



生物機能高分子セミナー  
グローバル COE 物質科学イノベーション講演会

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演題：**Current mechanistic and experimental views on the heat-induced phase transition of aqueous poly(*N*-isopropylacrylamide) solutions**

講師：



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日時：2010年7月20日(火) 16:00 ~ 18:00

場所：工学部 材料・化学棟 中会議室 (MC102)

主催：工学研究院生物機能高分子部門

共催：グローバル COE 「触媒が先導する物質科学イノベーション」  
高分子学会北海道支部

要旨：Poly(*N*-isopropylacrylamide) (PNIPAM) is highly soluble in cold water, but it becomes insoluble as its solution temperature exceeds 32 °C, the lower critical solution temperature (LCST) or cloud point ( $T_{CP}$ ). This phase transition is governed by the cooperative dehydration of PNIPAM chains and concomitant collapse of individual chains from hydrated coils into hydrophobic globules, which associate to form larger mesoglobules. Recent fundamental and experimental investigations aimed at understanding the mechanism of the coil-to-globule transition in PNIPAM solutions will be presented with emphasis on the effect of polymer architecture and of additives. The presentation will describe in some detail useful experimental techniques, including fluorescence spectroscopy, high sensitivity microcalorimetry, pressure perturbation calorimetry, and light scattering.

本講演は『化学研究先端講義 / 総合化学特別研究第二』の対象となっております。

連絡先：生物機能高分子部門 覚知 豊次 (内線：6602)