

# S. TAKEUCHI LAB.

## [Biohybrid Systems]

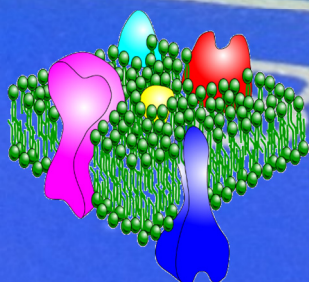
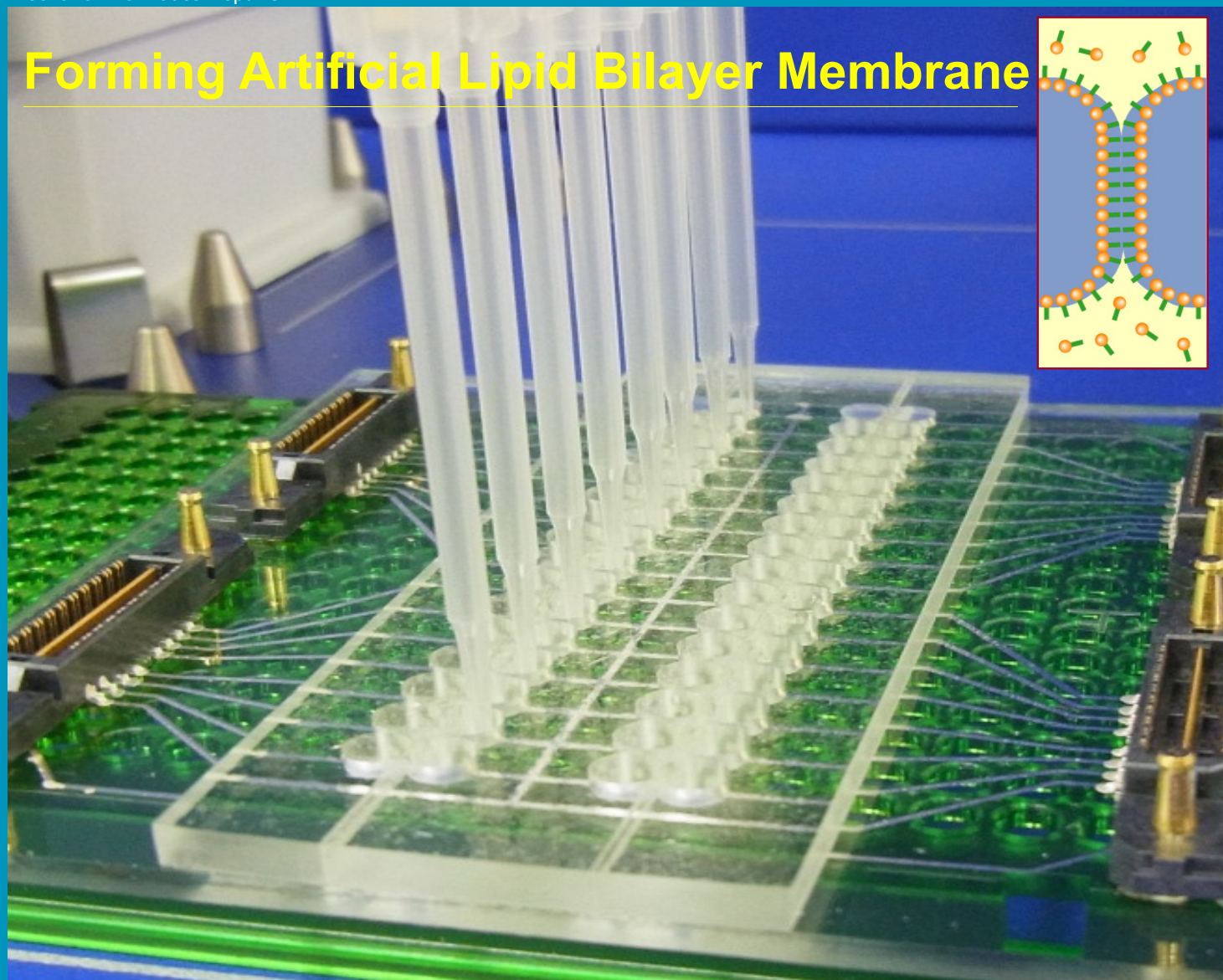
Centre for International Research on MicroNano Mechatronics

<http://www.hybrid.iis.u-tokyo.ac.jp>

**MEMS / Bionanotechnology / Tissue engineering**

Mechano-Informatics Dept. ISI

### Forming Artificial Lipid Bilayer Membrane



Artificial lipid bilayers, a simplified model of the membrane consisting of purified or synthesized phospholipids have been used as platforms to analyze single-species-specific membrane proteins. Our group recently developed a simple and reproducible technique of lipid bilayer formation, named Droplets Contact Method (DCM). When two aqueous droplets are placed in a lipid-dispersed organic solvent, lipid monolayers are immediately formed around the droplet surfaces. By contacting the two droplets, we can easily obtain lipid bilayer at the interface. This method has great potential for automated and parallel membrane formation. We thus believe that the method will be useful for the high-throughput membrane protein analysis.