Dresden University of Technology

The **Center for Molecular Bioengineering (**B CUBE) (https://tu-dresden.de/cmcb/bcube) and its partner institutions, the Biotechnology Center (BIOTEC) and the Center for Regenerative Therapies Dresden (CRTD), are equipped with state-of-the-art facilities for Molecular Bioscience and Biomaterial Research (https://tu-dresden.de/cmcb/bcube/forschung-technologie/technologieplattform). They are part of a rich and collaborative environment that includes the School of Science, the Carl Gustav Carus Faculty of Medicine, the Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG), and the Leibniz Institute for Polymer Research (Dresden) IPF).

For TUD Dresden University of Technology diversity is an essential feature and a quality criterion of an excellent university. Accordingly, we welcome all applicants who would like to commit themselves, their achievements and productivity to the success of the whole institution.

At **B CUBE**, an Institute of the Center for Molecular and Cellular Bioengineering (CMCB), the **Chair of Bioprospecting** (Prof. Dr. Yael Politi, https://tu-dresden.de/cmcb/bcube/forschungsgruppen/politi?set_language=en) offers a position as

Research Associate / PhD student / Postdoc (m/f/x)

(subject to personal qualification employees are remunerated according to salary group E 13 TV-L)

starting **as soon as possible**. The position is limited to three years, either as a full-time PostDoc or as a PhD student position comprising 65% of the full-time weekly hours, with the option of extension. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG). The position offers the chance to obtain further academic qualification.

Tasks: The successful applicant will join the research project “Exploring the Morphogenesis of Omniphobic Nano-Ornamentations on the Springtail Cuticle”, funded by the German Research Foundation (DFG). This project investigates the biological formation of nano-scaled ornamentation on the surface of springtails exoskeleton, which renders its surface omniphobic, repelling both hydrophobic and hydrophilic liquids.

The Politi group studies arthropod exoskeletons as a model to unravel the molecular mechanisms underlying bio-composite formation in biology. Springtails, Collembola (Entognatha), are soil-dwelling arthropods within the hexapod lineage. They play a crucial ecological role in soil formation. Springtails adopted epidermal respiration when transitioning to terrestrial life about 450 million years ago, a respiration mode that demands robust mechanisms to prevent wetting and repel the adhesion of organic, inorganic and microbial matter from the exoskeleton.

The successful applicant will use state-of-the-art biochemical, genomic, transcriptomic and cell biological tools to understand the formation of cuticular ornamentation. The project is a collaboration between B CUBE (Yael Politi), IPF (Ralf Helbig, Carsten Werner) and the Senckenberg Institute (Clement Schneider).

Requirements:

- university degree (MSc.), if applicable PhD in biochemistry, molecular genetics, biological materials, or related fields
- Applicants with strong research experience in transcriptome sequencing and analysis will be preferred.
- Prior experience in electron microscopy or mass spectrometry is advantageous but not required.
- Strong writing skills with a proven track record of successful research are essential.
- Excellent communication skills in English are indispensable, as this is the colloquial language at the research center.

TUD strives to employ more women in academia and research. We therefore expressly encourage women to apply. The University is a certified family-friendly university. We welcome applications from candidates with disabilities. If multiple candidates prove to be equally qualified, those with disabilities or with equivalent status pursuant to the German Social Code IX (SGB IX) will receive priority for employment.

Please submit your detailed application including CV, letter of intent and copies of highest degree, by **March 25, 2026** (stamped arrival date or the time stamp on the email server of TUD applies), preferably via the TUD SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf file to **nora.froehlich@tu-dresden.de** or to:

TU Dresden, B CUBE, Prof. Dr. Yael Politi, Tatzberg 41, 01307 Dresden, Germany.

Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

B CUBE
Center for Molecular Bioengineering TU Dresden

TUD is a founding partner in the DRESDEN-concept alliance.

DRESDEN concept

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis.