17 is a DNA gyrase poison: characterisation of the mode of inhibition ¹¹ Edited by J. Karn. <i>Journal of Molecular Biology</i> , 2001, 307, 1223-1234. | 2.0 | 135 |
| 24 | The potential of microfluidic water-in-oil droplets in experimental biology. <i>Molecular BioSystems</i> , 2009, 5, 1392. | 2.9 | 131 |
| 25 | New genotype-phenotype linkages for directed evolution of functional proteins. <i>Current Opinion in Structural Biology</i> , 2005, 15, 472-478. | 2.6 | 125 |
| 26 | Exploring sequence space in search of functional enzymes using microfluidic droplets. <i>Current Opinion in Chemical Biology</i> , 2017, 37, 137-144. | 2.8 | 88 |
| 27 | An efficient, multiply promiscuous hydrolase in the alkaline phosphatase superfamily. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 2740-2745. | 3.3 | 87 |
| 28 | A Fully Unsupervised Compartment-on-Demand Platform for Precise Nanoliter Assays of Time-Dependent Steady-State Enzyme Kinetics and Inhibition. <i>Analytical Chemistry</i> , 2013, 85, 4761-4769. | 3.2 | 85 |
| 29 | Efficient Catalytic Promiscuity in an Enzyme Superfamily: An Arylsulfatase Shows a Rate Acceleration of 10 ¹³ for Phosphate Monoester Hydrolysis. <i>Journal of the American Chemical Society</i> , 2008, 130, 16547-16555. | 6.6 | 84 |
| 30 | Characterization of Proton-Transfer Catalysis by Serum Albumins. <i>Journal of the American Chemical Society</i> , 2000, 122, 1022-1029. | 6.6 | 79 |
| 31 | Peptide Dendrimer/Lipid Hybrid Systems Are Efficient DNA Transfection Reagents: Structure-Activity Relationships Highlight the Role of Charge Distribution Across Dendrimer Generations. <i>ACS Nano</i> , 2013, 7, 4668-4682. | 7.3 | 78 |
| 32 | Anionic Charge Is Prioritized over Geometry in Aluminum and Magnesium Fluoride Transition State Analogs of Phosphoryl Transfer Enzymes. <i>Journal of the American Chemical Society</i> , 2008, 130, 3952-3958. | 6.6 | 77 |
| 33 | Inducible Stem-Cell-Derived Embryos Capture Mouse Morphogenetic Events In Vitro. <i>Developmental Cell</i> , 2021, 56, 366-382.e9. | 3.1 | 77 |
| 34 | An integrated cell culture lab on a chip: modular microdevices for cultivation of mammalian cells and delivery into microfluidic microdroplets. <i>Lab on A Chip</i> , 2009, 9, 1576. | 3.1 | 76 |
| 35 | Efficient Catalysis of Proton Transfer by Synzymes. <i>Journal of the American Chemical Society</i> , 1997, 119, 9578-9579. | 6.6 | 75 |
| 36 | Fluid Phase Endocytosis Contributes to Transfection of DNA by PEI-25. <i>Molecular Therapy</i> , 2009, 17, 1411-1417. | 3.7 | 74 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 37 | Directed Evolution of a Gatekeeper Domain in Nonribosomal Peptide Synthesis. <i>Chemistry and Biology</i> , 2011, 18, 1290-1299. | 6.2 | 74 |
| 38 | On the Magnitude and Specificity of Medium Effects in Enzyme-like Catalysts for Proton Transfer. <i>Journal of Organic Chemistry</i> , 2001, 66, 5866-5874. | 1.7 | 72 |
| 39 | High-throughput total RNA sequencing in single cells using VASA-seq. <i>Nature Biotechnology</i> , 2022, 40, 1780-1793. | 9.4 | 70 |
| 40 | A Trojan horse transition state analogue generated by MgF ₃ - formation in an enzyme active site. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 14732-14737. | 3.3 | 69 |
