A scientist just like me

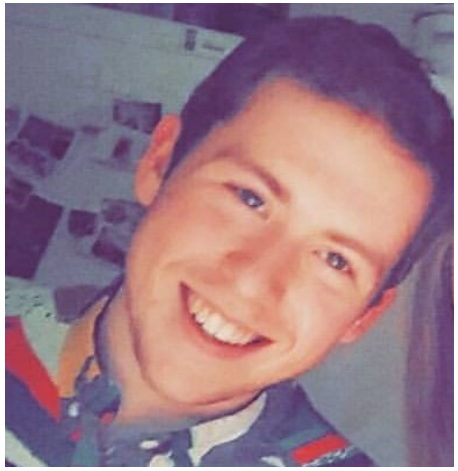
James Mortimer

Photochemist

why & how?
PRIMARY SCIENCE TEACHING TRUST

A scientist just like me

Hi there! I am James Mortimer – a photochemist



Where do I work?

I work at the University of Bristol in the chemistry department. In our lab we create interesting new substances.

What did I like doing when I was at school?

I had two main subjects that I enjoyed - drama and chemistry. Drama develops creativity and I could use this for good in chemistry.

What do I like doing in my spare time?

I am a big computer gamer and I also read a lot of scary fiction books; they are a great escape from the busy lab job!

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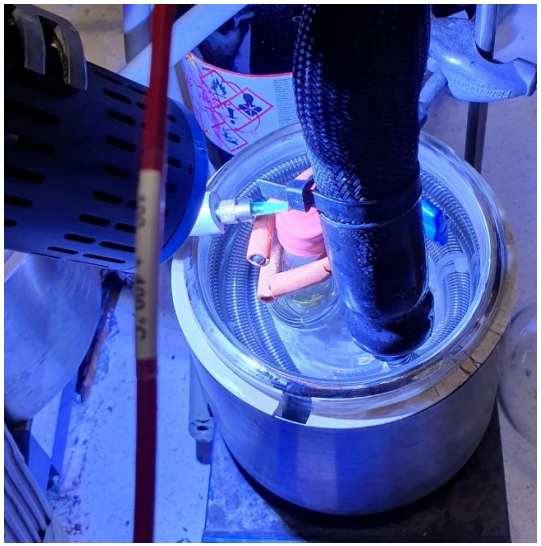
What do I do as a photochemist?

My main job is to make interesting substances which have the potential to be made into something else just by shining a light on them! Photochemistry involves taking a bright light of a certain colour and shining it onto molecules, giving them the energy they need to react and make really cool products.



How does what I do make the world a better place?

I am finding ways to use light to make medicines that would normally need very expensive or dangerous metals to make. Using light is very cheap, good for the environment and is much safer than using many metals!

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What I like about my job

I am lucky to have a very varied job where every day is different. I love the feeling of pushing science to a new place. It always feels as though I am having an impact on chemical research because it is an area that not many people know a lot about, which is why outreach is so important to me!

Challenges I have faced

Chemistry reactions often don't work, and sometimes it can be hard to work through that. But I have learned to persevere through the frustrating parts and focus on all the great research that is happening.

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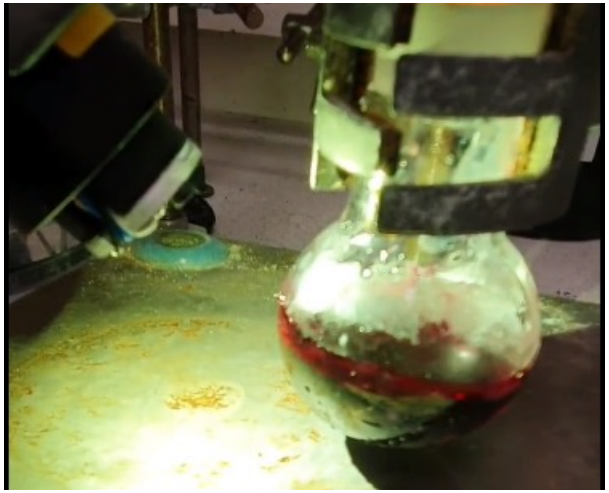
If you want to be a photochemist, you need:

- **the ability to communicate -** photochemistry is quite new and not many people understand it, so being able to explain it is important.
- **a willingness to learn -** there are a lot of unknowns in photochemistry so you need to be willing to learn new things!
- **an appreciation of colourful chemistry** - we often use very brightly coloured mixtures.



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Discussion time

- Would you like to be a photochemist like James Mortimer?

  Why? Why not?

- What skills and interests do you already have that would help you become a photochemist?

- What new skills and knowledge would you need to develop?

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James Mortimer is a STEM ambassador. Click here to access free STEM Ambassador support and resources.

Free supporting resources for photochemistry

Starters for science – see 'Colourful ink' and 'Mirrors and light'

I bet you didn't know... articles use cutting-edge science research as a context for learning. Teacher Guides describing the research and activities and investigations for children can be used a classroom presentations. See:

- The disastrous effects of historical ink

Created by the Primary Science Teaching Trust