



Applications are invited for the following a PhD studentship for the following project:

Neuromorphic Learning Devices based on Ion-Gel Gated Nanoscale Structures

The position will be based with *the Boland Research Group* at School of Chemistry, Trinity College Dublin and be part of the Materials for ICT platform within the Advanced Materials and Bioengineering Research Centre (AMBER) centre.

The goal of this project is to develop an approach to neuromorphic devices based on ion-gel gating. A transistor is a device that turns ON and OFF based on the action of a gate voltage stimulus. The objective here is to create devices whose response is dependent on the repetition and/or the duration of stimuli of different strengths. This requires the device to have a memory of what happened previously and is closely linked to the concept of learning. The goal of the project is to exploit the properties of ion-gels to gate nanowire and nanosheet devices. The project will involve materials processing, device fabrication and testing.

The ideal applicants will have a 1st Class Honours Bachelor's degree in *Chemistry, Physics or Material Science with a strong background/interest in physical measurement.*

The researcher will work closely with other members of a multidisciplinary project team. Excellent written and oral communication skills are essential.

How to apply:

CVs with the names and addresses of three referees should be submitted to:

Professor John J. Boland, School of Chemistry, Trinity College Dublin. jboland@tcd.ie

Positions will remain opened until filled but preferred start date is *September 2 2019*. Only short-listed applications will be acknowledged.

This position is funded by the SFI-research centre AMBER.

The AMBER research centre, as a community of researchers, welcomes its responsibility to provide equal opportunities for all. We are actively seeking diversity in our research teams and particularly encourage applications from underrepresented groups.