

Project SUSCOAT

How to make existing coatings 'smarter'?

A special coating that filters harmful substances out of the air. This may seem like something for the future, but it is already being researched at Dow Terneuzen. PhD students of Ghent University Cristina Resetco and Daniel Frank are both working on research project SUSCOAT. They are researching possibilities to make the coatings that Dow produces more sustainable and 'smarter'.

Cristina and Daniel work closely together, but fulfill their own role within the project. Daniel explains: "I combine different existing substances. I experiment with a variety of compositions in this process. A new molecule is formed after a chemical reaction, that serves as a filter for harmful substances when you add it to a coating. We also refer to these molecules as building blocks." Cristina then starts her work with these building blocks. "I am studying some coatings that Dow produces and I am researching how I can incorporate the building blocks and make the coatings more sustainable", Cristina explains. "We are researching different applications for this. An example of this is filtering a hazardous substance like formaldehyde out of the air. Formaldehyde is a substance released from, for example, furniture materials in which chipboard is processed. The chipboards are composed of compressed wood shavings and are glued with

formaldehyde-containing resins. Formaldehyde is also naturally present in wood. By processing these materials with a special coating, you can limit their negative effects." Dow has already released a first product on the market, known as FORMASHIELD™.

In its infancy

Daniel and Cristina are spending fifty percent of their time working at the Ghent University and the other half at Dow Terneuzen. This means that they gain a lot of practical experience. Daniel: "A university study can involve anything you want. Partially doing my research at Dow reminds me of the fact that the research should be applicable within the chemical industry and that it should finally answer to the customer's request. This makes the research more challenging, and definitely more interesting." The project is currently still in its infancy. Cristina: "Our goal is to finally deliver a 'Proof of Concept', in which we prove that there are possibilities to make these innovative coatings. This does not mean that we will actually deliver a commercial product. That is a possible next step in our research."

Working together

Project SUSCOAT is part of the European Marie Curie funding program. This program gives researchers the possibility to gain practical experience and take their research to a higher level. Daniel and Cristina are delighted about this: "By partially doing our research at Dow, we will be much better prepared for the labor market and hope to find a job easily." Besides the support from the university, they are also accompanied by employees from the Department of R&D at Dow. A major investment for Dow, but they get a lot of knowledge and expertise in return.



Cristina Resetco and Daniel Frank research the possibilities for developing new, smart coatings.