ABSTRACT:

ZnTe quantum dots (QDs) have been very attractive because of their potential applications in optoelectronic devices operating in the blue-green region of the spectrum. This work describes a convenient way of synthesis of high-quality ZnTe QDs in high-temperature organic solution with high yield. Powdered X-ray diffraction is applied to confirm the formation of ZnTe and to determine its phase and structure. The ZnTe quantum dots are coated with ZnS. Absorption and photoluminescence spectra demonstrate the tunability of this ZnTe/ZnS core/shell system.