



Fachgebiet  
Strukturforschung

Fachbereich 11  
Material- u.  
Geowissenschaften

Prof. Dr. Dr. h.c.  
Hartmut Fueß

Petersenstr. 23  
64287 Darmstadt

Tel. +49 6151 16 - 22 98  
Fax +49 6151 16 - 60 23  
hfuess@tu-darmstadt.de

21.05.2009

—

**Structure Determination by Synchrotron Radiation**  
**Hartmut Fueß**  
**University of Technology Darmstadt, Germany**

—

With the advent of a number of new synchrotron facilities access to these sources is assured for scientists in Europe.

In addition to the high brilliance, wide energy range and high polarizability, new developments allow micro- and even nano-focus beam-lines. New detector systems together with sophisticated sample environment brought a range of new experimental achievements.

—

The basic principles of SR will be presented together with recent instrumentation. Applications will be given for powder and single crystal diffraction as well as scattering from surfaces. X-ray absorption will be treated as a method for the in-situ observation of processes in heterogeneous catalysis.

The presentation will be concluded by short comparison between SR and neutron scattering.

---