

The Polymer Competence Center Leoben GmbH (PCCL) is the leading Austrian center for cooperative research in the field of polymer technology and polymer science. In collaboration with companies in the polymer industry and numerous academic institutions, our around 100 highly-qualified employees jointly work in R&D projects on innovative polymer solutions for a wide range of applications, including the whole rubber composite process chain from the materials design, over processing to material characterization. We currently aim to strengthen our team and offer a

## **MASTERTHESIS in the field of**

### **„Development of magnetic nanoparticles and implementation in photo-curable resins“**

**(JOB ID 20211103)**

#### **Tasks**

- Synthesis and characterization of magnetic nanoparticles
- Formulation of photo-curable resins
- Formulation and homogeneous implementation of synthesized nanoparticles in photo-curable resins
- Sample preparation (spin casting, doctor blading, molding) of filled resin formulations
- Spectroscopic characterization of the curing reaction and network formation
- Parameter development for nanoimprinting
- Characterization of the imprinted structures via (optical) microscopy, AFM etc.
- Shape-memory experiments of the imprinted structures

#### **Required skills**

- Profound knowledge in polymer chemistry, organic chemistry, polymer engineering and science or related disciplines
- Experience in working in a lab environment
- Structured and independent way of working
- Experience in photochemistry and organic synthesis preferred
- Personal initiative, good organizational skills and ability to work in a multi-disciplinary team
- Good communication skills in English; basic skills in German are advantageous

#### **We offer**

- Collaboration in a highly-motivated multi-disciplinary team with excellent contacts to industry as well as to national and international research organizations
- Location: Graz
- Academic supervisor: Prof. Gregor Trimmel
- Gross salary of 441,- € for 6 months
- Earliest start of employment – 01.12.2021

#### **Contact**

Please send your application (motivation letter, CV) along with copies of your certificates and diplomas to [jobs@pccl.at](mailto:jobs@pccl.at), indicating the Job-ID **20211103**.