

Einladung

Hiermit lade ich Sie im Rahmen des Mechanik-Seminars zu folgendem Vortrag ein:

Vortragender:

Herr PD Doru C. Lupascu
Nichtmetallisch-Anorganische Werkstoffe
Material- und Geowissenschaften
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Thema:

„Fatigue in Ferroelectric Ceramics.“

Ferroelectric materials are starting to be used in mass markets as piezoelectric actuators and ferroelectric memory cells. The long term reliability represents the major concern of industrial applications in both cases. Multiple forms of fatigue are observed and have been an issue for more than 20 years of intensive research. The underlying mechanisms are nevertheless still only roughly understood. The presentation gives an overview of possible fields of application and then outlines the macroscopic phenomenology for different modes of fatigue. A detailed description of the microscopic mechanisms follows. A major emphasis is put on domain wall mobility and the interaction of domain walls with defects. The rearrangement of point defects can be considered the major fatigue mechanism. The influences of macroscopic clamping and effective boundary conditions are discussed with respect to different material responses. Heterogeneities of the fatigue effect will be discussed.

The presentation will be given in German or English, depending on the auditorium.

Ort: Universität Duisburg-Essen, Campus Essen, Universitätsstr. 13

Raum: V13 S00 D50

Zeit: Mittwoch, 28.01.2004 um 15.00 Uhr

(Prof. Dr.-Ing. Jörg Schröder)