

BIOBASE

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Introduction

- 4 key textile sectors: Sportswear, Interior, Technical Textiles, and Automotive
- Global fiber production in 2019 reached 110 million tonnes - 72% is manmade and is mostly dependent on fossil-based polymers

Objective

- To establish bio-based polymers in the textile industry and to demonstrate their full potential.
- Products are developed in the 4 key textile sectors

Results

- Benchmark products based on fossil raw materials (PET) were replicated (Figure 2)
- Several biopolymer yarns are being developed and compared with benchmark (Figure 3)
PLA, PBS, PBAT, PHB, PHBH, PA410, PA69, PA11, PA56, PA12, PA1010

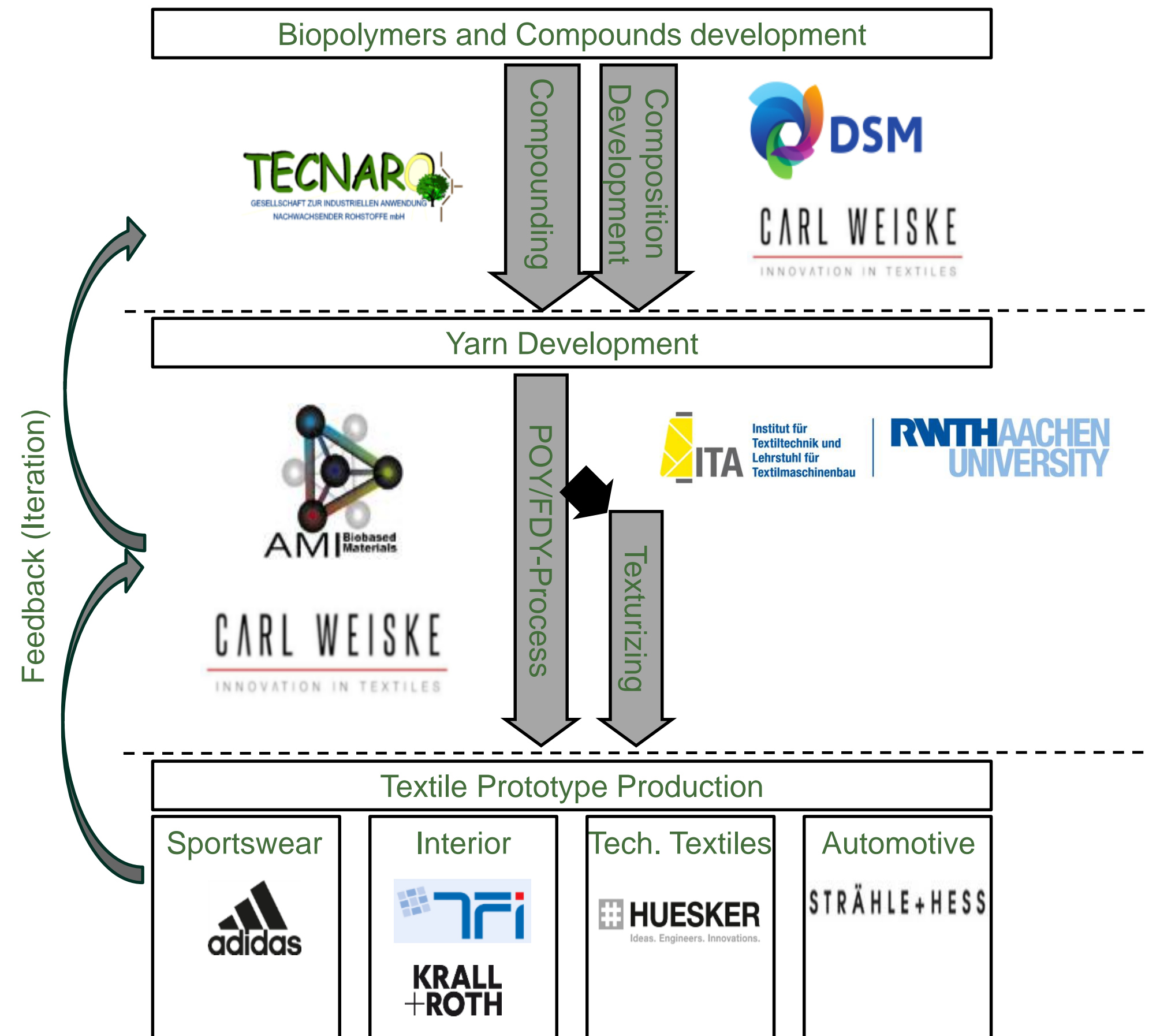


Figure 1: Biobase Project overview

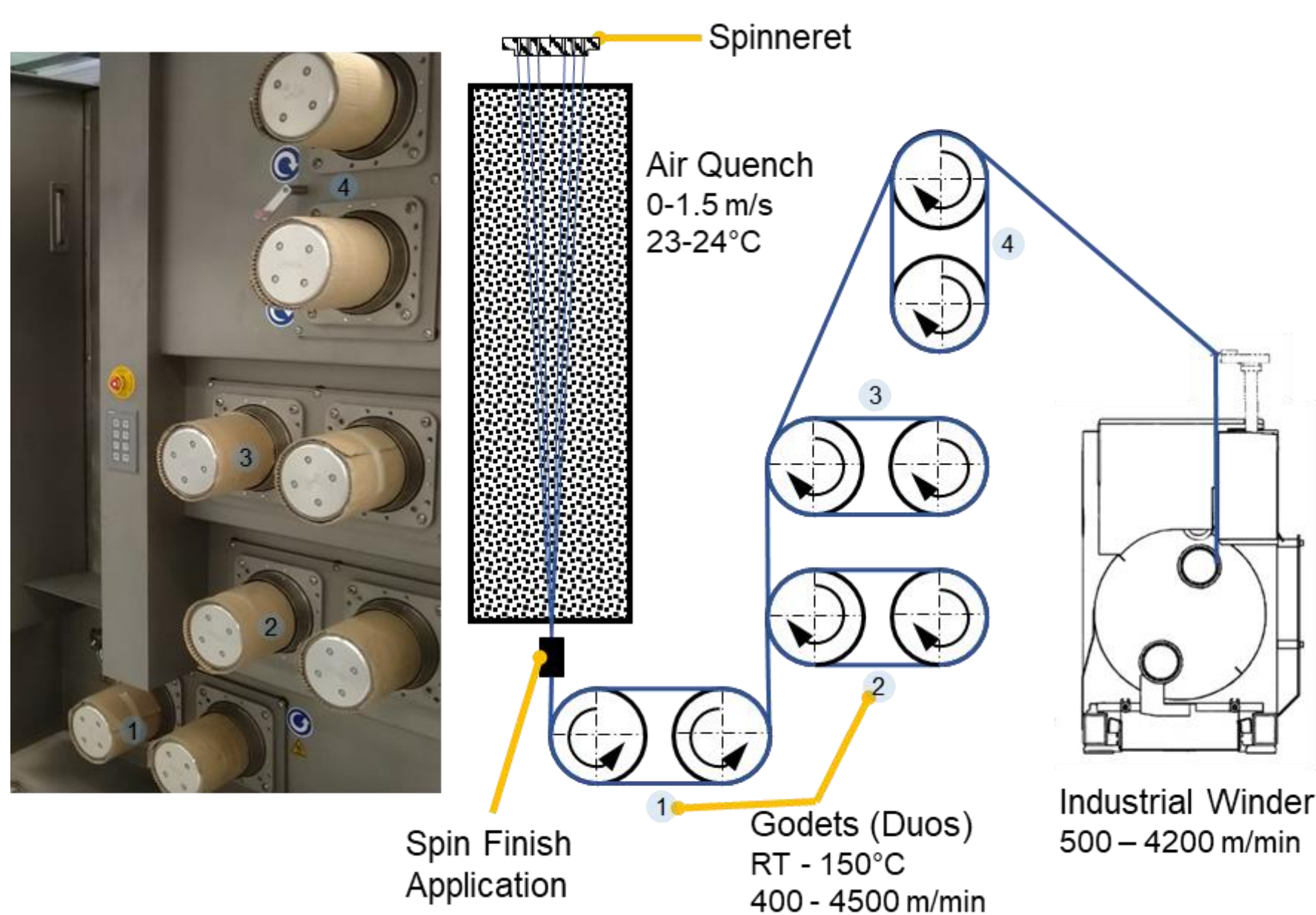


Figure 2: Melt spinning machine

