Your Department / Area at the Research Neutron Source Heinz Maier-Leibnitz (FRM II)

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With the Research Neutron Source Heinz Maier-Leibnitz (FRM II) in Garching near Munich, the Technical University of Munich (TUM) operates one of the most powerful and modern neutron sources. TUM's leading scientific position in the field of research with neutrons is underpinned by its cooperation with the Jülich Research Centre and the Helmholtz-Zentrum Hereon within the framework of the Heinz Maier-Leibnitz Zentrum (MLZ). **In this stimulating environment, we offer interesting opportunities for**

Working student (m/f/d) - Bachelor's thesis
Uranium foils as spallation targets

The FRM II nuclear fuel laboratory possesses a wide range of materials science capabilities and is licensed to handle uranium of various enrichment levels. Its activities encompass sample fabrication (PVD, arc melting) and preparation (sample mounting and polishing), as well as analysis (optical and electron microscopy, nanoindentation, ICP-OES, UV/VIS, IR,...).

A current project focuses on the production of thin (5 µm) uranium foils, which are used as spallation targets for the production of exotic nuclides.

Your tasks:

- Production of thin uranium foils via PVD (Physical Vapor Deposition)
- Metallographic sample preparation
- Analysis of mechanical properties and coating thickness uniformity
- Parameter optimization

Your skills:

- Studies in a technical field (physics, engineering, chemistry,...)
- Interest in handling radioactive material
- Enjoying practical and experimental laboratory work
- Careful, reliable and motivated working style

More job offers

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MLZ is a cooperation between:
JÜLICH Forschungszentrum · Helmholtz-Zentrum hereon · TUM