

Khaled Al-Shwafy

Yemen ➤ Belgium

*Novel catalytic routes
towards carbon efficient
lignocellulose biorefineries*



What's your project about?

My project focuses on **Reductive Catalytic Fractionation** (RCF) technology which is an **innovative** biorefinery to fractionate **biomass** with **stabilizing** lignin in a **low molecular weight** and **functionable** form. The aim of my project is to look into the **pulp** from this technology and to **valorize** it into **fiber applications** like paper making with **maintaining** the **lignin oil** in a functionable form.

Project Partners



KU Leuven university located in Leuven, Belgium. It is one of the **oldest** universities in the world dating back to **1425**. I am working at the Center for Sustainable Catalysis and Engineering (**CSCE**) under the supervision of professor **Bert Sels**.

KU LEUVEN

KU Leuven



Sappi

sappi

SAPPI is a world-leading **pulp** and **paper** industry. It was established in South Africa and now has **branches** and pulp **mills** in many countries around the **world**. I work in the facility located in **Gratkorn, Austria**.



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What are you most excited about your project?

My motivation for this project is **driven** by the fact that this **technology** can be an **alternative** for a very **old and mature industry** like paper & pulp and can create more **valuable applications** for industrial **lignin**.

What do you find the most challenging in your project?

Since pulp & paper is **old** with **mature technology**, it is challenging to **develop** a technology that can **compete** with **quality** and **price**.

What brought you to the Bioeconomy?

I did my master in an **Erasmus Mundus** program focusing on **bioeconomy**. But even before that, I **believe** that bioeconomy is the **future** and; hence I would love to **contribute** and to be an **important player** in this future.

What does the Bioeconomy mean for you?

For me Bioeconomy means to **continue** the industrial **growth** and **revolution** depending on **bio-based resources** that can **flourish** human civilization with keeping our **planet green** and **safe**.

