Einladung zum Sonderkolloquium

**Ort:** Universität zu Köln  
II. Physikalisches Institut, Seminarraum 201

**Zeit:** 18. Mai 2005, 13 Uhr s.t.  
(statt Mitarbeiterseminar II Physik)

**Sprecher:** Prof. D. Sc. Alexander N. Vasiliev  
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**Thema:** On multiferroic and other features of gadolinium ferroborate GdFe$_3$(BO$_3$)$_4$

The borates with general formula REM$_3$(BO$_3$)$_4$, where RE stands for a rare earth or yttrium and M = Al, Ga, Sc, Cr, Fe have recently attracted considerable attention because of their good luminescent and nonlinear optical properties. The crystals of GdFe$_3$(BO$_3$)$_4$ possess multiferroic features, which presume the coexistence of elastic, magnetic and ferroelectric order parameters. Most clearly, the coupling of these parameters is observed at low temperatures in the vicinity of a spin-reorientational transition in the Fe subsystem.

Gez. Dr. T. Lorenz