Quantum Dot Waveguides

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Nanocrystal chemistry has long been based on the preparation of quality materials in homogeneous solution. It is now possible to prepare a large range of semiconducting, magnetic and metallic materials with large ranges in size and in some cases of various particle shapes. An increasing challenge will be dispersion of the nanocrystals into suitable structures for applications, especially thin films. In this talk, we present recent work on the construction of thin films from nanocrystals through LbL processing, dipcoating and spin coating, and we discuss the resultant optical properties of the films.