The research group “Femtosecond spectroscopy and ultrafast laser control” of Prof. Thomas Baumert at University of Kassel is looking for a

PhD student (f/m).

Salary will be according to TV13 / 2.

Topic:

The everyday phenomenon of chirality has been fascinating scientists and philosophers for centuries. Molecular chirality, especially, plays an important role in the fundamental building blocks of nature. It is also crucial for human health as the positive or negative effects of pharmaceuticals can depend on the chirality of its active ingredients. Furthermore, chiral molecules act as versatile testbeds in fundamental physical sciences.

Within the nationally funded DFG-SFB ELCH, our group strives to understand and control molecular chirality on a microscopic level. Therefore, we investigate isolated molecular quantum systems in the gas phase using state-of-the-art methods of molecular physics and femtosecond laser control. One specific task is to invert chirality of a molecule using ultra short laser pulses.

The PhD student will have to perform experiments in the lab, to evaluate the data using computational methods and to present the results on scientific conferences and through publications in peer-reviewed journals.

Prerequisite:

- MSc or equal in physics, physical chemistry or related topics with very good marks.
- Good experimental skills in at least one of the following fields: Ultra short laser pulses, high-vacuum techniques and charged-particle detection.
- Ability to work in a team, high motivation and capability to work independently.

The city of Kassel:

Kassel (c. 200 000 inhabitants) lies in the geographic center of Germany and is connected very well to various modes of the transportation network. The city hosts the famous Documenta exhibition for contemporary arts and has about 24 000 students. The high recreational value of the area is underlined by the presence of both world cultural heritage (Bergpark Kassel) and world natural heritage (Kellerwald), while housing is relatively cheap compared with other large cities in Germany.

Our research group:

Find out more about our research on our webpage (www.uni-kassel.de/go/femto). It also holds first visual impressions of our labs (www.uni-kassel.de/go/bilder).

Contact:

Interested? Please send your complete application to Prof. Thomas Baumert or Dr. Arne Senftleben. Email addresses can be found on the webpage. Please do not hesitate to contact us by phone.