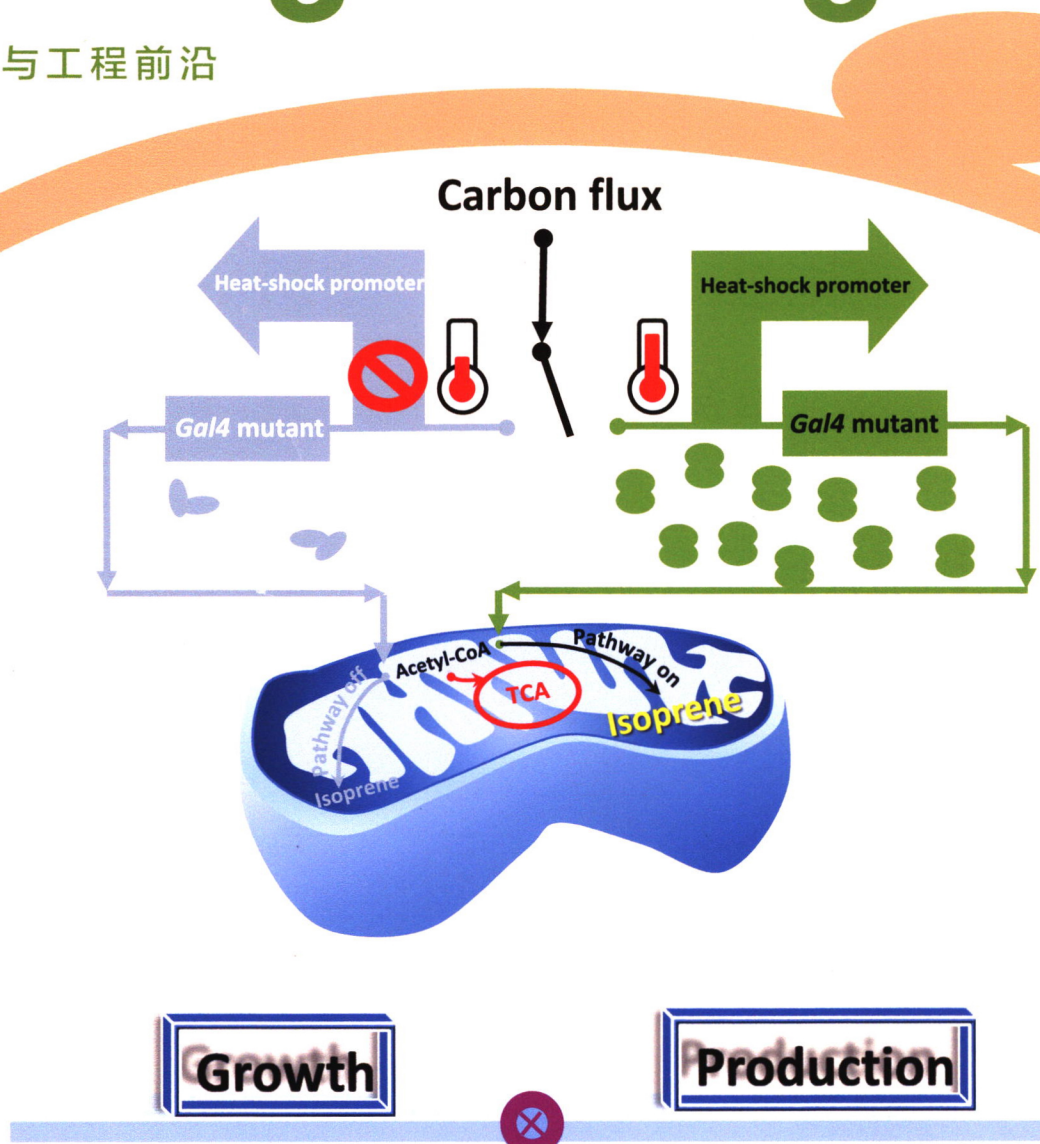




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- 1079** Development of a dual temperature control system for isoprene biosynthesis in *Saccharomyces cerevisiae*

