

Development of Nanoarchitected Functional Nanomaterials by Polymers for Environmental Applications

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Functional nanomaterials can be used for environmental applications such as sensor of toxic materials, remediation, separation etc. due to their outstanding chemical and physical properties. Especially, the functional polymers can boost the performance of functional nanomaterials such as catalysts, porous metals, and metal-organic frameworks (MOF). The polymers including block copolymer and natural polymer are useful to make nanoarchitecture for the functional nanomaterials. The nanoarchitecturing approaches including shape/dimension controls, nanopore formation, and nanoassembly on materials can provide more improved performances and new properties in diverse applications. In this presentation, synthesis of nanoarchitected materials using various polymers and their environmental applications of water purification, water/solvents separation, optical sensor for toxic materials will be presented.