Paul D. Adams

List of Publications by Citations

Source: https://exaly.com/author-pdf/2075970/paul-d-adams-publications-by-citations.pdf

Version: 2024-04-09

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.

316 papers

76,269 citations

80 h-index

275 g-index

361 ext. papers

89,825 ext. citations

7.8 avg, IF

7.56 L-index

| # | Paper | IF | Citations |
|-----|--|------|-----------|
| 316 | PHENIX: a comprehensive Python-based system for macromolecular structure solution. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2010 , 66, 213-21 | | 16067 |
| 315 | Phaser crystallographic software. Journal of Applied Crystallography, 2007, 40, 658-674 | 3.8 | 14212 |
| 314 | Crystallography & NMR system: A new software suite for macromolecular structure determination. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 1998 , 54, 905-21 | | 14106 |
| 313 | PHENIX: building new software for automated crystallographic structure determination. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2002 , 58, 1948-54 | | 3477 |
| 312 | Towards automated crystallographic structure refinement with phenix.refine. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2012 , 68, 352-67 | | 3236 |
| 311 | Macromolecular structure determination using X-rays, neutrons and electrons: recent developments in Phenix. <i>Acta Crystallographica Section D: Structural Biology</i> , 2019 , 75, 861-877 | 5.5 | 1527 |
| 310 | MolProbity: More and better reference data for improved all-atom structure validation. <i>Protein Science</i> , 2018 , 27, 293-315 | 6.3 | 1169 |
| 309 | Iterative model building, structure refinement and density modification with the PHENIX AutoBuild wizard. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2008 , 64, 61-9 | | 1042 |
| 308 | Real-space refinement in PHENIX for cryo-EM and crystallography. <i>Acta Crystallographica Section D: Structural Biology</i> , 2018 , 74, 531-544 | 5.5 | 917 |
| 307 | Structural basis for double-stranded RNA processing by Dicer. <i>Science</i> , 2006 , 311, 195-8 | 33.3 | 729 |
| 306 | electronic Ligand Builder and Optimization Workbench (eLBOW): a tool for ligand coordinate and restraint generation. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2009 , 65, 1074-80 | | 712 |
| 305 | Decision-making in structure solution using Bayesian estimates of map quality: the PHENIX AutoSol wizard. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2009 , 65, 582-601 | | 657 |
| 304 | The Phenix software for automated determination of macromolecular structures. <i>Methods</i> , 2011 , 55, 94-106 | 4.6 | 580 |
| 303 | Cross-validated maximum likelihood enhances crystallographic simulated annealing refinement. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1997 , 94, 5018-23 | 11.5 | 561 |
| 302 | EMRinger: side chain-directed model and map validation for 3D cryo-electron microscopy. <i>Nature Methods</i> , 2015 , 12, 943-6 | 21.6 | 523 |
| 301 | Accurate prediction of protein structures and interactions using a three-track neural network. <i>Science</i> , 2021 , 373, 871-876 | 33.3 | 522 |
| 300 | Engineering dynamic pathway regulation using stress-response promoters. <i>Nature Biotechnology</i> , 2013 , 31, 1039-46 | 44.5 | 338 |

| 299 | Polder maps: improving OMIT maps by excluding bulk solvent. <i>Acta Crystallographica Section D:</i> Structural Biology, 2017 , 73, 148-157 | .5 | 335 | |
|-----|--|--------------|-----|--|
| 298 | A new generation of crystallographic validation tools for the protein data bank. <i>Structure</i> , 2011 , 19, 1395 5 . | <u>4</u> 12 | 335 | |
| 297 | Simultaneous femtosecond X-ray spectroscopy and diffraction of photosystem II at room temperature. <i>Science</i> , 2013 , 340, 491-5 | 3.3 | 334 | |
| 296 | SPARX, a new environment for Cryo-EM image processing. <i>Journal of Structural Biology</i> , 2007 , 157, 47-55 ₃ . | 4 | 327 | |
| 295 | New tools for the analysis and validation of cryo-EM maps and atomic models. <i>Acta Crystallographica Section D: Structural Biology</i> , 2018 , 74, 814-840 | .5 | 291 | |
| 294 | Metabolic engineering of Escherichia coli for limonene and perillyl alcohol production. <i>Metabolic Engineering</i> , 2013 , 19, 33-41 | -7 | 281 | |
| 293 | A dimerization motif for transmembrane alpha-helices. <i>Nature Structural Biology</i> , 1994 , 1, 157-63 | | 278 | |
| 292 | Recent developments in the PHENIX software for automated crystallographic structure determination. <i>Journal of Synchrotron Radiation</i> , 2004 , 11, 53-5 | -4 | 273 | |
| 291 | Structures of the intermediates of KokN photosynthetic water oxidation clock. <i>Nature</i> , 2018 , 563, 421-435 | 5 0.4 | 261 | |
| 290 | Structure of photosystem II and substrate binding at room temperature. <i>Nature</i> , 2016 , 540, 453-457 | 0.4 | 260 | |
| 289 | Conformational variability in the refined structure of the chaperonin GroEL at 2.8 A resolution. Nature Structural and Molecular Biology, 1995, 2, 1083-94 | 7.6 | 207 | |
| 288 | New tools for structure refinement inPHENIX. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2010 , 66, s15-s15 | | 199 | |
| 287 | Joint X-ray and neutron refinement with phenix.refine. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2010 , 66, 1153-63 | | 193 | |
| 286 | Substructure search procedures for macromolecular structures. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2003 , 59, 1966-73 | | 187 | |
| 285 | Crystal structure of a bacterial ribonuclease P RNA. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 13392-7 | 1.5 | 186 | |
| 284 | Computational searching and mutagenesis suggest a structure for the pentameric transmembrane domain of phospholamban. <i>Nature Structural and Molecular Biology</i> , 1995 , 2, 154-62 | 7.6 | 186 | |
| 283 | Taking snapshots of photosynthetic water oxidation using femtosecond X-ray diffraction and spectroscopy. <i>Nature Communications</i> , 2014 , 5, 4371 | 7.4 | 184 | |
| 282 | New applications of simulated annealing in X-ray crystallography and solution NMR. <i>Structure</i> , 1997 , 5, 325-36 | .2 | 183 | |

