

Roberto A Chica

List of Publications by Year in descending order

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Version: 2024-02-01

38
papers

1,522
citations

393982

19
h-index

329751

37
g-index

43
all docs

43
docs citations

43
times ranked

2050
citing authors

#	ARTICLE	IF	CITATIONS
1	Semi-rational approaches to engineering enzyme activity: combining the benefits of directed evolution and rational design. <i>Current Opinion in Biotechnology</i> , 2005, 16, 378-384.	3.3	333
2	Iterative approach to computational enzyme design. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 3790-3795.	3.3	291
3	Generation of longer emission wavelength red fluorescent proteins using computationally designed libraries. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 20257-20262.	3.3	88
4	Rational design of proteins that exchange on functional timescales. <i>Nature Chemical Biology</i> , 2017, 13, 1280-1285.	3.9	76
5	Ensemble-based enzyme design can recapitulate the effects of laboratory directed evolution in silico. <i>Nature Communications</i> , 2020, 11, 4808.	5.8	67
6	Multistate approaches in computational protein design. <i>Protein Science</i> , 2012, 21, 1241-1252.	3.1	63
7	ProtaBank: A repository for protein design and engineering data. <i>Protein Science</i> , 2018, 27, 1113-1124.	3.1	47
8	Improving the accuracy of protein stability predictions with multistate design using a variety of backbone ensembles. <i>Proteins: Structure, Function and Bioinformatics</i> , 2014, 82, 771-784.	1.5	46
9	One-Pot Biocatalytic Synthesis of Substituted α -Tryptophans from Indoles Enabled by an Engineered Aminotransferase. <i>ACS Catalysis</i> , 2019, 9, 3482-3486.	5.5	43
10	The bioorganic chemistry of transglutaminase α 2 from mechanism to inhibition and engineering. <i>Canadian Journal of Chemistry</i> , 2008, 86, 271-276.	0.6	39
11	Tissue transglutaminase acylation: Proposed role of conserved active site Tyr and Trp residues revealed by molecular modeling of peptide substrate binding. <i>Protein Science</i> , 2004, 13, 979-991.	3.1	37
12	Discovery of Substrates for a SET Domain Lysine Methyltransferase Predicted by Multistate Computational Protein Design. <i>Structure</i> , 2015, 23, 206-215.	1.6	34
13	Computational Design of Multisubstrate Enzyme Specificity. <i>ACS Catalysis</i> , 2019, 9, 5480-5485.	5.5	27
14	Expression and rapid purification of highly active hexahistidine-tagged guinea pig liver transglutaminase. <i>Protein Expression and Purification</i> , 2004, 33, 256-264.	0.6	23
15	Photolabeling of Tissue Transglutaminase Reveals the Binding Mode of Potent Cinnamoyl Inhibitors. <i>Biochemistry</i> , 2009, 48, 3346-3353.	1.2	23
16	Structure-guided rational design of red fluorescent proteins: towards designer genetically-encoded fluorophores. <i>Current Opinion in Structural Biology</i> , 2017, 45, 91-99.	2.6	23
17	Engineered Aminotransferase for the Production of α -Phenylalanine Derivatives Using Biocatalytic Cascades. <i>ChemCatChem</i> , 2018, 10, 470-474.	1.8	23
18	Prediction of Stable Globular Proteins Using Negative Design with Non-native Backbone Ensembles. <i>Structure</i> , 2015, 23, 2011-2021.	1.6	21

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19	Multistate Computational Protein Design with Backbone Ensembles. <i>Methods in Molecular Biology</i> , 2017, 1529, 161-179.	0.4	21
20	Brighter Red Fluorescent Proteins by Rational Design of Triple-Decker Motif. <i>ACS Chemical Biology</i> , 2016, 11, 508-517.	1.6	20
21	Biocatalytic retrosynthesis approaches to α -(2,4,5-trifluorophenyl)alanine, key precursor of the antidiabetic sitagliptin. <i>Green Chemistry</i> , 2019, 21, 4368-4379.	4.6	20
22	Nerve Agent Hydrolysis Activity Designed into a Human Drug Metabolism Enzyme. <i>PLoS ONE</i> , 2011, 6, e17441.	1.1	19
23	Continuous colorimetric screening assay for detection of d-amino acid aminotransferase mutants displaying altered substrate specificity. <i>Analytical Biochemistry</i> , 2014, 463, 23-30.	1.1	17
24	Recovery of Red Fluorescent Protein Chromophore Maturation Deficiency through Rational Design. <i>PLoS ONE</i> , 2012, 7, e52463.	1.1	17
25	Bioanalysis for Biocatalysis: Multiplexed Capillary Electrophoresis-Mass Spectrometry Assay for Aminotransferase Substrate Discovery and Specificity Profiling. <i>Journal of the American Chemical Society</i> , 2013, 135, 13728-13736.	6.6	16
26	A high-throughput assay for screening l- or d-amino acid specific aminotransferase mutant libraries. <i>Analytical Biochemistry</i> , 2013, 441, 190-198.	1.1	14
27	Protein engineering in the 21 st century. <i>Protein Science</i> , 2015, 24, 431-433.	3.1	11
28	Origin of conformational dynamics in a globular protein. <i>Communications Biology</i> , 2019, 2, 433.	2.0	11
29	Genetically Encoded Fluorescent Biosensor for Rapid Detection of Protein Expression. <i>ACS Synthetic Biology</i> , 2020, 9, 2955-2963.	1.9	10
30	Generation of bright monomeric red fluorescent proteins <i>via</i> computational design of enhanced chromophore packing. <i>Chemical Science</i> , 2022, 13, 1408-1418.	3.7	9
31	Optimization of rotamers prior to template minimization improves stability predictions made by computational protein design. <i>Protein Science</i> , 2015, 24, 545-560.	3.1	8
32	Structural Determinants of the Stereoinverting Activity of <i>Pseudomonas stutzeri</i> d-Phenylglycine Aminotransferase. <i>Biochemistry</i> , 2018, 57, 5437-5446.	1.2	4
33	Chapter 4. Computational Enzyme Design: Successes, Challenges, and Future Directions. <i>RSC Catalysis Series</i> , 2018, , 88-116.	0.1	4
34	Specificity of transglutaminase-catalyzed peptide synthesis. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2016, 123, 53-61.	1.8	2
35	Personalized oncology and BRAFK601N melanoma: model development, drug discovery, and clinical correlation. <i>Journal of Cancer Research and Clinical Oncology</i> , 2021, 147, 1365-1378.	1.2	2
36	Turning a Negative into a Positive: Conversion of a Homodimer into a Heterodimer Using Negative State Repertoires. <i>Structure</i> , 2016, 24, 496-497.	1.6	1

#	ARTICLE	IF	CITATIONS
37	Designer proteins activate fluorescent molecules. <i>Nature</i> , 2018, 561, 471-472.	13.7	0
38	Designer sense-response systems. <i>Science</i> , 2019, 366, 952-953.	6.0	0