

SERVICES

From the material to the final product

Our research focus is on the development and selection of suitable polymeric materials for new applications, the design and construction of plastic components and composites, the development, optimization and application of suitable processing technologies, chemical analyses, physical, mechanical and other technical examinations, the testing of application properties, the determination of quality criteria, production and planning tasks and feasibility studies.



Material data

- Material data for simulation, thermoplastics, rubbers and elastomers, WPC and PIM-Feedstocks

Processes and Simulation

- Component design
- Process development and robust process management
- Special processing procedures such as injection moulding compounding, expansion injection moulding and ejection

Testing and Analysis

- Polymer testing and identification
- Morphological and structural analysis
- Mechanical and physical material testing
- Surface analysis
- Component testing and failure analysis
- Material selection and material development

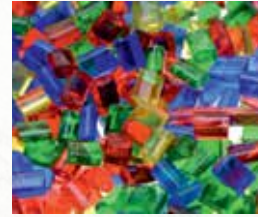
Sustainability

- Process analysis
- Life cycle assessment
- Various options of cooperation as well as consultancy and training offerings complete our range of services.

POLYMERS & ENVIRONMENT

The material of the 21st century

Polymers facilitate our daily lives in a variety of ways. Without polymers there would be no computer, no smartphone and no sportswear. Polymers have revolutionized medical technology and have enabled the construction of ever lighter and more energy-efficient vehicles. It is an innovation driver and at the same time guarantees prosperity and quality of life. No other material can be processed in such a versatile manner and has so many different properties. Therefore polymers are rightfully called „material of the 21st century“.



„Plastic greentastic“ – Environment and climate protection

Polymers and environmental protection are not a contradiction. On the contrary, polymers help save energy and have a better ecological balance than a variety of other materials. They are also environmentally friendly according to their service life. Over 50 % of the polymers used in Austria are recycled, while the rest are converted into energy by thermal recycling.



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DEPARTMENT OF POLYMER ENGINEERING AND SCIENCE

From the material to the final product



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DEPARTMENT OF POLYMER ENGINEERING

45 years of experience & innovation

The Department of Polymer Engineering and Science at the Montanuniversität Leoben is an internationally recognized research institution which has been working in the field of polymer engineering and science for over 45 years.

Vitally important for this excellent reputation is the strong cooperation with international companies. Special attention is paid to collaborative projects ranging from local projects to international EU-projects. The Department of Polymer Engineering and Science comprises eight floors across a total area of 6,597 square meters. With its state-of-the-art research facilities, including more than 300 machines, it ticks all the boxes.



- More than 100 polymer engineers
- Modern Machine Park & excellent infrastructure on over 6000 m²
- Partnership with Polymer Competence Center Leoben GmbH (PCCL)
- Cooperations with international companies & universities for more than 45 years

6 CHAIRS

Competence & Expertise

In accordance with the core competencies of the Montanuniversität Leoben, the Department of Polymer Engineering and Science integrates all necessary special fields along the value chain "From the material to the final product" in six Chairs:

- Chemistry of Polymeric Materials
- Materials Designing Plastics and Composite Materials
- Polymer Processing
- Injection Moulding of Polymers
- Processing of Composites
- Materials Science and Testing of Polymers

At the Chair of Chemistry of Polymeric Materials, the focus is on the chemistry of polymer materials, while the Chair of Polymer Processing deals with the processing of polymer materials. The two most recent chairs of the Department Polymer Engineering and Science Leoben, the Chair for Injection Moulding of Polymers, and the Chair for Processing of Composites are looking more closely at special processing methods of polymer materials. At the Chair for Materials Designing Plastics and Composite Materials, the main focus is on the structural solution by which a polymer component fulfils its requirements. The Chair for Materials Science and Testing of Polymers covers the gap between material synthesis and modification on the one hand, and the processing of plastics and composites, as well as the design and component design on the other.



The Department of Polymer Engineering and Science consists of six chairs (professorships) which undertake high-quality research in the fields of chemistry of polymeric materials, designing plastics and composite materials, polymer processing, injection moulding of polymers, processing of composites and materials science and testing of polymers.

POLYMER COMPETENCE CENTER LEOBEN

A valuable partner

The Polymer Competence Center Leoben (PCCL) is one of the most important non-university research partner of the Department. PCCL is a pre-competitive, business allied research company, performing scientific and applied research in selected fields of polymer engineering and science.



PCCL with its 100 employees aims at the generation of know-how on both a fundamental and an application oriented level and conducts research projects together with scientific and company partners. By these means, the research competence of the participating partners is increased. The transfer of know-how to industry also strengthens the competitiveness of the company partners.



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