

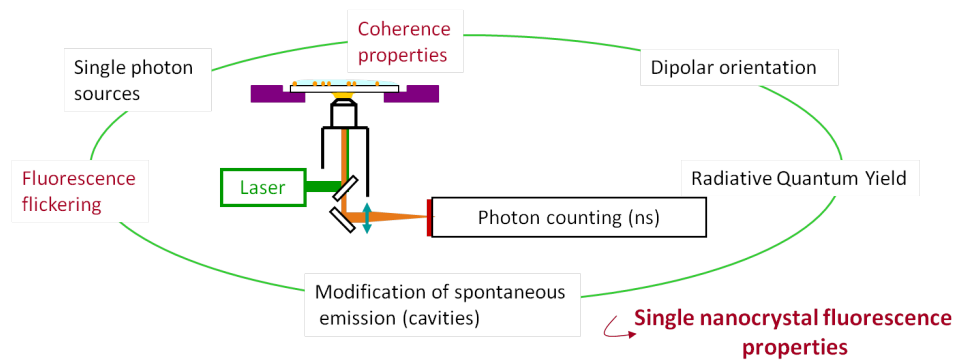


GEMaC

Groupe d'Étude de la Matière Condensée

PHOTOPHYSICAL PROPERTIES OF SEMICONDUCTOR NANOCRYSTALS

Our research on the physical properties of nanocrystals (NCs) concerns the study of single photons sources for quantum information. We mainly studied two types of nanocrystals consisting of a CdSe core of a few nanometers (3-6 nm) in diameter and a shell to passivate the dangling bonds on the surface of the core. For reasons of bandgap and weak lattice mismatch, the materials used for the shell is ZnS or CdS. The samples are prepared by our colleagues at the LPEM (Laboratoire de Physique et d'Etudes des Matériaux, ESPCI) and our studies are conducted in close collaboration with them.



CdSe/ZnS nanocrystals have been studied first. Various studies and many results are presented in the following link [CdSe/ZnS](#).

Nanocrystals of CdSe/CdS have been studied for several years and have very different behaviors. For more information, follow the link [CdSe/CdS](#).