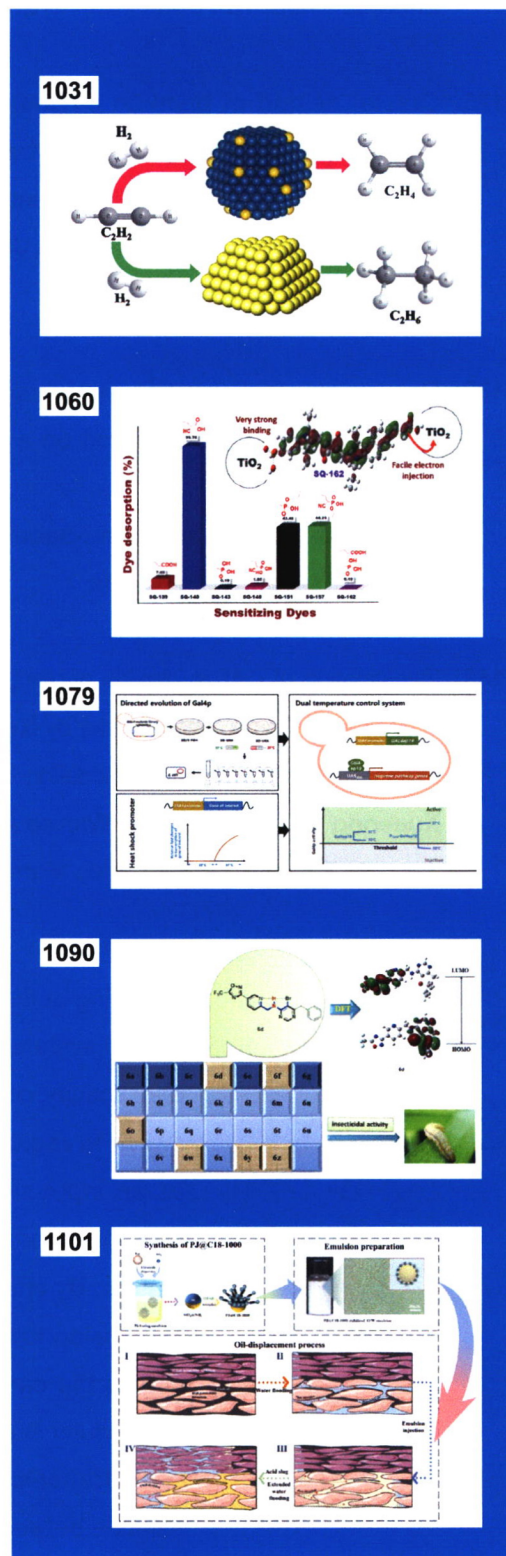
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1114 Ultrafine Fe-modulated Ni nanoparticles embedded within nitrogen-doped carbon from Zr-MOFs-confined conversion for efficient oxygen evolution reaction

Lingtao Kong, Zhouxun Li, Hui Zhang, Mengmeng Zhang, Jiaxing Zhu, Mingli Deng, Zhenxia Chen, Yun Ling, Yaming Zhou

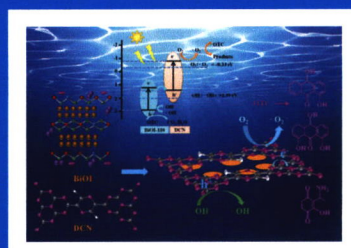
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1125 Crystal design of bismuth oxyiodide with highly exposed (110) facets on curved carbon nitride for the photocatalytic degradation of pollutants in wastewater

Jianxin Chen, Yupeng Li, Jihui Li, Jian Han, Guijun Zhu, Liang Ren

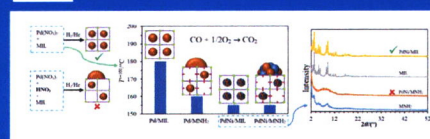
1125



1139 Conversion of CO into CO₂ by high active and stable PdNi nanoparticles supported on a metal–organic framework

Fateme Abbasi, Javad Karimi-Sabet, Zeinab Abbasi, Cyrus Ghotbi

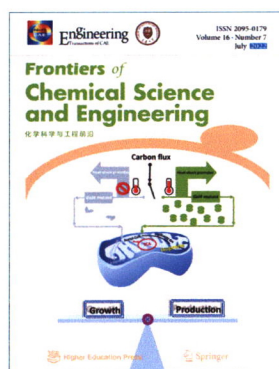
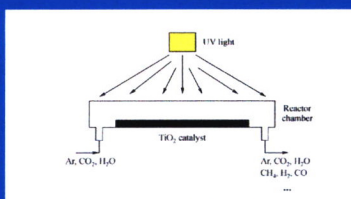
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1149 Investigation of carbon dioxide photoreduction process in a laboratory-scale photoreactor by computational fluid dynamic and reaction kinetic modeling

Xuesong Lu, Xiaojiao Luo, Warren A. Thompson, Jeannie Z.Y. Tan, M. Mercedes Maroto-Valer

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COVER

Targeting at the conflict between growth and production, a dual temperature control system is developed for yeast engineering based on the expression and activity control of the transcriptional activator *Gal4*, which acts as a switch to regulate the direction of carbon flux. Temperature change serves as an input signal to trigger the expression of the *Gal4* mutant under a heat-shock promoter, and meanwhile to activate it due to its cold-sensitive feature. By changing the culture temperature from 30 °C to 37 °C, both the expression level and activity of the *Gal4* mutant are increased, which re-directs the carbon flux from cell growth to product synthesis. In this way, the cellular burden caused by isoprene biosynthesis via a mitochondria-compartmented pathway could be relieved, leading to reconstruction of balance between cell growth and isoprene production. (Jiaxi Lin, Zhen Yao, Xiaomei Lyu, Lidan Ye, Hongwei Yu, pp. 1079–1089)

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