

演 題 : **Self-Assembling Behaviors of Miktoarm Star Polymers and Asymmetric Cyclic Polymers**

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共 催 : 日本化学会北海道支部、高分子学会北海道支部、
北海道大学 Ambitious リーダー育成プログラム (ALP)

要 旨 : A series of crystalline-crystalline miktoarm star polymers was investigated their thin film morphologies by using synchrotron grazing incidence X-ray scatterings. They always underwent phase separation in thin films, forming self-assembled nanostructures. Surprisingly, their nanostructures were found to be very complex, which were far from those of conventional diblock copolymers in a same volume fraction. Such interesting nanostructuring behaviors are discussed with considering the rigid chain properties, self-assembling characteristics, conformational asymmetry, and compressibilities in addition to the imbalanced volume fraction. These miktoarm star polymers were further investigated micelle formation characteristics in solutions by synchrotron solution X-ray scattering. They also revealed very exciting micellization behaviors. The results are discussed with taking into account the rigid chain properties, self-assembling characteristics, and solvation behaviors. In addition, a series of asymmetric cyclic block copolymers were investigated in nanoscale thin films as well as in solutions. Very interesting results were observed. Such results will be discussed with considering all possible factors.

本講演は、大学院総合化学院『化学研究先端講義/総合化学特別研究第二』の一部として認定されています。

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