| 41 | Deep learning guided image-based droplet sorting for on-demand selection and analysis of single cells and 3D cell cultures. <i>Lab on A Chip</i> , 2020, 20, 889-900. | 3.1 | 68 |
| 42 | A New Member of the Alkaline Phosphatase Superfamily with a Formylglycine Nucleophile: Structural and Kinetic Characterisation of a Phosphonate Monoester Hydrolase/Phosphodiesterase from <i>Rhizobium leguminosarum</i> . <i>Journal of Molecular Biology</i> , 2008, 384, 120-136. | 2.0 | 65 |
| 43 | Simultaneous measurement of reactions in microdroplets filled by concentration gradients. <i>Lab on A Chip</i> , 2009, 9, 1707. | 3.1 | 65 |
| 44 | Reverse evolution leads to genotypic incompatibility despite functional and active site convergence. <i>ELife</i> , 2015, 4, . | 2.8 | 65 |
| 45 | Impaired Transition State Complementarity in the Hydrolysis of O-Arylphosphorothioates by Protein-Tyrosine Phosphatases. <i>Biochemistry</i> , 1999, 38, 12111-12123. | 1.2 | 63 |
| 46 | The Human Histone Acetyltransferase P/CAF is a Promiscuous Histone Propionyltransferase. <i>ChemBioChem</i> , 2008, 9, 499-503. | 1.3 | 60 |
| 47 | Mapping catalytic promiscuity in the alkaline phosphatase superfamily. <i>Pure and Applied Chemistry</i> , 2009, 81, 731-742. | 0.9 | 57 |
| 48 | Efficient Catalytic Promiscuity for Chemically Distinct Reactions. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 3692-3694. | 7.2 | 56 |
| 49 | Enzyme engineering in biomimetic compartments. <i>Current Opinion in Structural Biology</i> , 2015, 33, 42-51. | 2.6 | 56 |
| 50 | Spatial profiling of early primate gastrulation in utero. <i>Nature</i> , 2022, 609, 136-143. | 13.7 | 56 |
| 51 | Engineering the protein dynamics of an ancestral luciferase. <i>Nature Communications</i> , 2021, 12, 3616. | 5.8 | 54 |
| 52 | Monitoring a Reaction at Submillisecond Resolution in Picoliter Volumes. <i>Analytical Chemistry</i> , 2011, 83, 1462-1468. | 3.2 | 53 |
| 53 | Cell-free Directed Evolution of a Protease in Microdroplets at Ultrahigh Throughput. <i>ACS Synthetic Biology</i> , 2021, 10, 252-257. | 1.9 | 53 |
| 54 | Mapping the Limits of Substrate Specificity of the Adenylation Domain of TycA. <i>ChemBioChem</i> , 2009, 10, 671-682. | 1.3 | 51 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 55 | Vesicles Accelerate Proton Transfer from Carbon up to 850-fold. <i>Organic Letters</i> , 2000, 2, 127-130. | 2.4 | 48 |
| 56 | Efficient, crosswise catalytic promiscuity among enzymes that catalyze phosphoryl transfer. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2013, 1834, 417-424. | 1.1 | 47 |
| 57 | Molecular Recognition of DNA by Rigid [n]-Polynorbornane-Derived Bifunctional Intercalators: Synthesis and Evaluation of Their Binding Properties. <i>Journal of Medicinal Chemistry</i> , 2007, 50, 2326-2340. | 2.9 | 45 |
| 58 | In vitro characterization of DNA gyrase inhibition by microcin B17 analogs with altered bisheterocyclic sites. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001, 98, 7712-7717. | 3.3 | 43 |
| 59 | Polyethylene Imine Derivatives (â€˜Synzymes') Accelerate Phosphate Transfer in the Absence of Metal. <i>Journal of the American Chemical Society</i> , 2007, 129, 7611-7619. | 6.6 | 43 |
