第 106 回化学コロキウムのご案内

日時: 平成 19 年 11 月 1 日(木) 午後3:00～5:00
場所: 国際交流会館中会議室
演者: Frédéric Nallet
(Centre de Recherche Paul-Pascal, CNRS, France)
演題: Structural and Dynamic Properties of Lyotropic Lamellar Phases in the Presence of DNA or Protein Host Components

Abstract: Multi-lamellar vesicles (or "onions") are conceptually attractive systems for drug-delivery applications. They are prepared from lyotropic lamellar phases in the presence of biologically-active host molecules - DNA or proteins, for instance. We consider model lamellar phases, investigating their structural and dynamic properties with small-angle x-ray scattering and fluorescence recovery. Working with oriented samples, we identify several structural phase transition as a function of confinement in the case of a DNA-doped, zwitterionic lamellar phase. The anisotropy of the DNA Brownian motion is indirectly evidenced by confocal fluorescence microscopy when the system is confined, in qualitative agreement with the two-dimensionally ordered structures (rectangular-centred, hexagonal) observed using x-rays.

Nallet 博士は，両親媒性物質が作る集合体，特にリオトロピック液晶相等の構造およびダイナミクスに関する研究で著名な業績を挙げておられ，X 線・中性子小角散乱や動的光散乱を用いた測定法・解析法の開発でも名高い方です。

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