

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

## **Post-doc (f/m/d) on biopolymers for optoelectronics**

**The Chair of Biogenic Functional Materials (BFM) at the Technische Universität München (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 and photovoltaics), 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***

Fluorescent protein-based bio-phosphors used as color transducers are considered the frontrunners in sustainable lighting and photovoltaics. Both the nature of the protein-polymer interaction and the shielding of proteins in polymer matrices lead to efficient electrophoto-active composites that can be applied in fully functional energy-related devices, advancing the field of green photonics. We are looking for an individual with initiative and motivation to continue his/her career in a new and dynamic chair at TUM. The candidate will develop new biopolymer systems based on polysaccharides, such as mixed linkage glucans, maltodextrins etc., with the aim to improve the thermal and mechanical properties to preserve the photoluminescence of the proteins under different stress scenarios. She/he will be responsible for the characterization of composites to establish direct relationships between composite composition and fabrication and protein stabilization under device operating conditions.

### ***Qualification***

The successful candidate will have

- High motivation and commitment to scientific excellence.
- Master's Degree/(10 semester diploma) and 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 polysaccharide chemistry is required.

- Experience in handling and spectroscopic/mechanical/thermal characterization of polymer composites is required.
- Previous experience with biopolymers, polymers and additives for protein or enzyme stabilization will be positively judged.
- Experience in engineering protein (cloning, expression, bacterial production, protein purification, etc.) will be welcome.
- Experience in protein or enzyme chemistry will be welcome.
- Excellent English language skills (fully fluent in writing and speaking). No knowledge of German is perfectly acceptable (free lessons 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 biomaterials for sustainable energy-related applications every day. TUM offers a wide range of inspiring and challenging PhD 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 offers everything you need for a successful Ph.D., including a diverse selection of pubs, cafes, and beer gardens. The TUM Campus Straubing for Biotechnology and Sustainability offers scientific and academic excellence in a student-friendly and fresh environment. The successful candidate will be offered a 2-year contract with the possibility of further extensions. 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 (100%). As an equal opportunity and affirmative action employer, TUM strongly encourages applications from women and all others who would bring additional dimensions of diversity 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](mailto:biofunmat@cs.tum.de). **Please indicate only "Post-doc-Bio-P" in the subject line.**

The position will be open until the candidate is selected. Publication date: 19.07.2024

Technical University of Munich  
TUM Campus Straubing for Biotechnology and Sustainability  
Chair of Biogenic Functional Materials

*Opportunities  
for Talents*

**For further information, please contact:**

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