ComBIOsites

Reversibly photocrosslinked BIO-based composites with barrier properties from industrial by-products

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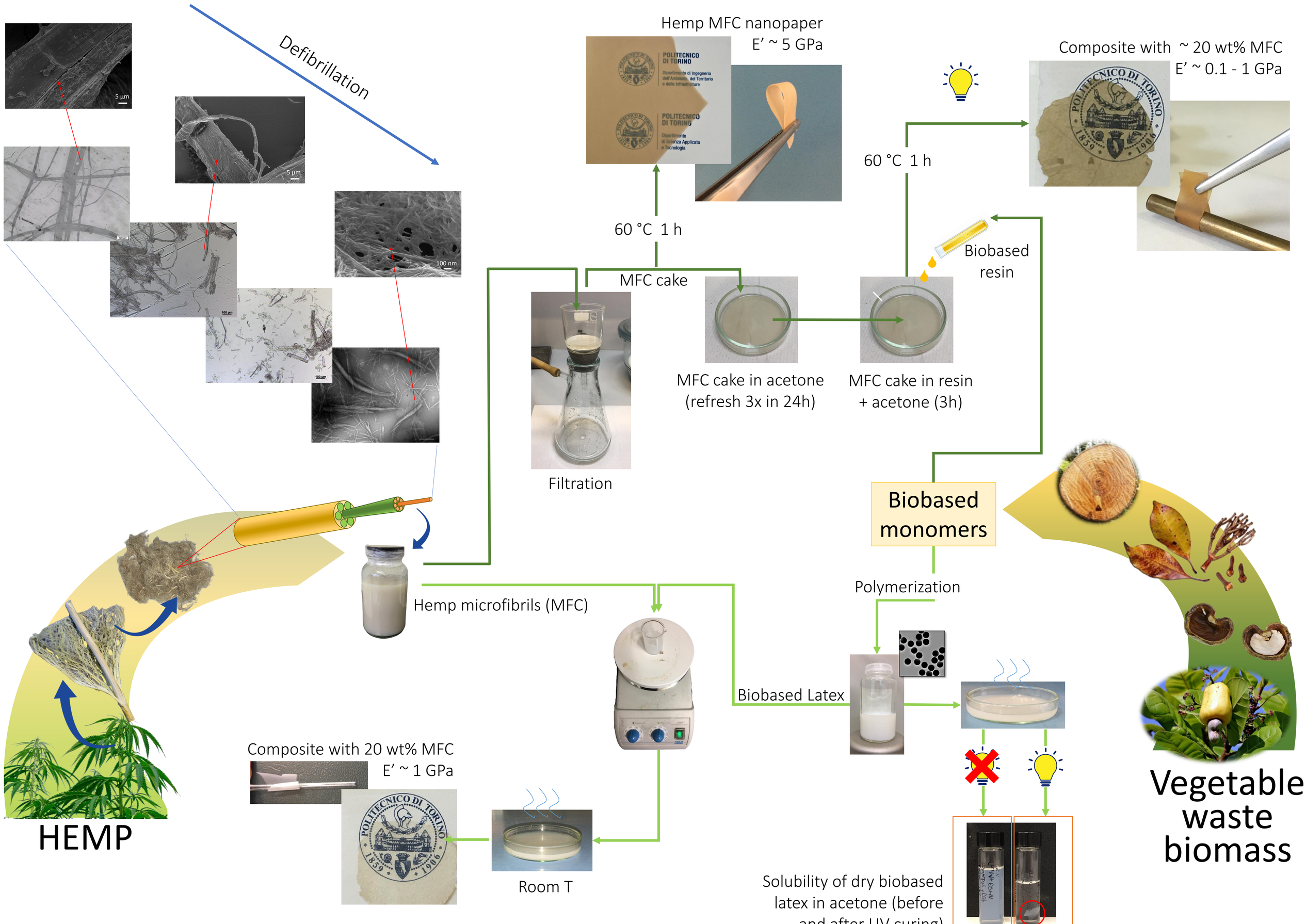
Objectives

Development of recyclable composite materials for packaging, using bio-based raw materials and environmentally friendly processes:

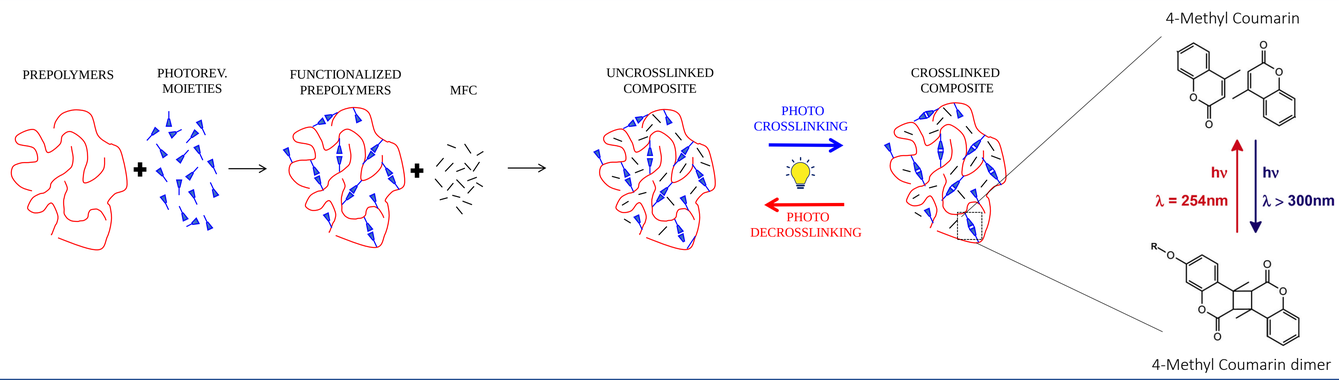
- **Microfibrillated cellulose** and **bio-based prepolymers**, both derived from agri-food industry waste, as raw materials.
- Curing by **photopolymerization**, a green technology with low energy requirements, room temperature operation, and low VOC emissions.
- **Reversible photocrosslinking,** to ensure the curing of the polymeric matrix upon irradiation at a given wavelength, and to allow its dismantling upon irradiation at a different wavelength.

Results



Work in progress

- Photoreversibility of matrices is currently under investigation
- Permeability of the films is being assessed and a model will be developed



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