



# ***SEMINAR ANNOUNCEMENT***

**“Localized surface plasmon as a tool to enhance the electroluminescence of organic light-emitting diodes”**

**Prof. Azzedine Boudrioua**

*Laboratoire de Physique des Lasers*

*Université Paris 13, France*

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The localized surface plasmon resonance (LSPR) is one of the most interesting properties, and not sufficiently exploited, appearing when metals dimensions are reduced to the nanoscale. This optical effect is due to the collective oscillation of the electrons at the surface of a metallic nanoparticle (NP). LSPR can cause a modification of the photophysical properties including the radiative and the nonradiative decay of adjacent emitters. Thus, the use of the LSPR effect is a promising way to improve the optical and electrical performances of organic light-emitting diodes (OLED) which find, increasingly, numerous applications especially in the field of lighting and display. In addition, LSPR could provide solutions to overcome the intrinsic limitations of organic materials and enhance their electroluminescence for the organic laser diode quest.

In this talk, I will give general outlines of the research activities we are conducting in my group at LPL Laboratory of Paris 13 University. I will specifically talk about plasmonic properties of metallic NPs and the different parameters, which can affect their interaction with an organic emitter. I will briefly describe other topics also under development.