Postdoctoral Fellow

Continuous Reel to Reel Manufacturing of Nanoscale Patterned Aligned Carbon Nanotube Arrays - CORE- VANTA

UCD – School of Physics

Closes: 12th December 2016 (placed on: 21st November 2016)
Job Ref: DZ20161/2

Hours: **Full Time**
Contract Type: **Fixed Term (2 year contract)**

Location: UCD Dublin, School of Physics, Dublin 4, Ireland
Salary: This appointment will be made in accordance to the IUA Post Doctorate Researcher scale
Closing Date and Time: 12 noon GMT, Friday 16th of December 2016

Post Summary

The Plasmonics and Ultrafast Nanooptics group has developed a novel, scalable platform technology with potential for continuous and 2D printing /patterning of arrays of vertical aligned Single Wall Carbon Nanotubes, allowing the preparation of dense, highly aligned, CNT arrays on planar, 3D curved substrates or even freestanding nanoforests. The technology as well as being fast, scalable has other benefits such as highest densities 10^{13} CNTs/cm^2 , high alignment of tube's main axes and thus order in the array; Definable orientation of tube main axis versus substrate angles between 0-60 deg.; deposition on conducting and insulating surfaces, including even surfaces of low melting point.

You will have an excellent undergraduate degree and PhD in Physics, Materials Science, Engineering or Physical Chemistry. Eligible applications will be assessed on the applicant's (i) qualifications, (ii) experimental aptitude, (iii) technical skills, (iv) communication skills, and (v) motivation for the project.

Ideally you are skilled/experienced in:

- Surface Science, Nanoscale Science (Imaging and spectroscopy), Nanoparticles, Thin Films or Nanotubes
- Electronics, Computer interfacing
- Programming (e.g. C++, Python)
- Interest in experimental techniques

Standard duties and Responsibilities of the Post include

- Advanced research into the behaviour of Carbon Nanotubes, nanoscale Physics, and imaging including optical and electron microscopy techniques and analysis
- Dissemination of research findings, written and oral, to group members, wider academic and industrial community
- Co-supervision of postgraduate students/ provide day to day assistance and guidance to MSc/PhD students.
- It is planned to commercialise the output of this project in the framework of a spin-out company – this might open additional opportunities for the applicants at a later stage.

Please send your applications (CV, publication record, supporting documentation) directly to the Principal Investigator of the Plasmonics and Ulltrafast Nanooptics group Assoc. Prof. Dominic Zerulla
Email: dominic.zerulla@ucd.ie