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

Opportunities for Talents

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

Post-doc (f/m/d) on engineering fluorescent proteins and bacteria based materials 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 surounded 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 and bacteria materials for photon manipulation are considered frontrunners in sustainable lighting and photovoltaics. We are looking for an individual with initiative and motivation to work at our chair at TUM. The research activities will cross the boundary between engineering proteins and bacteria to develop new emitting materials as bio-phosphors for bio-hybrid LEDs and photovoltaics. The biogenic materials should be able to overcome thermal, photo and long-term storage degradation. This will be complemented by spectroscopic, mechanical and microscopic characterization of the bio-phosphors to elucidate the stabilization and degradation mechanism, adaptability and evolvability. It is also expected that the candidate will be involved in the fabrication and analysis of the final devices. The workflow ranges from engineering protein/bacteria to photophysical and structural characterization of the material thereof to the fabrication and analysis of bio-hybrid devices.

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/Synthetic Biology or related disciplines.

- Team skills and enthusiasm for working in a multidisciplinary, collaborative environment are required.
- Experience in engineering protein (cloning, expression, bacterial production, protein purification, etc.) and bacteria (microbial genetic tools, upstream (functional gene acquisition) and downstream (heterogeneous expression), evolvability etc.) required.
- Experience in protein or enzyme chemistry will be judged positively.
- Experience in handling and spectroscopic/mechanical/thermal characterization of polymer composites will be viewed favorably.
- Previous experience with biopolymers, polymers and additives for protein or enzyme stabilization is 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 . **Please indicate only "Post-doc-FP-Ba" in the subject line.**

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

For further information, please contact:

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