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Advanced EPR Studies in Functional
Materials: From Ferroelectrics to
Semiconductors

Electron paramagnetic resonance (EPR) is a very powerful method due to its enhanced sensitivity to unpaired electrons. In order to understand the defect structure in functional materials we use multi-frequency EPR spectroscopy.

In this presentation i) basics of EPR spectroscopy, ii) overview of project B1 within the framework of SFB-595 and iii) EPR investigations of intrinsic defect centers in zinc oxide nanoparticles will be given.

After giving the introductory knowledge about EPR spectroscopy; poling, aging, doping and nano-size effects will be discussed for the ferroelectric materials such as, PbTiO_3 , BaTiO_3 , PZT, KNN, BNT-BT. In the last part of the talk, surface and core defects and their reactivity under temperature and light will be presented for ZnO semiconductor nanomaterials.

Die Vortrag findet um **16:15 Uhr** im Gebäude der Materialwissenschaften,
Lichtwiese, Petersenstr. 23, **Raum 228** statt