| 281 | Modelling dynamics in protein crystal structures by ensemble refinement. <i>ELife</i> , 2012 , 1, e00311 | 8.9 | 176 |
|-----|--|------|-----|
| 280 | TheComputational Crystallography Toolbox: crystallographic algorithms in a reusable software framework. <i>Journal of Applied Crystallography</i> , 2002 , 35, 126-136 | 3.8 | 167 |
| 279 | Use of knowledge-based restraints in phenix.refine to improve macromolecular refinement at low resolution. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2012 , 68, 381-90 | | 156 |
| 278 | Structural organization of the pentameric transmembrane alpha-helices of phospholamban, a cardiac ion channel <i>EMBO Journal</i> , 1994 , 13, 4757-4764 | 13 | 154 |
| 277 | Targeted proteomics for metabolic pathway optimization: application to terpene production. <i>Metabolic Engineering</i> , 2011 , 13, 194-203 | 9.7 | 151 |
| 276 | Nanoflow electrospinning serial femtosecond crystallography. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2012 , 68, 1584-7 | | 146 |
| 275 | Phaser.MRage: automated molecular replacement. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2013 , 69, 2276-86 | | 144 |
| 274 | Improved prediction for the structure of the dimeric transmembrane domain of glycophorin A obtained through global searching. <i>Proteins: Structure, Function and Bioinformatics</i> , 1996 , 26, 257-61 | 4.2 | 141 |
| 273 | A robust bulk-solvent correction and anisotropic scaling procedure. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2005 , 61, 850-5 | | 138 |
| 272 | Improved low-resolution crystallographic refinement with Phenix and Rosetta. <i>Nature Methods</i> , 2013 , 10, 1102-4 | 21.6 | 137 |
| 271 | Experimentally based orientational refinement of membrane protein models: A structure for the Influenza A M2 H+ channel. <i>Journal of Molecular Biology</i> , 1999 , 286, 951-62 | 6.5 | 136 |
| 270 | Room temperature femtosecond X-ray diffraction of photosystem II microcrystals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 9721-6 | 11.5 | 135 |
| 269 | Enhancing fatty acid production by the expression of the regulatory transcription factor FadR. <i>Metabolic Engineering</i> , 2012 , 14, 653-60 | 9.7 | 132 |
| 268 | Survey of renewable chemicals produced from lignocellulosic biomass during ionic liquid pretreatment. <i>Biotechnology for Biofuels</i> , 2013 , 6, 14 | 7.8 | 132 |
| 267 | Automated map sharpening by maximization of detail and connectivity. <i>Acta Crystallographica Section D: Structural Biology</i> , 2018 , 74, 545-559 | 5.5 | 132 |
| 266 | Outcome of the First wwPDB Hybrid/Integrative Methods Task Force Workshop. <i>Structure</i> , 2015 , 23, 1156-67 | 5.2 | 131 |
| 265 | Iterative-build OMIT maps: map improvement by iterative model building and refinement without model bias. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2008 , 64, 515-24 | | 130 |
| 264 | Robust indexing for automatic data collection. <i>Journal of Applied Crystallography</i> , 2004 , 37, 399-409 | 3.8 | 129 |

| 263 | Research priorities. Shining light into black boxes. <i>Science</i> , 2012 , 336, 159-60 | 33.3 | 125 |
|-------------|--|---------------------|-----|
| 262 | Generalized X-ray and neutron crystallographic analysis: more accurate and complete structures for biological macromolecules. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2009 , 65, 567-73 | 3 | 123 |
| 261 | Improvement of cryo-EM maps by density modification. <i>Nature Methods</i> , 2020 , 17, 923-927 | 21.6 | 123 |
| 2 60 | Error Rate Comparison during Polymerase Chain Reaction by DNA Polymerase. <i>Molecular Biology International</i> , 2014 , 2014, 287430 | | 121 |
| 259 | Impact of ionic liquid pretreated plant biomass on Saccharomyces cerevisiae growth and biofuel production. <i>Green Chemistry</i> , 2011 , 13, 2743 | 10 | 120 |
| 258 | iotbx.cif: a comprehensive CIF toolbox. <i>Journal of Applied Crystallography</i> , 2011 , 44, 1259-1263 | 3.8 | 120 |
| 257 | Accurate macromolecular structures using minimal measurements from X-ray free-electron lasers. <i>Nature Methods</i> , 2014 , 11, 545-8 | 21.6 | 118 |
| 256 | Principal component analysis of proteomics (PCAP) as a tool to direct metabolic engineering. <i>Metabolic Engineering</i> , 2015 , 28, 123-133 | 9.7 | 118 |
| 255 | FEM: feature-enhanced map. Acta Crystallographica Section D: Biological Crystallography, 2015, 71, 646- | 66 | 113 |
| 254 | Natural bacterial communities serve as quantitative geochemical biosensors. <i>MBio</i> , 2015 , 6, e00326-15 | 7.8 | 113 |
| 253 | Supramolecular self-assembled chaos: polyphenolic lignin barrier to cost-effective lignocellulosic biofuels. <i>Molecules</i> , 2010 , 15, 8641-88 | 4.8 | 110 |
| 252 | Role of the gamma-phosphate of ATP in triggering protein folding by GroEL-GroES: function, structure and energetics. <i>EMBO Journal</i> , 2003 , 22, 4877-87 | 13 | 110 |
| 251 | Metabolic engineering for the high-yield production of isoprenoid-based Clalcohols in E. coli. <i>Scientific Reports</i> , 2015 , 5, 11128 | 4.9 | 109 |
| 250 | phenix.mr_rosetta: molecular replacement and model rebuilding with Phenix and Rosetta. <i>Journal of Structural and Functional Genomics</i> , 2012 , 13, 81-90 | | 109 |
| 249 | Coupling of receptor conformation and ligand orientation determine graded activity. <i>Nature Chemical Biology</i> , 2010 , 6, 837-43 | 11.7 | 102 |
| 248 | Energy-dispersive X-ray emission spectroscopy using an X-ray free-electron laser in a shot-by-shot mode. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 19103 | 3- 7 1.5 | 98 |
| 247 | Graphical tools for macromolecular crystallography in PHENIX. <i>Journal of Applied Crystallography</i> , 2012 , 45, 581-586 | 3.8 | 95 |
| 246 | An atomic model of brome mosaic virus using direct electron detection and real-space optimization. <i>Nature Communications</i> , 2014 , 5, 4808 | 17.4 | 95 |

| 245 | Accurate model annotation of a near-atomic resolution cryo-EM map. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 3103-3108 | 11.5 | 92 |
|-----|---|--------------------|----|
| 244 | phenix.model_vs_data: a high-level tool for the calculation of crystallographic model and data statistics. <i>Journal of Applied Crystallography</i> , 2010 , 43, 669-676 | 3.8 | 91 |
| 243 | Use of a new label, (13)==(18)O, in the determination of a structural model of phospholamban in a lipid bilayer. Spatial restraints resolve the ambiguity arising from interpretations of mutagenesis data. <i>Journal of Molecular Biology</i> , 2000 , 300, 677-85 | 6.5 | 91 |
| 242 | Exploring the structural dynamics of the E.coli chaperonin GroEL using translation-libration-screw crystallographic refinement of intermediate states. <i>Journal of Molecular Biology</i> , 2004 , 342, 229-45 | 6.5 | 88 |
| 241 | Employing a biochemical protecting group for a sustainable indigo dyeing strategy. <i>Nature Chemical Biology</i> , 2018 , 14, 256-261 | 11.7 | 85 |
| 240 | Crystallographic model quality at a glance. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2009 , 65, 297-300 | | 84 |
| 239 | High-resolution structure of RNase P protein from Thermotoga maritima. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003 , 100, 7497-502 | 11.5 | 83 |
| 238 | A fully automatic method yielding initial models from high-resolution cryo-electron microscopy maps. <i>Nature Methods</i> , 2018 , 15, 905-908 | 21.6 | 82 |
| 237 | The protein structure initiative structural genomics knowledgebase. <i>Nucleic Acids Research</i> , 2009 , 37, D365-8 | 20.1 | 80 |
| 236 | Recent developments for the efficient crystallographic refinement of macromolecular structures. <i>Current Opinion in Structural Biology</i> , 1998 , 8, 606-11 | 8.1 | 80 |
| 235 | Advances, interactions, and future developments in the CNS, Phenix, and Rosetta structural biology software systems. <i>Annual Review of Biophysics</i> , 2013 , 42, 265-87 | 21.1 | 76 |
| 234 | Correlation analysis of targeted proteins and metabolites to assess and engineer microbial isopentenol production. <i>Biotechnology and Bioengineering</i> , 2014 , 111, 1648-58 | 4.9 | 75 |
| 233 | Automated ligand fitting by core-fragment fitting and extension into density. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2006 , 62, 915-22 | | 75 |
| 232 | Crystal structures of the Rhodococcus proteasome with and without its pro-peptides: implications for the role of the pro-peptide in proteasome assembly. <i>Journal of Molecular Biology</i> , 2004 , 335, 233-45 | 6.5 | 74 |
| 231 | Transmembrane signal transduction of the alpha(IIb)beta(3) integrin. <i>Protein Science</i> , 2002 , 11, 1800-12 | 6.3 | 73 |
| 230 | Comprehensive in Vitro Analysis of Acyltransferase Domain Exchanges in Modular Polyketide Synthases and Its Application for Short-Chain Ketone Production. <i>ACS Synthetic Biology</i> , 2017 , 6, 139-14 | . 7 5·7 | 71 |
| 229 | X-ray crystallographic and kinetic studies of human sorbitol dehydrogenase. <i>Structure</i> , 2003 , 11, 1071-8 | 55.2 | 71 |
| 228 | Label-free in situ imaging of lignification in the cell wall of low lignin transgenic Populus trichocarpa. <i>Planta</i> , 2009 , 230, 589-97 | 4.7 | 70 |

