

## Ph.D. Position in Biochemistry Cryo-Electron Microscopy / Tomography

The cryo-electron microscopy group at the Buchmann Institute for Molecular Life Sciences is seeking an enthusiastic, highly motivated Ph.D. student with a background in **biochemistry/molecular biology** to occupy a PhD position.

The scientific goal of the project is to gain knowledge into the transcription apparatus using cryo-electron microscopy. To achieve this, we use advanced biochemical methods and a brand-new cutting-edge visualization technology called cryo-electron tomography. This allows us to look directly into the nucleus and see the individual enzymes and the DNA giving unlimited possibilities for exploration. In this project, we would like to study the **RNA polymerase** at all operational states in the **unperturbed cellular context** in order to gain a deep understanding of its function and regulation. Further, individual enzymes can be studied by single particle cryo-electron microscopy at atomic resolution. This project is embedded within the SFB 902 (Molecular Principles of RNA-based Regulation).

Do you have a degree in biochemistry and/or molecular biology, excellent grades and a strong interest in structural biology and electron microscopy? Please contact Achilleas Frangakis (email: [achilleas.frangakis@biophysik.org](mailto:achilleas.frangakis@biophysik.org)) for additional information. Previous experience working with large macromolecules such as the ribosome or RNA polymerase is advantageous. Technically, experience with cell culture, cloning, fluorescence tagging, as well as some experience in protein purification would be helpful.

Interested candidates should send a short application letter outlining their research interests, a detailed CV to Professor Achilleas Frangakis (email: [achilleas.frangakis@biophysik.org](mailto:achilleas.frangakis@biophysik.org))

For detailed information about the group please visit our webpages:

[https://www.bmls.de/Electron\\_Microscopy/aboutus.html](https://www.bmls.de/Electron_Microscopy/aboutus.html)  
<http://fcem.uni-frankfurt.de/>

For detailed information about our publications:

[https://www.bmls.de/Electron\\_Microscopy/pubs.php?author=Achilleas+Frangakis](https://www.bmls.de/Electron_Microscopy/pubs.php?author=Achilleas+Frangakis)