# Jose L Avalos

## List of Publications by Citations

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|---|---|---|---|
| 40<br>papers | 3,085<br>citations | 20<br>h-index | 51<br>g-index |
| 51<br>ext. papers | 3,734<br>ext. citations | 13.2<br>avg, IF | 5.52<br>L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 40 | 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, 6658-63 | 11.5 | 622 |
| 39 | Mechanism of sirtuin inhibition by nicotinamide: altering the NAD(+) cosubstrate specificity of a Sir2 enzyme. *Molecular Cell*, **2005**, 17, 855-68 | 17.6 | 358 |
| 38 | Compartmentalization of metabolic pathways in yeast mitochondria improves the production of branched-chain alcohols. *Nature Biotechnology*, **2013**, 31, 335-41 | 44.5 | 332 |
| 37 | Crystal structure of the eukaryotic strong inward-rectifier K+ channel Kir2.2 at 3.1 A resolution. *Science*, **2009**, 326, 1668-74 | 33.3 | 274 |
| 36 | Structure of a Sir2 enzyme bound to an acetylated p53 peptide. *Molecular Cell*, **2002**, 10, 523-35 | 17.6 | 210 |
| 35 | Mapping Local and Global Liquid Phase Behavior in Living Cells Using Photo-Oligomerizable Seeds. *Cell*, **2018**, 175, 1467-1480.e13 | 56.2 | 193 |
| 34 | Optogenetic regulation of engineered cellular metabolism for microbial chemical production. *Nature*, **2018**, 555, 683-687 | 50.4 | 166 |
| 33 | Structural basis for the mechanism and regulation of Sir2 enzymes. *Molecular Cell*, **2004**, 13, 639-48 | 17.6 | 119 |
| 32 | Insights into the sirtuin mechanism from ternary complexes containing NAD+ and acetylated peptide. *Structure*, **2006**, 14, 1231-40 | 5.2 | 115 |
| 31 | Light-based control of metabolic flux through assembly of synthetic organelles. *Nature Chemical Biology*, **2019**, 15, 589-597 | 11.7 | 85 |
| 30 | Harnessing yeast organelles for metabolic engineering. *Nature Chemical Biology*, **2017**, 13, 823-832 | 11.7 | 84 |
| 29 | The structural basis of sirtuin substrate affinity. *Biochemistry*, **2006**, 45, 7511-21 | 3.2 | 80 |
| 28 | Current and future modalities of dynamic control in metabolic engineering. *Current Opinion in Biotechnology*, **2018**, 52, 56-65 | 11.4 | 52 |
| 27 | SIR2 family of NAD(+)-dependent protein deacetylases. *Methods in Enzymology*, **2002**, 353, 282-300 | 1.7 | 43 |
| 26 | Optogenetic control of protein binding using light-switchable nanobodies. *Nature Communications*, **2020**, 11, 4044 | 17.4 | 43 |
| 25 | Uncovering the role of branched-chain amino acid transaminases in Saccharomyces cerevisiae isobutanol biosynthesis. *Metabolic Engineering*, **2017**, 44, 302-312 | 9.7 | 32 |
| 24 | Embracing Biological Solutions to the Sustainable Energy Challenge. *CheM*, **2017**, 2, 20-51 | 16.2 | 31 |

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| 23 | Optogenetic control of the lac operon for bacterial chemical and protein production. *Nature Chemical Biology*, **2021**, 17, 71-79 | 11.7 | 30 |
| 22 | Xylose assimilation enhances the production of isobutanol in engineered Saccharomyces cerevisiae. *Biotechnology and Bioengineering*, **2020**, 117, 372-381 | 4.9 | 24 |
| 21 | Xylose utilization stimulates mitochondrial production of isobutanol and 2-methyl-1-butanol in. *Biotechnology for Biofuels*, **2019**, 12, 223 | 7.8 | 21 |
| 20 | Critical Roles of the Pentose Phosphate Pathway and GLN3 in Isobutanol-Specific Tolerance in Yeast. *Cell Systems*, **2019**, 9, 534-547.e5 | 10.6 | 18 |
| 19 | Optogenetics and biosensors set the stage for metabolic cybergenetics. *Current Opinion in Biotechnology*, **2020**, 65, 296-309 | 11.4 | 18 |
| 18 | Design and Characterization of Rapid Optogenetic Circuits for Dynamic Control in Yeast Metabolic Engineering. *ACS Synthetic Biology*, **2020**, 9, 3254-3266 | 5.7 | 16 |
| 17 | Development of light-responsive protein binding in the monobody non-immunoglobulin scaffold. *Nature Communications*, **2020**, 11, 4045 | 17.4 | 16 |
| 16 | Mitochondrial Compartmentalization Confers Specificity to the 2-Ketoacid Recursive Pathway: Increasing Isopentanol Production in. *ACS Synthetic Biology*, **2020**, 9, 546-555 | 5.7 | 14 |
| 15 | Optogenetic Amplification Circuits for Light-Induced Metabolic Control. *ACS Synthetic Biology*, **2021** , 10, 1143-1154 | 5.7 | 12 |
| 14 | 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 | 11 |
| 13 | Physiological limitations and opportunities in microbial metabolic engineering. *Nature Reviews Microbiology*, **2022**, 20, 35-48 | 22.2 | 8 |
| 12 | Optogenetic control of protein binding using light-switchable nanobodies | | 5 |
| 11 | ¡Viva la mitochondria!: harnessing yeast mitochondria for chemical production. *FEMS Yeast Research* , **2020**, 20, | 3.1 | 4 |
| 10 | Lights up on organelles: Optogenetic tools to control subcellular structure and organization. *WIREs Mechanisms of Disease*, **2021**, 13, e1500 | 0.3 | 4 |
| 9 | Partial Observations and Conservation Laws: Gray-Box Modeling in Biotechnology and Optogenetics. *Industrial & Engineering Chemistry Research*, **2020**, 59, 2611-2620 | 3.9 | 3 |
| 8 | Dynamical Modeling of Optogenetic Circuits in Yeast for Metabolic Engineering Applications. *ACS Synthetic Biology*, **2021**, 10, 219-227 | 5.7 | 3 |
| 7 | Cellulosic biofuel production using emulsified simultaneous saccharification and fermentation (eSSF) with conventional and thermotolerant yeasts. *Biotechnology for Biofuels*, **2021**, 14, 157 | 7.8 | 3 |
| 6 | Optogenetic Control of Microbial Consortia Populations for Chemical Production. *ACS Synthetic Biology*, **2021**, 10, 2015-2029 | 5.7 | 3 |

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| 5 | Metabolic engineering: Biosensors get the green light. *Nature Chemical Biology*, **2016**, 12, 894-895 | 11.7 | 2 |
| 4 | The Inducible Q System Enables Simultaneous Optogenetic Amplification and Inversion in for Bidirectional Control of Gene Expression. *ACS Synthetic Biology*, **2021**, 10, 2060-2075 | 5.7 | 2 |
| 3 | Biosensor for branched-chain amino acid metabolism in yeast and applications in isobutanol and isopentanol production.. *Nature Communications*, **2022**, 13, 270 | 17.4 | 1 |
| 2 | Genetically encoded biosensors for branched-chain amino acid metabolism to monitor mitochondrial and cytosolic production of isobutanol and isopentanol in yeast | | 1 |
| 1 | Anode co-valorization for scalable and sustainable electrolysis. *Green Chemistry*, | 10 | 1 |