



## CENEM Workshop: Neutrons for Functional Materials



From left to right: Prof. T. Unruh, Prof. W. Peukert, Prof. W. Petry and Prof. A. Magerl in front of the new SAXS instrument of the work group Nanomaterials Characterization (Scattering Methods).

Neutrons are a perfect probe for the study of structure and dynamics of condensed matter. The extremely wide range of its applications is due to its unique properties (e.g. zero charge, magnetic moment, isotope dependent scattering). Thus with neutrons the microscopic structure of matter can be determined in space and time non-destructively with atomic resolution. The aim of the two-day workshop on 18th and 19th of June in Erlangen was to bring together experts for neutron research of the Heinz Maier-Leibnitz Zentrum (MLZ) and researchers of EAM for extensive exchange and discussion.

Already in the first talk given by Prof. W. Peukert, the speaker of the EAM cluster, the use of neutrons for the research within the EAM became obvious to the auditorium. The high interaction potential of the two centers (EAM & MLZ) was further demonstrated in the following talks. The researchers of the MLZ gave comprehensive introductions to their instrumental methods and research interests, while the EAM researchers presented an overview of their research within the EAM. An introduction of the neutron methods and the neutron research facility in Garching was presented by Prof. W. Petry, one of the scientific directors of the FRM II and MLZ.

The intense discussions between the short talks demonstrated the broad relevance of research with neutrons for the EAM. It ranges from small angle scattering (SANS), reflectometry and GISANS to neutron activation analysis, tomography and studies at the positron source. The first day of the workshop was closed with the inauguration of the new SAXS instrument of the work group Nanomaterials Characterization (Scattering Methods) and a lovely barbecue, accompanied by further discussions.



Poster session with contributions from researchers of EAM and MLZ.

The high level of the workshop was kept on the second day, with talks by i.a. Prof. P. Wasserscheid, Prof. M. Göken and Prof. E. Spiecker. Different possibilities for the use of neutrons for EAM research were highlighted and several new cooperations initiated.

The workshop was organized by the Center for Nanoanalysis and Electron Microscopy (CENEM) and EAM in cooperation with the Heinz Maier-Leibnitz Zentrum. The impact of neutrons especially for the study of the structure of organic/inorganic hybrid materials is of highest interest within CENEM activities. Accordingly the foundation of an EAM outstation at FRM II was considered for the near future.