

Social acceptance of waste based bio-composites



Introduction

Biobased materials are an important development to phase out fossil feedstock and to contribute to a sustainable and resilient society. Moreover, if we use organic waste streams, we give value to these materials. At the AMS institute, we are working on the development of bio-composites based on organic waste streams. PHBV is a biobased plastic made by bacteria from municipal waste water. We are developing two bio-composites with corresponding applications, being office furniture from a composite with PHBV and waste leather, and structures for nature restoration from a composite with PHBV and biomass.

Assignment

The bio-composites from PHBV are not only biobased, but also waste based. From a sustainability point of view this is favorable, but it might also make social acceptance more difficult. Therefore, we would like you to investigate the social acceptance of these materials for this graduation assignment.

We invite you to explore the social implications in relation to the applications. The material experience is very important for acceptance. We want to know how these materials are perceived based on different factors, positioning and the type of application. We also want to know whether

perceptions and levels of acceptance differ for different groups of people and the expected target group. This is an experimental project, in which you will develop sample to test the materials with users.

Context

At the AMS institute we are working on solutions to improve the urban environment on all kind of topics like energy, circularity, and climate resilience. This assignment is part of the PRO-PHBV project, which consist of a consortium of AMS institute, TU Delft and five companies, being Paques Biomaterials, NPSP, Material Sense lab, Ahrend, and Waardenburg Ecology. You will be part of the consortium and collaborate with all parties. Especially, Material Sense lab has a lot of experience in material appearance and experiential characterization. They have developed tools and methods on which you can build your project.

More information about the project:

<https://www.ams-institute.org/urban-challenges/circularity-urban-regions/developing-waste-based-biobased-plastics-for-furniture-and-nature-restoration-pro-phbv/>

Would you like to know more? Please contact me:

Mariet Sauerwein

Mariet.sauerwein@ams-institute.org