



## S E M I N A I R E   D E   P H Y S I Q U E

ONERA - Bâtiment S - Fort de Palaiseau - 91120 Palaiseau

Salle du LAERTE

Mardi 22 mars 2016 à 11h

### **Recent advances in the field of nanocrystal optoelectronic**

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This talk is an introduction to the use of nanocrystals for optoelectronic. I will first introduce colloidal nanomaterials and briefly discussed their growth as well as their optical and transport properties. Then the talk will discussed two types of materials and applications. In the first part, I will speak about narrow band gap semiconductor nanocrystals and their use for infrared photoconduction. I will give an overview of the recent progresses of the field including its potential outreach for industry. In the second part I will discuss the optoelectronic properties of colloidal quantum wells. There I will point in which way 2D systems differ from 0D nanocrystals for a phototransport point of view.

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