

A Future in Chemistry

Your career starts here

Fragrance Chemist

Charles Sell

I help develop new fragrances, and ways to capture and manufacture them.

What is a Fragrance Chemist?

Fragrance chemists work in the fragrance industry or in academic research. Their work involves discovering new fragrance chemicals, improving how fragrance ingredients are produced and analysing fragrances and their ingredients. They can also be involved in the study of smell, which is also known as olfaction.

What do you do in your job?

I have been involved, at one time or another, in every area of fragrance chemistry. I helped improve manufacturing methods by increasing their sustainability, and developed new ways of producing fragrance ingredients and natural extracts. I also searched for new fragrance ingredients that were better over existing ones, in terms of safety, cost, performance and sustainability. I became interested in how chemical structure is linked to smell, and I was involved in a study of how the sense of smell works. I worked with molecular biologists and biochemists investigating how the receptors that sense smell recognise and respond to odourant molecules. Through contact with neuroscientists and sensory scientists, I learnt how the brain uses input from the olfactory receptors to create the mental picture that we call odour. I now act as a consultant in fragrance chemistry and olfaction.

What do you enjoy most about your job?

Fragrance chemistry is exciting because there is immediate feedback. We can make something which has never existed before and smell it to see what effect it has. The sense of smell is extremely complicated and personal. It can easily be shown that we each have a unique sense of smell, and the link between these differences and the practical chemistry is fascinating.

What attracted you to becoming a fragrance chemist?

My PhD researched molecules that are important fragrance ingredients and this was how I entered the perfumery industry. I started doing laboratory work on improving the manufacture of fragrance and flavour ingredients and synthesising new ingredients. My career then moved on to managing research teams involved in these activities. Designing new odourant molecules made me think about how the nose detects these molecules and how the brain creates a picture based on the signals from the receptors in the nose.



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How did I get started?

I studied A levels in chemistry, physics, mathematics, pure mathematics and applied mathematics, then went on to graduate with a 1st class honours BSc chemistry degree from Queen's University Belfast. I stayed at Queen's to do my MSc through research in organic chemistry and then moved to the Australian National University, where I did a PhD in organic chemistry.



How did you get in to your job?

I studied A-levels in chemistry, physics, mathematics, pure mathematics and applied mathematics, then went onto graduate with a 1st class honours BSc Chemistry degree from Queen's University Belfast. I stayed at Queen's to do my MSc through research in organic chemistry and then moved to the Australian National University, where I did a PhD in organic chemistry. Following this I obtained a Royal Society European Fellowship for postdoctoral research at the Swiss Federal Institute of Technology Zurich (ETHZ), and then worked as an EPSRC Post-doctoral Fellow at University of Warwick. I then joined a company which has now gone on to become part of another company called Givaudan. At one point in my career I spent a year as a visiting scientist at the Massachusetts Institute of Technology.

What are the opportunities for career progression?

Fragrance chemists can progress from laboratory work to the management of research and development teams or can move to other areas of management within a company.

What advice would you give for people wishing to enter your career area?

Demonstrate academic excellence in a relevant area of chemistry or biochemistry and a passion for fragrance. Competition can be tough so you will need something that makes you stand out to employers. The fragrance business is multinational and so willingness to travel, to live abroad and to speak one or two foreign languages is also helpful.

Career progression

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Skills used

Team Worker, Problem Solving, Communication, Data Handling and Research, Practical Lab Skills, Creative Thinker, IT and Technology

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