| 227 | Surprises and pitfalls arising from (pseudo)symmetry. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2008 , 64, 99-107 | | 70 |
|-------------|---|-------------|----|
| 226 | Web-Ice: integrated data collection and analysis for macromolecular crystallography. <i>Journal of Applied Crystallography</i> , 2008 , 41, 176-184 | 3.8 | 70 |
| 225 | Structure of a three-domain sesquiterpene synthase: a prospective target for advanced biofuels production. <i>Structure</i> , 2011 , 19, 1876-84 | 5.2 | 68 |
| 224 | Untangling the sequence of events during the S -IS transition in photosystem II and implications for the water oxidation mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 12624-12635 | 11.5 | 65 |
| 223 | Structural perspectives of phospholamban, a helical transmembrane pentamer. <i>Annual Review of Biophysics and Biomolecular Structure</i> , 1997 , 26, 157-79 | | 64 |
| 222 | Integrated analysis of isopentenyl pyrophosphate (IPP) toxicity in isoprenoid-producing Escherichia coli. <i>Metabolic Engineering</i> , 2018 , 47, 60-72 | 9.7 | 62 |
| 221 | Crystal structures of a group II chaperonin reveal the open and closed states associated with the protein folding cycle. <i>Journal of Biological Chemistry</i> , 2010 , 285, 27958-66 | 5.4 | 61 |
| 220 | Crystal structure of DNA sequence specificity subunit of a type I restriction-modification enzyme and its functional implications. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 3248-53 | 11.5 | 61 |
| 219 | The cryo-electron microscopy structure of human transcription factor IIH. <i>Nature</i> , 2017 , 549, 414-417 | 50.4 | 60 |
| 218 | The Structural Biology Knowledgebase: a portal to protein structures, sequences, functions, and methods. <i>Journal of Structural and Functional Genomics</i> , 2011 , 12, 45-54 | | 60 |
| 217 | Structural basis of light chain amyloidogenicity: comparison of the thermodynamic properties, fibrillogenic potential and tertiary structural features of four Vlambda6 proteins. <i>Journal of Molecular Recognition</i> , 2004 , 17, 323-31 | 2.6 | 60 |
| 216 | Identification of a sphingolipid Eglucuronosyltransferase that is essential for pollen function in Arabidopsis. <i>Plant Cell</i> , 2014 , 26, 3314-25 | 11.6 | 59 |
| 215 | Analytics for Metabolic Engineering. Frontiers in Bioengineering and Biotechnology, 2015, 3, 135 | 5.8 | 59 |
| 214 | Thermoascus aurantiacus is a promising source of enzymes for biomass deconstruction under thermophilic conditions. <i>Biotechnology for Biofuels</i> , 2012 , 5, 54 | 7.8 | 59 |
| 213 | Characterizing Strain Variation in Engineered E.lboli Using a Multi-Omics-Based Workflow. <i>Cell Systems</i> , 2016 , 2, 335-46 | 10.6 | 59 |
| 212 | Validated near-atomic resolution structure of bacteriophage epsilon15 derived from cryo-EM and modeling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 12301-6 | 11.5 | 58 |
| 211 | Molecular dynamics applied to X-ray structure refinement. <i>Accounts of Chemical Research</i> , 2002 , 35, 404-2 | 12 3 | 58 |
| 21 0 | A Versatile Microfluidic Device for Automating Synthetic Biology. <i>ACS Synthetic Biology</i> , 2015 , 4, 1151-64 | 5.7 | 57 |

| 209 | Bulk-solvent and overall scaling revisited: faster calculations, improved results. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2013 , 69, 625-34 | | 57 |
|-----|---|------|----|
| 208 | Production of jet fuel precursor monoterpenoids from engineered Escherichia coli. <i>Biotechnology and Bioengineering</i> , 2017 , 114, 1703-1712 | 4.9 | 56 |
| 207 | Interpretation of ensembles created by multiple iterative rebuilding of macromolecular models. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2007 , 63, 597-610 | | 56 |
| 206 | Understanding changes in lignin of Panicum virgatum and Eucalyptus globulus as a function of ionic liquid pretreatment. <i>Bioresource Technology</i> , 2012 , 126, 156-61 | 11 | 55 |
| 205 | Exploiting the Substrate Promiscuity of Hydroxycinnamoyl-CoA:Shikimate Hydroxycinnamoyl Transferase to Reduce Lignin. <i>Plant and Cell Physiology</i> , 2016 , 57, 568-79 | 4.9 | 54 |
| 204 | Three Novel Rice Genes Closely Related to the Arabidopsis IRX9, IRX9L, and IRX14 Genes and Their Roles in Xylan Biosynthesis. <i>Frontiers in Plant Science</i> , 2013 , 4, 83 | 6.2 | 54 |
| 203 | Biochemical characterization and crystal structure of endoglucanase Cel5A from the hyperthermophilic Thermotoga maritima. <i>Journal of Structural Biology</i> , 2010 , 172, 372-9 | 3.4 | 54 |
| 202 | Averaged kick maps: less noise, more signal and probably less bias. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2009 , 65, 921-31 | | 54 |
| 201 | A droplet-to-digital (D2D) microfluidic device for single cell assays. <i>Lab on A Chip</i> , 2015 , 15, 225-36 | 7.2 | 53 |
| 200 | Addition of a carbohydrate-binding module enhances cellulase penetration into cellulose substrates. <i>Biotechnology for Biofuels</i> , 2013 , 6, 93 | 7.8 | 51 |
| 199 | Ligand identification using electron-density map correlations. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2007 , 63, 101-7 | | 50 |
| 198 | On macromolecular refinement at subatomic resolution with interatomic scatterers. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2007 , 63, 1194-7 | | 49 |
| 197 | Identification and Characterization of a Golgi-Localized UDP-Xylose Transporter Family from Arabidopsis. <i>Plant Cell</i> , 2015 , 27, 1218-27 | 11.6 | 46 |
| 196 | A Droplet Microfluidic Platform for Automating Genetic Engineering. <i>ACS Synthetic Biology</i> , 2016 , 5, 426-33 | 5.7 | 46 |
| 195 | Understanding the impact of ionic liquid pretreatment on cellulose and lignin via thermochemical analysis. <i>Biomass and Bioenergy</i> , 2013 , 54, 276-283 | 5.3 | 46 |
| 194 | Glycoside hydrolases from a targeted compost metagenome, activity-screening and functional characterization. <i>BMC Biotechnology</i> , 2012 , 12, 38 | 3.5 | 46 |
| 193 | Production of anteiso-branched fatty acids in Escherichia coli; next generation biofuels with improved cold-flow properties. <i>Metabolic Engineering</i> , 2014 , 26, 111-118 | 9.7 | 45 |
| 192 | Phylogenomically guided identification of industrially relevant GH1 Eglucosidases through DNA synthesis and nanostructure-initiator mass spectrometry. <i>ACS Chemical Biology</i> , 2014 , 9, 2082-91 | 4.9 | 45 |

