

2023 CaMPUS Informal Report - James Cowie

My name is James Cowie, a second-year student at Churchill College studying Natural Sciences. Next year, I will be studying Materials Science specifically. I was placed at the Technical University of Hamburg-Harburg (TUHH) in Germany.

I wanted to take part in the CaMPUS internship scheme to be able to have some work experience working in the materials science industry, as well as being able to meet and work with people who have been working in the industry for some time. I expected the work to be somewhat similar to the lab work that I have done already at the University of Cambridge, with similar reporting required.

I was happy to get placed in Germany, as I have visited before and enjoyed my time there, although I was somewhat afraid of the language barrier. However, both my hosts and the research group spoke very good English. The research group were very friendly and helpful, and it was composed of people from many different countries including France, Germany, Russia, Spain, Brazil, India, and Ghana.

My work at TUHH was to produce and test samples of a ceramic-polymer composite material. This included some lab chemistry, use of a centrifuge and a hot-pressing setup, and the performance of Vickers hardness and 3-point bending tests. I was also consulted on ideas for new samples, but most of the theory work was performed by my supervisor.

The image to the right is a picture of me using the hot press to produce a sample.



During my stay in Hamburg, I studied German online for 15-30 minutes each day. Before my visit to Germany, I knew very little German, but I was able to learn enough of the language for everyday use around the city. I hope to continue learning the language in future.



While in the city, I took part in a bicycle tour of the city centre, as well as going canoeing on the canal. In August, my colleagues invited me to a Pride parade (pictured left). I also visited a model railway exhibit called Miniatur Wunderland, which I very much enjoyed (see below).



My placement taught me a lot about the everyday expectations of working in a research group, and I was introduced to new pieces of equipment that I had not used before. I also enjoyed learning about the chemistry behind ceramic-polymer composites, which I thought was quite interesting.

I was already considering a research career in materials science, and I have enjoyed this placement. I would definitely be interested in pursuing a career in research.

Many thanks to the Worshipful Company of Armourers and Brasiers for giving me the opportunity to undertake this internship.