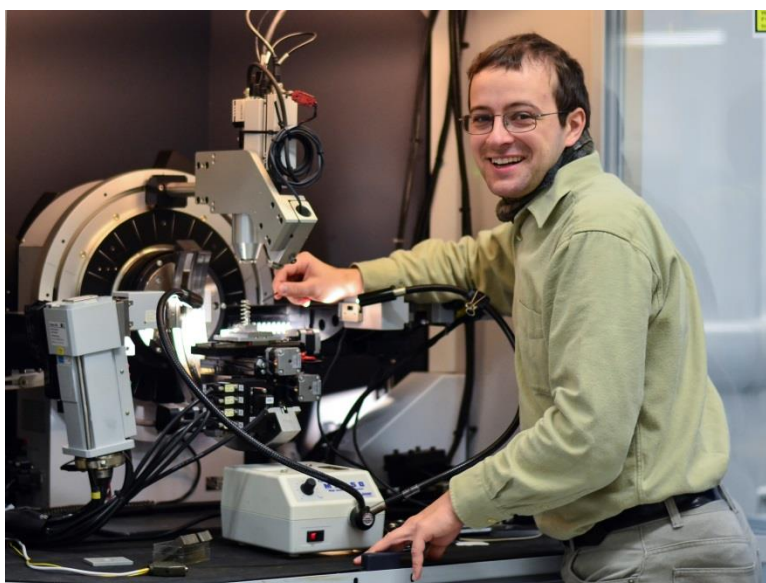


Martin Frentrup



Martin working on the X-ray diffractometer

"I am fascinated when I get to work on something completely new. And getting information out of a challenging sample, and visualising the crystal in my mind inspire me."

How did you join the Cambridge Centre for Gallium Nitride?

I came to Cambridge because of my interest in crystallography and X-ray diffraction of crystals. As a diploma student and then a PhD student at TU Berlin in Germany, I worked on growing crystals of gallium nitride and its alloys and using X-rays to characterise them. During this time I had occasional contacts with members of the Materials Science Department in Cambridge, like Mary Vickers. We talked a lot about different ways of characterising semipolar GaN and about new results on this topic. In 2014, a friend of mine who had moved from Berlin to Cambridge told me that the Gallium Nitride Centre here in Cambridge was looking for an experienced researcher to work on X-ray characterisation. This caught my interest, since it gave me the opportunity to continue my X-ray research. So I applied for the job and thus joined the Centre for GaN.

What is your role in the GaN group?

As the group's expert on X-ray characterisation I am responsible for analysing all new types of materials, and our non-standard samples, which are difficult to measure. I am fascinated when I get to work on something completely new. And getting information out of a challenging sample, and visualising the crystal in my mind



Martin showing the diffraction of light during the Cambridge Science Festival.

inspire me. In addition to my own research, I train our new PhD students on our X-ray diffractometers, and I help my colleagues with their analysis.

What do you like best about working in the group?

Oh, there are many things to like! In terms of my research, the best thing about my work here in Cambridge is having access to a wide range of high resolution X-ray diffractometers. This allows me to test new ideas I have, and to get fast feedback on whether the ideas work and what possible problems can occur. But of course the lab work is not the only thing that I like about my job. I must not forget to mention the very friendly and open atmosphere in the group, and our weekly cake club!

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Where do you see nitrides in future?

The future is hard to predict. We already know that the material properties of nitrides open a wide range of applications which can improve our lives. I am certain that this trend will continue. However, there are a few open questions which can't be solved by the nitrides alone. But maybe in combination with other more traditional semiconductors, like the arsenides or phosphides, progress will be made. We will see what the future will bring! None of us can see it now, but I am looking forward to exciting new developments.



Martin making ice cream with liquid nitrogen during science week, showing that science can be tasty.

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