

Coulomb Explosion Imaging of Ultrafast Photochemical Pathways

Supervisors: Prof Andrew J. Orr-Ewing and Prof Mike Ashfold

Project Description

When molecules absorb ultraviolet light, they can undergo structural changes such as bond-breaking or isomerization. These changes occur on ultrafast (femtosecond to picosecond) timescales, and are the basis of numerous important processes, including vision in animals, or UV damage of biologically important molecules. We are developing new experimental methods based on femtosecond laser spectroscopy and Coulomb explosion imaging to watch the changing structures of photo-excited molecules on these ultrafast timescales, so that the mechanisms of structural change can be understood. Further details are available from Prof Orr-Ewing (a.orr-ewing@bristol.ac.uk) or Prof Ashfold (mike.ashfold@bristol.ac.uk), or from the Bristol Laser Chemistry Group's website www.bristoldynamics.com

How to apply

Please make an online application for this project at <http://www.bris.ac.uk/pghowtoapply>. Please select Chemistry (PhD) on the Programme Choice page. You will be prompted to enter details of the studentship in the Funding and Research Details sections of the form.

Funding

A full studentship will cover UK/EU tuition fees, a training support fee and a stipend (£14,777 p.a. for 2018/19, updated each year) for 3 years and 6 months.