

Open position for a PhD student (physicist m/f/d)

The Institute of Nuclear Chemistry at Johannes Gutenberg University Mainz has an open position for a PhD student (physicist, m/f/d) to work at GSI Darmstadt in the field of the superheavy elements.

In the past years, the new superheavy elements 113 to 118 were discovered and were added to the periodic table. The GSI superheavy element chemistry department performs studies of the superheavy elements in the fields of their synthesis, nuclear structure, and chemical behavior.

The open PhD position aims at studies of these elements, produced in nuclear fusion reactions at the heavy-ion accelerator facility at GSI Darmstadt. In the TASCA recoil separator, they will be isolated to facilitate safe detection at a level of single atoms per week. The superheavy atoms will be stopped in a buffer gas stopping cell. The construction of this cell is a key component of the PhD work. From this cell, the superheavy elements will be available for nuclear spectroscopy in ancillary setups and for chemical studies, in comparison to the behavior of the lighter homologue elements. The nuclear decays will be registered in various detection systems, which are read out via state-of-the-art digital data acquisition systems.

We offer:

- Experimental PhD position to characterize heaviest known elements in an interdisciplinary team of physicists, chemists, and engineers at GSI Darmstadt and Institute of Nuclear Chemistry at Johannes Gutenberg University Mainz.
- An international environment. Many of our experiments are carried out with collaboration partners from Europa, USA, Asia and Australia.
- Possibility to join the graduate school „HGS HiRe“.
- This is initially a three-year position, salary class 13 TV-L / 50%.

Our requirements:

- Masters, Diploma or equivalent degree in Physics .
- Experience in the field of experimental nuclear or atomic physics.
- Good communication skills in English.
- Interest to join an interdisciplinary research group in an international environment at one of the leading large scale research facilities in Germany.

Experience with nuclear radiation detection and associated data acquisition systems, with heavy-ion accelerator based research, with RF ion manipulation systems, with programming (C++) and with LabView will be considered as added qualifications, as will in-depth experience with Windows and Linux based systems.

Interested applicants are invited to submit a short motivation letter, a short description of their studies (CV), a copy of the diploma / MSc grades, and the names of two referees (all in one single pdf-file) to duellmann@uni-mainz.de.

Review of applications starts on December 09, 2019, and will continue until the position is filled.

For further questions, please contact

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