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White Light Emission from Ultrasmall CdSe Nanocrystals SANDRA ROSENTHAL, Vanderbilt University

Magic-sized cadmium selenide (CdSe) nanocrystals have been pyrolytically synthesized. These ultra-small nanocrystals exhibit broadband emission (420 -710 nm) that covers most of the visible spectrum while not suffering from self absorption. This behavior is a direct result of the extremely narrow size distribution and unusually large Stokes shift (40-50 nm). The intrinsic properties of these ultra-small nanocrystals may lead to applications in solid state lighting and also provide the perfect platform to study the molecule-to-nanocrystal transition.