| 60 | Monodisperse Water-in-Oil-in-Water (W/O/W) Double Emulsion Droplets as Uniform Compartments for High-Throughput Analysis via Flow Cytometry. <i>Micromachines</i> , 2013, 4, 402-413. | 1.4 | 43 |
| 61 | Accessing unexplored regions of sequence space in directed enzyme evolution via insertion/deletion mutagenesis. <i>Nature Communications</i> , 2020, 11, 3469. | 5.8 | 42 |
| 62 | Flexibility and Reactivity in Promiscuous Enzymes. <i>ChemBioChem</i> , 2013, 14, 285-292. | 1.3 | 40 |
| 63 | Interfacing Microwells with Nanoliter Compartments: A Sampler Generating High-Resolution Concentration Gradients for Quantitative Biochemical Analyses in Droplets. <i>Analytical Chemistry</i> , 2015, 87, 624-632. | 3.2 | 39 |
| 64 | In vitro affinity screening of protein and peptide binders by megavalent bead surface display. <i>Protein Engineering, Design and Selection</i> , 2013, 26, 713-724. | 1.0 | 38 |
| 65 | Catalysis of the Kemp elimination by antibodies elicited against a cationic hapten. <i>Bioorganic and Medicinal Chemistry Letters</i> , 1997, 7, 2497-2502. | 1.0 | 37 |
| 66 | An optimized ATP/PPI-exchange assay in 96-well format for screening of adenylation domains for applications in combinatorial biosynthesis. <i>Biotechnology Journal</i> , 2007, 2, 232-240. | 1.8 | 37 |
| 67 | Controlling the contents of microdroplets by exploiting the permeability of PDMS. <i>Lab on A Chip</i> , 2011, 11, 1132. | 3.1 | 35 |
| 68 | Long-term Perfusion Culture of Monoclonal Embryonic Stem Cells in 3D Hydrogel Beads for Continuous Optical Analysis of Differentiation. <i>Small</i> , 2019, 15, e1804576. | 5.2 | 35 |
| 69 | Balancing Specificity and Promiscuity in Enzyme Evolution: Multidimensional Activity Transitions in the Alkaline Phosphatase Superfamily. <i>Journal of the American Chemical Society</i> , 2019, 141, 370-387. | 6.6 | 35 |
| 70 | Mutations in Mll2, an H3K4 Methyltransferase, Result in Insulin Resistance and Impaired Glucose Tolerance in Mice. <i>PLoS ONE</i> , 2013, 8, e61870. | 1.1 | 35 |
| 71 | Evolutionary repurposing of a sulfatase: A new Michaelis complex leads to efficient transition state charge offset. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E7293-E7302. | 3.3 | 34 |
| 72 | A Covalent Chemical Genotype-Phenotype Linkage for in vitro Protein Evolution. <i>ChemBioChem</i> , 2007, 8, 2191-2194. | 1.3 | 33 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 73 | Kinetic Analysis of \hat{I}^2 -Phosphoglucomutase and Its Inhibition by Magnesium Fluoride. <i>Journal of the American Chemical Society</i> , 2009, 131, 1575-1588. | 6.6 | 33 |
| 74 | Investigating host-microbiome interactions by droplet based microfluidics. <i>Microbiome</i> , 2020, 8, 141. | 4.9 | 33 |
| 75 | Ultrahigh throughput screening for enzyme function in droplets. <i>Methods in Enzymology</i> , 2020, 643, 317-343. | 0.4 | 32 |
| 76 | A single mutation in the core domain of the lac repressor reduces leakiness. <i>Microbial Cell Factories</i> , 2013, 12, 67. | 1.9 | 31 |
| 77 | Plasmodium dihydrofolate reductase is a second enzyme target for the antimalarial action of triclosan. <i>Scientific Reports</i> , 2018, 8, 1038. | 1.6 | 31 |
| 78 | Dynamic cell contacts between periportal mesenchyme and ductal epithelium act as a rheostat for liver cell proliferation. <i>Cell Stem Cell</i> , 2021, 28, 1907-1921.e8. | 5.2 | 30 |
