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Quantum Dots Tailored with Conjugated Polymer JUN XU, ZHIQUN LIN, Iowa State University — Placing conjugated polymers (CPs) in direct contact with a quantum dot (QD) (i.e., preparing QD-CP nanocomposites) carries advantage over cases where QD aggregation dominates. Such QD-CP nanocomposites possess a well-defined interface that significantly promotes the charge or energy transfer between these two components. However, very few studies have centered on such direct integration and QD-CP nanocomposites confined in nanoscopic geometries have never been explored. Here we demonstrate an approach to graft vinyl functionalized poly(3-hexylthiophene) (P3HT) onto aryl-bromide functionalized CdSe QD surfaces. The photophysical properties of nanocomposites in nanoscopic confined geometries are studied.

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