

Welcome



Welcome to our latest Chemistry Newsletter.

I hope you find these short articles interesting. If you have any questions about Chemistry at Birmingham, please do not hesitate to contact us.

Best wishes,
Professor Jon Preece
Head of School

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Emily Doyle

1st-year undergraduate
and Excellence Scholarship
winner Chemistry MSci



Receiving an Excellence Scholarship has undoubtedly been one of the stand-out events of my first couple of months at university – and I can safely say that it's been a hectic semester! Coming from a relatively small sixth-form college in rural Somerset, the move to Birmingham has provided me with countless opportunities, both academically and socially. In the short time I have already spent at the University of Birmingham, I feel certain that I couldn't have chosen a better place to continue my studies, and intend to take full advantage of everything Birmingham has to offer in order to further develop my knowledge and skills.

Ben Cross

1st-year
undergraduate
and Excellence Scholarship
winner Chemistry MSci



I'm Benjamin Cross, but everyone calls me Ben, or Benny boy. I'm reading Chemistry here at Birmingham, and both the course and the social side of my first semester have been great. It's mad to think I've already been here 3 months, because to me, it feels like everything that's happened in that time happened only yesterday. For example, I was lucky enough to be nominated for an Excellence Scholarship, and after a lot of nerves and a gruelling interview, I was delighted to hear that I'd actually won one of only 10 of these awards that are available across the entire College of Engineering and Physical Sciences! The shock and euphoria from winning hasn't worn off quite yet, so if you see me smiling inanely to myself, that's probably why!

Yvonne Malewski

3rd-year undergraduate
Chemistry with Study Abroad MSci

I first decided to study abroad during my first year at Birmingham when I met, and became great friends with, a guy on a year abroad from Australia. He had such an amazing time and I was so excited by the possibility of having a similar experience, I applied for the course and ended up going to New Zealand. I had always been told about how beautiful and amazing the country was so I decided to go for it; when else would I get this chance!

As soon as I arrived, the culture shock kicked in and it took me several days to get used to living in a new country. When I arrived at my halls, it was the start of the 2nd semester



and I found out that I had 34 floor mates, all of whom have become brilliant friends. It was initially tough (and the jet lag didn't help!); however, I quickly joined several clubs, including scuba and tramping (hiking), and involved myself with any events that took my fancy. I found that the people I met through my course and societies are very like-minded. I've already learnt so many things from my stay here, including those which can't be taught, that

will make this trip all the more worthwhile. My friend from Australia even came to visit for several days and we ended up being featured on the news eating fish and chips on a beach! After 3 months, I feel I've settled in and am looking forward to travelling and a long, 'Summer' holiday, that is, after my exams have finished!

University Challenge Polo Victory

Louise Slope

4th-year undergraduate Chemistry MSci

Held in late November, the University Challenge Polo Tournament is the first fixture of the year for the polo team. I was selected to compete for the Novice 2nd team alongside Kian Gheissari (Captain) and Alexander Kaye. Thirty teams from six universities took part in the weekend tournament, which is seen by many as a warm-up for the SUPA National Championships. Birmingham put forward four Novice and four

Beginner teams, and managed to dominate the Novice section, taking the top three spots. The all-Birmingham final was played out between the 1st team, who were hoping to secure the title for a second year running, and the newly formed 2nd team (of which I was a part) who whilst being the underdogs, went on to win 2-1! Birmingham's all-round success was featured not only in the University's student newspaper, *Redbrick*, but also in the world's leading polo magazine, the *Polo Times*.



Matt Gray

3rd-year undergraduate
Chemistry with Industrial Experience MSci

When applying for University, I opted for Birmingham's Chemistry with a Year in Industry degree programme, in which the 3rd year of this four-year course is spent out in industry. This meant that during my 2nd year I had to apply for placements, which admittedly was a daunting prospect. However, balancing full-time study with job applications and interview processes was more manageable than it first appeared as Birmingham provided me with all the support I needed to be successful in my applications. I was rewarded for my efforts with a placement as an Analytical Chemist at AstraZeneca Pharmaceuticals in Macclesfield.

In advance of starting my placement I was sent an information pack from AstraZeneca detailing what to expect on my first day, who my industrial supervisor would be and contact details of other students whom I would be on placement with. When I arrived I received training for two weeks on various AstraZeneca policies and how to use the equipment. You're not thrown in at the deep end as soon as you arrive. Everyone is very understanding and they go out of their way to make sure that you feel comfortable with what you are doing. Even several months in, everyone is still willing to help or answer any questions I have.



In my day-to-day role within my analytical chemistry team, I spend the majority of my time working in the state-of-the-art lab facilities using techniques such as HPLC, UPLC, NMR, GC, dissolution and water-content apparatus. This has enabled me to progress my lab skills and to develop more of an understanding of these techniques and how to interpret the data obtained. I've become a valued member of the team and my opinions are taken into account daily in the problem-solving and analysis we conduct as part of our roles.

Whilst on my placement I have distance-learning modules to complete, one for each of the Year 3 core modules. These follow the same content as what is lectured in 3rd year so you aren't left behind those who stay at Birmingham and, of course, you get to miss out on 3rd-year exams! Whilst on placement I am also carrying out a three-month project where I am allowed to research, for example, a specific technique or reaction. This is a great opportunity to develop yourself and your understanding as you perform cutting-edge chemistry.

I would highly recommend doing a year in industry as the experience allows you to develop your lab skills, chemical knowledge, ability to present data and it helps build working relationships within the company, skills which can be applied to any future role in employment, be it in chemistry or not. A placement is really not as intimidating as it first appears and if you enjoy practical work then I can't think of a better degree to choose.

Dr Etienne Baranoff

New Birmingham Fellow



After a PhD from the University of Strasbourg (France) and post-doctoral positions at Tokyo University (Japan) and the EPFL (Switzerland) I recently joined the University of Birmingham to establish my own independent research group. My interests revolve around light and self-organisation for the fabrication of photoactive organic materials, which is the central topic of my research.

Organic materials are attracting tremendous interest for next-generation optoelectronics. If you have a certain type of smartphone, you are already using such technology in the form of organic light-emitting diodes. Besides the efficient production of light for displays and lighting, organic optoelectronics is also a promising area for the sustainable production of electricity from sunlight.

The main focus of my research involves looking at the very first steps of a material's development; I am interested in the design, synthesis, and characterisation of novel organic and organometallic molecules for light/energy-related applications such as solar cells, electroluminescence and transistors. One of our important goals is to understand the impact of bulk morphology on properties and to control the aggregation of molecules in condensed phases in order to improve device performance and stability.

Dr Zoe Schnepf

New Birmingham Fellow



I joined the School of Chemistry in October on the Birmingham Fellows Scheme. I'm from the UK originally, but before this I was a postdoctoral researcher in the National Institute for Materials Science in Japan. Since then I've been busy setting up my lab and starting my new group members on their research projects. We've got some really interesting projects, mostly focusing on nanostructured carbons for energy

applications such as fuel cells. I've always been interested in Green Chemistry, particularly in the use of biomass as a feedstock and the development of simple and safe methodology. For example we're using hydrothermal processing to convert seaweed polymers into porous colloidal carbon. Another focus is on alternative catalytic materials where we are using nanostructured metal carbides as a replacement for platinum.