

85a Solution-Based Straight/Branched Semiconductor Nanowires [Invited]

Masaru Kuno

This presentation will focus on recent developments on the solution-phase synthesis of straight and branched semiconductor nanowires. Two model systems, CdSe and PbSe, are developed. Nanowires within the quantum confinement regime of each system are obtained. Branched nanowires with interesting tripod, v-shape, y-shape and t-shape morphologies are also obtained. The branching is understood to arise from the underlying crystal structure of each material. Preliminary optical studies of straight/branched CdSe nanowires will also be presented. Unusual optical heterogeneity is observed in single nanowire optical measurements resulting in both intrawire spectral and intensity heterogeneity.