

Post-Doc position opening in organic electronics

Elaboration and study of silole- and phosphole-based Organic Light Emitting Diodes

Employer: Ecole National Supérieure de Chimie et de Physique de Bordeaux - <http://www.enscpb.fr/>

Location: IMS Laboratory, Bordeaux, FRANCE - <http://www.ims-bordeaux.eu/>

Duration: 18 months - Starting as soon as possible

Salary: Approx. 2100 €gross/month.

Description

Basically, the operating process of an OLED consists of confining both electrons and holes in an active layer. In order to develop new organic semiconductors synthesized by the partners of this project, the active layer will be sandwiched between the anode and the cathode. Thus, this basic device is suitable to study the electro-optical behavior of these novel semiconductors. The elaboration process parameters such as deposition rate, substrate temperature, layer thickness, substrate preparation and device architecture will be investigated and optimized. The charge injection and transport mechanisms will be deeply studied using current and luminance vs. voltage and temperature, admittance spectrometry vs. T and thermally stimulated current measurements. Hole-only and electron-only devices will be prepared by varying the electrode work-functions. The candidate will feedback to the chemist partners to allow customizing molecules to tune their electro-optical properties.

The challenge will consist in the development of highly efficient single-layer devices to avoid interfaces and technological steps.

The principal tasks of the appointee will be the design, the fabrication and the characterization of devices using both vacuum and solution deposition techniques.

Qualification: The candidate is expected to hold a PhD in Chemistry, Applied Physics or Materials Sciences. He/She should have a strong background in the fabrication of optoelectronic devices and semiconductor materials. Good communication skills and ability to work independently are recommended.

To apply: send a CV with full list of publications and the contribution for each, at least two references, a cover letter with a brief summary of past and present research and two letters of recommendation to Dr Lionel HIRSCH (lionel.hirsch@ims-bordeaux.fr). Please, name the attached files with your last name.