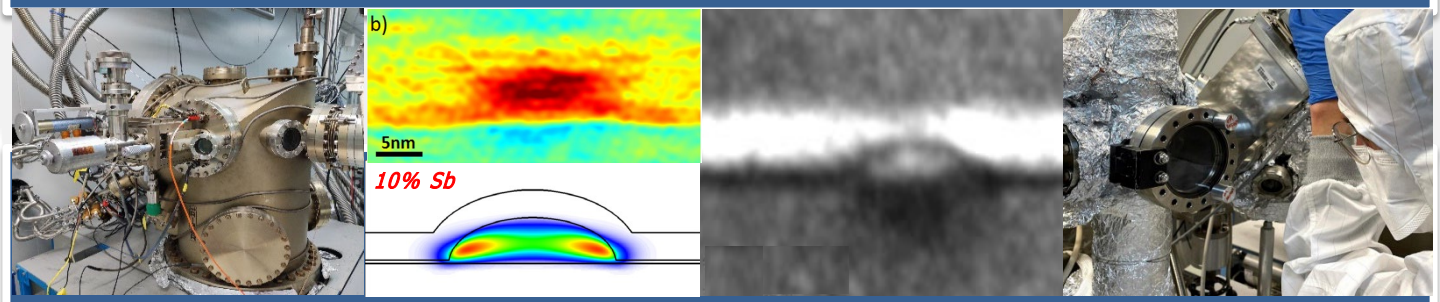
Development of novel Telecom single photon sources

The Institute for Optoelectronic Systems and Microtechnology (www.isom.upm.es) of Universidad Politécnica de Madrid (ISOM-UPM), a Spanish major scientific facility in optoelectronics, **offers a position for a highly motivated PhD student to contribute to a breakthrough project funded by Spanish Ministry of Science and Innovation on the subject of quantum communications.**

The student will have an **official FPI grant from the Spanish Ministry of Science and Innovation**, which includes funding for research stays in other institutions. He/she will do a minimum of 3 months in a renowned foreign research center and will obtain the **International PhD Mention**. The student will work on developing novel semiconductor quantum dot structures for single photon emitters, a key component of the future quantum technologies that will revolutionize society. He/she will develop the nanostructures by molecular beam epitaxy (MBE) and will perform their structural and optical characterization by using atomic force microscopy (AFM), scanning electron microscopy (SEM), x-ray diffraction (XRD), and photoluminescence spectroscopy (PL).

The research will be carried out at ISOM-UPM, but in close collaboration with the project partners that will provide state of the art transmission electron microscopy (IMEYMAT-UCA) and quantum nano-optics simulation and characterization (IMN-CNM-CSIC), as well as with renowned partners outside Spain.



REQUIREMENTS:

- A master in the area of nanophysics, advanced materials, semiconductors, nanophotonics or similar.
- A degree in: Physics, Electrical/Telecommunication/Material Engineering or in a similar area.
- Full professional competence in English.
- Ability to work both independently and collaboratively.

JOB CONDITIONS:

- Four-year contract.
- Annual Official FPI Gross Salary: 17.222 € (year 1), 18.452 € (year 2), 23.065 € (years 3 and 4).
- Work in a highly competitive international environment.

APPLICATION:

- Send **a short CV**, **a short motivation letter** and copy of your **university degree certificate** to Jose María Ulloa (jmulloa@isom.upm.es) or Sergio Fernández (sergio.fernandezga@upm.es)

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