
The 108th iCeMS SEMINAR

Thu 26 Apr 2012
13:30 - 15:00

Dynamics of Heterogeneity in Fluid Membranes

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Venue: iCeMS Complex 1 Main Bldg. (#71)
2nd floor Seminar Room

I shall discuss the dynamics of heterogeneity observed in multi-component fluid membranes particularly focusing on hydrodynamic effects due to the membrane and solvent. Two situations are discussed separately; above and below the miscibility transition temperature. In the former case, we calculate the wavenumber dependence of the effective diffusion coefficient by changing the temperature and/or the thickness of the bulk fluid. For the case below the transition temperature, we study the domain growth exponent in a binary membrane using a particle-based simulation method. With the addition of bulk solvent, a change in the growth exponent from two- to three-dimensional nature is observed. Along with the measurement of correlated diffusion, we conclude that the phase separation takes place through the Brownian coagulation process in our simulation.

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Hosted by: iCeMS (Institute for Integrated Cell-Material Sciences), Kyoto University

