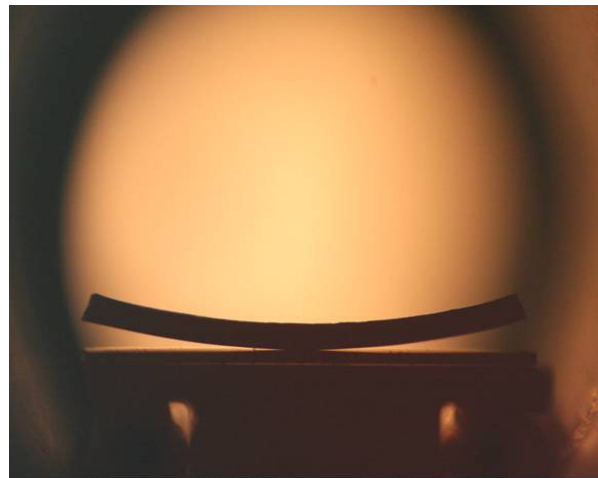


Contact

Please reply and register using the back of this page via post, fax or e-mail by **January 30th, 2009** at the latest to the following address:

SFB 595 - Gila Völzke
Gebäude L2|01
Petersenstraße 23
64287 Darmstadt

voelzke@ceramics.tu-darmstadt.de



For further information about SFB 595 please visit our homepage

www.sfb595.tu-darmstadt.de

Program

- | | |
|-------|---|
| 10:00 | Welcome
Prof. Dr. Jürgen Rödel
Director of SFB 595 |
| 10:10 | Introduction
Fatigue in el. functional materials
Prof. Dr. Jürgen Rödel |
| 10:30 | Lebensdauerstatus von OLEDs für Display und Lichtanwendungen
Dr. Andreas Haldi, NOVALED AG, Dresden |
| 11:15 | Coffee break |
| 11:40 | Fatigue in organic semiconductors
Dr. Christian Melzer |
| 12:10 | Fatigue in ferroelectric ceramics
Dr. Torsten Granzow |
| 12:35 | Fatigue in intercalation batteries
Prof. Dr. Wolfram Jaegermann |
| 13:00 | Lunch & Poster Session |
| 15:40 | High-strain Bi-based lead-free piezoceramics
Dr. Wook Jo |
| 16:00 | Fatigue of Poly(<i>p</i> -phenylenevinylene) based organic light emitting diodes: incomplete dehydrohalogenation during Gilch-polymerisation
Dipl. Ing. Katja Stegmaier |
| 16:20 | Change of the electronic structure of cathode materials $\text{Li}_x(\text{Co,Ni})\text{O}_2$ as a function of <i>x</i>
Dr.-Ing. Sonja Laubach |
| 16:40 | Future prospects
Prof. Dr. Jürgen Rödel |
| 17:00 | Closing words from the president of the TU Darmstadt
Prof. Dr. Hans Jürgen Prömel |

Informations

Venue

Altes Schalthaus
Rodensteinweg 2
64293 Darmstadt

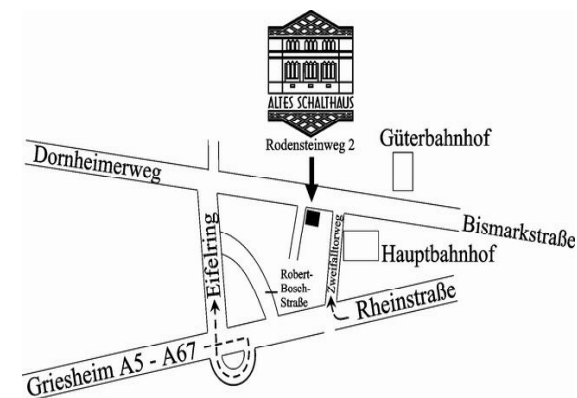
Travel

By train:

From central railway station, exit direction west, Europaplatz, following the Traubenweg to Rodensteinweg (walk about 10 minutes).

