

Controlling the emission properties of nanowires quantum dot with strain engineering and photonic structures

In this talk I will review different experiment performed in Grenoble which are aimed at controlling the emission properties of a single quantum dot embedded in a II-VI nanowire. Growth condition allow to apply a well defined strain on the dot and hence to control its hole ground state (heavy or light-hole). I will also present two strategies to couple the nanowire QD to a photonic structure in order to optimize its light collection efficiency.