

S36-1 Observation of Membrane Dynamics Induced by a Catalytic Dehydrocondensation at Water-Lipid Interfaces

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Unusual rate enhancement of bimolecular dehydrocondensation to form amides was observed by using the combination of 2-chloro-4,6-dimethoxy-1,3,5-triazine (CDMT) and a tertiary amine catalyst at the interfaces of micelles. The rate enhancement in micelles was 2000 times higher than that in water, which originated from the micellar effects (preorientational effect and local concentration effect).⁽¹⁾

We report here formation of giant liposomes (GUVs) from small unilamellar vesicles (SUVs) via membrane fusions. The spontaneous membrane fusion is induced by a chemical synthesis of ceramides **3** (cone-shape molecules) from sphingosines **1** and fatty acids **2** (inverted cone- or cylindrical-shape molecules) at a surface of the lipid bilayer.⁽²⁾

(1) M. Kunishima, *et al.* *Angew. Chem. Int. Ed.* **2005**, *44*, 7254. (2) M. Kunishima, *et al.* *J. Am. Chem. Soc.* **2006**, *128*, 14452.

