

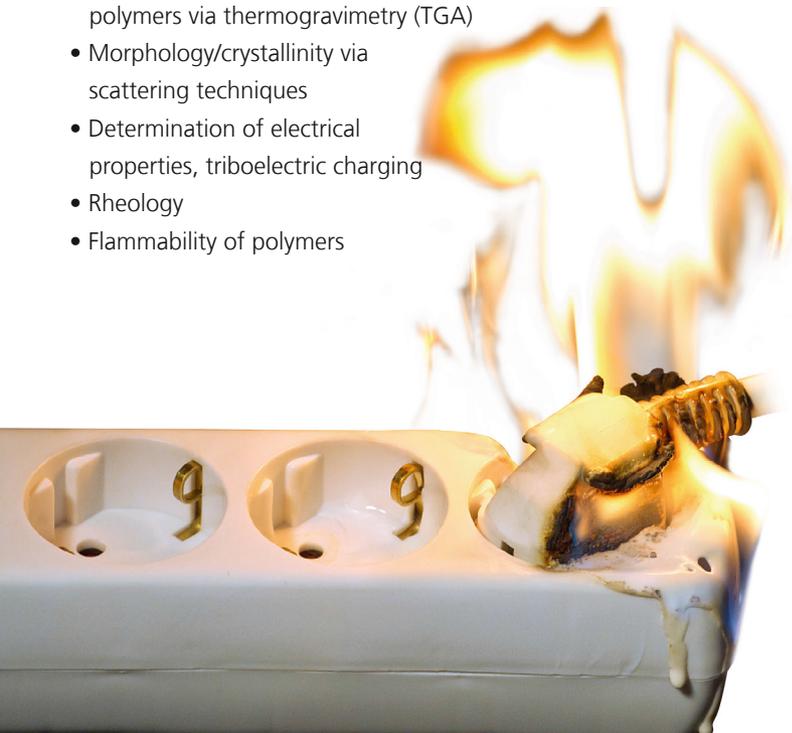


TAILOR-MADE POLYMERS

INNOVATIVE.

Material properties:

- Thermal properties e.g. melt/glass transition temperature via DSC or DMA
- Thermal stability and filler content of polymers via thermogravimetry (TGA)
- Morphology/crystallinity via scattering techniques
- Determination of electrical properties, triboelectric charging
- Rheology
- Flammability of polymers



Talk to us:



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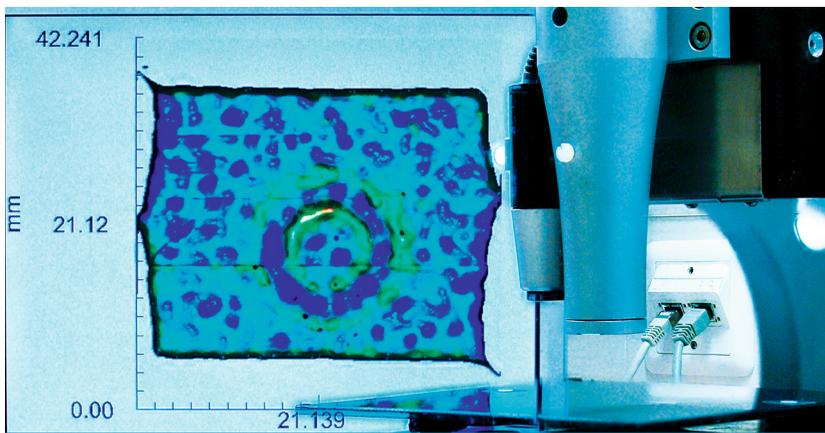
1938 – 2013



**75 Jahre –
Mit Sicherheit innovativ.**

75 years – Innovative for sure.





INNOVATIVE FOR SURE.

TAILOR-MADE POLYMERS

Material development for your applications

To develop new and customer specific modified materials, polymers and plastic parts, the Fraunhofer Institute for Structural Durability and System Reliability offers flexible synthetic laboratories, analytical characterization methods and processing units.

You will benefit from our competencies in polymers and from our close contacts with industrial partners and organizations. We provide complete solutions for development and qualification of innovative products, components and systems.

The Fraunhofer LBF realizes application oriented, efficient solutions of high quality to accelerate your product development and to save you costs.

Innovative for sure!

Polymer synthesis and development of additives:

- Syntheses under various conditions from gram to kilogram
- Modern synthetic methods e.g. controlled polymerization
- Surface modification
- Formulation development

Polymer processing:

- Extrusion/compounding with twin screw extruders from 11 to 34 mm
- Film extrusion
- Injection molding
- Coating of films using roll to roll technology
- In-line process monitoring of different polymer processing operations

Composite laboratory:

- Mold design using e.g. rapid prototyping
- Prototyp construction
- Manufacturing of composites via prepreg, vacuum infusion, VAP, RTM

Polymer analytics:

- Investigation of the chemical identity of polymers and additives
- Determination of molecular weight and molecular weight
- Distribution of polymers through Size Exclusion Chromatography (GPC; SEC)
- Analysis of chemical composition and functionality of polymers
- Multidimensional separation techniques and combinations of analytical methods

