

University of Bayreuth, 95440 Bayreuth, Germany

PhD-student position

Bayreuth,
12 January 2021

Applications are sought for a PhD-student position at the Laboratory of Crystallography of the University of Bayreuth, on the subject

Charge density waves (CDWs) in materials with strongly correlated electron systems.

The phase transition from a metallic state toward a charge-density-wave (CDW) state is a typical feature of so-called quasi-one-dimensional metals. Ideally, the transition is that from a metal to a semiconductor. Structurally it may involve the formation of aperiodic superstructures. The project aims at developing an understanding of CDWs in three-dimensional metals, including the interplay between CDWs and magnetism in materials supporting strongly correlated electron systems. Selected compounds will be studied by temperature-dependent X-ray diffraction that will be related to the temperature dependencies of transport, magnetic and thermodynamic properties.

The successful candidate has a university degree in physics, chemistry, crystallography, mineralogy or related relevant subjects. Payment is according to TV-L E13/half.

Further information can be obtained from Prof. Sander van Smaalen. Applications should be sent by E-mail to Prof. S. van Smaalen, Laboratory of Crystallography, University of Bayreuth, 95440 Bayreuth, Germany. E-mail: smash@uni-bayreuth.de. Phone: +49-921-553886. Please include scanned copies of relevant documents. Applications will be considered until the position is filled.

Sander van Smaalen