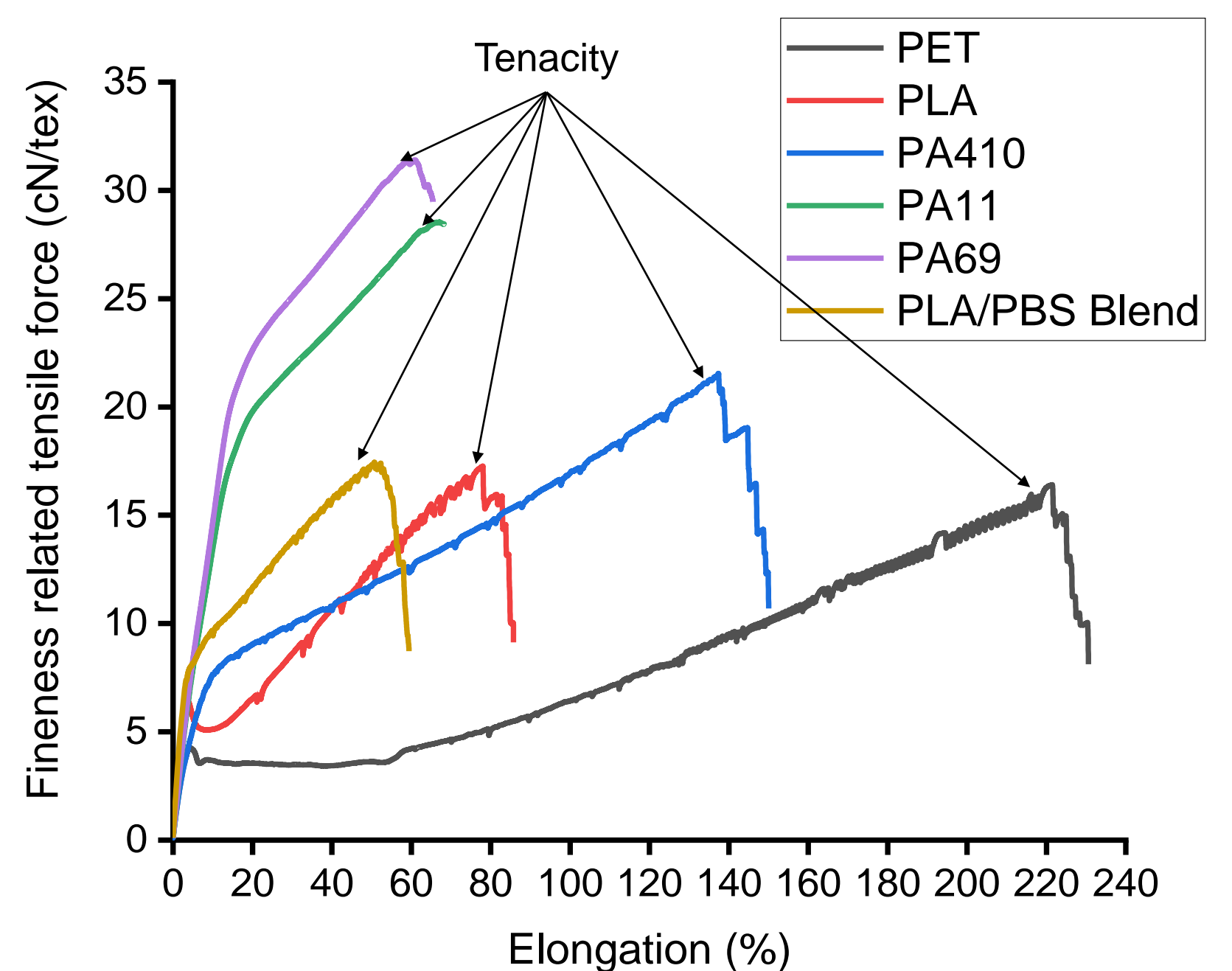


Figure 3: Mechanical Properties (DIN EN ISO 5079)

Summary and Outlook

- The mechanical properties of the benchmark can be met in some applications, in others there remain challenges
- The production of biobased yarns will be optimized in the coming months
- Textile demonstrators will be developed based on optimized biopolymer yarns

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