



Position Title	PhD Studentship - Novel Porphyrin Functionalised Nanoribbon Devices: Towards Integrated Functional Nanoribbon Electronics
Project Abstract	<p>The idea of this project is simple even though using complex physical, chemical and surface science methods and techniques. Electronically and chemically versatile functional molecules known as porphyrins, are to be integrated into self-assembled graphene nanoribbons (GNR), where this on-surface bottom-up assembly occurs due to thermally driven chemical dissociation, diffusion and reaction mechanisms. Consider this as “wiring up” functional porphyrin molecules with semiconducting nanowires to either side, integrating porphyrin molecules as part of a conductive pathway, or circuit element in future nanoelectronic devices which could employ such self-assembled nanostructures.</p> <p>We term these nanostructures porphyrin functionalised graphene nanoribbons (Por-fGNR). Constructing a Field Effect Transistor (FET) device based on this concept is appropriate to AMBERs research mission.</p>
Experience	The PhD position is funded for 4 years, including a monthly stipend and materials and travel budget. Applicants should hold a minimum of an honours bachelor’s degree at 2:1 level or equivalent in a relevant subject such as Physics/Chemistry/Materials Science. Candidates should also have a strong interest in 2D Materials
Funding	The studentship will cover fees up to €5,500 pa and a stipend of €18,500 pa
Location	TCD
Closing Date	Friday 29 th June 2018
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