| 191 | The plant glycosyltransferase clone collection for functional genomics. <i>Plant Journal</i> , 2014 , 79, 517-29 | 6.9 | 44 | |
|-----|---|-------------------|----|--|
| 190 | A peptide-based method for 13C Metabolic Flux Analysis in microbial communities. <i>PLoS Computational Biology</i> , 2014 , 10, e1003827 | 5 | 43 | |
| 189 | A targeted proteomics toolkit for high-throughput absolute quantification of Escherichia coli proteins. <i>Metabolic Engineering</i> , 2014 , 26, 48-56 | 9.7 | 41 | |
| 188 | Manipulation of the carbon storage regulator system for metabolite remodeling and biofuel production in Escherichia coli. <i>Microbial Cell Factories</i> , 2012 , 11, 79 | 6.4 | 41 | |
| 187 | Analysis of plant nucleotide sugars by hydrophilic interaction liquid chromatography and tandem mass spectrometry. <i>Analytical Biochemistry</i> , 2014 , 448, 14-22 | 3.1 | 40 | |
| 186 | Addressing the need for alternative transportation fuels: the Joint BioEnergy Institute. <i>ACS Chemical Biology</i> , 2008 , 3, 17-20 | 4.9 | 40 | |
| 185 | Structure and mechanism of NOV1, a resveratrol-cleaving dioxygenase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 14324-14329 | 11.5 | 40 | |
| 184 | Multifunctional cellulase catalysis targeted by fusion to different carbohydrate-binding modules. <i>Biotechnology for Biofuels</i> , 2015 , 8, 220 | 7.8 | 38 | |
| 183 | Conformational dynamics of a crystalline protein from microsecond-scale molecular dynamics simulations and diffuse X-ray scattering. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 17887-92 | 11.5 | 38 | |
| 182 | Microbial Functional Gene Diversity Predicts Groundwater Contamination and Ecosystem Functioning. <i>MBio</i> , 2018 , 9, | 7.8 | 37 | |
| 181 | Automatic multiple-zone rigid-body refinement with a large convergence radius. <i>Journal of Applied Crystallography</i> , 2009 , 42, 607-615 | 3.8 | 37 | |
| 180 | Improving the accuracy of macromolecular structure refinement at 7 Iresolution. <i>Structure</i> , 2012 , 20, 957-66 | 5.2 | 36 | |
| 179 | On the handling of atomic anisotropic displacement parameters. <i>Journal of Applied Crystallography</i> , 2002 , 35, 477-480 | 3.8 | 36 | |
| 178 | Structural and Biochemical Characterization of the Early and Late Enzymes in the Lignin FAryl Ether Cleavage Pathway from Sphingobium sp. SYK-6. <i>Journal of Biological Chemistry</i> , 2016 , 291, 10228 | -3584 | 36 | |
| 177 | Droplet-based microfluidic platform for heterogeneous enzymatic assays. <i>Lab on A Chip</i> , 2013 , 13, 1817 | '- 7 2 | 35 | |
| 176 | From soil to structure, a novel dimeric Eglucosidase belonging to glycoside hydrolase family 3 isolated from compost using metagenomic analysis. <i>Journal of Biological Chemistry</i> , 2013 , 288, 14985-9 | 2 ^{5.4} | 35 | |
| 175 | Biochemical and structural studies of NADH-dependent FabG used to increase the bacterial production of fatty acids under anaerobic conditions. <i>Applied and Environmental Microbiology</i> , 2014 , 80, 497-505 | 4.8 | 34 | |
| 174 | The Experiment Data Depot: A Web-Based Software Tool for Biological Experimental Data Storage, Sharing, and Visualization. <i>ACS Synthetic Biology</i> , 2017 , 6, 2248-2259 | 5.7 | 34 | |

| 173 | Improved crystal orientation and physical properties from single-shot XFEL stills. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2014 , 70, 3299-309 | | 34 |
|-----|--|---------------|----|
| 172 | Intensity statistics in the presence of translational noncrystallographic symmetry. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2013 , 69, 176-83 | | 34 |
| 171 | On-chip integration of droplet microfluidics and nanostructure-initiator mass spectrometry for enzyme screening. <i>Lab on A Chip</i> , 2017 , 17, 323-331 | 7.2 | 33 |
| 170 | Standard flow liquid chromatography for shotgun proteomics in bioenergy research. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015 , 3, 44 | 5.8 | 33 |
| 169 | Improved crystallographic models through iterated local density-guided model deformation and reciprocal-space refinement. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2012 , 68, 861- | 70 | 33 |
| 168 | Raman imaging of cell wall polymers in Arabidopsis thaliana. <i>Biochemical and Biophysical Research Communications</i> , 2010 , 395, 521-3 | 3.4 | 33 |
| 167 | Numerically stable algorithms for the computation of reduced unit cells. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2004 , 60, 1-6 | | 33 |
| 166 | Automating crystallographic structure solution and refinement of protein-ligand complexes. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2014 , 70, 144-54 | | 33 |
| 165 | Announcing mandatory submission of PDBx/mmCIF format files for crystallographic depositions to the Protein Data Bank (PDB). <i>Acta Crystallographica Section D: Structural Biology</i> , 2019 , 75, 451-454 | 5.5 | 32 |
| 164 | Evidence of functional protein dynamics from X-ray crystallographic ensembles. <i>PLoS Computational Biology</i> , 2010 , 6, e1000911 | 5 | 31 |
| 163 | Tracing determinants of dual substrate specificity in glycoside hydrolase family 5. <i>Journal of Biological Chemistry</i> , 2012 , 287, 25335-43 | 5.4 | 31 |
| 162 | Protein structures by spallation neutron crystallography. <i>Journal of Synchrotron Radiation</i> , 2008 , 15, 21 | 5 <i>2</i> 84 | 31 |
| 161 | Crystal structures of an NAD kinase from Archaeoglobus fulgidus in complex with ATP, NAD, or NADP. <i>Journal of Molecular Biology</i> , 2005 , 354, 289-303 | 6.5 | 31 |
| 160 | Automatic solution of heavy-atom substructures. <i>Methods in Enzymology</i> , 2003 , 374, 37-83 | 1.7 | 31 |
| 159 | Crystal structure of a PhoU protein homologue: a new class of metalloprotein containing multinuclear iron clusters. <i>Journal of Biological Chemistry</i> , 2005 , 280, 15960-6 | 5.4 | 31 |
| 158 | No observable conformational changes in PSII. <i>Nature</i> , 2016 , 533, E1-2 | 50.4 | 31 |
| 157 | Rapid kinetic characterization of glycosyl hydrolases based on oxime derivatization and nanostructure-initiator mass spectrometry (NIMS). <i>ACS Chemical Biology</i> , 2014 , 9, 1470-9 | 4.9 | 30 |
| 156 | Development of a native Escherichia coli induction system for ionic liquid tolerance. <i>PLoS ONE</i> , 2014 , 9, e101115 | 3.7 | 30 |

