

Pablo Carbonell

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2870727/publications.pdf>

Version: 2024-02-01

83
papers

2,767
citations

172386

29
h-index

206029

48
g-index

94
all docs

94
docs citations

94
times ranked

3111
citing authors

#	ARTICLE	IF	CITATIONS
1	RetroPath2.0: A retrosynthesis workflow for metabolic engineers. <i>Metabolic Engineering</i> , 2018, 45, 158-170.	3.6	174
2	An automated Design-Build-Test-Learn pipeline for enhanced microbial production of fine chemicals. <i>Communications Biology</i> , 2018, 1, 66.	2.0	159
3	A retrosynthetic biology approach to metabolic pathway design for therapeutic production. <i>BMC Systems Biology</i> , 2011, 5, 122.	3.0	100
4	XTMS: pathway design in an eXTended metabolic space. <i>Nucleic Acids Research</i> , 2014, 42, W389-W394.	6.5	96
5	Opportunities at the Intersection of Synthetic Biology, Machine Learning, and Automation. <i>ACS Synthetic Biology</i> , 2019, 8, 1474-1477.	1.9	95
6	The lithium tolerance of the <i>Arabidopsis cat2</i> mutant reveals a cross-talk between oxidative stress and ethylene. <i>Plant Journal</i> , 2007, 52, 1052-1065.	2.8	91
7	Pathways to cellular supremacy in biocomputing. <i>Nature Communications</i> , 2019, 10, 5250.	5.8	88
8	Machine Learning of Designed Translational Control Allows Predictive Pathway Optimization in <i>Escherichia coli</i> . <i>ACS Synthetic Biology</i> , 2019, 8, 127-136.	1.9	88
9	Virus Adaptation by Manipulation of Host's Gene Expression. <i>PLoS ONE</i> , 2008, 3, e2397.	1.1	79
10	RetroPath: Automated Pipeline for Embedded Metabolic Circuits. <i>ACS Synthetic Biology</i> , 2014, 3, 565-577.	1.9	76
11	Selenzyme: enzyme selection tool for pathway design. <i>Bioinformatics</i> , 2018, 34, 2153-2154.	1.8	75
12	RetroRules: a database of reaction rules for engineering biology. <i>Nucleic Acids Research</i> , 2019, 47, D1229-D1235.	6.5	74
13	Molecular signatures-based prediction of enzyme promiscuity. <i>Bioinformatics</i> , 2010, 26, 2012-2019.	1.8	72
14	Origins of Specificity and Promiscuity in Metabolic Networks. <i>Journal of Biological Chemistry</i> , 2011, 286, 43994-44004.	1.6	68
15	Synthetic biology for pharmaceutical drug discovery. <i>Drug Design, Development and Therapy</i> , 2015, 9, 6285.	2.0	66
16	SensiPath: computer-aided design of sensing-enabling metabolic pathways. <i>Nucleic Acids Research</i> , 2016, 44, W226-W231.	6.5	60
17	Bioinformatics for the synthetic biology of natural products: integrating across the Design-Build-Test cycle. <i>Natural Product Reports</i> , 2016, 33, 925-932.	5.2	58
18	Enumerating metabolic pathways for the production of heterologous target chemicals in chassis organisms. <i>BMC Systems Biology</i> , 2012, 6, 10.	3.0	57

