

Poly (N-Isopropyl Acrylamide-Co-Acrylic Acid)-Graft-Polyaspartate Coated Magnetic Nanoparticles for Molecular Imaging and Therapy

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Abstract : A series of pH- and thermosensitive poly(N-isopropyl acrylamide-co-acrylic acid) were synthesized by radical polymerization and grafted on poly succinimide backbones. The poly succinimide derivatives synthesized were coated on iron oxide magnetic nanoparticles for potential applications in drug delivery systems with theranostic and molecular imaging. The structure of polymer shell was confirmed by FT-IR, H-NMR spectroscopies. Its thermal behavior was tested by UV-Vis spectroscopy. The particle size and its distribution are measured by dynamic light scattering (DLS) and transmission electron microscope (TEM). The mean diameter of the core-shell structure is from 20 to 80 nm.

Keywords : magnetic, nano, PNIPAM, polysuccinimide

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