Synthetic polymers are key components in tailor-made, functional materials for a vast range of applications, e.g., construction, electronics, textiles, nutrition, cosmetics, and medicine. Yet, exploring their full potential is often limited by a notable lack of strategies for efficient and targeted design of well-established, yet hard-to-functionalize, low-reactive polymers. On this account, in a joined approach, we will design synthetic polymers (IPF) and introduce functional groups in the polymer backbone via cell-free bio-catalysis based on pre-screened, tailored enzymes (TU Dresden). The combination of abiological synthesis and biological functionalization of polymers will foster interdisciplinary exchange between life sciences and material sciences, and turn towards a new direction in polymer research. For that the IPF-Institute of Physical Chemistry and Polymer Physics, Department Nanostructured Materials, the Research Group ThieleLab is offering a position for a

**PhD student (m/f/d), 26 h/week, on**

**Tailor-made synthetic polymers and hydrogel precursors**

The Leibniz Institute of Polymer Research Dresden (IPF) is one of the largest polymer research facilities in Germany. As an institute of the Leibniz Association, the IPF is committed to carrying out application-oriented fundamental research and receives its basic funding in equal parts from the federal and state governments.

The advertised position is part of a newly launched interdisciplinary research project funded by the Volkswagen Foundation (“Change of Course – Exploring New Research Territories between the Life Sciences and Science or Engineering”). An academic background in chemistry (hands-on training in polymer design and functionalization) is essential as much as a strong experience in and interest for:

- **Advanced polymer synthesis** (e.g., living anionic polymerization)
- **Polymer characterization** (NMR, GPC, HPLC, MALDI-TOF)

For more information: thielelab.com

**Starting date:** ASAP  
**Duration:** 3 years  
**Salary:** According to German pay grade TV-L EG 13

Preference is given to severely disabled applicants, if they have the same level of qualification. IPF attaches importance to equal professional treatment of women and men. The data submitted by you in the course of the application procedure will be processed by IPF. IPF shall use the data for the purposes of the application procedure. No data shall be passed on to third parties. The costs for the interviews will not be refunded.

The desire to work across disciplines and discuss/present results with our collaborator from TU Dresden (Molecular Biotechnology) being part of a joint PhD program is essential. If you are motivated by these challenges, please submit your excellent record of accomplishment with research interests, full CV, a detailed description of experience in experimental and characterization methods, and contact information of two references to the Personnel Department. Applications in non-related fields (e.g., inorganic chemistry, electrochemistry, environmental and hydrochemistry) will not be considered.

**Detailed information:** thiele@ipfdd.de or thielelab.com

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