#	ARTICLE	IF	CITATIONS
19	Semisupervised Gaussian Process for Automated Enzyme Search. <i>ACS Synthetic Biology</i> , 2016, 5, 518-528.	1.9	57
20	Changes in the gene expression profile of <i>Arabidopsis thaliana</i> after infection with Tobacco etch virus. <i>Virology Journal</i> , 2008, 5, 92.	1.4	54
21	Validation of RetroPath, a computer-aided design tool for metabolic pathway engineering. <i>Biotechnology Journal</i> , 2014, 9, 1446-1457.	1.8	53
22	Nonlinear control of a pneumatic muscle actuator: backstepping vs. sliding-mode. , 0, , .		51
23	Stereo Signature Molecular Descriptor. <i>Journal of Chemical Information and Modeling</i> , 2013, 53, 887-897.	2.5	51
24	Compound toxicity screening and structure-activity relationship modeling in <i>Escherichia coli</i> . <i>Biotechnology and Bioengineering</i> , 2012, 109, 846-850.	1.7	50
25	Rapid prototyping of microbial production strains for the biomanufacture of potential materials monomers. <i>Metabolic Engineering</i> , 2020, 60, 168-182.	3.6	48
26	Handbook of Chemoinformatics Algorithms. , 0, , .		47
27	Engineering <i>Escherichia coli</i> towards de novo production of gatekeeper (2S)-flavanones: naringenin, pinocembrin, eriodictyol and homoeriodictyol. <i>Synthetic Biology</i> , 2020, 5, ysaa012.	1.2	45
28	Characterization of PsMPK2, the first C1 subgroup MAP kinase from pea (<i>Pisum sativum</i> L.). <i>Planta</i> , 2008, 227, 1333-1342.	1.6	43
29	Automated engineering of synthetic metabolic pathways for efficient biomanufacturing. <i>Metabolic Engineering</i> , 2021, 63, 61-80.	3.6	38
30	Energetic determinants of protein binding specificity: Insights into protein interaction networks. <i>Proteomics</i> , 2009, 9, 1744-1753.	1.3	37
31	SelProm: A Queryable and Predictive Expression Vector Selection Tool for <i>Escherichia coli</i> . <i>ACS Synthetic Biology</i> , 2019, 8, 1478-1483.	1.9	37
32	Highly multiplexed, fast and accurate nanopore sequencing for verification of synthetic DNA constructs and sequence libraries. <i>Synthetic Biology</i> , 2019, 4, ysz025.	1.2	35
33	biochem4j: Integrated and extensible biochemical knowledge through graph databases. <i>PLoS ONE</i> , 2017, 12, e0179130.	1.1	31
34	Engineering antibiotic production and overcoming bacterial resistance. <i>Biotechnology Journal</i> , 2011, 6, 812-825.	1.8	30
35	Extended Metabolic Biosensor Design for Dynamic Pathway Regulation of Cell Factories. <i>IScience</i> , 2020, 23, 101305.	1.9	30
36	The Modular Organization of Domain Structures: Insights into Protein-Protein Binding. <i>PLoS Computational Biology</i> , 2007, 3, e239.	1.5	28

#	ARTICLE	IF	CITATIONS
37	Integrated structure- and ligand-based <i>in silico</i> approach to predict inhibition of cytochrome P450 2D6. <i>Bioinformatics</i> , 2015, 31, 3930-3937.	1.8	27
38	Computer-aided design for metabolic engineering. <i>Journal of Biotechnology</i> , 2014, 192, 302-313.	1.9	26
39	PartsGenie: an integrated tool for optimizing and sharing synthetic biology parts. <i>Bioinformatics</i> , 2018, 34, 2327-2329.	1.8	25
40	A fuzzy backstepping controller for a pneumatic muscle actuator system. , 0, , .		24
41	InSilicoSpectro: An Open-Source Proteomics Library. <i>Journal of Proteome Research</i> , 2006, 5, 619-624.	1.8	24
42	In silico design and automated learning to boost next-generation smart biomanufacturing. <i>Synthetic Biology</i> , 2020, 5, ysaa020.	1.2	23
43	In Silico Mechanistic Profiling to Probe Small Molecule Binding to Sulfotransferases. <i>PLoS ONE</i> , 2013, 8, e73587.	1.1	23
44	A retrosynthetic biology approach to therapeutics: from conception to delivery. <i>Current Opinion in Biotechnology</i> , 2012, 23, 948-956.	3.3	21
45	Fast biofoundries: coping with the challenges of biomanufacturing. <i>Trends in Biotechnology</i> , 2022, 40, 831-842.	4.9	20
46	Retrosynthetic Design of Heterologous Pathways. <i>Methods in Molecular Biology</i> , 2013, 985, 149-173.	0.4	17
47	Leukemic transformation driven by an ASXL1 mutation after a JAK2V617F-positive primary myelofibrosis: clonal evolution and hierarchy revealed by next-generation sequencing. <i>Journal of Hematology and Oncology</i> , 2013, 6, 68.	6.9	14
48	Molecular structures enumeration and virtual screening in the chemical space with RetroPath2.0. <i>Journal of Cheminformatics</i> , 2017, 9, 64.	2.8	13
49	Hepatotoxicity prediction by systems biology modeling of disturbed metabolic pathways using gene expression data. <i>ALTEX: Alternatives To Animal Experimentation</i> , 2017, 34, 219-234.	0.9	13
50	A Sense of Balance: Experimental Investigation and Modeling of a Malonyl-CoA Sensor in <i>Escherichia coli</i> . <i>Frontiers in Bioengineering and Biotechnology</i> , 2015, 3, 46.	2.0	11
51	Mapping the patent landscape of synthetic biology for fine chemical production pathways. <i>Microbial Biotechnology</i> , 2016, 9, 687-695.	2.0	11
52	Identification of major malate export systems in an engineered malate-producing <i>Escherichia coli</i> aided by substrate similarity search. <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 9001-9011.	1.7	10
53	SynBiopython: an open-source software library for <i>Synthetic Biology</i> . <i>Synthetic Biology</i> , 2021, 6, .	1.2	9
54	Methyl side-chain dynamics prediction based on protein structure. <i>Bioinformatics</i> , 2009, 25, 2552-2558.	1.8	8

