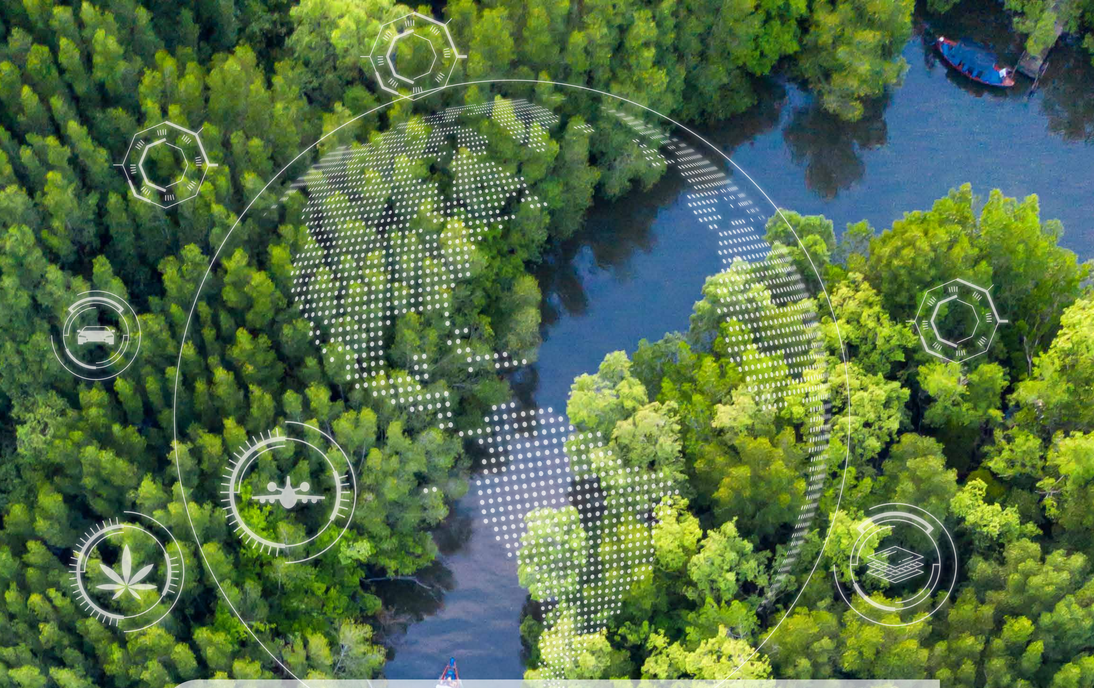

furhy

fully recyclable hybrid
bio-composite
for transport application

Challenge

The growing demand for reducing CO2 emissions by the automotive and the aviation industry aims to advance in eco-sustainable and lightweight composite materials.

Solution

The FURHY project will develop a new, bio-based, smart and completely recyclable composite material, obtained by fast and low energy consumption out-of-autoclave process. The matrix will be made by a new bio-based epoxy resin formulation filled by expanded graphite (EG), that will have a multiple role in the enhancement of both material and manufacturing process, providing smart-functions. A hybrid composite will be developed, using hemp and recycled carbon fibers (rCFs), thus maximizing the environmental benefits with a life-cycle perspective.

Industrial sectors

Aerospace and automotive

Expected impact:

- Reduced cost for production of renewable lightweight materials, 25% lower cost than materials currently used
- Lightweight products containing >50% sustainable, bio-based materials
- Up to 30% lightweight potential through tailored functionality for a range of extreme environment
- CO2 emission reduction of at least 20%
- Business models and circular value chains for bio-based lightweight components
- Industrial leadership and increased autonomy in key strategic value chains with security in raw materials supply

Funded by
the European Union

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Consortium

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