



| Wilma de Groot



| Martin Jurna

'MESA+ holds the future'

Develop new drugs faster

She graduated in February last year and her doctoral research will take four years to complete. Wilma de Groot (27) will therefore be a part of University of Twente's Materials Science and Technology of Polymers group for some time to come. But that prospect doesn't daunt her at all, on the contrary: "I like it here and the research I am engaged in is challenging and should eventually lead to a significant contribution to the development of drugs." That research is a European study, ASMENA, in which – in a nutshell – we are making membranes with minute channels that can open and close, like a sort of valve. I focus especially on these valves, which are made from polymers and open and close when subjected to a stimulus such as temperature and acidity level. This application of nanotechnology can be used at a later stage to develop drugs faster." In saying this, De Groot makes the point that nanotechnology, and therefore MESA+, is playing a major role in biomedical applications. "But it also goes without saying that this applies to many other applications as well. Thanks to nanotechnology we are constantly becoming more able to make many things much smaller, faster and more efficient. With the help of MESA+ we are well on the way to playing a major role in this field. MESA+ holds the future, of that I am convinced."

For her research Wilma de Groot visits the NanoLab frequently. "I really don't need to be here so very often, but I will probably come here more often in a few months time when we have been moved to Carré, that will be right next door then." She is looking forward to the move for other reasons too: "Many students from certain research groups will then be working closer together and that tends to have a stimulating effect." And still in two and a half years' time, when she has obtained her doctorate, her work at the University of Twente will come to an end. That is unless she wants to continue developing her knowledge and pass it on within MESA+. "That is always a possibility, but I don't know as yet. Maybe I'll find work in the private sector or in a hospital; I'll just have to wait and see what turns up."

Still in its infancy

Martin Jurna (28), a member of the Optical Sciences research group, is further along with his doctoral research; he will obtain his doctorate on 2 July next. He too still has no idea what he is going to do after reaching that milestone. "Yes, I know I should already have started applying for jobs. However, a job in the private sector is certainly on the books for me." Maybe your own company? "Who knows, but I will first have to come up with a good spin-off idea. I'll just see what happens, but I am sure everything will turn out well." In other words: Martin Jurna is an optimist. And his optimism also applies with regard to MESA+ and nanotechnology. "I see a bright future for both. Nanotechnology is still in its infancy, but if you see how many significant applications have already been realised then it's only natural that the flywheel effect will do its work. Certainly here at MESA+ the entire entourage of the budding Kennispark will start to play a more prominent role." But then it is essential that the knowledge, as is often the case nowadays, does not drain out of Twente to Eindhoven or other areas in the Netherlands. "That's still the case, and I will certainly familiarise myself with Eindhoven, but considering the number of businesses that have developed themselves there as spin-offs, then I'm not all that pessimistic." In his research, Jurna is engaged in CARS microscopy. He explains this as 'addressing vibrations within molecules' and 'chemistry specific imaging'; the average layman will find this subject matter difficult to comprehend. But, and this is quite important, what does the research deliver? "One specific example is our work in trying to detect protein diseases such as Alzheimer's. That could lead to us being able to determine by means of a blood sample whether a person has an increased risk of developing Alzheimer's. If you know that, then you can administer prophylactic medication." Together with his research group, Jurna was the first to move to Carré. "The new location is great and," in confirmation of the view expressed by Wilma de Groot, "you have an added stimulus in this new setting."