

### Synthesis of Polyacrylate/Polythiophene Core/Shell Nanoparticles via Dual Initiation

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Polyacrylate/polythiophene (PA/PTh) core/shell nanoparticles were synthesized via surfactant-free emulsion polymerization with oxidative initiation. As a couple agents, hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) and ferric chloride (FeCl<sub>3</sub>) were used to carry out dual initiation system. The average particle size and core/shell structure were determined by dynamic laser scattering and solvent extraction method, respectively. Morphology control of PA/PTh core/shell nanoparticles was studied by SEM and GPC analysis. The optical property of core/shell particles was analyzed by photoluminescence spectroscopy.