

# Research Assistant

## Job Purpose

Professor Barbaros Özyilmaz group is opening a Research Assistant position to support advanced electronics and spintronics research based on 2D materials. Our group is at the forefront of 2D materials-based spintronics research and we are exploring exotic Majorana bound states in van der Waals heterostructures for topological quantum computation.

Your role will be to fabricate van der Waals heterostructures devices by exfoliation, characterisation and transfer of 2D materials. You will also have the opportunity to develop new processes for more reliable exfoliation and optical determination of 2D materials thickness. You will be able to participate in authoring scientific manuscripts.

For a better understanding of our group, please visit: <http://graphene.nus.edu.sg/barbaros>.

## Duties & Responsibilities

- Exfoliate various 2D crystals including graphene, boron nitride, black phosphorus, etc.
- Transfer atomic layers of 2D crystals on top of another using motorised transfer stage
- Characterise 2D materials using atomic force microscopy, Raman spectroscopy, fluorescence microscopy, etc..
- Fabricate nano devices using electron beam lithography and thermal evaporator.
- Develop new processes for reliable exfoliation and optical determination of 2D materials thickness.
- Procurement of equipment and consumables
- Manage and maintain stock for key consumables and chemicals.
- Perform routine equipment testing and maintenance.

## Requirements

- Great hands-on working skills.
- B.E., B.Sc. or equivalent degree in Engineering / Science fields or higher. (Experienced in thin film fabrication and characterisation tools relevant to the field of interest is an advantage.)
- High fluency in English with excellent written and verbal communication skills.
- Able to work independently without direct supervision.
- Strong drive and motivation to excel.
- Strong sense of responsibility and works well with other lab members.

Please send your application, CV and contact details to [barbaros@nus.edu.sg](mailto:barbaros@nus.edu.sg)