



THALES



université
PARIS-SACLAY



Post Doctoral Position ANR PassiveHeat

Object :

18-month Post-doctoral position in the frame of the ANR project PassiveHeat - "Passive functionalized thermal emitter based on metal-insulator transition composite materials" .

Scientific Contexte :

It is a real challenge in many technical domains such as microelectronics, infrared camouflage, energy conversion systems, to manage heat generated in solid materials. The PassiveHEAT project aims at developing new functionalized composite materials based on phase transition materials (vanadium dioxide) whose thermal emission properties are entirely controlled by temperature. The goal is to control the spectral and directional emissivity of these emitters in the vicinity of the critical transition temperature by an appropriate nanotexturing of materials.

The partners of the ANR Project are THALES Research and Technology, Institut d'Optique Charles Fabry Laboratory, and **INSA Lyon CETHIL Laboratory**.

Main tasks expected :

The 18 month project will be devoted mainly to :

- a preliminary bibliographical study,
- the design and implementation of a spectrometric measurement bench allowing to characterize emitters provided by THALES.

Measurements will then be performed on this bench and compared to model predictions carried out by Charles Fabry Laboratory.

Candidate skills :

The candidate should have been granted a PhD in one of the following fields: Applied Physic, Optics. Radiative metrology skills will be appreciated.

Position availability :

The position is currently available.

Administrative framework and location :

Laboratoire CETHIL UMR 5008- INSA de Lyon - Domaine Scientifique de la Doua - Bât. Sadi Carnot - 9, rue de la Physique - 69621 Villeurbanne Cedex

Durée : 18-months

Contact : Please send your resume by email to

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