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

PhD or Post-doc (f/m/d) on engineering living materials for lighting

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

Today's biological tunable optoelectronics and photonics integrating photo-active living building blocks are slowly advancing due to the need of a fundamental understanding on how cell engineering tools and polymer designs can work together to ensure i) functionality, resilience and adaptability of living cells in cell-cell or cell-artificial interfaces and ii) the thermal, mechanical and optical requirements to meet high performances upon device fabrication and operation conditions. We are looking for an individual with initiative and motivation to work at a dynamic chair at TUM in the framework of the DFG-SPP2451 project ENABLED. The research activities will cross the boundary between protein engineering, microbiology, polymer design, bacteria-based materials, and fabrication/analysis of bio-hybrid LEDs. This will be complemented by spectroscopic, mechanical and microscopic characterization techniques. The workflow spans from protein engineering and polymer design, through the preparation and characterization of bacteria-polymer materials, to fabrication and analysis of bio-hybrid lighting devices.

Qualification

The successful candidate will have

- High motivation and commitment to scientific excellence.
- Master's degree (10 semesters) 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 fluorescent protein engineering and is required.
- Experience in (bio)-polymer chemistry is required.
- Experience in handling and characterize (bio)-polymer composites is required.
- Experience in handling and characterize bacteria living materials is required.

- 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 bacteria-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 hold a 3-year contract with the possibility of extension up to 1 years. 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 "ENABLED-PhD/Post" in the subject line.**

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

For further information, please contact:

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