

Open Positions



PhD Position (m/f/d)

Open for applications as of March 2, 2026

We invite applications from motivated and talented candidates for a fully funded PhD position in the field of perovskite semiconductor research.

Metal halide perovskites are redefining the limits of optoelectronic performance, particularly in next-generation photovoltaics. Despite record efficiencies, their long-term operational stability remains the central bottleneck preventing large-scale deployment. Within the framework of the *HOPE* project, instability is addressed not merely as a device-performance issue, but as a fundamental materials science challenge. The successful candidate will contribute to uncovering the physical origins of degradation under realistic operational conditions. The project aims to establish structure–property–stability relationships that enable the rational design of durable wide-bandgap perovskite materials for tandem solar cells and related optoelectronic applications.

This position offers the opportunity to work at the intersection of semiconductor physics, materials science, and advanced characterization techniques within a collaborative and internationally connected research environment. Within the framework of the project, you will:

- Fabricate high-efficiency and stable wide-bandgap perovskite devices
- Perform device characterization, experimental loss analysis, and advanced optical spectroscopy measurements
- Contribute to the planning and execution of project tasks and ensure their timely completion
- Present and publish research results in project meetings, peer-reviewed journals, and international conferences
- Prepare regular reports documenting scientific progress

We are looking for a curious, responsible, and ambitious candidate who enjoys engaging with fundamental scientific questions.

- Master's degree (or equivalent) in Physics, Materials Science, Engineering, or a closely related field
- Solid background in semiconductor physics and optoelectronic materials
- Experience with thin-film processing, photovoltaic devices, or advanced optical characterization is advantageous
- Strong experimental skills, including the ability to design experiments, operate advanced instrumentation, and critically analyze data
- Ability to work independently while actively contributing to a collaborative research environment



Application

Applicants are requested to submit the following documents as a single combined PDF to esma.ugur@cup.uni-muenchen.de with subject line 'PhD – HOPE WBG – [Your Name]'

- Detailed CV including B.Sc. and M.Sc. transcripts
- A research statement (maximum two pages) outlining your motivation and how your background aligns with the project
- Contact details of two referees

Review of applications will begin upon receipt and continue until the position is filled. Shortlisted candidates will be contacted by email to schedule an interview.

The position will remain open until filled.

F-Praktikum and MSc students

Students are encouraged to send their application by email to esma.ugur@cup.uni-muenchen.de with subject line

'MSc – [Your Name]'

'F-Praktikum – [Your Name]'.



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