

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

PhD or Post-doc (f/m/d) for the development of protein hybrids for photon manipulation

The Chair of Biogenic Functional Materials (BFM) at the Technical University Munich (TUM) is looking for a new member! We offer a state-of-the-art infrastructure consisting of four interdisciplinary and interconnected laboratories focusing on chemical synthesis, protein engineering, energy optoelectronics (lighting, photovoltaics and harvesting), and mechanical, thermal, microscopy, spectroscopy, and electrochemical characterization techniques. All this is surrounded by a multicultural family of researchers located on the young TUM campus in Straubing. This new campus aims to become the European leader in the development of sustainable technologies within the framework of green photonics to make the bio-economy a reality. If you are interested in research, you should join this adventure. With us, you will learn from biology, think like a chemist and act like an engineer.

Mission

Protein materials for photon manipulation are considered frontrunners for the design of the next generation of sustainable photovoltaic technologies. We are looking for an individual with initiative and motivation to work at a dynamic chair at TUM in the framework of protein-based energy technologies. The research activities will cross the boundary between biology and engineering to refine new protein-based materials, which will be prepared and analyzed under real conditions. This will be complemented by spectroscopic, mechanical and microscopic characterization of the bio-phosphors to elucidate the stabilization, degradation processes and versatility. The workflow spans from protein engineering (bio-informatics and wet-lab), through preparation and characterization of protein-polymer materials, to fabrication and analysis of bio-hybrid devices operating under conditions relevant to energy harvesting.

Qualification

The successful applicant must have the following:

- High motivation and commitment to scientific excellence.
- Master Degree/(10 semester diploma) and/or PhD in biochemistry/biotechnology/chemistry/materials science or related disciplines.
- Team skills and enthusiasm for working in a multidisciplinary, collaborative environment are required.
- Experience in molecular biology and protein engineering (cloning, microbiology, gene expression, DNA/protein purification, bio-informatics, etc.) is required.

- Basic knowledge of computational protein analysis (sequence and structure) and photophysics will be welcome.
- Previous work experience in lighting systems will be viewed favorably.
- Excellent English language skills (fluent in writing and speaking). No knowledge of German is completely acceptable (free training will be provided).

Offer

We offer a deep immersion in bio-based energy technologies. The candidate will learn and live the translational perspective of designing proteins for sustainable energy-related applications every day. TUM offers a wide range of inspiring and challenging graduate programs that complement research training with excellent opportunities for career development, continuing education, and lifelong learning. Located at the gateway to the Bavarian Forest, Straubing, the old ducal city on the Danube, is the intellectual center for renewable resources and technologies for sustainability in Germany. Though small in population, Straubing is already a cosmopolitan city who offers everything you need for a successful PhD and/or Post-doc, with friendly amenities in sightseeing, sport and cultural activities, as well as a diverse selection of pubs, cafes, and beer gardens. In particular, the TUM Campus Straubing for Biotechnology and Sustainability offers scientific and academic excellence in a student-friendly and fresh environment.

The successful candidate will hold a 1-year contract with the possibility of extension up to 3 years, working with an international consortium under the frame of the European project BioSinFin. We offer a competitive salary and benefits commensurate with experience and seniority in accordance with the Tarifvertrag für den öffentlichen Dienst des Freistaates Bayern - TV-L E13 (50-100%). As an equal opportunity and affirmative action employer, TUM strongly encourages applications from women and all others who would bring additional diversity dimensions to the university's research and teaching strategies. Preference will be given to disabled candidates with essentially equal qualifications.

Application

We are looking forward to receiving your comprehensive application including your letter of motivation (1 page), CV (including complete contact information for two references) and academic transcripts of records in English in a **single PDF file**, via email to biofunmat@cs.tum.de . **Please indicate only “Job BioSF” in the subject line.**

The position will be open until the candidate is selected. Publication date: xx.xx.2025

For further information, please contact:

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