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Polythiophene-CdSe Nanorod Assembly Using Electric Field[1]
SIRINYA CHANTARAK, TODD EMRICK, THOMAS P. RUSSELL, University of Massachusetts Amherst — We report controlled solvent evaporation and electric-field assisted vertical alignment of CdSe nanorods (NRs) in a poly(3-hexylthiophene) (P3HT) matrix over large micron areas. NRs of well-defined sizes were synthesized to optimize the geometries of devices made from these nanorods. Regioregular P3HT chains and oligothiophene were functionalized with ligating end-groups to provide contact to the NRs. Hexagonal arrays of these nanocomposites were characterized by transmission electron microscopy (TEM).

[1]MRSEC, NSF, EFRC, U.S. Department of Energy

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