Pablo Carbonell

List of Publications by Year in descending order

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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	Blood Glucose Estimation From Voice: First Review of Successes and Challenges. Journal of Voice, 2022, 36, 737.e1-737.e10.	0.6	5
2	Fast biofoundries: coping with the challenges of biomanufacturing. Trends in Biotechnology, 2022, 40, 831-842.	4.9	20
3	A retrobiosynthetic approach for production, conversion, sensing, dynamic regulation and degradation of molecules. , 2022, , 205-214.		0
4	Automated engineering of synthetic metabolic pathways for efficient biomanufacturing. Metabolic Engineering, 2021, 63, 61-80.	3.6	38
5	Synthetic biology design tools for metabolic engineering. , 2021, , 65-77.		2
6	SynBiopython: an open-source software library for Synthetic Biology. Synthetic Biology, 2021, 6, .	1.2	9
7	Prototyping of microbial chassis for the biomanufacturing of high-value chemical targets. Biochemical Society Transactions, 2021, 49, 1055-1063.	1.6	3
8	In silico design and automated learning to boost next-generation smart biomanufacturing. Synthetic Biology, 2020, 5, ysaa020.	1.2	23
9	Extended Metabolic Biosensor Design for Dynamic Pathway Regulation of Cell Factories. IScience, 2020, 23, 101305.	1.9	30
10	Engineering Escherichia coli towards de novo production of gatekeeper (2S)-flavanones: naringenin, pinocembrin, eriodictyol and homoeriodictyol. Synthetic Biology, 2020, 5, ysaa012.	1.2	45
11	Rapid prototyping of microbial production strains for the biomanufacture of potential materials monomers. Metabolic Engineering, 2020, 60, 168-182.	3.6	48
12	Opportunities at the Intersection of Synthetic Biology, Machine Learning, and Automation. ACS Synthetic Biology, 2019, 8, 1474-1477.	1.9	95
13	Identification of major malate export systems in an engineered malate-producing Escherichia coli aided by substrate similarity search. Applied Microbiology and Biotechnology, 2019, 103, 9001-9011.	1.7	10
14	Highly multiplexed, fast and accurate nanopore sequencing for verification of synthetic DNA constructs and sequence libraries. Synthetic Biology, 2019, 4, ysz025.	1.2	35
15	SelProm: A Queryable and Predictive Expression Vector Selection Tool for Escherichia coli. ACS Synthetic Biology, 2019, 8, 1478-1483.	1.9	37
16	Efficient learning in metabolic pathway designs through optimal assembling. IFAC-PapersOnLine, 2019, 52, 7-12.	0.5	5
17	Pathways to cellular supremacy in biocomputing. Nature Communications, 2019, 10, 5250.	5.8	88
18	Machine Learning of Designed Translational Control Allows Predictive Pathway Optimization in Escherichia coli. ACS Synthetic Biology, 2019, 8, 127-136.	1.9	88