#	ARTICLE	IF	CITATIONS
55	Overcoming drug resistance through in silico prediction. <i>Drug Discovery Today: Technologies</i> , 2014, 11, 101-107.	4.0	8
56	Computational Protein Design Methods for Synthetic Biology. <i>Methods in Molecular Biology</i> , 2015, 1244, 3-21.	0.4	8
57	On the suppression of flow-induced vibration with a simple control algorithm. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2003, 8, 49-64.	1.7	7
58	Synergistic Synthetic Biology: Units in Concert. <i>Frontiers in Bioengineering and Biotechnology</i> , 2013, 1, 11.	2.0	7
59	SYNBIOCHEM—a SynBio foundry for the biosynthesis and sustainable production of fine and speciality chemicals. <i>Biochemical Society Transactions</i> , 2016, 44, 675-677.	1.6	7
60	Reaction Network Generation. <i>Chapman & Hall/CRC Mathematical and Computational Biology Series</i> , 2010, , 317-341.	0.1	7
61	Editorial “Synthetic Biology: Engineering Complexity and Refactoring Cell Capabilities. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015, 3, 120.	2.0	6
62	SYNBIOCHEM Synthetic Biology Research Centre, Manchester “A UK foundry for fine and speciality chemicals production. <i>Synthetic and Systems Biotechnology</i> , 2016, 1, 271-275.	1.8	6
63	Fuzzy gain scheduling control of switch-mode DC/DC converters. , 0, , .		5
64	Sensibility study of the control loops of voltage and current mode controlled DC-DC converters by means of robust parametric control theory. , 0, , .		5
65	Efficient learning in metabolic pathway designs through optimal assembling. <i>IFAC-PapersOnLine</i> , 2019, 52, 7-12.	0.5	5
66	Blood Glucose Estimation From Voice: First Review of Successes and Challenges. <i>Journal of Voice</i> , 2022, 36, 737.e1-737.e10.	0.6	5
67	Local model-based fuzzy control of switch-mode DC/DC converters. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 1999, 32, 5404-5409.	0.4	3
68	Prototyping of microbial chassis for the biomanufacturing of high-value chemical targets. <i>Biochemical Society Transactions</i> , 2021, 49, 1055-1063.	1.6	3
69	FUZZY TCP: A PRELIMINARY STUDY. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2002, 35, 205-210.	0.4	2
70	Enzyme Discovery: Enzyme Selection and Pathway Design. <i>Methods in Enzymology</i> , 2018, 608, 3-27.	0.4	2
71	Hepatotoxicity Prediction by Systems Biology Modeling of Disturbed Metabolic Pathways Using Gene Expression Data. <i>Methods in Molecular Biology</i> , 2018, 1800, 505-518.	0.4	2
72	Synthetic biology design tools for metabolic engineering. , 2021, , 65-77.		2

#	ARTICLE	IF	CITATIONS
73	Getting on the Path to Engineering Biology. Learning Materials in Biosciences, 2019, , 3-10.	0.2	2
74	Extended Metabolic Space Modeling. Methods in Molecular Biology, 2018, 1671, 83-96.	0.4	1
75	Enzyme Discovery and Selection. Learning Materials in Biosciences, 2019, , 63-81.	0.2	1
76	Nonlinear Control of a Pneumatic Muscle Actuator System. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 1129-1134.	0.4	0
77	Fuzzy Logic Applications in Control Theory and Systems Biology. Advances in Fuzzy Systems, 2013, 2013, 1-1.	0.6	0
78	Aplicaciones de técnicas de modelos locales en sistemas complejos. Inteligencia Artificial, 2000, 4, .	0.5	0
79	Pathway Selection. Learning Materials in Biosciences, 2019, , 99-113.	0.2	0
80	Genome-Scale Modeling. Learning Materials in Biosciences, 2019, , 11-26.	0.2	0
81	Pathway Discovery. Learning Materials in Biosciences, 2019, , 83-97.	0.2	0
82	Pathway Modeling. Learning Materials in Biosciences, 2019, , 27-44.	0.2	0
83	A retrobiosynthetic approach for production, conversion, sensing, dynamic regulation and degradation of molecules. , 2022, , 205-214.		0