(2012-2012)

| 1 | -55 | Acoustic deposition with NIMS as a high-throughput enzyme activity assay. <i>Analytical and Bioanalytical Chemistry</i> , 2012 , 403, 707-11 | 4.4 | 30 | |
|---|----------|--|------|----|--|
| 1 | 54 | Conformation-dependent backbone geometry restraints set a new standard for protein crystallographic refinement. <i>FEBS Journal</i> , 2014 , 281, 4061-71 | 5.7 | 29 | |
| 1 | -53 | Massively Parallel Fitness Profiling Reveals Multiple Novel Enzymes in Lysine Metabolism. <i>MBio</i> , 2019 , 10, | 7.8 | 28 | |
| 1 | 152 | Discovery of enzymes for toluene synthesis from anoxic microbial communities. <i>Nature Chemical Biology</i> , 2018 , 14, 451-457 | 11.7 | 28 | |
| 1 | 151 | Colloid-based multiplexed screening for plant biomass-degrading glycoside hydrolase activities in microbial communities. <i>Energy and Environmental Science</i> , 2011 , 4, 2884 | 35.4 | 28 | |
| 1 | 50 | Crystal structure of the "PhoU-like" phosphate uptake regulator from Aquifex aeolicus. <i>Journal of Bacteriology</i> , 2005 , 187, 4238-44 | 3.5 | 28 | |
| 1 | 49 | Macromolecular X-ray structure determination using weak, single-wavelength anomalous data. <i>Nature Methods</i> , 2015 , 12, 127-30 | 21.6 | 27 | |
| 1 | 148 | Structural Basis of Stereospecificity in the Bacterial Enzymatic Cleavage of EAryl Ether Bonds in Lignin. <i>Journal of Biological Chemistry</i> , 2016 , 291, 5234-46 | 5.4 | 27 | |
| 1 | 47 | Automated identification of elemental ions in macromolecular crystal structures. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2014 , 70, 1104-14 | | 27 | |
| 1 | 146 | from fundamentals to practice. <i>Crystallography Reviews</i> , 2013 , 19, 230-270 | 1.3 | 27 | |
| 1 | 45 | Pressure stabilizer for reproducible picoinjection in droplet microfluidic systems. <i>Lab on A Chip</i> , 2014 , 14, 4533-9 | 7.2 | 27 | |
| 1 | 44 | Structure of endoglucanase Cel9A from the thermoacidophilic Alicyclobacillus acidocaldarius. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2009 , 65, 744-50 | | 27 | |
| 1 | 43 | Extending the limits of molecular replacement through combined simulated annealing and maximum-likelihood refinement. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 1999 , 55, 181-90 | | 27 | |
| 1 | 42 | A new default restraint library for the protein backbone in Phenix: a conformation-dependent geometry goes mainstream. <i>Acta Crystallographica Section D: Structural Biology</i> , 2016 , 72, 176-9 | 5.5 | 27 | |
| 1 | 41 | Can I solve my structure by SAD phasing? Anomalous signal in SAD phasing. <i>Acta Crystallographica Section D: Structural Biology</i> , 2016 , 72, 346-58 | 5.5 | 26 | |
| 1 | <u> </u> | NMR Exchange Format: a unified and open standard for representation of NMR restraint data. <i>Nature Structural and Molecular Biology</i> , 2015 , 22, 433-4 | 17.6 | 26 | |
| 1 | 139 | High-throughput enzymatic hydrolysis of lignocellulosic biomass via in-situ regeneration. <i>Bioresource Technology</i> , 2011 , 102, 1329-37 | 11 | 26 | |
| 1 | 138 | Mechanism of nucleotide sensing in group II chaperonins. <i>EMBO Journal</i> , 2012 , 31, 731-40 | 13 | 26 | |
| | | | | | |

| 137 | Structural genomics of minimal organisms and protein fold space. <i>Journal of Structural and Functional Genomics</i> , 2005 , 6, 63-70 | | 26 |
|-----|--|------|----|
| 136 | Optimization of the IPP-bypass mevalonate pathway and fed-batch fermentation for the production of isoprenol in Escherichia coli. <i>Metabolic Engineering</i> , 2019 , 56, 85-96 | 9.7 | 25 |
| 135 | Toward industrial production of isoprenoids in Escherichia coli: Lessons learned from CRISPR-Cas9 based optimization of a chromosomally integrated mevalonate pathway. <i>Biotechnology and Bioengineering</i> , 2018 , 115, 1000-1013 | 4.9 | 25 |
| 134 | Structure of the transmembrane cysteine residues in phospholamban. <i>Journal of Membrane Biology</i> , 1997 , 155, 199-206 | 2.3 | 25 |
| 133 | Application of DEN refinement and automated model building to a difficult case of molecular-replacement phasing: the structure of a putative succinyl-diaminopimelate desuccinylase from Corynebacterium glutamicum. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2012 , 68, 391-403 | | 24 |
| 132 | Model morphing and sequence assignment after molecular replacement. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2013 , 69, 2244-50 | | 24 |
| 131 | Blind image analysis for the compositional and structural characterization of plant cell walls. <i>Analytica Chimica Acta</i> , 2011 , 702, 172-7 | 6.6 | 24 |
| 130 | Supplementation of intracellular XylR leads to coutilization of hemicellulose sugars. <i>Applied and Environmental Microbiology</i> , 2012 , 78, 2221-9 | 4.8 | 24 |
| 129 | Renewable production of high density jet fuel precursor sesquiterpenes from. <i>Biotechnology for Biofuels</i> , 2018 , 11, 285 | 7.8 | 24 |
| 128 | A Global Ramachandran Score Identifies Protein Structures with Unlikely Stereochemistry. <i>Structure</i> , 2020 , 28, 1249-1258.e2 | 5.2 | 23 |
| 127 | Constructing tailored isoprenoid products by structure-guided modification of geranylgeranyl reductase. <i>Structure</i> , 2014 , 22, 1028-36 | 5.2 | 23 |
| 126 | Annealing in crystallography: a powerful optimization tool. <i>Progress in Biophysics and Molecular Biology</i> , 1999 , 72, 135-55 | 4.7 | 23 |
| 125 | Can I solve my structure by SAD phasing? Planning an experiment, scaling data and evaluating the useful anomalous correlation and anomalous signal. <i>Acta Crystallographica Section D: Structural Biology</i> , 2016 , 72, 359-74 | 5.5 | 23 |
| 124 | Metrics for comparison of crystallographic maps. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2014 , 70, 2593-606 | | 22 |
| 123 | Improved ligand geometries in crystallographic refinement using AFITT in PHENIX. <i>Acta Crystallographica Section D: Structural Biology</i> , 2016 , 72, 1062-72 | 5.5 | 22 |
| 122 | An editor for the generation and customization of geometry restraints. <i>Acta Crystallographica Section D: Structural Biology</i> , 2017 , 73, 123-130 | 5.5 | 22 |
| 121 | Cryo-EM model validation recommendations based on outcomes of the 2019 EMDataResource challenge. <i>Nature Methods</i> , 2021 , 18, 156-164 | 21.6 | 22 |
| 120 | Structure of aryl-demethylase offers molecular insight into a catalytic tyrosine-dependent mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E3205-E3214 | 11.5 | 21 |

(2020-2009)

