

Instytut Fizyki Molekularnej PAN
i
Polskie Towarzystwo Fizyczne

zapraszają na wykład

*Magnetoelectric multiferroic and multiglass
materials*

który wygłosi

Professor Wolfgang Kleemann

(Angewandte Physik, Universität Duisburg-Essen)

Wykład odbędzie się w auli IFM PAN,
przy ul. Smoluchowskiego 17
w dniu **17 listopada 2008 roku** o godz. **13.00**

Magnetolectric (ME) materials with a bilinear magnetic and electric free energy contribution, $\Delta F_{me} = -\alpha H \cdot E$, have become of utmost interest, in view of both fundamental understanding and novel desirable applications (Fiebig, 2005). Multiferroic materials with simultaneous polar and magnetic long-range order are expected to optimize the crosslinked responses, viz. magnetization excited by electric fields and polarization induced by magnetic ones (Eerenstein et al., 2005). Most promising applications in spintronics are presently proposed for the ME multiferroic BiFeO_3 (Béa et al., 2008; Ramesh et al., 2008), for the non-ME multiferroic BiMnO_3 (Gajek et al., 2007), and for the non-multiferroic ME Cr_2O_3 (Chen et al., 2006). Record high ME responses of stress-strain coupled composites like PZT/FeBSiC (Dong et al., 2006) finds applications in sensorics. An extension of the conventional multiferroic scenario towards a ME multiglass is found in $(\text{Sr},\text{Mn})\text{TiO}_3$. It shows both dipolar glassy and spin-glass freezing as well as higher order ME coupling (Shvartsman et al., 2008).