



The supervisory board of the Kestcells Project announces the Seminar AMU-05:

“Introduction to hybrid perovskites: theoretical aspects, photovoltaic and optoelectronic applications”

Dates: 02nd of July, 2015.

Place: AMU, CINaM – Campus de Luminy - Salle Raymond Kern, Marseille, France

Program

Time	Subject	Speaker
16:00 – 17:30	Introduction to hybrid perovskites: theoretical aspects, photovoltaic and optoelectronic applications.	Prof. Jacky Even
Institut National des Sciences Appliquées de Rennes		

Summary

Hybrid layered perovskites have gained attention for their exceptional optical properties, but also for the great flexibility offered in terms of development, self-assembly and chemical synthesis. The history of 3D hybrid perovskites for Photovoltaics has been accelerating, after some initial results in Japan and Korea, thanks to a team from EPFL and a team Oxford. The PV record yields very rapidly reached 10% (2012), 15% (2013) and 20% (2014). These advances are based both on new processes for the preparation and deposition of hybrid perovskites, a better understanding of basic phenomena, better control of the physical chemistry of materials, but also to new architectures of solar cells or optoelectronic composites. Very recently, a first demonstration of white luminescence 3D perovskites suggests that the history of these materials may also be part of the field of light emission. The seminar will introduce the topic of hybrid perovskites and provide several features of the theoretical work developed by the group of physical chemists in Rennes (FOTON, UMR6082 / ISCR, UMR6226) working on the subject since 2010 .

1. J. Even, et al. Phys. Rev. B. 2012, 86, 205301 .
2. J. Phys. Chem. Lett. 2013, 4, 2999-3005.