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19	RetroRules: a database of reaction rules for engineering biology. Nucleic Acids Research, 2019, 47, D1229-D1235.	6.5	74
20	Enzyme Discovery and Selection. Learning Materials in Biosciences, 2019, , 63-81.	0.2	1
21	Pathway Selection. Learning Materials in Biosciences, 2019, , 99-113.	0.2	0
22	Genome-Scale Modeling. Learning Materials in Biosciences, 2019, , 11-26.	0.2	0
23	Pathway Discovery. Learning Materials in Biosciences, 2019, , 83-97.	0.2	0
24	Pathway Modeling. Learning Materials in Biosciences, 2019, , 27-44.	0.2	0
25	Getting on the Path to Engineering Biology. Learning Materials in Biosciences, 2019, , 3-10.	0.2	2
26	PartsGenie: an integrated tool for optimizing and sharing synthetic biology parts. Bioinformatics, 2018, 34, 2327-2329.	1.8	25
27	Selenzyme: enzyme selection tool for pathway design. Bioinformatics, 2018, 34, 2153-2154.	1.8	75
28	Extended Metabolic Space Modeling. Methods in Molecular Biology, 2018, 1671, 83-96.	0.4	1
29	RetroPath2.0: A retrosynthesis workflow for metabolic engineers. Metabolic Engineering, 2018, 45, 158-170.	3.6	174
30	Enzyme Discovery: Enzyme Selection and Pathway Design. Methods in Enzymology, 2018, 608, 3-27.	0.4	2
31	Hepatotoxicity Prediction by Systems Biology Modeling of Disturbed Metabolic Pathways Using Gene Expression Data. Methods in Molecular Biology, 2018, 1800, 505-518.	0.4	2
32	An automated Design-Build-Test-Learn pipeline for enhanced microbial production of fine chemicals. Communications Biology, 2018, 1, 66.	2.0	159
33	biochem4j: Integrated and extensible biochemical knowledge through graph databases. PLoS ONE, 2017, 12, e0179130.	1.1	31
34	Molecular structures enumeration and virtual screening in the chemical space with RetroPath2.0. Journal of Cheminformatics, 2017, 9, 64.	2.8	13
35	Hepatotoxicity prediction by systems biology modeling of disturbed metabolic pathways using gene expression data. ALTEX: Alternatives To Animal Experimentation, 2017, 34, 219-234.	0.9	13
36	Bioinformatics for the synthetic biology of natural products: integrating across the Designâ€“Buildâ€“Test cycle. Natural Product Reports, 2016, 33, 925-932.	5.2	58

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37	SYNBIOCHEMâ€“a SynBio foundry for the biosynthesis and sustainable production of fine and speciality chemicals. Biochemical Society Transactions, 2016, 44, 675-677.	1.6	7
38	Mapping the patent landscape of synthetic biology for fine chemical production pathways. Microbial Biotechnology, 2016, 9, 687-695.	2.0	11
39	SYNBIOCHEM Synthetic Biology Research Centre, Manchester â€“ A UK foundry for fine and speciality chemicals production. Synthetic and Systems Biotechnology, 2016, 1, 271-275.	1.8	6
40	SensiPath: computer-aided design of sensing-enabling metabolic pathways. Nucleic Acids Research, 2016, 44, W226-W231.	6.5	60
41	Semisupervised Gaussian Process for Automated Enzyme Search. ACS Synthetic Biology, 2016, 5, 518-528.	1.9	57
42	Synthetic biology for pharmaceutical drug discovery. Drug Design, Development and Therapy, 2015, 9, 6285.	2.0	66
43	A Sense of Balance: Experimental Investigation and Modeling of a Malonyl-CoA Sensor in Escherichia coli. Frontiers in Bioengineering and Biotechnology, 2015, 3, 46.	2.0	11
44	Editorial â€“ Synthetic Biology: Engineering Complexity and Refactoring Cell Capabilities. Frontiers in Bioengineering and Biotechnology, 2015, 3, 120.	2.0	6
45	Integrated structure- and ligand-based in silico approach to predict inhibition of cytochrome P450 2D6. Bioinformatics, 2015, 31, 3930-3937.	1.8	27
46	Computational Protein Design Methods for Synthetic Biology. Methods in Molecular Biology, 2015, 1244, 3-21.	0.4	8
47	XTMS: pathway design in an eXTended metabolic space. Nucleic Acids Research, 2014, 42, W389-W394.	6.5	96
48	Overcoming drug resistance through in silico prediction. Drug Discovery Today: Technologies, 2014, 11, 101-107.	4.0	8
49	Computer-aided design for metabolic engineering. Journal of Biotechnology, 2014, 192, 302-313.	1.9	26
50	Retropath: Automated Pipeline for Embedded Metabolic Circuits. ACS Synthetic Biology, 2014, 3, 565-577.	1.9	76
51	Validation of RetroPath, a computerâ€aided design tool for metabolic pathway engineering. Biotechnology Journal, 2014, 9, 1446-1457.	1.8	53
52	Leukemic transformation driven by an ASXL1 mutation after a JAK2V617F-positive primary myelofibrosis: clonal evolution and hierarchy revealed by next-generation sequencing. Journal of Hematology and Oncology, 2013, 6, 68.	6.9	14
53	Retrosynthetic Design of Heterologous Pathways. Methods in Molecular Biology, 2013, 985, 149-173.	0.4	17
54	Stereo Signature Molecular Descriptor. Journal of Chemical Information and Modeling, 2013, 53, 887-897.	2.5	51

