Research Interests
We focus on the synthesis and application of functional polymers. The chemical structures and architectures of these polymers are delicately designed to persuade desired self-assembled morphologies and functionalities. The applications of our functional polymers include but not limit to: (1) Fabrication of optoelectronic devices, (2) Smart nanocarriers for controlled and target drug delivery, (3) Fluorescent sensors.

Representative Publications

Fluorescent Polymeric Micelles with Aggregation-Induced Emission Properties for Monitoring the Encapsulation of Doxorubicin (*Macromol. Biosci.*, 13, 623-632)

Fluorescent polymeric micelles with aggregation-induced emission properties have been utilized as a fluorescent probe and an anticancer drug carrier simultaneously. The Förster resonance energy transfer from micelles to drugs has facilitated the indications of successful encapsulation and subsequent release of doxorubicin in these micelles.
Highly efficient fluorescence probes are achieved through the encapsulation of aggregation-induced emission molecules, in the core of polymeric micelles. Bright fluorescence cell images are shown with tunable colors of green directly from HPS and red through efficient FRET from HPS to NPAFN.

This feature article focuses on the recent progress in stimuli-responsive conjugated rod-coil block copolymers on their synthetic routes, stimuli induced transitions in morphologies, and numerous applications in different fields.