| 79 | Removal of background signals from fluorescence thermometry measurements in PDMS microchannels using fluorescence lifetime imaging. <i>Lab on A Chip</i> , 2009, 9, 3437. | 3.1 | 28 |
| 80 | Functional Trade-Offs in Promiscuous Enzymes Cannot Be Explained by Intrinsic Mutational Robustness of the Native Activity. <i>PLoS Genetics</i> , 2016, 12, e1006305. | 1.5 | 28 |
| 81 | A simple method to evaluate the biochemical compatibility of oil/surfactant mixtures for experiments in microdroplets. <i>Lab on A Chip</i> , 2012, 12, 4185. | 3.1 | 27 |
| 82 | One-pot Deracemization of α -Alcohols: Enantioconvergent Enzymatic Hydrolysis of Alkyl Sulfates Using Stereocomplementary Sulfatases. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 3277-3279. | 7.2 | 27 |
| 83 | Quantitative Affinity Determination by Fluorescence Anisotropy Measurements of Individual Nanoliter Droplets. <i>Analytical Chemistry</i> , 2017, 89, 1092-1101. | 3.2 | 27 |
| 84 | Isothermal DNA amplification using the T4 replisome: circular nicking endonuclease-dependent amplification and primase-based whole-genome amplification. <i>Nucleic Acids Research</i> , 2010, 38, e201-e201. | 6.5 | 26 |
| 85 | Directed evolution of anti-HER2 DARPins by SNAP display reveals stability/function trade-offs in the selection process. <i>Protein Engineering, Design and Selection</i> , 2015, 28, 269-279. | 1.0 | 26 |
| 86 | Enzymes under the nanoscope. <i>Nature</i> , 2008, 456, 45-47. | 13.7 | 25 |
| 87 | High-Throughput, Lysis-Free Screening for Sulfatase Activity Using <i>Escherichia coli</i> Autodisplay in Microdroplets. <i>ACS Synthetic Biology</i> , 2019, 8, 2690-2700. | 1.9 | 25 |
| 88 | UMI-linked consensus sequencing enables phylogenetic analysis of directed evolution. <i>Nature Communications</i> , 2020, 11, 6023. | 5.8 | 25 |
| 89 | SNAP Dendrimers: Multivalent Protein Display on Dendrimer-Like DNA for Directed Evolution. <i>ChemBioChem</i> , 2011, 12, 2208-2216. | 1.3 | 24 |
| 90 | An experimental framework for improved selection of binding proteins using SNAP display. <i>Journal of Immunological Methods</i> , 2014, 405, 47-56. | 0.6 | 24 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 91 | An efficient method to assemble linear DNA templates for in vitro screening and selection systems. <i>Nucleic Acids Research</i> , 2009, 37, e122-e122. | 6.5 | 22 |
| 92 | Combining Medium Effects and Cofactor Catalysis: Metal-Coordinated Synzymes Accelerate Phosphate Transfer by 10 ⁸ . <i>Chemistry - A European Journal</i> , 2009, 15, 12371-12380. | 1.7 | 22 |
| 93 | Efficient Transfection of siRNA by Peptide Dendrimer-Lipid Conjugates. <i>ChemBioChem</i> , 2016, 17, 2223-2229. | 1.3 | 22 |
| 94 | A Method to Quantify FRET Stoichiometry with Phasor Plot Analysis and Acceptor Lifetime Ingrowth. <i>Biophysical Journal</i> , 2015, 108, 999-1002. | 0.2 | 21 |
| 95 | Controlled Oil/Water Partitioning of Hydrophobic Substrates Extending the Bioanalytical Applications of Droplet-Based Microfluidics. <i>Analytical Chemistry</i> , 2019, 91, 10008-10015. | 3.2 | 20 |
| 96 | Global fitness landscapes of the Shine-Dalgarno sequence. <i>Genome Research</i> , 2020, 30, 711-723. | 2.4 | 19 |
