

The new Chair of Biogenic Functional Materials at TUM Campus Straubing for Biotechnology and Sustainability is looking for a

PhD (f/m/d) on protein-DNA assemblies

The Chair of Biogenic Functional Materials at the Technical University of Munich is seeking a biologist, biochemist, or chemist to bolster research activities in the interface between organic chemistry, synthetic biology, and physical chemistry with a strong focus on organic chemistry (small molecules, supramolecular protein functionalization) and characterization for optics and photonics. Our research focuses on designing multifunctional molecules to bring new functionalities to protein-DNA hybrid materials for optics and photonics purposes. Thus, we teach courses on organic chemistry, protein engineering and chemistry, materials science, optics, electronic spectroscopy, mechanical and thermal analysis, and optoelectronics. The TUM Campus Straubing for Biotechnology and Sustainability is our new home since 2020. It provides an excellent, dynamic environment with top-notch research facilities, modern teaching spaces, and a welcoming, open, multicultural atmosphere that fosters growth for students, scientists, and teachers alike.

Your tasks

- Research on the design and synthesis of new multifunctional molecules, assembly of protein-DNA hybrids and their purification thereof.
- Research on spectroscopy and structural analysis using experimental and computational methodologies.
- Participation on courses in the Bachelor's and Master's degree programs and implementation of Bachelor's and Master's theses (English).

Qualification

- High motivation and commitment to scientific excellence.
- University degree in natural sciences or engineering, preferably with a focus on chemistry, synthetic biology, and/or biochemistry.
- Practical experience in organic chemistry (synthesis and characterization), protein and DNA chemical functionalization, protein engineering (structural and sequence design), and DNA modification/purification is required.
- Practical experience in electronic spectroscopy techniques will be positively evaluated.
- Ability to convey practical and theoretical knowledge in a didactically suitable form.
- Good teamwork and communication skills, as well as a sense of professionalism and responsibility.
- Experience in planning, organizational and coordination activities.
- Excellent command of the English language (fully fluent in writing and speech). No knowledge of German is totally fine (free lessons will be provided).

Offer

We offer a deep immersion in protein-DNA assemblies and their possible applications; the candidate will learn and live the translational perspective of designing biomaterials for the sustainable transformation of optical, photonic, and optoelectronic technologies. Situated on the Bavarian Forest gate, Straubing as the old ducal town on the Danube, is the intellectual hub for renewable raw materials and technologies for sustainability in Germany. TUM Campus Straubing for Biotechnology and Sustainability offers scientific and academic excellence in a student-friendly and fresh environment. The successful applicant will hold a 3-year contract with the possibility to expand it for another year. We offer a competitive salary and benefits depending on work experience and seniority in accordance with the public service wage agreement of the Free State of Bavaria - DFG basis in the new excellence cluster BioSystemM. As an equal opportunity and affirmative action employer, TUM explicitly encourages applications from women, as well as from all people who would bring additional diversity dimensions to the university's research and teaching strategies. Preference will be given to disabled candidates with essentially the same qualifications.

Application

We are looking forward to receiving your comprehensive application, including your letter of motivation (1 page), CV (with complete contact information for two references), complete list of publications, participation in projects, and awards/recognitions in English in a single PDF file, via email to biofunmat@cs.tum.de. Please indicate only "PhD_ protein-DNA" in the subject line.

The position will be open until the candidate is selected. Publication date: x.x.202x

For further information, please contact:

Prof. Dr. Rubén D. Costa
Chair of Biogenic Functional Materials,
Technical University of Munich
Email: biofunmat@cs.tum.de