

Postdoc position, Chemistry and Physics of Materials, PLUS, Salzburg, Austria: Transmission electron microscopy in materials science

The projects:

We are seeking a motivated Postdoc to work in transmission electron microscopy in the frame of two material science-oriented projects. The first project is centred around the development of energy-filtered applications for (beam sensitive) functional materials and devices such as photocatalysts, battery materials, plasmonic heterostructures and highly porous hybrid aerogels (FFG infrastructure project BioMatTEM). The second project (Interreg project ReBi) adds light weight alloys to the materials classes which will be studied. The TEM related work packages of these projects aim for providing structural and compositional information with subnanometer resolution for complex material science problems, partially of beam sensitive materials.

Your contribution:

You will be able to use the infrastructure provided by the Chemistry and Physics of Materials department to address relevant materials science problems that are treated in close collaborations with partners at the department and/or within the project consortium. You will find a JEOL JEM-F200 TEM equipped with a Cold-FEG, a large area EDX detector, a CEOS energy filter, pre- and post-filter cameras from TVIPS (XF416), STEM detectors and cryo- and in-situ holders at your disposal. You will develop methodologies to investigate the crystal and electronic structure, and composition of complex beam sensitive materials. Based on these methodologies you will contribute to answer research questions which crucially need the wide range of information on the nanoscale provided by TEM such as defect types, electronic structure or compositional changes at interfaces or porosity.

Qualifications:

PhD in physics, chemistry, or materials science with a strong orientation towards TEM
Expertise in TEM/STEM techniques such as EELS, EFTEM, HREM, SAD, in-situ studies, low dose
Interest in functional materials and energy materials
Languages: English, knowledge of German is an advantage

Salary: Annual gross income € 60.927, 40 h per week, 2,5 years

Earliest start date: July 1st, 2023, contact ends latest on March 31st, 2026

Review of applications will begin on April 1st, 2023

Please send your application to gregor.zickler@plus.ac.at

Your application should include:

- Curriculum vitae
- Cover letter explaining your motivation
- Credentials