



Profiles	Development
Name	Lucy Bloxham
Age	27
Job	Development chemist

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Career path and qualifications so far

I completed my first degree, BSc (Hons) in Chemistry and French, at the University of Liverpool. This was a four year course, the third year of which I spent studying at the University of Poitiers in France. After graduation, I did a PhD in Surface Science, also at Liverpool. On completion of my PhD I started in my current position in Johnson Matthey as a development chemist in the Process Catalyst Development Group. I have been in this position for two years.

Has anything you've done been especially useful in your career?

During the final year of my degree I studied modules on surface chemistry, catalysis and kinetics, which have all been useful in my job. Although my PhD work is not directly relevant to what I do now, some of the principles and analytical techniques I used then are helpful. I use French when dealing with our sales department in Brussels and occasionally when dealing with our French customers.

What is a development chemist?

The catalysts we make in the Process Catalyst Development Group are used in a wide variety of processes from pharmaceutical synthesis to manufacturing foodstuffs. As a development chemist it is my job to develop, fabricate and test catalysts for our customers' processes. I am also involved in the scale-up of catalysts from laboratory to plant scale.

Day to day activities

Work within the Process Catalyst Development Group is project based and we usually work on different projects simultaneously. The projects are generally related to a specific customer or process and some are short-term, while others run over a more extended period.

Much of the project work involves designing catalysts for a specific process and then preparing and testing the catalysts in the laboratory. Another important aspect of the job is working with the Process Catalyst production team to scale up successful catalysts from laboratory scale (150 g) through pilot scale (10-20 kg) and on to full-scale production (100-200 kg).

My responsibilities also extend to technical support, which involves catalyst recommendations, after-sales service and dealing with customer enquiries.

Further qualifications

I am currently studying for the Open University Certificate in Management.

Why development chemistry?

Having graduated with a degree in Chemistry and PhD in Surface Science, I was keen to follow a career in the field of catalysis, but I also wanted to move away from academic research to something that was more immediately applicable to the real world. I was aware of Johnson Matthey through their university sponsorship programme and was impressed by the company and the diverse range of opportunities within it.

What do you most enjoy about your job?

What I really like about my job is the variety. I spend roughly half of my time in the laboratory doing test work and the other half in the office dealing with technical support and sales enquiries. The development projects are very varied, so I am often working on something that I haven't dealt with before. There are always lots of challenges and new things to learn, but there's also a good deal of freedom to choose how I spend my time. Another aspect of my job I enjoy is the customer contact side, going out to meetings with customers to talk about the projects and discuss our results.

What other skills do you need?

I would say that good communication skills are essential as I often have to liaise with colleagues, other departments within the company and customers. Presentation skills are also useful when making customer presentations. Time management is a necessary skill to balance the different job roles and to be able to stick to deadlines.

Why is it necessary to study a science subject at university?

Owing to the nature of the job, it is vital to have some scientific qualifications – generally at degree or postgraduate level. An understanding of chemistry is needed to be able to design and make new catalysts, and some basic knowledge of reactor testing is needed to screen potential new catalysts.

Further information/contacts

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For further information on careers in the chemical sciences contact:

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