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55	Synergistic Synthetic Biology: Units in Concert. Frontiers in Bioengineering and Biotechnology, 2013, 1, 11.	2.0	7
56	Fuzzy Logic Applications in Control Theory and Systems Biology. Advances in Fuzzy Systems, 2013, 2013, 1-1.	0.6	0
57	In Silico Mechanistic Profiling to Probe Small Molecule Binding to Sulfotransferases. PLoS ONE, 2013, 8, e73587.	1.1	23
58	A retrosynthetic biology approach to therapeutics: from conception to delivery. Current Opinion in Biotechnology, 2012, 23, 948-956.	3.3	21
59	Enumerating metabolic pathways for the production of heterologous target chemicals in chassis organisms. BMC Systems Biology, 2012, 6, 10.	3.0	57
60	Compound toxicity screening and structureâ€“activity relationship modeling in Escherichia coli. Biotechnology and Bioengineering, 2012, 109, 846-850.	1.7	50
61	Origins of Specificity and Promiscuity in Metabolic Networks. Journal of Biological Chemistry, 2011, 286, 43994-44004.	1.6	68
62	Engineering antibiotic production and overcoming bacterial resistance. Biotechnology Journal, 2011, 6, 812-825.	1.8	30
63	A retrosynthetic biology approach to metabolic pathway design for therapeutic production. BMC Systems Biology, 2011, 5, 122.	3.0	100
64	Molecular signatures-based prediction of enzyme promiscuity. Bioinformatics, 2010, 26, 2012-2019.	1.8	72
65	Reaction Network Generation. Chapman & Hall/CRC Mathematical and Computational Biology Series, 2010, , 317-341.	0.1	7
66	Methyl side-chain dynamics prediction based on protein structure. Bioinformatics, 2009, 25, 2552-2558.	1.8	8
67	Energetic determinants of protein binding specificity: Insights into protein interaction networks. Proteomics, 2009, 9, 1744-1753.	1.3	37
68	Characterization of PsMPK2, the first C1 subgroup MAP kinase from pea (Pisum sativum L.). Planta, 2008, 227, 1333-1342.	1.6	43
69	Changes in the gene expression profile of Arabidopsis thaliana after infection with Tobacco etch virus. Virology Journal, 2008, 5, 92.	1.4	54
70	Virus Adaptation by Manipulation of Host's Gene Expression. PLoS ONE, 2008, 3, e2397.	1.1	79
71	The Modular Organization of Domain Structures: Insights into Proteinâ€“Protein Binding. PLoS Computational Biology, 2007, 3, e239.	1.5	28
72	The lithium tolerance of the Arabidopsis cat2 mutant reveals a crossâ€talk between oxidative stress and ethylene. Plant Journal, 2007, 52, 1052-1065.	2.8	91

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73	InSilicoSpectro:Â An Open-Source Proteomics Library. Journal of Proteome Research, 2006, 5, 619-624.	1.8	24
74	On the suppression of flow-induced vibration with a simple control algorithm. Communications in Nonlinear Science and Numerical Simulation, 2003, 8, 49-64.	1.7	7
75	FUZZY TCP: A PRELIMINARY STUDY. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 205-210.	0.4	2
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	Aplicaciones de tÃ©cnicas de modelos locales en sistemas complejos. Inteligencia Artificial, 2000, 4, .	0.5	0
78	Local model-based fuzzy control of switch-mode DC/DC converters. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1999, 32, 5404-5409.	0.4	3
79	Fuzzy gain scheduling control of switch-mode DC/DC converters. , 0, , .		5
80	Sensibility study of the control loops of voltage and current mode controlled DC-DC converters by means of robust parametric control theory. , 0, , .		5
81	Nonlinear control of a pneumatic muscle actuator: backstepping vs. sliding-mode. , 0, , .		51
82	A fuzzy backstepping controller for a pneumatic muscle actuator system. , 0, , .		24
83	Handbook of Chemoinformatics Algorithms. , 0, , .		47