

Post-doctoral position available at the University of Pisa, Italy

Investigation of thermal and charge transport in silicon nanostructures for thermoelectric applications

Duration: 1 year, starting February 1st, 2019, extendable to a second year

Stipend: 30,000 €/yr

The post-doctoral position is dedicated to the development, fabrication and characterization of silicon nanostructures for thermoelectric applications in support to the theoretical and computational investigation of transport processes carried out at the University of Warwick (UK) in the frame of the ERC Starting Grant ERC-2015-STG_678763 (NANOthermMA – Advanced Simulation Design of Nanostructured Thermoelectric Materials with Enhanced Power Factors). The post-doc activity will involve the development of processes (based on electron-beam lithography, dry and wet etching, and semiconductor doping) for the fabrication of silicon nanostructures with enhanced thermoelectric properties.

Several process steps for the fabrication of integrated nanodevices with multiple energy barriers, including heaters and temperature sensors for the measurement of the Seebeck coefficient, have already been implemented.

After a further improvement of the process, thermal and electrical transport will be investigated, and results will be used to validate computational models developed at the University of Warwick.

Contacts and additional information:

Prof. Giovanni Pennelli, giovanni.pennelli@ing.unipi.it

Prof. Dario Narducci, dario.narducci@unimib.it

The post-doctoral position is made available through the University of Milano Bicocca. Requests of information concerning deadlines and application forms should be addressed to dario.narducci@unimib.it



European
Research
Council