| 97 | Kinetic and computational evidence for an intermediate in the hydrolysis of sulfonate esters. <i>Organic and Biomolecular Chemistry</i> , 2012, 10, 8095. | 1.5 | 18 |
| 98 | Structural and Mechanistic Analysis of the Choline Sulfatase from <i>Sinorhizobium melliloti</i> : A Class I Sulfatase Specific for an Alkyl Sulfate Ester. <i>Journal of Molecular Biology</i> , 2018, 430, 1004-1023. | 2.0 | 18 |
| 99 | Specificity Effects of Amino Acid Substitutions in Promiscuous Hydrolases: Context-Dependence of Catalytic Residue Contributions to Local Fitness Landscapes in Nearby Sequence Space. <i>ChemBioChem</i> , 2017, 18, 1001-1015. | 1.3 | 17 |
| 100 | Novel peptide-dendrimer/lipid/oligonucleotide ternary complexes for efficient cellular uptake and improved splice-switching activity. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2018, 132, 29-40. | 2.0 | 17 |
| 101 | Microfluidic platform for 3D cell culture with live imaging and clone retrieval. <i>Lab on A Chip</i> , 2020, 20, 2580-2591. | 3.1 | 17 |
| 102 | Combinatorial Synthesis of Structurally Diverse Triazole-Bridged Flavonoid Dimers and Trimers. <i>Molecules</i> , 2016, 21, 1230. | 1.7 | 16 |
| 103 | Ultrahigh-Throughput Screening of Single-Cell Lysates for Directed Evolution and Functional Metagenomics. <i>Methods in Molecular Biology</i> , 2018, 1685, 297-309. | 0.4 | 16 |
| 104 | Agarose microgel culture delineates lumenogenesis in naive and primed human pluripotent stem cells. <i>Stem Cell Reports</i> , 2021, 16, 1347-1362. | 2.3 | 16 |
| 105 | Exploiting protease activation for therapy. <i>Drug Discovery Today</i> , 2022, 27, 1743-1754. | 3.2 | 16 |
| 106 | Functional metagenomic screening identifies an unexpected β -glucuronidase. <i>Nature Chemical Biology</i> , 2022, 18, 1096-1103. | 3.9 | 16 |
| 107 | Nonspecific Catalysis By Protein Surfaces. <i>Applied Biochemistry and Biotechnology</i> , 2000, 83, 173-182. | 1.4 | 15 |
| 108 | SNAP Display: In Vitro Protein Evolution in Microdroplets. <i>Methods in Molecular Biology</i> , 2012, 805, 101-111. | 0.4 | 15 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 109 | Single-cell activity screening in microfluidic droplets. <i>Methods in Enzymology</i> , 2019, 628, 95-112. | 0.4 | 15 |
| 110 | Growth amplification in ultrahigh-throughput microdroplet screening increases sensitivity of clonal enzyme assays and minimizes phenotypic variation. <i>Lab on A Chip</i> , 2021, 21, 163-173. | 3.1 | 15 |
| 111 | A Shorter Route to Antibody Binders via Quantitative in vitro Bead-Display Screening and Consensus Analysis. <i>Scientific Reports</i> , 2016, 6, 36391. | 1.6 | 14 |
| 112 | Droplets as Reaction Compartments for Protein Nanotechnology. <i>Methods in Molecular Biology</i> , 2013, 996, 269-286. | 0.4 | 13 |
| 113 | Bioinspired genotype-phenotype linkages: mimicking cellular compartmentalization for the engineering of functional proteins. <i>Interface Focus</i> , 2015, 5, 20150035. | 1.5 | 12 |
| 114 | Split & mix assembly of DNA libraries for ultrahigh throughput on-bead screening of functional proteins. <i>Nucleic Acids Research</i> , 2020, 48, e63-e63. | 6.5 | 12 |
| 115 | SNAP Display - an In Vitro Method for the Selection of Protein Binders. <i>Current Pharmaceutical Design</i> , 2013, 19, 5421-5428. | 0.9 | 12 |
