Biopolymers for road construction

Reducing pollution from asphalt production and utilization

Positive Impact

Reducing carbon emissions from asphalt production and utilization

Problem

Asphalt roads are a crucial part of everybody's daily and professional life. However, key asphalt constituent is bitumen, which is a material derived from crude oil (fossilised oil deposits).

It's production and transport processes release millions of tons of CO2 and other emissions. Moreover, current societal and climate challenges the bitumen production, supply and price are severely affected

Initial Validation

Validations have been conducted in the lab settings and the product is available on kg scale.

Solution

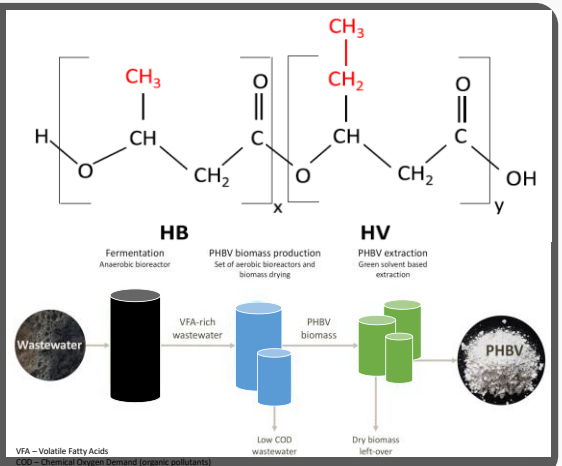
Replacing bitumen with biopolymer will help in lowering the CO_2 emission and will strengthen the road industry efforts to become carbon neutral by 2050.

Further reduction of climate impact is achieved by preventing production and use of new polymers, but to treat wastewater and extract biopolymers that are then incorporated into the bitumen mixture.

Technology

→ Partially replacing bitumen with biopolymer **poly-3-hydroxybutyrate-co-3-**hydroxyvalerate **(**PHBV)

→ Established water purification process to obtain PHBV



Call to Action !!!

We are looking for passionate individuals with entrepreneurial and business development skills who wants to innovate an old-fashioned industry. Also, If you have a background in polymers and chemical engineering, contact us!

If you are interested, please reach out to entrepreneur@hightechxl.com

Potential Markets

There are several potential markets where this problem is an issue.

→ Road industry

Asphalt Producers

Bitumen Suppliers

→ Construction industry

→ Roofing sealants