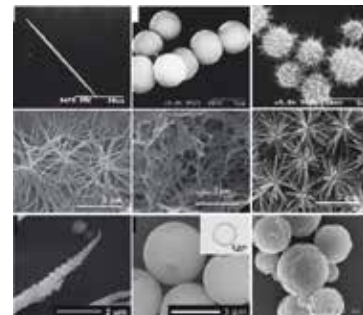




Creation of environmentally benign polymerization system and polymer materials

Aromatic polymers are used in various industrial fields as high-performance materials due to their excellent properties, such as thermal stability, mechanical properties, or chemical stability. However, processing of these polymers is extremely difficult because of their intractability. We have been studying the unique polymerization system for morphology control of aromatic polymers. As a result, we obtained various morphologies such as whisker, ribbon, helical, sphere with dimple, and so on. This polymerization system and materials are one of the answers towards sustainable development of society.



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Studies on biodegradable polymers with unique topology based on crystallization control

This study conducts the development of high-performance biodegradable polymers with the tunability of physical properties such as mechanical strength and thermal resistance using the unique topology of cyclic homopolymer and topological blend polymer having cyclic polymer as a component. The cyclic homopolymer and topological blend polymer are capable of control of crystalline and entanglement state. The unique morphology and crystallization behavior have been clarified.

