



SEMINAIRE ISMO

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Understanding light emission in plasmonic nanoparticles

Extrapolating the characteristics of bulk materials to predict the properties of nanometric structures is not an obvious task. One of the most striking examples is that of gold nanoparticles. While gold is known to have a very low quantum yield of luminescence, a quite high luminescence emission is observed when gold nanoparticles are excited at their plasmon resonance, with a strong influence of the shape of the nanoparticles or their crystallinity. The origin of plasmonic luminescence remains a subject of intense discussion : I will show the results obtained in our lab regarding the two-photon luminescence (TPL) of colloidal gold nanorods or nanobipyramids. After discussing the origin of the signal, I will show that TPL turns out to be a very sensitive characterization technique able either to monitor nano-objects environment and ordering, or to control nanoparticles reshaping following e.g. plasmon induced thermal effects.

Mardi 14 janvier 2020 à 11 h
Amphithéâtre du bât 520 (3^{ème} étage)
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