

**PhD Studentship Opportunity**

**Structure into Function:**

*Understanding thin-film amorphous metal oxides and interfaces for enhanced performance flexible electronics.*

Flexible electronics is an exciting and rapidly growing field encompassing a wide range of technologies and applications that spans current consumer applications, such as flexible displays, through to demonstrators and concepts, including sensing textiles and 'electronic skin'. Flexible thin-film integrated circuits (ICs) hosted on polymeric substrates offer lightweight, rugged, conformable and potentially foldable electronic circuits for novel and seamless integration into a wide range of products, creating new uses, adding benefits from embedded electronic functionality and providing technology for the 'Internet of Things'.

The aim of this project is to identify, develop and apply the materials science techniques capable of defining the structural, compositional and interface features that control the electrical performance of flexible nanoscale transparent amorphous oxide films. This challenge will underpin performance improvements for device applications, enhance yield and optimise the metal oxide processing conditions. In short, the aim is to understand the relationships between the structural details of flexible amorphous metal oxide films and their functional electronic performance.

PragmatIC is a world leader in ultra-low cost flexible electronics, enabling the potential for trillions of smart objects that can engage with consumers and their environments. PragmatIC's unique technology platform delivers flexible integrated circuits (FlexICs) that are thinner than a human hair and can be easily embedded into everyday objects. For more information visit [www.pragmatic.tech](http://www.pragmatic.tech)

Durham University is proud to be an international scholarly community that seeks the highest distinction in research and scholarship and is committed to excellence in all aspects of education and transmission of knowledge. Durham is consistently ranked in the top 100 Universities in the world and in national league tables is recognised as one of the top universities in the UK.

This studentship is part funded by the European Regional Development Fund (ERDF) and is a three year PhD studentship partnership project, starting in October 2018, between PragmatIC and Durham University. The student will be based at Durham University and work closely with the company, spending some of their time in PragmatIC's Research and Development base at NETPark, the North East Technology Park, in County Durham.

The funding provides a stipend and full tuitions fees for an EU/UK postgraduate student. Prospective International students will need to provide funds for additional international fees.

For further information and to apply for this studentship please contact Professor Del Atkinson, in the Department of Physics at Durham University ([del.atkinson@durham.ac.uk](mailto:del.atkinson@durham.ac.uk)). Closing date for applications midday Monday 16th of July 2018.

