



GETTING TO KNOW TEQ'S MEMBERS

Name: Jence T. Mulder

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Profession: PhD Candidate

Age: 27

How did you choose your field of studies?

I always loved chemistry in high school, hence I chose a chemistry BSc (which turned out to be quite different, but better, than I expected). After continuing my MSc in chemical engineering, I realized that I wanted to do some more synthetic chemistry which brought me to the groups of Arjan Houtepen and Liberato Manna. In both of their groups, I can do exactly what I love, namely making chemical nanostructures from scratch, in this case, specific optical properties.

Can you briefly introduce yourself and your work?



Some cesium lead halide (CsPbX_3) nanocrystal dispersions made during my internship at IIT Genova, where the halide goes from chloride (left) to bromide (middle) to iodide (right) and mixtures thereof. Credits: J. Mulder.

I'm Jence Mulder, I'm Dutch and currently, I am working as a PhD candidate for the TEQ-project at TU Delft (and hopefully soon at IIT Genova again). My main research is aimed at synthesizing, optically analyzing and improving a variety of nanomaterials, including ytterbium-doped YLF. This material is studied further by, for example UCL.

Outside of working hours, I love to play the oboe and English horn (especially in a symphony orchestra), as well as occasionally attend techno parties.

What do you mostly like about your research? What are the challenges?

I love the freedom, creativity and versatility of the job. As we are trying to push the boundaries of science, no path is completely clear. This means that every day is different, and what might seem a bad idea at first can turn out to be the holy grail. Or the other way around... Unfortunately, my personal challenges include stress and insecurities, triggered by the generally large amount of negative results and my personal aim to perform to the max.



Far more important to me than scientific results are my colleagues, parents and partner. Before, but especially since COVID, they have helped me to grow personally and scientifically. Gaining confidence through collaborations (I always love to be part of different types of research) and being able to vent whenever stress or insecurities take the overhand, because of them COVID thankfully did not kill my love for science and scientific development.

Picture taken in Genova, during an internship at the IIT. There, I learned to make a number of materials that currently form a large part of my PhD. Credits: J. Mulder.

What advice would you tell students who want to become scientists in the future?

Listen to yourself and think about what you like. Becoming a good scientist does not mean you have to be the best of the class. And the best of the class might not be the best scientist. In order to be a scientist, you should be interested in the topic you want to dive into. Discipline and creativity can help you much further in certain positions than knowledge alone. But above all, don't let others make your plans. If you want to become a scientist, and if you are willing to go for it completely, you will succeed. One way or another.