JBEI Publications - FY2024

Core Publications:

1. Leggieri P. A., Blair E. M., Lankiewicz T. S., O'Malley M. A. (2023) “Continuous culture of anaerobic fungi enables growth and metabolic flux tuning without use of genetic tools.” Bioresource technology. doi: 10.1016/j.biortech.2023.129854
2. Dwivedi N., Yamamoto S., Zhao Y., Hou G., Bowling F., Tobimatsu Y., Liu C. J. (2023) “Simultaneous suppression of lignin, tricin and wall-bound phenolic biosynthesis via the expression of monolignol 4-O-methyltransferases in rice.” Plant biotechnology journal. doi: 10.1111/pbi.14186
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4. Nava A., Roberts J., Haushalter R., Wang Z., Keasling J.D. (2023) "Module-based polyketide synthase engineering for de novo polyketide biosynthesis." ACS Synthetic Biology. doi: 10.1021/acssynbio.3c00282
5. Schmidt M., Lee N., Zhan C., Roberts J. B., Nava A. A., Keiser L. S., Vilchez A. A., Chen Y., Petzold C. J., Haushalter R. W., Blank L. M., Keasling J. D. (2023) “Maximizing Heterologous Expression of Engineered Type I Polyketide Synthases: Investigating Codon Optimization Strategies.” ACS synthetic biology. doi: 10.1021/acssynbio.3c00367
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8. Chainani Y., Bonnanzio G., Tyo KEJ, Broadbelt L.J. (2023) “Coupling chemistry and biology for the synthesis of advanced bioproducts.” Current Opinion in Biotechnology. doi: 10.1016/j.copbio.2023.102992
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10. Wang Y., Ryu J., Kim K.H., Meng X., Pu Y., Tian Y., Eudes A., Leem G., Ragauskas A.J., Yoo C.G. (2023) "Investigation of the Effects of Ternary Deep Eutectic Solvent Composition on Pretreatment of Sorghum Stover." AIChE Journal. doi: 10.1002/aic.18227

11. Chen X., Hudson G.A., Mineo C., Amer B., Baidoo E.E.K., Crowe S.A., Liu Y., Keasling J.D., Scheller H.V. (2023) “Deciphering triterpenoid saponin biosynthesis by leveraging transcriptome response to methyl jasmonate elicitation in Saponaria vaccaria.” Nat Commun. doi: 10.1038/s41467-023-42877-0
12. Kim J., Lee T.S. (2023) “Enhancing isoprenol production by systematically tuning metabolic pathways using CRISPR interference in E. coli.” Front. Bioeng. Biotechnol. doi: 10.3389/fbioe.2023.1296132
13. Backman T. W. H., Schenk C., Radivojevic T., Ando D., Singh J., Czajka J. J., Costello Z., Keasling J. D., Tang Y., Akhmatskaya E., Garcia Martin, H. (2023) “BayFlux: A Bayesian method to quantify metabolic Fluxes and their uncertainty at the genome scale.” PLoS computational biology. doi: 10.1371/journal.pcbi.1011111
14. Liu A. K., Kaeser B., Chen L., West-Roberts J., Taylor-Kearney L. J., Lavy A., Günzing D., Li W. J., Hammel M., Nogales E., Banfield J. F., Shih P. M. (2023) “Deep-branching evolutionary intermediates reveal structural origins of form I rubisco.” Current biology. doi: 10.1016/j.cub.2023.10.053
15. Scown C. D., Baral N. R., Tanjore D., Rapp, V. (2023) “Matching diverse feedstocks to conversion processes for the future bioeconomy.” Current opinion in biotechnology. doi: 10.1016/j.copbio.2023.103017
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18. Huang J., Keasling J. D. (2023) “Carbene chemistry for unnatural biosynthesis.” Science China Life sciences. doi: 10.1007/s11427-023-2470-5
19. Dou C., Choudhary H., Wang Z., Baral N.W., Mohan M., Aguilar R.A., Huang S., Holiday A., Banatao D.R., Singh S., Scown C.D., Keasling J.D., Simmons B.A., Sun N. (2023) “A hybrid chemical-biological approach can upcycle mixed plastic waste with reduced cost and carbon footprint.” One Earth. doi: 10.1016/j.oneear.2023.10.015
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21. Achinivu E.C., Blankenship B.W., Baral N.R., Choudhary H., Kakumanu R., Mohan M., Baidoo E.E.K., Scown C.D., George A., Simmons B.A., Gladden J. (2023) "Biomass pretreatment with distillable ionic liquids for an effective recycling and recovery approach." Chemical Engineering Journal. doi: 10.1016/j.cej.2023.147824
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26. Luckie B.A., Kashyap M., Pearson A.N., Chen Y., Liu Y., Valencia L.E., Carrillo Romero A., Hudson G.A., Tao X.B., Wu B., Petzold C.J., Keasling, J.D. (2023) “Development of Corynebacterium glutamicum as a monoterpene production platform.” Metabolic engineering. doi: 10.1016/j.ymben.2023.11.009
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28. Gautam S., Baral N.R., Mishra U., Scown C.D. (2023) “Impact of bioenergy feedstock carbon farming on sustainable aviation fuel viability in the United States.” Proceedings of the National Academy of Sciences of the United States of America. doi: 10.1073/pnas.2312667120
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31. Borchert A.J., Bleem A.C., Lim H.G., Rychel K., Dooley K.D., Kellermyer Z.A., Hodges T.L., Palsson B.O., Beckham G.T. (2024) “Machine learning analysis of RB-TnSeq fitness data predicts functional gene modules in Pseudomonas putida KT2440.” Appl and Env Microbiol. doi: 10.1128/msystems.00942-23
32. Roberts J. B., Nava A. A., Pearson A. N., Incha M. R., Valencia L. E., Ma M., Rao A., Keasling J. D. (2024) “Foldy: An open-source web application for interactive protein structure analysis.” PLoS computational biology. doi: 10.1371/journal.pcbi.1011171
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Enabled Publications

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