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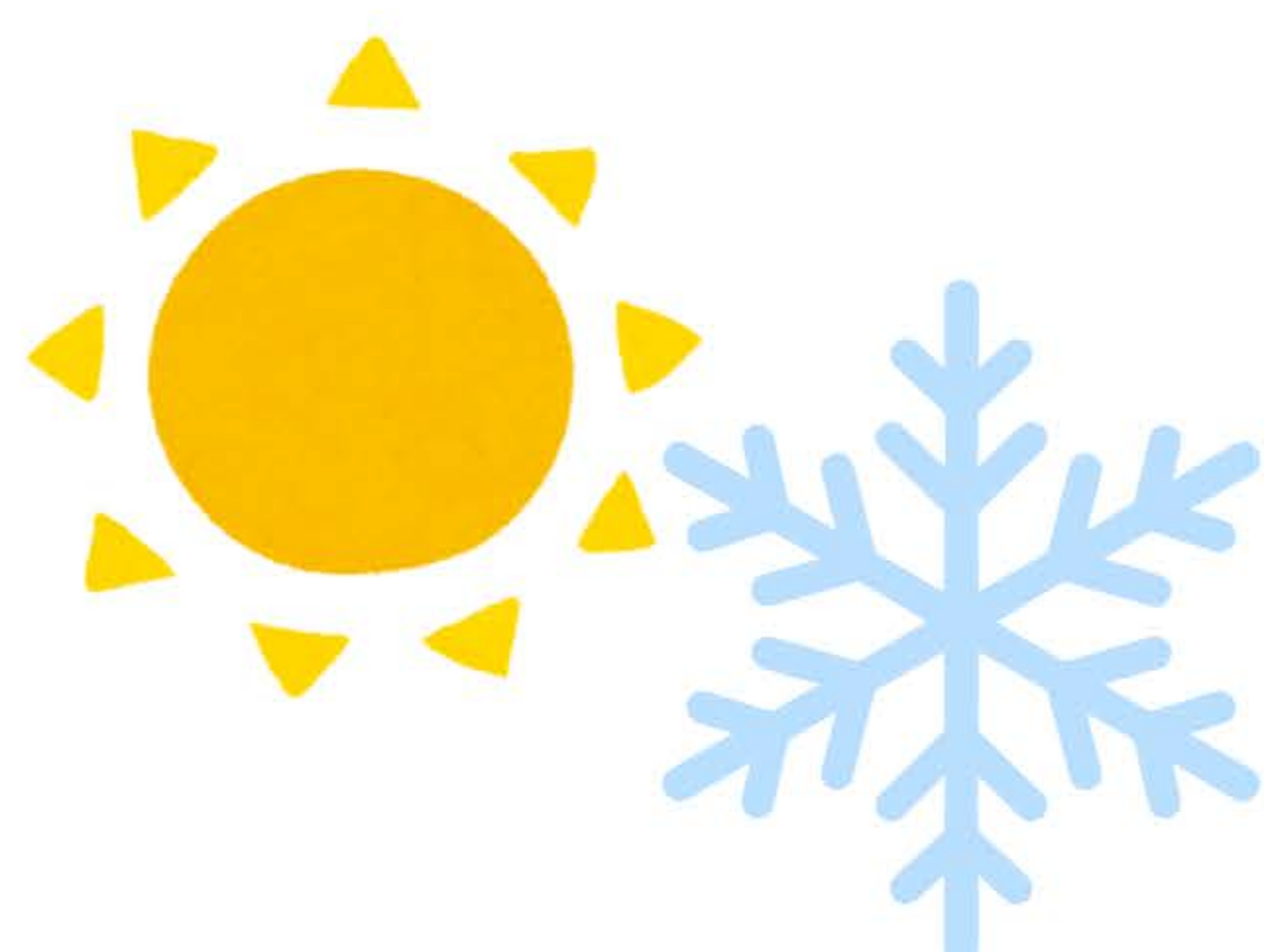
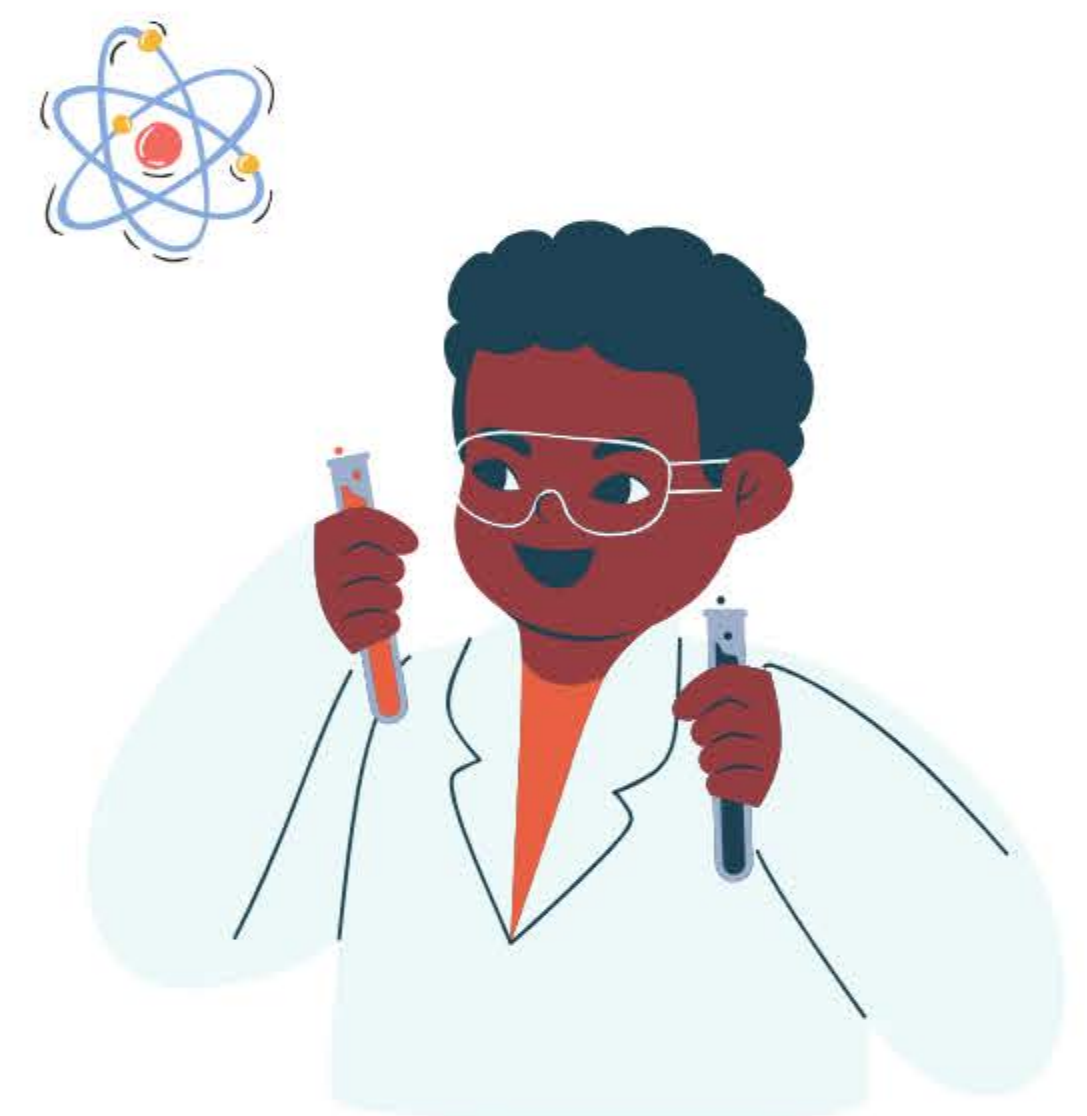
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What did little Khaled want to be when he'd grow up?

I have been always curious and dream of making a worldwide impact that is why since I was a little kid I wanted to be a scientist. In some stages of my childhood, I wanted to be the president ^_*



Something you love? And something you hate?

I love summer & sun. I don't like winter & cold

Any hobbies outside of Science?

Creative writing, football, and traveling



Short CV

- 2016-2020** ● Bachelors in Chemical Engineering and Technology, Tianjin University, **China**
- 2020-2022** ● **European** Joint Master Degree in Biological and Chemical Engineering For Sustainable Bioeconomy:
- 2020-2021** ● Master in Microbiology, University of Reims Champaign Ardenne URCA, **France**
- 2021** ● Master Green Chemistry, Tallinn University of Technology, TalTech, **Estonia**
- 2021-2022** ● Master in Bioprocess and Bioenergy, University of Liege, **Belgium**

