

Recovery of fibers and matrix from natural fiber-reinforced plastics

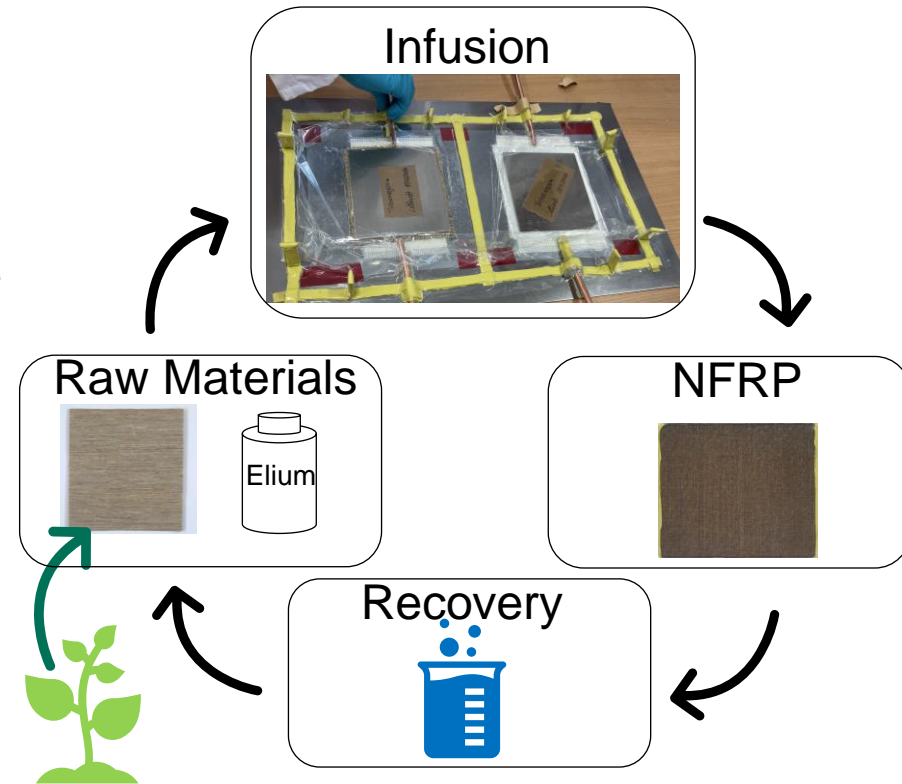
✓ Masterthesis

In the field of composites natural fibers and thermoplastics are recently in focus due to their potential inherent recyclability. DLR and IMA is jointly looking into the potential for a natural fiber-reinforced plastics (NFRP) with Elium, a thermoplast suitable for the infusion process and recyclable under ambient conditions.

The goal of this student thesis is to investigate the possibilities to recover the individual components from NFRP laminates. First the mechanical properties of the recovered materials have to be tested and compared with the initial state. In a second step the possibility of processing the recovered components can be as a secondary composite to be tested. The influence of the recycling process will also be investigated and evaluated.

Possible tasks:

- Literature review on recycling strategies for NFRPs
- Manufacturing of NFRP laminates
- Recovering of fibers and matrix from laminate and potential reuse
- Mechanical testing of single fibers and NFRPs in initial and recycled state



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