Self-assembly of Sub-100 nm Conjugated Polymer Nanoparticles Using a Phospholipid with a Modified Polar Head by Deterated Acetamide

Conjugated polymer has high conductivity that comes from low band gap and absorb energy such as near infrared light and transmit another energy such as heat. Conjugated polymer nanoparticles assembled with phospholipids via modification of polar heads were prepared by shattering phase-separated film of the conjugate polymer and phospholipid with a modified polar head by deterated acetic acid. We found that uniform CPNs with a sub-100 nm diameter were prepared by shattering phase-separated film of the conjugate polymer and phospholipid. Image of phase-separated film before annealing and after measured by Conducting AFM to analyze the structure of prepared nanoparticle. It was presumed that the highly-ordered assembly structures of the conjugated polymer and phospholipid.