



Functionalization of the cytochrome P450cam monoxygenase system.

Functionalization of the cytochrome P450cam monoxygenase system, which requires electron transfer among three different proteins, was successfully attained in the micro-scale aqueous compartments of stable water-in-oil (W/O) emulsions, which can be easily formed by mixing organic and aqueous solutions. The activity of the cytochrome P450 monoxygenase system as to hydroxylation of camphor, as a model, was efficiently improved through coupling of the system with the NADH regeneration process, as illustrated on the cover of this issue, suggesting the potential utility of the micro-scale cell-like aqueous compartments of W/O emulsions for practical multicomponent enzymatic reactions, especially for substrates with low aqueous solubility.

Related article: Michizoe, J., Ichinose, H., Kamiya, N., Maruyama, T., and Goto, M., "**Functionalization of the cytochrome P450cam monooxygenase system in the cell-like aqueous compartments of water-in-oil emulsions**", **J. Biosci. Bioeng.**, vol. 99, 12-17 (2005).