| 116 | Improved RAD51 binders through motif shuffling based on the modularity of BRC repeats. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, . | 3.3 | 12 |
| 117 | Simple but efficient models for nuclease catalysis. <i>Pure and Applied Chemistry</i> , 1994, 66, 687-694. | 0.9 | 11 |
| 118 | Relating Chemical and Biological Diversity Space: A Tunable System for Efficient Gene Transfection. <i>ChemBioChem</i> , 2008, 9, 1960-1967. | 1.3 | 11 |
| 119 | Directed evolution of a histone acetyltransferase - enhancing thermostability, whilst maintaining catalytic activity and substrate specificity. <i>FEBS Journal</i> , 2008, 275, 5635-5647. | 2.2 | 11 |
| 120 | Measuring Fast and Slow Enzyme Kinetics in Stationary Droplets. <i>Analytical Chemistry</i> , 2015, 87, 11915-11922. | 3.2 | 11 |
| 121 | Divergent synthesis of biflavonoids yields novel inhibitors of the aggregation of amyloid β (1-42). <i>Organic and Biomolecular Chemistry</i> , 2017, 15, 4554-4570. | 1.5 | 11 |
| 122 | In vitro evolution of antibody affinity via insertional scanning mutagenesis of an entire antibody variable region. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 27307-27318. | 3.3 | 11 |
| 123 | Combinatorial Screening Identifies Novel Promiscuous Matrix Metalloproteinase Activities that Lead to Inhibition of the Therapeutic Target IL-13. <i>Chemistry and Biology</i> , 2015, 22, 1442-1452. | 6.2 | 10 |
| 124 | Transition-State Interactions in a Promiscuous Enzyme: Sulfate and Phosphate Monoester Hydrolysis by <i>Pseudomonas aeruginosa</i> Arylsulfatase. <i>Biochemistry</i> , 2019, 58, 1363-1378. | 1.2 | 10 |
| 125 | Droplet-based screening of phosphate transfer catalysis reveals how epistasis shapes MAP kinase interactions with substrates. <i>Nature Communications</i> , 2022, 13, 844. | 5.8 | 10 |
| 126 | Handicap-Recover Evolution Leads to a Chemically Versatile, Nucleophile-Permissive Protease. <i>ChemBioChem</i> , 2015, 16, 1866-1869. | 1.3 | 9 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 127 | Ultrahigh-Throughput Detection of Enzymatic Alcohol Dehydrogenase Activity in Microfluidic Droplets with a Direct Fluorogenic Assay. <i>ChemBioChem</i> , 2021, 22, 3292-3299. | 1.3 | 9 |
| 128 | Enzymatic <i>N</i> -Allylation of Primary and Secondary Amines Using Renewable Cinnamic Acids Enabled by Bacterial Reductive Aminases. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 6794-6806. | 3.2 | 9 |
| 129 | ϵ -NAD ϵ Ultrahigh-Throughput in Vitro Screening of NAD(H) Dehydrogenases Using Bead Display and Flow Cytometry. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 9015-9021. | 7.2 | 8 |
| 130 | One-Pot Deracemization of <i>sec</i> -Alcohols: Enantioconvergent Enzymatic Hydrolysis of Alkyl Sulfates Using Stereocomplementary Sulfatases. <i>Angewandte Chemie</i> , 2013, 125, 3359-3361. | 1.6 | 6 |
| 131 | Multiplexed Affinity Characterization of Protein Binders Directly from a Crude Cell Lysate by Covalent Capture on Suspension Bead Arrays. <i>Analytical Chemistry</i> , 2021, 93, 2166-2173. | 3.2 | 6 |
| 132 | Ultrahigh-throughput screening in microfluidic droplets: a faster route to new enzymes. <i>Trends in Biochemical Sciences</i> , 2021, , . | 3.7 | 6 |
