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Prerequisites and Mechanisms for the Release of Alveolar Fibrous Carbon Fibre Fragments



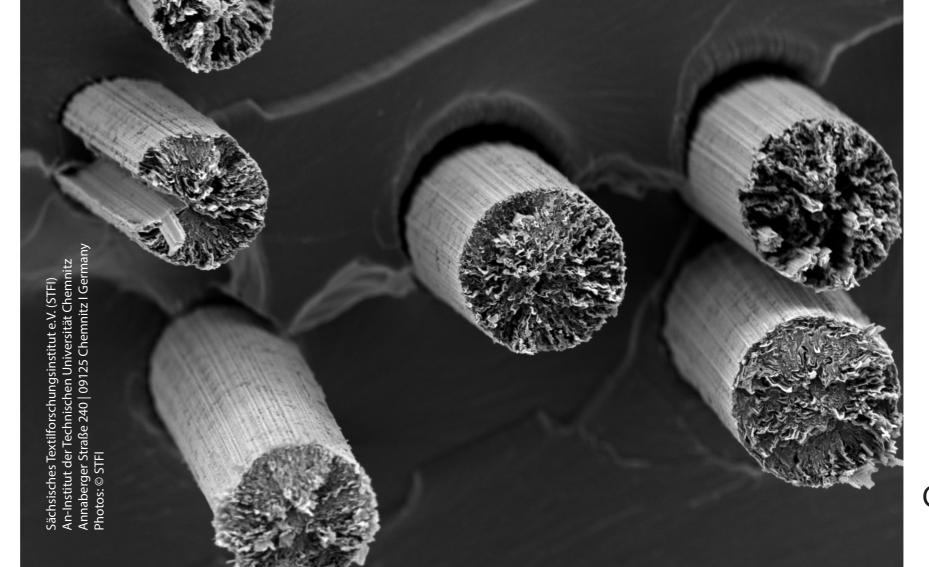
Project duration: 01.01.2019 - 31.12.2021

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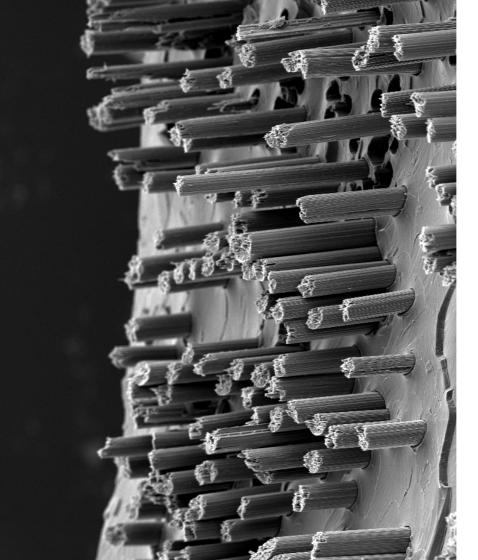
Objectives

- ¬ Investigation of the potential for the release of alveolar carbon fibre (CF) fragments
- ¬ Development of materials science expertise on the fracture behaviour of CF
- ¬ Clarification of the material requirements of CF for the formation of alveolar fibrous fragments
- ¬ Improved understanding of the fracture behaviour of CF and the release behaviour of alveolar fragments under mechanical stress

Approach

- Investigation of the fracture behaviour of selected fibre types (pitch- or polyacrylonitrile (PAN)-based carbon fibres from different strength and elasticity modulus ranges)
- Production of textile semi-finished products from the selected carbon fibres
- Mechanical stress of composites and performance of workplace measurements
- Investigation of the influence of recycling processes on material properties (recovery of carbon fibres and production of composites from rCF semi-finished products)
- Comparative tests on real samples from different manufacturers
- Discussion of the project results with industrial partners, derivation of specific protection measures and their testing in practice
- Elaboration of a protective guideline "Safety by Design and Application Safety"





Project Partners









Associated Partners































