



Sonderforschungsbereich 595

Elektrische Ermüdung in Funktionswerkstoffen



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The Defect Chemistry of BaTiO₃

The ferroelectric oxide BaTiO₃ is the dielectric layer in multilayer ceramic capacitors, MLCCs, that are produced at a worldwide rate of hundreds of billions of capacitors per year. Defect chemistry has been particularly useful in explaining the properties of this important compound, and has pointed the way to optimize its behavior by suitable doping and process control. In addition, BaTiO₃ has proved to be an ideal model material for the illustration and understanding of the principles of defect chemistry. In this talk, we will review the defect chemistry of BaTiO₃ in terms of nonstoichiometry, doping, and equilibration conditions. The emphasis will be on the control of n-type, p-type, and ionic conductivity.

Der Vortrag findet um **16:15** im Gebäude der Materialwissenschaften, Lichtwiese,
Petersenstr. 23, **Raum 128** statt