

Size Tunability of Semiconductor Nanocrystals

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NNIN Facility utilized: Characterization Facility

● SOLUTION-BASED SYNTHESSES

- ◆ $\text{PbO} + \text{TOP:Se} \rightarrow$ oleic acid-capped PbSe
 - Range of particle sizes obtained by adjusting growth time
- ◆ $\text{In}(\text{OAc}) + (\text{TMS})_3\text{P} \rightarrow$ myristic acid-capped InP
 - Range of particle sizes obtained by adjusting temperature and growth time

● MAJOR OBSERVATIONS

- ◆ Monodisperse NCs synthesized
- ◆ Absorbance and PL shift with changing size

● APPLICATIONS

- ◆ LEDs for IR emission
- ◆ Tunability within telecom. range

