The IfBB

The Institute of Bioplastics and Biocomposites, founded in 2011 and affiliated to Faculty II of the Hochschule Hannover - University of Applied Sciences and Arts, is involved in the development, processing, industrial use and recycling of bioplastics and biocomposites. This includes both thermoplastic and duroplastic bio-based composites.

Main research areas and areas of expertise:

- Goal-oriented and application-oriented material development
- Process engineering
- Comprehensive material testing
- Research on biomaterials from development to disposal (circular economy)
- Sustainability assessment of biomaterials
- Knowledge transfer

The institute works closely with industry, universities and extramural research institutions. In particular with the application center HOFZET of the Fraunhofer WKI, also located in Hanover-Ahlem at the Hochschule Hannover - University of Applied Sciences and Arts, there is an extensive technical cooperation.

HOCHSCHULE HANNOVER
UNIVERSITY OF APPLIED SCIENCES AND ARTS
–
Fakultät II
Maschinenbau und Bioverfahrenstechnik

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Germany Land of Ideas
Landmark 2018
National Sponsor Deutsche Bank

last update: November 2018

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IfBB
Institute for Bioplastics and Biocomposites

Areas of expertise

Source: China Hopson

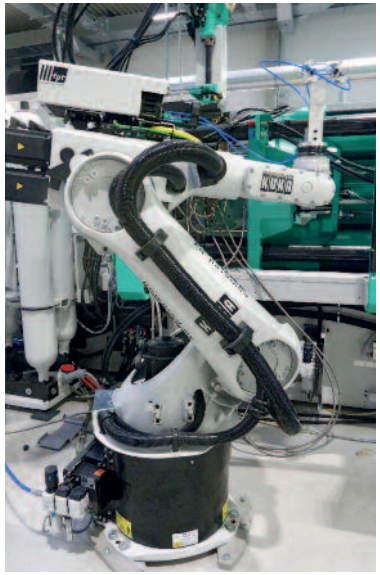
Material development

- Goal-oriented and application-oriented material development of bioplastics and biocomposites
- Additized and functionalized (plasma technology) thermoplastic and duroplastic bio-based composites

Source: IfBB

Process engineering

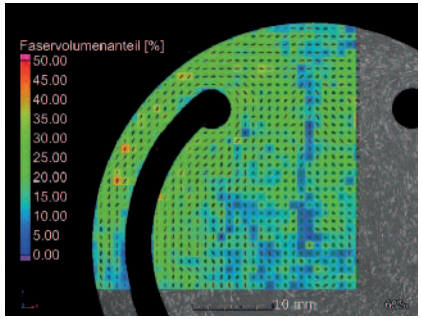
- Processing of biomaterials, adaptation of new materials to existing processing
- Characterization and analysis of the processing behavior of the developed biomaterials
- Providing processing information to the processing industry
- State-of-the-art technical equipment in the Technical center for Bioplastics and Composites



Source: IfBB

Material analysis

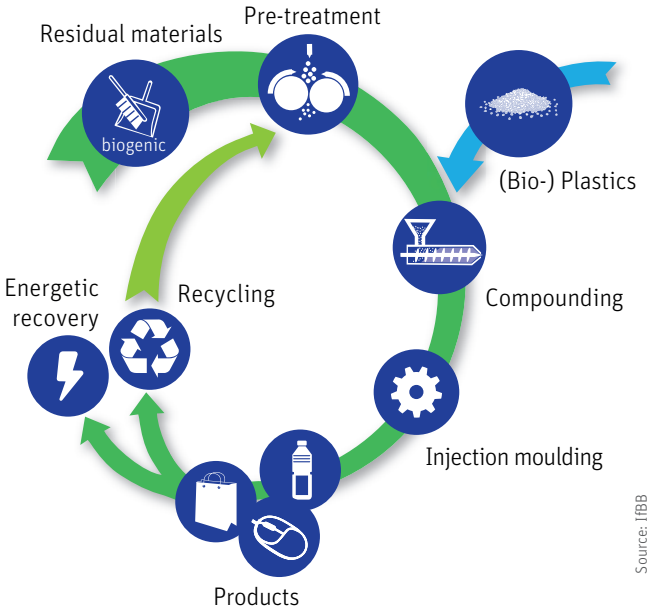
- Wide range of tests aimed to develop and examine conventional plastics and biomaterials (biopolymers, fibre reinforced composites)
- Mechanical, thermal and rheological test laboratories with weathering, extensive imaging and optical analysis, including computer tomography and scanning electron microscope



Source: Florian Bittner/Fraunhofer WKI

Circular economy

- Recycling of biomaterials
- Usage of residual materials for biocomposites
- Marine degradability of biomaterials
- Design for recycling

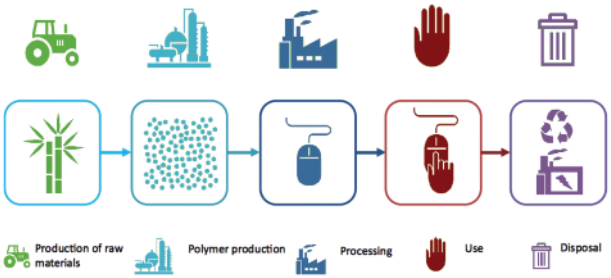


Source: IfBB

Sustainability analysis of biomaterials

- Ecological assessments for products and processes
- Life cycle assesments according to ISO 14040/44
- Critical tests according to ISO 14040/44
- Socio-economic evaluation in cooperation with Fraunhofer IBP - Holistic Accounting

Environmental impact along the value chain



Source: BiNa-Project research partners

Knowledge transfer

- Publications
- Internet presence and databases
- Events
- Analysis of the biomaterials market
- Coordination of the research cluster “Bioplastics” of the Hochschule Hannover – University of Applied Sciences and Arts
- Information preparation for industry
- National and international networking with partners