

Postdoctoral position on photonic hardware for AI

The Nanophotonics Technology Center is a research institute of the Universitat Politècnica de València with unique capabilities in Spain for prototyping and manufacturing photonic integrated circuits. As a part of our activity, we are developing novel photonic devices by integrating materials with unique optoelectronics properties in silicon photonics for applications in artificial intelligence, datacom and telecom.

Short-role description:

We are looking for an excellent researcher with recognized expertise for conducting advanced research in the development of key building blocks for enabling novel hardware for neuromorphic computing and reconfigurable photonics. You will focus on the optimization of the deposition process of materials, their integration on silicon structures, and the optimization and control of their optoelectronic properties. The fabrication will be done in our 500 m² cleanroom in close cooperation with our fab technicians, and in collaboration with international partners. Currently, we are working with phase-change materials and transparent conductive oxides so that previous experience with these materials will be a plus. We are seeking for a motivated researcher with a proven ability for teamwork and problem-solving attitude.

Requirements:

- Ph.D. in Photonics, Physics, Electrical Engineering, Materials Science, or a related field.
- Strong background in integrated photonics and material science.
- Hands on experience with material deposition techniques (RF sputtering, e-beam evaporation or PECVD) and structural and optoelectronics material characterization methods (spectroscopy ellipsometry, RAMAN, AFM, or Hall effect measurements).
- Experience in the design and characterization of photonic integrated devices. Hands on experience with RSOFT and Comsol will be a plus.
- Proven publication record in relevant scientific journals.
- Written and oral communication skills in English. Skills in Spanish will be a plus.

What we offer:

- Two-year contract with salary in accordance with experience, demonstrated skills and Spanish standards. Possibility of extension depending on available funding.
- Opportunity to professional growth in a leading research group with many international collaborators and strong experience in European projects.
- Full access to the unique capabilities of our research institute recognized by the Spanish Government as a Unique Scientific and Technical Facility of Spain.
- Many benefits for being part of Universitat Politècnica de València: nice university community, excellent public transport network (metro, tram, bus, bike), free parking, fitness and sports facilities, very close to the beach.

Applicants should send a motivation letter and a short CV. A list of references is encouraged. Please submit your application to Prof. Pablo Sanchis at pabsanki@upv.es and Ms. Isabel Salas (misalas@ntc.upv.es).