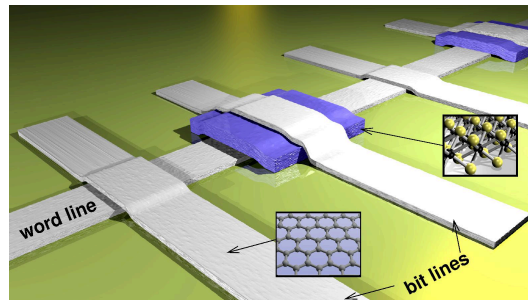




PhD position – Inkjet printing and characterisation of electronic devices

The Dipartimento di Ingegneria dell'Informazione (DII) at the University of Pisa is involved in several areas of the field of Information Technology. Within the field of Nanoelectronics, the research activities of DII include the characterization and fabrication of micro and nano scale devices, to be exploited in a wide range of electronic applications (e.g., digital, Radio frequency, flexible, portable, etc.).



The activity

The research activity will focus on the inkjet printing of electronic devices, through the exploitation of inks based on two-dimensional materials (2DMs). 2DMs are right now a really hot topic in the nanoelectronic scenario, because of the extraordinary electronic properties they have shown up to know. The target is to use inks based on 2DMs (with conducting, semiconducting and insulating electrical properties), so to define new device concepts and architectures (e.g., heterostructures) to be exploited in circuits printed on different substrates (both rigid and flexible), both for electronic (e.g., amplifiers, logic circuits, etc.) and optoelectronic applications (e.g., photodetectors, solar cells, etc.). The activity will be performed with top-leading team in the field, which will provide the 2DMs inks. The activity will also include the electrical and noise characterization of printed devices, at different temperatures.

Requirements

Previous experience with measurement systems and methods code could represent an added value. The ideal candidate should be really motivated, and able to perform research independently, as well as to collaborate in a team. Fluency in English is essential.

How to apply

Expressions of interest with attached **detailed CV should be sent by email** to [Gianluca Fiori](mailto:Gianluca.Fiori), University of Pisa at giori@mercurio.iet.unipi.it

Reference

D. McManus, S. Vranic, F. Withers, V. Sanchez-Romaguera, M. Macucci, H. Yang, R. Sorrentino, K. Parvez, S.-K. Son, G. Iannaccone, K. Kostarelos, G. Fiori, C. Casiraghi, 'Water-based and biocompatible 2D crystal inks for all-inkjet printed heterostructures', **Nature Nanotechnology**, 2017.