| 119 | Recent developments in phasing and structure refinement for macromolecular crystallography. <i>Current Opinion in Structural Biology</i> , 2009 , 19, 566-72 | 8.1 | 21 |
|-----|--|------|----|
| 118 | A rapid and inexpensive labeling method for microarray gene expression analysis. <i>BMC Biotechnology</i> , 2009 , 9, 97 | 3.5 | 21 |
| 117 | Structure of the human TRiC/CCT Subunit 5 associated with hereditary sensory neuropathy. <i>Scientific Reports</i> , 2017 , 7, 3673 | 4.9 | 20 |
| 116 | Raman-spectroscopy-based noninvasive microanalysis of native lignin structure. <i>Analytical and Bioanalytical Chemistry</i> , 2012 , 402, 983-7 | 4.4 | 20 |
| 115 | Application of targeted proteomics to metabolically engineered Escherichia coli. <i>Proteomics</i> , 2012 , 12, 1289-99 | 4.8 | 20 |
| 114 | The Protein Structure Initiative Structural Biology Knowledgebase Technology Portal: a structural biology web resource. <i>Journal of Structural and Functional Genomics</i> , 2012 , 13, 57-62 | | 20 |
| 113 | Improved activity of a thermophilic cellulase, Cel5A, from Thermotoga maritima on ionic liquid pretreated switchgrass. <i>PLoS ONE</i> , 2013 , 8, e79725 | 3.7 | 19 |
| 112 | Crystal structure of a heat-inducible transcriptional repressor HrcA from Thermotoga maritima: structural insight into DNA binding and dimerization. <i>Journal of Molecular Biology</i> , 2005 , 350, 987-96 | 6.5 | 19 |
| 111 | A bacterial pioneer produces cellulase complexes that persist through community succession. <i>Nature Microbiology</i> , 2018 , 3, 99-107 | 26.6 | 19 |
| 110 | In vitro analysis of carboxyacyl substrate tolerance in the loading and first extension modules of borrelidin polyketide synthase. <i>Biochemistry</i> , 2014 , 53, 5975-7 | 3.2 | 18 |
| 109 | Encoding substrates with mass tags to resolve stereospecific reactions using Nimzyme. <i>Rapid Communications in Mass Spectrometry</i> , 2012 , 26, 611-5 | 2.2 | 18 |
| 108 | Cryo-EM map interpretation and protein model-building using iterative map segmentation. <i>Protein Science</i> , 2020 , 29, 87-99 | 6.3 | 18 |
| 107 | Automated "Cells-To-Peptides" Sample Preparation Workflow for High-Throughput, Quantitative Proteomic Assays of Microbes. <i>Journal of Proteome Research</i> , 2019 , 18, 3752-3761 | 5.6 | 17 |
| 106 | Cellulosic biomass pretreatment and sugar yields as a function of biomass particle size. <i>PLoS ONE</i> , 2014 , 9, e100836 | 3.7 | 17 |
| 105 | Improved statistics for determining the Patterson symmetry from unmerged diffraction intensities. Journal of Applied Crystallography, 2006 , 39, 158-168 | 3.8 | 17 |
| 104 | Crystal structures of a phosphotransacetylase from Bacillus subtilis and its complex with acetyl phosphate. <i>Journal of Structural and Functional Genomics</i> , 2005 , 6, 269-79 | | 17 |
| 103 | Non-invasive imaging of cellulose microfibril orientation within plant cell walls by polarized Raman microspectroscopy. <i>Biotechnology and Bioengineering</i> , 2016 , 113, 82-90 | 4.9 | 17 |
| 102 | Improved chemistry restraints for crystallographic refinement by integrating the Amber force field into Phenix. <i>Acta Crystallographica Section D: Structural Biology</i> , 2020 , 76, 51-62 | 5.5 | 16 |

| 101 | Methyl ketone production by Pseudomonas putida is enhanced by plant-derived amino acids. <i>Biotechnology and Bioengineering</i> , 2019 , 116, 1909-1922 | 4.9 | 15 |
|-----|--|-------|----|
| 100 | Plant cell wall glycosyltransferases: High-throughput recombinant expression screening and general requirements for these challenging enzymes. <i>PLoS ONE</i> , 2017 , 12, e0177591 | 3.7 | 15 |
| 99 | Cryo_fit: Democratization of flexible fitting for cryo-EM. <i>Journal of Structural Biology</i> , 2019 , 208, 1-6 | 3.4 | 15 |
| 98 | Improved crystallographic structures using extensive combinatorial refinement. <i>Structure</i> , 2013 , 21, 19 | 23:30 | 15 |
| 97 | Structural and biochemical studies of actin in complex with synthetic macrolide tail analogues. <i>ChemMedChem</i> , 2014 , 9, 2286-93 | 3.7 | 15 |
| 96 | Crystal structure of the transcriptional activator HlyU from Vibrio vulnificus CMCP6. <i>FEBS Letters</i> , 2010 , 584, 1097-102 | 3.8 | 15 |
| 95 | Algorithms for deriving crystallographic space-group information. II. Treatment of special positions. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2002 , 58, 60-5 | | 15 |
| 94 | Recent developments in software for the automation of crystallographic macromolecular structure determination. <i>Current Opinion in Structural Biology</i> , 2000 , 10, 564-8 | 8.1 | 15 |
| 93 | Development of a High Throughput Platform for Screening Glycoside Hydrolases Based on Oxime-NIMS. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015 , 3, 153 | 5.8 | 14 |
| 92 | On the use of logarithmic scales for analysis of diffraction data. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2009 , 65, 1283-91 | | 14 |
| 91 | Molecular simulations provide new insights into the role of the accessory immunoglobulin-like domain of Cel9A. <i>FEBS Letters</i> , 2010 , 584, 3431-5 | 3.8 | 14 |
| 90 | Flexible torsion-angle noncrystallographic symmetry restraints for improved macromolecular structure refinement. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2014 , 70, 1346-56 | | 13 |
| 89 | Novel bacterial clade reveals origin of form I Rubisco. <i>Nature Plants</i> , 2020 , 6, 1158-1166 | 11.5 | 13 |
| 88 | A rapid methods development workflow for high-throughput quantitative proteomic applications. <i>PLoS ONE</i> , 2019 , 14, e0211582 | 3.7 | 13 |
| 87 | Jungle Express is a versatile repressor system for tight transcriptional control. <i>Nature Communications</i> , 2018 , 9, 3617 | 17.4 | 13 |
| 86 | Indexing amyloid peptide diffraction from serial femtosecond crystallography: new algorithms for sparse patterns. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2015 , 71, 357-66 | | 12 |
| 85 | : a software library for aspherical atom model X-ray scattering factor calculations with CPUs and GPUs. <i>Journal of Applied Crystallography</i> , 2018 , 51, 193-199 | 3.8 | 12 |
| 84 | Comparative Community Proteomics Demonstrates the Unexpected Importance of Actinobacterial Glycoside Hydrolase Family 12 Protein for Crystalline Cellulose Hydrolysis. <i>MBio</i> , 2016 , 7, | 7.8 | 12 |

