

GaAs Nanowires and Heterostructures: Single-Photon Emission and Solar Cells

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Nanowires are filamentary crystals with a tailored diameter between few and ~ 100 nm. Their especial morphology and dimensions render them especially interesting for the study of low dimensional semiconductor physics and for opto-electronic and energy harvesting applications. In my talk, I will show two of our latest results obtained with self-catalyzed GaAs nanowires: 1) the formation of extremely high quality GaAs quantum dots in an AlGaAs shell to be used in quantum information technology and 2) the advantages of nanowires in next generation photovoltaics.