

Linda Laflör – Study abroad at University of Glasgow

email: linda.lafloer@rub.de



Figure 1: University of Glasgow [1]

I had the opportunity to visit the University of Glasgow (UoG), Scotland, from September 2014 to May 2015. For my year abroad I wished to spend time in an English speaking country, and UoG was my first choice as it not only offered a wide range of lecture courses, but also the opportunity to participate in a half year long research project in a single molecule spectroscopy laboratory of Steven Magennis.

In this research group I was able to investigate single molecule spectroscopy on folding of single DNA molecules under molecular crowding. I was introduced to work with an objective type internal reflection fluorescence microscope, FRET and molecular crowding, as well as analysing data using Matlab. Furthermore the project included techniques for sample and surface preparation, as well as ensemble studies using absorption and emission spectroscopy. The aim of this project was to determine the influence of molecular crowding on single DNA molecules and it was shown, that crowding increases the folding of the DNA molecule.

The lectures offered, were organised in module blocks of organic, inorganic and physical chemistry as well as a block of special topics, which contained lectures on recent research topics, such as molecular magnetism or surface structure and spectroscopy, which I considered particularly interesting. Different types of surface and X-ray spectroscopies were discussed, like STM, AFM and Auger spectroscopy. The aim of this course was not only to explain different techniques, but to outline their ability to obtain different information.

Through Auger spectroscopy information of the atomic species can be obtained. X-ray spectroscopy additionally gives information on chemical environment. LEED uses electrons, and information is obtained via its diffraction pattern, which leads to a crystal structure.

Scanning Probe techniques give information about surface structure, absorption and can be used to manipulate the surface. This is important for nanoscale engineering, where various techniques can be used.

Differences to university life in Germany were numerous including teaching, student-lecturer relation and social life in general.

Lectures at UoG were usually at a high didactical level, implying student interactions during the lectures, such as questions, fill in hand outs or real life examples. Therefore the lectures appeared easier to understand and revise.

Lecturers were generally speaking post docs, who tend to have a more caring attitude about their students and occasional lecturer-students meetings in an informal environment, were

really interesting ways to discuss problems with courses, research projects or general advice about future studies.

Social life in general at UoG is highly organised in clubs and societies, where sports and any kind of interest is represented. University sport appears to be well organised, competitive and students identify with their uni and its colours.

References:

[1] www.gla.ac.uk/international/