| 83 | A second-generation expression system for tyrosine-sulfated proteins and its application in crop protection. <i>Integrative Biology (United Kingdom)</i> , 2016 , 8, 542-5 | 3.7 | 12 |
|----------------|--|------------------------------|----------------|
| 82 | Application of targeted proteomics and biological parts assembly in E. coli to optimize the biosynthesis of an anti-malarial drug precursor, amorpha-4,11-diene. <i>Chemical Engineering Science</i> , 2013 , 103, 21-28 | 4.4 | 12 |
| 81 | Microfluidic glycosyl hydrolase screening for biomass-to-biofuel conversion. <i>Analytical Chemistry</i> , 2010 , 82, 9513-20 | 7.8 | 12 |
| 80 | Automated crystallographic ligand building using the medial axis transform of an electron-density isosurface. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2005 , 61, 1354-63 | | 12 |
| 79 | Macromolecular refinement of X-ray and cryoelectron microscopy structures with Phenix/OPLS3e for improved structure and ligand quality. <i>Structure</i> , 2021 , 29, 913-921.e4 | 5.2 | 12 |
| 78 | Structure of the OsSERK2 leucine-rich repeat extracellular domain. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2014 , 70, 3080-6 | | 11 |
| 77 | High throughput nanostructure-initiator mass spectrometry screening of microbial growth conditions for maximal Eglucosidase production. <i>Frontiers in Microbiology</i> , 2013 , 4, 365 | 5.7 | 11 |
| 76 | Ligand placement based on prior structures: the guided ligand-replacement method. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2014 , 70, 134-43 | | 11 |
| 75 | From deep TLS validation to ensembles of atomic models built from elemental motions. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2015 , 71, 1668-83 | | 11 |
| | | | |
| 74 | Density modification of cryo-EM maps. Acta Crystallographica Section D: Structural Biology, 2020 , 76, 9 | 12 5 9 3 5 | 11 |
| 74 73 | Density modification of cryo-EM maps. <i>Acta Crystallographica Section D: Structural Biology</i> , 2020 , 76, 9 Efficient production of oxidized terpenoids via engineering fusion proteins of terpene synthase and cytochrome P450. <i>Metabolic Engineering</i> , 2021 , 64, 41-51 | 12 5 9 3 5 | 11 |
| | Efficient production of oxidized terpenoids via engineering fusion proteins of terpene synthase | | |
| 73 | Efficient production of oxidized terpenoids via engineering fusion proteins of terpene synthase and cytochrome P450. <i>Metabolic Engineering</i> , 2021 , 64, 41-51 Interactive comparison and remediation of collections of macromolecular structures. <i>Protein</i> | 9.7 | 11 |
| 73 72 | Efficient production of oxidized terpenoids via engineering fusion proteins of terpene synthase and cytochrome P450. <i>Metabolic Engineering</i> , 2021 , 64, 41-51 Interactive comparison and remediation of collections of macromolecular structures. <i>Protein Science</i> , 2018 , 27, 182-194 Programming new geometry restraints: parallelity of atomic groups. <i>Journal of Applied</i> | 9·7 6.3 | 11 |
| 73 72 71 | Efficient production of oxidized terpenoids via engineering fusion proteins of terpene synthase and cytochrome P450. <i>Metabolic Engineering</i> , 2021 , 64, 41-51 Interactive comparison and remediation of collections of macromolecular structures. <i>Protein Science</i> , 2018 , 27, 182-194 Programming new geometry restraints: parallelity of atomic groups. <i>Journal of Applied Crystallography</i> , 2015 , 48, 1130-1141 Exact direct-space asymmetric units for the 230 crystallographic space groups. <i>Acta</i> | 9·7 6.3 | 11 10 10 |
| 73 72 71 70 | Efficient production of oxidized terpenoids via engineering fusion proteins of terpene synthase and cytochrome P450. <i>Metabolic Engineering</i> , 2021 , 64, 41-51 Interactive comparison and remediation of collections of macromolecular structures. <i>Protein Science</i> , 2018 , 27, 182-194 Programming new geometry restraints: parallelity of atomic groups. <i>Journal of Applied Crystallography</i> , 2015 , 48, 1130-1141 Exact direct-space asymmetric units for the 230 crystallographic space groups. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2011 , 67, 269-75 A microscale platform for integrated cell-free expression and activity screening of cellulases. | 9·7 6.3 3.8 | 11 10 10 |
| 73 72 71 70 69 | Efficient production of oxidized terpenoids via engineering fusion proteins of terpene synthase and cytochrome P450. <i>Metabolic Engineering</i> , 2021 , 64, 41-51 Interactive comparison and remediation of collections of macromolecular structures. <i>Protein Science</i> , 2018 , 27, 182-194 Programming new geometry restraints: parallelity of atomic groups. <i>Journal of Applied Crystallography</i> , 2015 , 48, 1130-1141 Exact direct-space asymmetric units for the 230 crystallographic space groups. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2011 , 67, 269-75 A microscale platform for integrated cell-free expression and activity screening of cellulases. <i>Journal of Proteome Research</i> , 2010 , 9, 5677-83 | 9.7 6.3 3.8 | 11 10 10 10 10 |

| 65 | O-/N-/S-Specificity in Glycosyltransferase Catalysis: From Mechanistic Understanding to Engineering. <i>ACS Catalysis</i> , 2021 , 11, 1810-1815 | 13.1 | 10 |
|----|---|--------------|----|
| 64 | Response of Pseudomonas putida to Complex, Aromatic-Rich Fractions from Biomass. <i>ChemSusChem</i> , 2020 , 13, 4455-4467 | 8.3 | 9 |
| 63 | Evaluation system and web infrastructure for the second cryo-EM model challenge. <i>Journal of Structural Biology</i> , 2018 , 204, 96-108 | 3.4 | 9 |
| 62 | Predicting X-ray diffuse scattering from translation-libration-screw structural ensembles. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2015 , 71, 1657-67 | | 9 |
| 61 | Automatic Fortran to C++ conversion with FABLE. Source Code for Biology and Medicine, 2012, 7, 5 | 1.9 | 9 |
| 60 | Golgi enrichment and proteomic analysis of developing Pinus radiata xylem by free-flow electrophoresis. <i>PLoS ONE</i> , 2013 , 8, e84669 | 3.7 | 9 |
| 59 | Patterson correlation methods: a review of molecular replacement with CNS. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2001 , 57, 1390-6 | | 9 |
| 58 | Iron-sulfur clusters have no right angles. <i>Acta Crystallographica Section D: Structural Biology</i> , 2019 , 75, 16-20 | 5.5 | 9 |
| 57 | Expression of naturally ionic liquid-tolerant thermophilic cellulases in Aspergillus niger. <i>PLoS ONE</i> , 2017 , 12, e0189604 | 3.7 | 8 |
| 56 | On symmetries of substructures. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2003 , 59, 1974-7 | | 8 |
| 55 | Structure of a NAD kinase from Thermotoga maritima at 2.3 A resolution. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2005 , 61, 640-6 | | 8 |
| 54 | Utilizing a highly responsive gene, yhjX, in E. coli based production of 1,4-butanediol. <i>Chemical Engineering Science</i> , 2013 , 103, 68-73 | 4.4 | 7 |
| 53 | Understanding the role of histidine in the GHSxG acyltransferase active site motif: evidence for histidine stabilization of the malonyl-enzyme intermediate. <i>PLoS ONE</i> , 2014 , 9, e109421 | 3.7 | 7 |
| 52 | Models for the transmembrane region of the phospholamban pentamer: which is correct?. <i>Annals of the New York Academy of Sciences</i> , 1998 , 853, 178-85 | 6.5 | 7 |
| 51 | Structure of O67745_AQUAE, a hypothetical protein from Aquifex aeolicus. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2007 , 63, 369-74 | | 7 |
| 50 | Engineering Saccharomyces cerevisiae for isoprenol production. <i>Metabolic Engineering</i> , 2021 , 64, 154-1 | 66 .7 | 7 |
| 49 | Structure of FabH and factors affecting the distribution of branched fatty acids in Micrococcus luteus. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2012 , 68, 1320-8 | | 6 |
| 48 | Berkeley Screen: a set of 96 solutions for general macromolecular crystallization. <i>Journal of Applied Crystallography</i> , 2017 , 50, 1352-1358 | 3.8 | 6 |

(2012-2021)

