

Close future plans for radiography driven PGAA at FRM II in Munich

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Prompt gamma activation analysis (PGAA), as well as neutron radiography are known as non-destructive neutron techniques. While in PGAA, the average elemental composition of the irradiated volume can be obtained, with neutron radiography one can visualise the internal structure of an inhomogeneous sample with a high resolution. With combining the two methods, the chemical composition of the sample details with different image contrasts can be determined and thus the spatial elemental distribution can be reconstructed, too.

The PGAA instrument at FRM II was upgraded in 2011. The high-flux focussed beam provides a unique opportunity for high-resolution elemental mapping and the medium-flux homogeneous beam is ideal for radiography of objects with the size of a few centimetres. First, the neutron radiography part will be installed and tested in the characterisation of these neutron beams, then the radiography image of selected test objects will be measured and the resolution determined.

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