



Originally from the Netherlands, I did my BSc degree at the Technical University (TU) Delft and the University of Leiden which was called Life Science and Technology. This bachelor involved core knowledge in Chemistry and exact courses, as well as more Biotechnology focused courses and laboratory work. During my bachelor thesis I was part of the Bioprocess Engineering group at the TU Delft, where I developed a computational Flory-Huggins based model to predict phase separation of enzymes and sugars as a downstream step in biofuel production. In 2019 I did an MPhil in Biotechnology and the University of Cambridge where I also was part of the Magnetic Resonance research group.

In 2020 I started the Syntech CDT programme whilst being part of the Sustainable Reaction Engineering (SRE) group with Professor Alexei Lapkin. My PhD project is in collaboration with GSK and is on the modelling and optimisation of cell line selection in pharmaceutical bioprocesses. The goal of the project is to develop a hybrid model, combining artificial intelligence and mechanistic modelling, to predict the cell line selection process and eventually shorten the experimental de-risking phase.

What appealed to me about the Syntech programme is the fact that it is at the interface of chemistry, engineering and data science. With a strong interest in both chemical (bio-) synthesis and digital molecular technologies, this programme effectively integrates both fields and enables me with the unique set of skills in all aspects of automated chemical synthesis. In addition, doing a PhD whilst also being part of a programme and cohort provides unique collaboration opportunities, as well as continuously improving my complementary scientific skills and ethical knowledge.

Publications:

<https://doi.org/10.1016/j.seppur.2020.117636>