



演題：**Polymer Chains & Nanoparticles:**  
*Structural Characteristics*

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要旨：The structural characteristics of a single polymer chain are directly reflected into its morphological structure formation and properties. Thus, it is very important to understand all possible aspects of polymer chain structure. However, direct clues on the structure of a single polymer chain are very limited, mainly due to its weak signals in measurements; thus, the developments of advanced probing sources and detection systems are still challenged. As an alternative way, a dilute polymer system is very often subjected to the structural investigation of a single polymer chain. With any possible information of a polymer, its morphological structure formation and analysis are immediately required to understand its beneficial properties and optimize such properties. In general, a polymer can reveal a variety of morphological structures depending on its chemical composition, topology, chain structural characteristics, and fabrication conditions. An attractive shape of a polymer in aggregate state is a particle, for example nanoparticle, which is highly demanded in many fields including nano-science and technology, energy science, microelectronics, and biomedical science. The function and property performances of such nanoparticles are governed by their structural details including the size and distribution, and inside and surface characteristics, in addition to the chemical and physical functionalities at the surface. In this presentation, some of the recent research works on polymer chains and nanoparticles will be discussed in the aspect of structural characteristic details.

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