

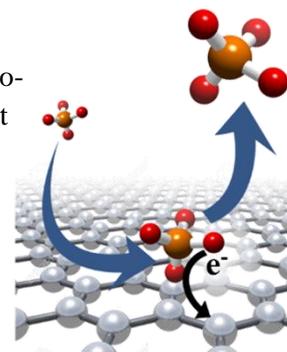
The University Of Sheffield.

2-years Postdoc Position

In ultrafast spectroscopy of nano-structured graphene-based materials.
Starting 1st February 2020

One avenue to make farming more productive and sustainable is to properly monitor soil composition. In this aim, sensing is key to “precision farming”. Sensing of small molecules takes place when small molecules or ions interact, at the electronic level, with appropriate materials. The goal of this project is thus to better understand the electronic properties of novel nano-structured graphene and graphene-based materials with the hope of fine-tuning them for sensing purposes.

In this aim, we propose to investigate the intrinsic electronic properties of novel nano-structured graphene and graphene-based materials. You will use Sheffield’s recently built laser facility which includes (among others) an **ultrafast transient spectroscopy** (Helios) and the latest **fluorescence up-conversion** setups. The goal is to correlate specific electronic characteristics of these materials with their susceptibility to small molecules and ions. By combining some of the best equipment available in the world and structurally unique graphene-based materials, we expect the outcome of this project to have **significant societal impact**.



Besides acquiring expertise in the proposed ultrafast techniques and data analysis, the successful candidate will have the opportunity to develop the current laser system to integrate multi-pulse and pulse-shaping capabilities. The university also provides with a vibrant social environment and with effective professional development programs.

The University of Sheffield is a **world top 100 university** and **world top 50 most international**, situated at the edge of Sheffield’s historical downtown, and only 6km away from the Peak District national park with direct train connections to London (2.5h), Manchester (1h) and Leeds (<1h).

You must have a doctoral degree in Chemistry, Physics or related disciplines with experiences in fs laser spectroscopy and/or time resolved techniques. You are willing to work in a diverse environment, are self-motivated and have leaderships abilities.

Please contact a.chauvet@sheffield.ac.uk for any queries, or apply directly at <http://bit.ly/Job-Chauvet>

We are looking forward to hearing from you.

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<https://teamchauvet.com/>

<https://www.sheffield.ac.uk/faculty/science/research/facilities/laserlab>

