



POLITÉCNICA



The Center of Advanced Materials and Devices for Information and Communication Technologies (CEMDATIC), at the Universidad Politécnica de Madrid within the framework of the national project “Remote sensing of contaminant emissions with dual comb spectroscopy based on low-cost gain-switched semiconductor lasers (RESECO)” offers position for:

1 post-doc candidate on Gas-Sensing with laser diodes and photonic integrated circuits

The aim of RESECO is to develop remote gas sensing systems for atmospheric contaminants based on dual-comb spectroscopy (DCS) using low-cost semiconductor lasers. The gases to be monitored are: NH₃, CO, H₂S, NO₂, SO, and NO. For those gases with absorption lines close to the optical communication C-band both Photonic Integrated Circuit (PIC) and discrete components systems will be developed, while for the other gases only discrete component-based systems will be implemented. The goal is to develop relatively low-cost systems and to study the possibility of application in open-air paths as a function of the system sensitivity.

The interested candidates should hold a **PhD** in Photonics, Electronics, Signal Processing or a related discipline. Background in PICs and/or spectroscopy is highly appreciated.

We offer: 2 years contract in an experimented and dynamic team of scientists, strong international collaboration, access to modern technology labs and participation in a cutting-edge research program.

Starting Date: Beginning 2023

Duration: 2 years

Salary: 30 k€/year, before taxes (negotiable according to the experience of the candidate)

We are happy to consider CV of interested applicants and receive Expression of Interest and queries at this email:

Prof. Ignacio Esquivias

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