

## POSTDOCTORAL FELLOWSHIP – UNIVERSITY OF BORDEAUX, FRANCE

### Modeling and design of metamaterial infrared reflectors

#### Job offer

Current infrastructures and vehicles are in dire need of Near-Infrared (NIR) reflectors for heat protection and energy savings. Such devices constitute interfaces that reflect electromagnetic radiation at wavelengths where radiative heat transfer may occur.

The CRPP and ICMCB along with their industrial partner Solvay are seeking to develop two- or three-dimensional materials consisting in nanoparticles dispersed in a continuous matrix that may take the form of an ink, paint or coating destined to reflect the NIR solar irradiance. Experimentalists in this project will focus their efforts on the development of self-assembled metamaterials made of large assemblies of colloidal resonators produced by nanochemistry and/or soft-matter techniques.

The project requires a scientist specialized in the design and modeling of nanostructured materials capable of exploring various realistic nanostructures and interacting with experimental nanochemists and physico-chemists to guide them in the fabrication of the metamaterials.

#### Candidate's profile

Applicants should have at least a PhD in Physics with a specialty in Optics, Photonics or Electromagnetism. Ideally the candidate should have experience in modeling and design of optical nanostructures. Knowledge of Matlab and COMSOL Multiphysics is a plus, but not compulsory. The candidate should be proficient in English both orally and in writing and show interest toward industrial applications and R&D.

Salary  
2 300 €/month (neto)

Localisation: The candidate will be located at the CRPP laboratory at the University of Bordeaux, France. He/She will be working in strong collaboration with the ICMCB laboratory.

#### Application:

Applicants are invited to submit a complete CV, a motivation letter, a copy of PhD diploma, references details and 2 recommendation letters at <http://amadeus.labex.u-bordeaux.fr/en/Jobs/> job opportunity ref: 2017 AMADEus 063. Applications will be considered until position is filled.

#### Contact:

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