

## Ph.D. Position: *Cool Ice* in Brno, the Czech Republic

The research group of Assoc. Prof. Dominik Heger (ResearcherID: H-9934-2012) at the Department of Chemistry, Masaryk University, Brno is looking for a motivated and skillful candidate to join our quest to understand **ice-impurity interactions**. The Ph.D. program in physical chemistry is full-time and funded for four years. The trainee will enjoy a personal approach to reach scientific maturity.

The group's current effort focuses on various facets of frozen solutions. Interactions among ice and compounds play an important role in the environment as well as laboratory and industrial freezing. We try to describe both the processes that occur during freezing and the states of frozen solutions, utilizing the obtained knowledge to freeze biochemical materials harmlessly. In the project we collaborate with specialists on electron microscopy (Dr. Vilém Neděla at ISI-CAS, Brno) and physics of ice (Assoc. Prof. Thomas Loerting, Innsbruck, Austria), with the envisaged output consisting in new methods for protein stabilization.

**The trainee** is expected to perform one or both of the following project subtasks:

1. Physical chemistry of crystalline and amorphous ices to be characterized via spectroscopic methods (UV-Vis, X-ray, fluorescence) and cryo-calorimetry.
2. Stability tests of biochemical assays and their optimization for freezing and lyophilization.

### The ideal candidate

1. believes in scientific methods to willingly study, share, and write scientific literature.
2. is a full (or soon-to-graduate) Master of Science in chemistry, physics, biochemistry or a related field, having an outstanding track record (grades, graduation with honors, academic awards).
3. has previous laboratory experience.
4. is proficient in spoken and written English.
5. seeks personal and professional growth through hands-on involvement in project work.
6. is a team player keen to share his/her knowledge and mentor other students.
7. will be shortlisted for an interview via video call or in person, based on proven academic excellence.

We are offering an exciting position at Masaryk University in the dynamic city of Brno, the Czech Republic. Brno is a cultural hub of the land of Moravia, bustling with student life and having wonderful surroundings to relax in. The city is internationalizing fast: Currently there are more than 5,000 international students at MU only.

I look forward to receiving your **application** that includes a *cover letter* (max. 2 pages), *CV*, *copies of degree certificates*, *contact details of 2 referees*, and, ideally, *a sample of written work* (e.g., an M.Sc. thesis or papers). Please send the documents by email to [hegerd@chemi.muni.cz](mailto:hegerd@chemi.muni.cz); only complete applications will be considered. The position opens in January 2019.