| 133 | Adventures on the Routes of Protein Evolutionâ€”In Memoriam Dan Salah Tawfik (1955â€”2021). <i>Journal of Molecular Biology</i> , 2022, 434, 167462. | 2.0 | 6 |
| 134 | Electrostatic catalysis of the hydrolysis of a phosphate diester in water. <i>Journal of the Chemical Society Chemical Communications</i> , 1992, , 1770. | 2.0 | 5 |
| 135 | Intramolecular general acid catalysis of sulfate transfer \hat{A} — Nucleophilic attack by oxyanions on the SO \hat{A} — group. <i>Canadian Journal of Chemistry</i> , 2005, 83, 1629-1636. | 0.6 | 4 |
| 136 | A Titratable Cell Lysis-on-Demand System for Droplet-Compartmentalized Ultrahigh-Throughput Screening in Functional Metagenomics and Directed Evolution. <i>ACS Synthetic Biology</i> , 2021, 10, 1882-1894. | 1.9 | 4 |
| 137 | Controlled Ligand Exchange Between Ruthenium Organometallic Cofactor Precursors and a Na \hat{A} ~ve Protein Scaffold Generates Artificial Metalloenzymes Catalysing Transfer Hydrogenation. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 10919-10927. | 7.2 | 3 |
| 138 | Hitting a moving target?â€”Understanding how conformational diversity impacts enzymatic catalysis. <i>Current Opinion in Chemical Biology</i> , 2010, 14, 634-635. | 2.8 | 2 |
| 139 | peri-Dimethylamino substituent effects on proton transfer at carbon in \hat{I} \pm -naphthylacetate esters: a model for mandelate racemase. <i>Organic and Biomolecular Chemistry</i> , 2012, 10, 590-596. | 1.5 | 2 |
| 140 | Just (protein) engineering?. <i>Current Opinion in Structural Biology</i> , 2013, 23, 569-570. | 2.6 | 2 |
| 141 | Error-Free Synthetic DNA by Molecular Dictation. <i>Trends in Biotechnology</i> , 2021, 39, 861-865. | 4.9 | 2 |
| 142 | USER Friendly DNA Recombination (USERec): Gene Library Construction Requiring Minimal Sequence Homology. <i>Methods in Molecular Biology</i> , 2014, 1179, 213-224. | 0.4 | 2 |
| 143 | ϵ -NAD ϵ Ultrahigh-Throughput in Vitro Screening of NAD(H) Dehydrogenases Using Bead Display and Flow Cytometry. <i>Angewandte Chemie</i> , 2021, 133, 9097-9103. | 1.6 | 1 |
| 144 | Conference: Highlights from the 37th ESF/EUCHEM Conference on Stereochemistry, B \hat{A} ~rgenstock, Switzerland, April 2002. <i>Chemical Communications</i> , 2002, , xviii-xix. | 2.2 | 0 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 145 | From fascination to function. <i>Current Opinion in Biotechnology</i> , 2011, 22, 473-474. | 3.3 | 0 |
| 146 | Assembling Linear DNA Templates for In Vitro Transcription and Translation. <i>Methods in Molecular Biology</i> , 2012, 815, 67-78. | 0.4 | 0 |
| 147 | Enzyme Promiscuity and Evolution of New Protein Functions. , 2014, , 524-538. | | 0 |
| 148 | A Short Practical Guide to the Quantitative Analysis of Engineered Enzymes. , 2016, , 3-20. | | 0 |
| 149 | Microfluidic Droplets and Their Applications: Diagnosis, Drug Screening and the Discovery of Therapeutic Enzymes. <i>IFMBE Proceedings</i> , 2020, , 361-368. | 0.2 | 0 |
| 150 | Controlled Ligand Exchange Between Ruthenium Organometallic Cofactor Precursors and a Na ⁺ -ve Protein Scaffold Generates Artificial Metalloenzymes Catalysing Transfer Hydrogenation. <i>Angewandte Chemie</i> , 2021, 133, 11014-11022. | 1.6 | 0 |
| 151 | Towards biological experimentation in microfluidic microdroplets. <i>Houille Blanche</i> , 2009, 95, 127-133. | 0.3 | 0 |