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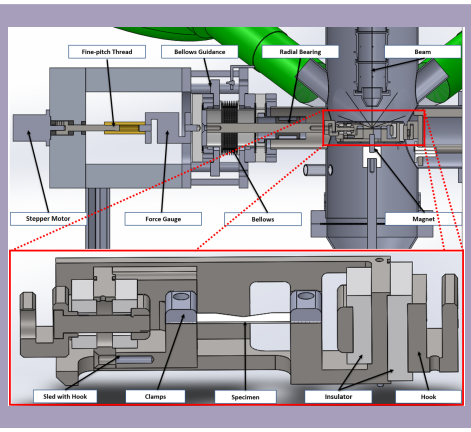
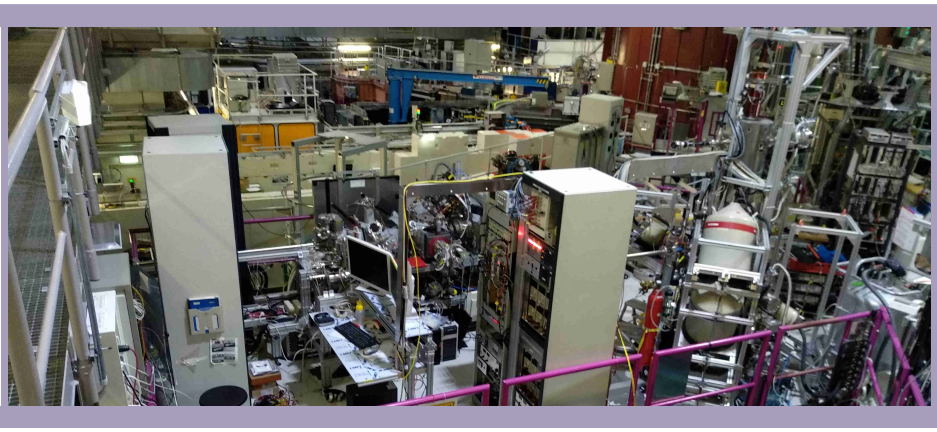
The NEutron-induced POsitron source MUniCh (NEPOMUC) at FRM II at the TU München provides the worlds most intense anti-matter beam. In addition the positron physics research group operates further experiments sourced by $\beta^+-$emitters in its laboratories at the physics department. These cover a wide range of topics ranging from basic to material science.

# Bachelor Thesis

## Tensile-Test Machine for In-Situ Positron Annihilation Spectroscopy

Tensile Testing is a fundamental materials science and engineering technique to study the strain hardening characteristics of metallic alloys. For a more in-depth investigation of atomic defects generated by the application of strain, we plan to combine tensile testing with the highly defect-sensitive spectroscopy of positron annihilation. In the course of this thesis, we expect the design and assembly of a tensile-test machine for in-situ positron annihilation spectroscopy. Finally, measurements on technical Al-alloys will help to understand proven techniques for metal hardening on an atomic level.



Working in our group you will have the chance to experience, applied physics research at first hand while collaborating with both engineers and scientist. Also you will gain insight into the way a large science facility is operated.

Please send applications to Lucian Mathes or Prof. Christoph Hugenschmidt. If you apply online, please send the documents collected in one PDF file.