CALL FOR POST-DOC POSITION @ CNR-SPIN, GENOVA (ITALY)

Funding: The position will be funded by the H2020 FET Open OXiNEMS "Oxide Nanoelectromechanical Systems for Ultrasensitive and Robust Sensing of Biomagnetic Fields" (www.oxinems.eu).

Salary: 1.600 Euros/month (net). Application link will soon appear also on www.oxinems.eu.

Duration: 1 year, renewable for an additional year depending on the first year research outcome

Start of the activities: June - July 2022 (expected)

Location: The activity will be carried out at the National Research Council, CNR-SPIN institute, unit of Genova (Italy) www.spin.cnr.it

Topic: Development of nanoelectromechanical devices with innovative characteristics and new functionalities, entirely realized with transition metal oxides (TMO). Realization of a prototype of high-sensitivity NEMS device for the detection of biomagnetic fields (details on www.oxinems.eu) by means of thin film fabrication techniques. Deposition of TMO by pulsed laser ablation and optimization of their physical and structural properties. Development of micro/nanolithographic processes for the fabrication of micro/nanostructures.

Description of the activities: Deposition by pulsed laser ablation of thin films of transition metal oxides and their morphological, structural and functional characterization. Fabrication of thin-film microstructures using optical lithography processes and chemical/physical removal processes. The ability to manage and optimize autonomously the deposition processes and the microfabrication activities is required. The research fellow will also participate in the design and optomechanical characterization of the same microstructures. Short research stays with the OXiNEMS project partners will be possible.

Required expertise: Master Degree and PhD Degree in Physics, Material Science, Chemistry, Electronic Engineering or equivalent subjects. Experience in thin film growth by physical vapor deposition techniques, in the morphological and structural characterization of thin films is required. Experience in the use of scanning probe microscopes, X ray diffractometers and in the fabrication of thin film devices with microlithographic techniques will be positively evaluated.

Contacts: For technical information on the call application: spin.recruitment[at]spin.cnr.it

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