



## Dr. Fabien Massabuau

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Fabien working on a transmission electron microscope (TEM)

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### How did you join the Cambridge Centre for Gallium Nitride?

*I first joined the Gallium Nitride group as a summer student in 2010. At that time I was an undergraduate student from École Centrale de Lyon. I was studying engineering and I was looking for an international experience in nanotechnology. This was my very first experience in a research environment as well. I really enjoyed being confronted to problems with no pre-determined answers, and using my knowledge and resourcefulness to overcome the challenges. Then I came back to France to complete my degree but I was motivated to come back to Cambridge for a PhD, which I did in 2011.*

### **What is your role in the GaN group?**

*From my doctoral training, I am mostly a characterisation person. I used to look at various structural aspects of light emitting diodes (LEDs) in order to identify which ones are crucial to the fabrication of efficient light emitters. After graduation, I kept my characterisation hat, but started focussing more on the development of methodologies for advanced characterisation of nitride materials (not necessary LEDs).*

*I am also involved with the teaching activities of the department: I mentor second year undergraduates, and supervise students on research projects.*

### **What do you like best about working in the group?**

*I like the relatively high degree of autonomy that I have on the projects I am working on. I have the possibility to pursue my own ideas and to design experiments to test them. Also, related to the previous point, I think I am quite lucky to be in the Cambridge department of materials science and metallurgy since I have access to a wide range of facilities (which is what allows me to be autonomous).*

### **Where do you see nitrides in future?**

*Nitrides find applications in many fields; some devices are already reliable in an industrial context. But we are far from being done with these materials; there is still a lot to discover or to improve! That is what makes this field exciting. In my opinion, nitrides will be very important for the development of ultraviolet light emitters, with applications such as water disinfection, forensic identification, or phototherapy amongst many others.*



Fabien using a demo to explain 'LiFi' to the school students



Fabien having fun in the lab!