Jose L Avalos

List of Publications by Year
in descending order

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43 papers	4,285 citations	236925 25 h-index	254184 43 g-index
51 all docs	51 docs citations	51 times ranked	4661 citing authors

#	Article	IF	Citations
1	A phylogenetically conserved NAD+-dependent protein deacetylase activity in the Sir2 protein family. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 6658-6663.	7.1	678
2	Compartmentalization of metabolic pathways in yeast mitochondria improves the production of branched-chain alcohols. Nature Biotechnology, 2013, 31, 335-341.	17.5	412
3	Mechanism of Sirtuin Inhibition by Nicotinamide: Altering the NAD+ Cosubstrate Specificity of a Sir2 Enzyme. Molecular Cell, 2005, 17, 855-868.	9.7	408
4	Mapping Local and Global Liquid Phase Behavior in Living Cells Using Photo-Oligomerizable Seeds. Cell, 2018, 175, 1467-1480.e13.	28.9	330
5	Crystal Structure of the Eukaryotic Strong Inward-Rectifier K ⁺ Channel Kir2.2 at 3.1 Ã… Resolution. Science, 2009, 326, 1668-1674.	12.6	311
6	Optogenetic regulation of engineered cellular metabolism for microbial chemical production. Nature, 2018, 555, 683-687.	27.8	266
7	Structure of a Sir2 Enzyme Bound to an Acetylated p53 Peptide. Molecular Cell, 2002, 10, 523-535.	9.7	225
8	Light-based control of metabolic flux through assembly of synthetic organelles. Nature Chemical Biology, 2019, 15, 589-597.	8.0	176
9	Harnessing yeast organelles for metabolic engineering. Nature Chemical Biology, 2017, 13, 823-832.	8.0	152
10	Structural Basis for the Mechanism and Regulation of Sir2 Enzymes. Molecular Cell, 2004, 13, 639-648.	9.7	142
11	Insights into the Sirtuin Mechanism from Ternary Complexes Containing NAD+ and Acetylated Peptide. Structure, 2006, 14, 1231-1240.	3.3	123
12	Optogenetic control of protein binding using light-switchable nanobodies. Nature Communications, 2020, 11, 4044.	12.8	91
13	Current and future modalities of dynamic control in metabolic engineering. Current Opinion in Biotechnology, 2018, 52, 56-65.	6.6	84
14	The Structural Basis of Sirtuin Substrate Affinity[,]. Biochemistry, 2006, 45, 7511-7521.	2.5	83
15	Optogenetic control of the lac operon for bacterial chemical and protein production. Nature Chemical Biology, 2021, 17, 71-79.	8.0	80
16	Physiological limitations and opportunities in microbial metabolic engineering. Nature Reviews Microbiology, 2022, 20, 35-48.	28.6	53
17	Embracing Biological Solutions to the Sustainable Energy Challenge. CheM, 2017, 2, 20-51.	11.7	51
18	SIR2 Family of NAD+-Dependent Protein Deacetylases. Methods in Enzymology, 2002, 353, 282-300.	1.0	47

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19	Xylose assimilation enhances the production of isobutanol in engineered <i>Saccharomyces cerevisiae</i>. Biotechnology and Bioengineering, 2020, 117, 372-381.	3.3	43
20	Uncovering the role of branched-chain amino acid transaminases in Saccharomyces cerevisiae isobutanol biosynthesis. Metabolic Engineering, 2017, 44, 302-312.	7.0	42
21	Optogenetics and biosensors set the stage for metabolic cybergenetics. Current Opinion in Biotechnology, 2020, 65, 296-309.	6.6	42
22	Optogenetic Amplification Circuits for Light-Induced Metabolic Control. ACS Synthetic Biology, 2021, 10, 1143-1154.	3.8	42
23	Development of light-responsive protein binding in the monobody non-immunoglobulin scaffold. Nature Communications, 2020, 11, 4045.	12.8	39
24	Xylose utilization stimulates mitochondrial production of isobutanol and 2-methyl-1-butanol in Saccharomyces cerevisiae. Biotechnology for Biofuels, 2019, 12, 223.	6.2	38
25	Design and Characterization of Rapid Optogenetic Circuits for Dynamic Control in Yeast Metabolic Engineering. ACS Synthetic Biology, 2020, 9, 3254-3266.	3.8	34
26	Optogenetic Control of Microbial Consortia Populations for Chemical Production. ACS Synthetic Biology, 2021, 10, 2015-2029.	3.8	30
27	Critical Roles of the Pentose Phosphate Pathway and GLN3 in Isobutanol-Specific Tolerance in Yeast. Cell Systems, 2019, 9, 534-547.e5.	6.2	28
28	Mitochondrial Compartmentalization Confers Specificity to the 2-Ketoacid Recursive Pathway: Increasing Isopentanol Production in <i>Saccharomyces cerevisiae</i>. ACS Synthetic Biology, 2020, 9, 546-555.	3.8	26
29	Biosensor for branched-chain amino acid metabolism in yeast and applications in isobutanol and isopentanol production. Nature Communications, 2022, 13, 270.	12.8	22
30	Anode co-valorization for scalable and sustainable electrolysis. Green Chemistry, 2021, 23, 7917-7936.	9.0	16
31	Metabolic pathway engineering. Synthetic and Systems Biotechnology, 2018, 3, 1-2.	3.7	15
32	Â¡Viva la mitochondria!: harnessing yeast mitochondria for chemical production. FEMS Yeast Research, 2020, 20, .	2.3	15
33	Partial Observations and Conservation Laws: Gray-Box Modeling in Biotechnology and Optogenetics. Industrial & Engineering Chemistry Research, 2020, 59, 2611-2620.	3.7	15
34	Lights up on organelles: Optogenetic tools to control subcellular structure and organization. WIREs Mechanisms of Disease, 2021, 13, e1500.	3.3	13
35	Cellulosic biofuel production using emulsified simultaneous saccharification and fermentation (eSSF) with conventional and thermotolerant yeasts. Biotechnology for Biofuels, 2021, 14, 157.	6.2	13
36	Traditional and novel tools to probe the mitochondrial metabolism in health and disease. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2017, 9, e1373.	6.6	12

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37	Engineering acetyl-CoA supply and <i>ERG9</i> repression to enhance mevalonate production in <i>Saccharomyces cerevisiae</i>. Journal of Industrial Microbiology and Biotechnology, 2021, 48, .	3.0	11
38	The <i>Neurospora crassa</i> Inducible Q System Enables Simultaneous Optogenetic Amplification and Inversion in <i>Saccharomyces cerevisiae</i> for Bidirectional Control of Gene Expression. ACS Synthetic Biology, 2021, 10, 2060-2075.	3.8	11
39	Optogenetics Illuminates Applications in Microbial Engineering. Annual Review of Chemical and Biomolecular Engineering, 2022, 13, 373-403.	6.8	11
40	Dynamical Modeling of Optogenetic Circuits in Yeast for Metabolic Engineering Applications. ACS Synthetic Biology, 2021, 10, 219-227.	3.8	9
41	Biosensors get the green light. Nature Chemical Biology, 2016, 12, 894-895.	8.0	2
42	Genetically engineered yeast makes medicinal plant products. Nature, 2020, 585, 504-505.	27.8	1
43	Light-Controlled Fermentations for Microbial Chemical and Protein Production. Journal of Visualized Experiments, 2022, , .	0.3	0