By car:

Autobahn A67 or A5, exit Darmstadt, following signs to Weststadt (turn right into Eifelring), straight on to Dornheimerweg, turn right to Rodensteinweg „Altes Schalthaus“



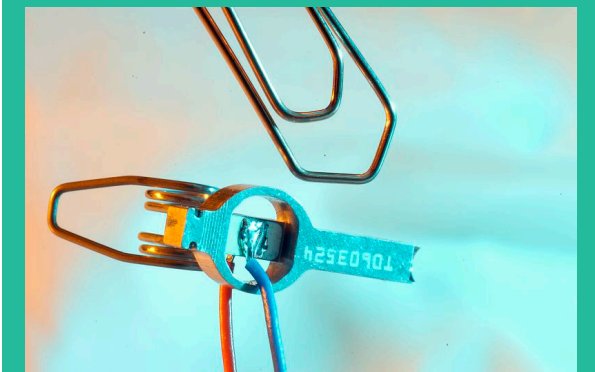
SFB 595 Electric Fatigue in Functional Materials

Statuscolloquium - Feb. 26th, 2009

Invitation and Program

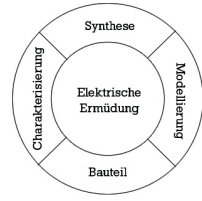


Deutsche
Forschungsgemeinschaft
DFG



Introduction

SFB 595 - Electric Fatigue in Functional Materials



Modern technical components have to satisfy ever growing standards: performance and functionality have to increase, costs decrease, and lifetime has to be extended.

In many cases the limiting factor is the material used. High electric loads acting for long periods of time often lead to a degradation generally known as 'fatigue'.

The causes of fatigue are as diverse as the possible applications; to understand and minimize or eliminate its effects by optimizing material properties requires detailed knowledge of material behavior from the atomic scale to the interaction of components in the final device.

The Collaborative Research Center 595 (Sonderforschungsbereich 595, SFB 595)

'Electric fatigue in functional materials'

funded by the German Research Foundation (Deutsche Forschungsgemeinschaft), located at the Technische Universität Darmstadt, has been investigating degradation mechanisms of ferro- and piezoelectric materials, ionic conductors and semiconducting polymers since its institution in 2003.

The most recent results of the research work will be presented to a national and international audience in a statuscolloquium on February 26th, 2009. We would like to cordially invite you to attend this event.

Posters

- A1 Development of new lead-free piezoceramics based on solid solutions of perovskites
- A2 Manufacturing and characterization of PZT-ceramics with defined defect chemistry
- A3 Boundary layers and thin films of ionic conductors: electronic structure, electrochemical potentials, defect formation and degradation mechanisms
- A4 Novel Si-containing anode material for lithium-ion batteries
- A5 Synthesis of semiconducting model polymers and their characterization before and after cyclic electrical fatigue
- B1 Structural and dynamic properties of defect dipoles in piezoelectric functional materials
- B2 Investigations of the defect structure and diffusion in ferroelectric materials
- B3 Are domains really the key for understanding the poling behaviour of morphotropic ferroelectrics?
- B4 In situ investigations of the degradation of intercalation batteries and their modelling
- B7 Polarisation and charging in electrical fatigue of ferroelectrics
- B8 In situ diagnostic of intercalation-batteries by Raman spectroscopy



- C1 First principles calculations on solid solutions of ferroelectric perovskites
- C1 DFT calculations on cathode materials Li_xMO_2 ($M = \text{Co}, \text{Ni}$) in lithium-ion batteries
- C2 Ab-initio modeling of diffusion in indium oxide
- C3 Microscopic investigations into defect agglomeration and its effect on the mobility of domain walls
- C5 Charge migration mechanism of aging in ferroelectrics: dependence on doping
- D1 Fatigue of PZT ceramics under unipolar driving conditions
- D3 Oxygen exchange of ITO
- D4 Influence of fatigue on transport properties in Poly(p-phenylenevinylene) based Organic Light Emitting Diodes
- D5 Processing and characterization of Li-ion thin film batteries



Registration

The following persons will attend the Statuscolloquium of SFB 595 on Feb. 26th, 2009:

Sender:

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FB11 - SFB 595
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64287 Darmstadt