

## **Application of CRISPR genome editing for creating novel yeast cell factories**

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One of the major applications of synthetic biology is development of novel cell factories for sustainable production of bulk and specialty chemicals. The recent advances in CRISPR-based genome editing of yeast made construction of yeast cell factories cheaper and faster. These genetic tools facilitate iterative cycles of metabolic engineering, where the cellular metabolism is systematically re-wired towards higher titer, rate and yield of the target product(s). Oleaginous yeast *Yarrowia lipolytica* recently emerged as a workhorse for production of acetyl-CoA and fatty acid derived metabolites. I will present examples of engineering *Y. lipolytica* for production of carotenoid feed additives and fatty acid-derived products.