At the Center for Molecular Bioengineering (B CUBE), an Institute of the Center for Molecular and Cellular Bioengineering (CMCB), in the Chair of Biomimetic Materials (Prof. Nils Kröger, http://www.bcube-dresden.de/researchgroups/kroeger/home/) in cooperation with the Center for Advancing Electronics Dresden (PD Dr. Benjamin Friedrich, https://cfaed.tu-dresden.de/friedrich-home) the position as Research Associate for a PhD student or Postdoc in Biological Physics (Experiment + Modeling) is available immediately. Subject to personal qualification employees will be remunerated according to salary group E 13 TV-L 65% (PhD student) or E 13 TV-L (Postdoc). The position is initially limited for 3 years (PhD student) or 2 years (Postdoc) with the possibility of extension. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG).

**Tasks:** The successful applicant will work on the mechanisms of biomineral pattern formation in diatoms, combining experiment and computer simulations. Diatoms are single-celled eukaryotes that are genetically tractable model systems for studying the fundamental mechanisms of biologically-controlled mineral morphogenesis. The research project will focus on the spatio-temporal self-assembly of functional biosilica patterns in diatoms, which exhibit hierarchical arrangement of ribs and pores. Methods will include state-of-the-art electron microscopy of different developmental stages, chemical and physical manipulation of normal morphogenesis, automated image analysis and statistical characterization of emergent patterns, as well as computer simulations of rule-based models and experiment-driven development of model variants.

**Requirements:** university degree (MSc) and – if applicable - PhD degree in molecular biology, physics, biochemistry, or related fields. Applicants with strong research experience in both microbiology/cell biology and programming (Matlab, python) will be preferred. Excellent communication skills in English are essential as this is the language at the research center. The B CUBE (http://www.bcube-dresden.de) and its partner institutions, the Biotechnology Center (BIOTEC) and the Center for Regenerative Therapies (CRTD), are equipped with state-of-the-art facilities for Molecular Bioscience research (http://biotp.tu-dresden.de/biotechnology-platform/). They are part of a rich and collaborative environment that includes the Faculty of Physics, the Faculty of Medicine, the Max-Planck-Institute of Molecular Cell Biology and Genetics (MPI-CBG), and the Leibniz Institute for Polymer Research (IPF). The position is funded by the Cluster of Excellence “Physics of Life”, which connects these institutions.

Applications from women are particularly welcome. The same applies to people with disabilities. Complete applications (letter of motivation, CV, list of publications, and certificates of qualifications) should be sent via the SecureMail Portal of the TU Dresden https://securemail.tu-dresden.de in a single pdf-file to nora.froehlich@tu-dresden.de or via post to TU Dresden, B CUBE, Herrn Prof. Nils Kröger, Tatzberg 41, 01307 Dresden until 29.03.2019 (stamped arrival date applies). Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis