

Abstract Submitted
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An evaluation of optical properties of solution processed colloidal chalcogenide type nanocrystals PRASHANT SARSWAT, MICHAEL FREE, University of Utah — Solution cast cadmium free chalcogenide type quantum dots were synthesized using environmentally friendly constituent elements. Some of the advantages of solution cast nanocrystals are easy integration with desired substrate, good control over size and shape, and their rapid processing. A range of liquid with different color luminescence was produced by changing the solvent and synthesis conditions. A green color luminescence was produced when oleylamine is used as a solvent and inert condition is maintained, whereas yellow luminescence was observed when syntheses of crystals were carried out in presence of oxygen. Detailed characterization and investigation was conducted using transmission electron microscopy, X-ray photoelectron spectroscopy, Raman spectroscopy, and photoluminescence study.

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