| 47 | Structural dynamics in the water and proton channels of photosystem II during the S to S transition. <i>Nature Communications</i> , 2021 , 12, 6531 | 17.4 | 6 |
|----|---|------|---|
| 46 | Rapid characterization of the activities of lignin-modifying enzymes based on nanostructure-initiator mass spectrometry (NIMS). <i>Biotechnology for Biofuels</i> , 2018 , 11, 266 | 7.8 | 6 |
| 45 | Improved prediction for the structure of the dimeric transmembrane domain of glycophorin A obtained through global searching 1996 , 26, 257 | | 6 |
| 44 | Map segmentation, automated model-building and their application to the Cryo-EM Model Challenge. <i>Journal of Structural Biology</i> , 2018 , 204, 338-343 | 3.4 | 5 |
| 43 | A universal flow cytometry assay for screening carbohydrate-active enzymes using glycan microspheres. <i>Chemical Communications</i> , 2013 , 49, 5441-3 | 5.8 | 5 |
| 42 | Using support vector machines to improve elemental ion identification in macromolecular crystal structures. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2015 , 71, 1147-58 | | 4 |
| 41 | Structure and Function of BorB, the Type II Thioesterase from the Borrelidin Biosynthetic Gene Cluster. <i>Biochemistry</i> , 2020 , 59, 1630-1639 | 3.2 | 4 |
| 40 | From deep TLS validation to ensembles of atomic models built from elemental motions. II. Analysis of TLS refinement results by explicit interpretation. <i>Acta Crystallographica Section D: Structural Biology</i> , 2018 , 74, 621-631 | 5.5 | 4 |
| 39 | Use of Nanostructure-Initiator Mass Spectrometry to Deduce Selectivity of Reaction in Glycoside Hydrolases. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015 , 3, 165 | 5.8 | 4 |
| 38 | Hitherto unrecognized fluorescence properties of coniferyl alcohol. <i>Molecules</i> , 2010 , 15, 1645-67 | 4.8 | 4 |
| 37 | Mechanical Stress Analysis as a Method to Understand the Impact of Genetically Engineered Rice and Arabidopsis Plants. <i>Industrial Biotechnology</i> , 2012 , 8, 238-244 | 1.3 | 4 |
| 36 | Potent and Selective Covalent Inhibitors of the Papain-like Protease from SARS-CoV-2 2021 , | | 4 |
| 35 | Characterization of a Metal-Resistant Strain With a High Molybdate Affinity ModA From Contaminated Sediments at the Oak Ridge Reservation. <i>Frontiers in Microbiology</i> , 2020 , 11, 587127 | 5.7 | 4 |
| 34 | Mechanism Across Scales: A Holistic Modeling Framework Integrating Laboratory and Field Studies for Microbial Ecology. <i>Frontiers in Microbiology</i> , 2021 , 12, 642422 | 5.7 | 4 |
| 33 | Distribution of evaluation scores for the models submitted to the second cryo-EM model challenge. <i>Data in Brief</i> , 2018 , 20, 1629-1638 | 1.2 | 4 |
| 32 | Structural insights into dehydratase substrate selection for the borrelidin and fluvirucin polyketide synthases. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2019 , 46, 1225-1235 | 4.2 | 3 |
| 31 | Reply to Kiser: Dioxygen binding in NOV1 crystal structures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E6029-E6030 | 11.5 | 3 |
| 30 | 1.7 Refinement of X-ray Crystal Structures 2012 , 105-115 | | 3 |

| 29 | Spectroscopic analyses of the biofuels-critical phytochemical coniferyl alcohol and its enzyme-catalyzed oxidation products. <i>Molecules</i> , 2009 , 14, 4758-78 | 4.8 | 3 |
|----|--|------|---|
| 28 | A robust bulk solvent correction and anisotropic scaling procedure in the CCTBX. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2005 , 61, c160-c160 | | 3 |
| 27 | Macromolecular crystallographic estructure refinement. <i>Arbor</i> , 2015 , 191, a219 | 0.2 | 3 |
| 26 | Structural genomics of minimal organisms: pipeline and results. <i>Methods in Molecular Biology</i> , 2008 , 426, 475-96 | 1.4 | 3 |
| 25 | Structural Mechanism of Regioselectivity in an Unusual Bacterial Acyl-CoA Dehydrogenase. <i>Journal of the American Chemical Society</i> , 2020 , 142, 835-846 | 16.4 | 3 |
| 24 | Reply to Wang et al.: Clear evidence of binding of Ox to the oxygen-evolving complex of photosystem II is best observed in the omit map. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118, | 11.5 | 3 |
| 23 | Automated flow-based/digital microfluidic platform integrated with onsite electroporation process for multiplex genetic engineering applications 2018 , | | 3 |
| 22 | CERES: a cryo-EM re-refinement system for continuous improvement of deposited models. <i>Acta Crystallographica Section D: Structural Biology</i> , 2021 , 77, 48-61 | 5.5 | 3 |
| 21 | Implementation of the riding hydrogen model in CCTBX to support the next generation of X-ray and neutron joint refinement in Phenix. <i>Methods in Enzymology</i> , 2020 , 634, 177-199 | 1.7 | 2 |
| 20 | An iron (II) dependent oxygenase performs the last missing step of plant lysine catabolism. <i>Nature Communications</i> , 2020 , 11, 2931 | 17.4 | 2 |
| 19 | The Berkeley Center for Structural Biology at the Advanced Light Source. <i>Synchrotron Radiation News</i> , 2015 , 28, 22-27 | 0.6 | 2 |
| 18 | The development of an automated data analysis system for high-pressure powder diffraction data collected using an area detector. <i>High Pressure Research</i> , 2008 , 28, 293-298 | 1.6 | 2 |
| 17 | Technical Report: Recent Major Improvements to the ALS Sector 5 Macromolecular Crystallography Beamlines. <i>Synchrotron Radiation News</i> , 2007 , 20, 23-30 | 0.6 | 2 |
| 16 | FINDMOL: automated identification of macromolecules in electron-density maps. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2005 , 61, 1514-20 | | 2 |
| 15 | Arginine off-kilter: guanidinium is not as planar as restraints denote. <i>Acta Crystallographica Section D: Structural Biology</i> , 2020 , 76, 1159-1166 | 5.5 | 2 |
| 14 | Improving AlphaFold modeling using implicit information from experimental density maps | | 2 |
| 13 | New Applications of Simulated Annealing in Crystallographic Refinement 1998 , 143-157 | | 2 |
| 12 | Protein identification from electron cryomicroscopy maps by automated model building and side-chain matching. <i>Acta Crystallographica Section D: Structural Biology</i> , 2021 , 77, 457-462 | 5.5 | 2 |

LIST OF PUBLICATIONS

| 11 | Experimental and theoretical insights into the effects of pH on catalysis of bond-cleavage by the lignin peroxidase isozyme H8 from Phanerochaete chrysosporium. <i>Biotechnology for Biofuels</i> , 2021 , 14, 108 | 7.8 | 2 |
|----|---|------|---|
| 10 | X-ray diffraction analysis and in vitro characterization of the UAM2 protein from Oryza sativa. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2017 , 73, 241-245 | 1.1 | 1 |
| 9 | Mechanism of nucleotide sensing in group II chaperonins. <i>EMBO Journal</i> , 2012 , 31, 3949-3950 | 13 | 1 |
| 8 | Computational aspects of high-throughput crystallographic macromolecular structure determination. <i>Methods of Biochemical Analysis</i> , 2003 , 44, 75-87 | | 1 |
| 7 | A multiplexed nanostructure-initiator mass spectrometry (NIMS) assay for simultaneously detecting glycosyl hydrolase and lignin modifying enzyme activities. <i>Scientific Reports</i> , 2021 , 11, 11803 | 4.9 | 1 |
| 6 | Engineering glycoside hydrolase stability by the introduction of zinc binding. <i>Acta Crystallographica Section D: Structural Biology</i> , 2018 , 74, 702-710 | 5.5 | 1 |
| 5 | Integration of software tools for integrative modeling of biomolecular systems <i>Journal of Structural Biology</i> , 2022 , 107841 | 3.4 | О |
| 4 | A Synthetic Gene Library Yields a Previously Unknown Glycoside Phosphorylase That Degrades and Assembles Poly-E1,3-GlcNAc, Completing the Suite of ELinked GlcNAc Polysaccharides <i>ACS Central Science</i> , 2022 , 8, 430-440 | 16.8 | O |
| 3 | What are the current limits on determination of protonation state using neutron macromolecular crystallography?. <i>Methods in Enzymology</i> , 2020 , 634, 225-255 | 1.7 | |
| 2 | Photon Science at the ALS for Sustainable Energy. Synchrotron Radiation News, 2010 , 23, 8-15 | 0.6 | |
| 1 | Modular automated bottom-up proteomic sample preparation for high-throughput applications <i>PLoS ONE</i> , 2022 , 17, e0264467 | 3.7 | |