



## Sonderforschungsbereich 595 Elektrische Ermüdung in Funktionswerkstoffen



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT

*Sonderkolloquium  
Sommersemester 2014*

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## **Electron Magnetic Resonance of Acceptor and Donor Defects in Ferroic Perovskite Oxides**

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The ability of electron magnetic resonance methods (EMR) to sensitively detect and provide atomic scale local structurally characterisation of paramagnetic point defects associated with acceptor and donor doping of ferroic perovskite oxides is reviewed and critically assessed. An introduction to EMR methods, for example electron paramagnetic resonance (EPR), electron nuclear double resonance (ENDOR), etc., will be given. Results on acceptor doping of SrTiO<sub>3</sub> and PbTiO<sub>3</sub> will be presented and discussed. More specifically, Fe-doping in both SrTiO<sub>3</sub> and PbTiO<sub>3</sub>, and Cu-doping of PbTiO<sub>3</sub>. Results on donor, La, doped PbTiO<sub>3</sub> will also be presented and discussed.

Der Vortrag findet um **13:00 Uhr** im Gebäude der Materialwissenschaften,  
Lichtwiese, Alarich-Weiss-Str. 2, **Raum 128** statt