

SEMINARIUM - ON 3

Uprzejmie zawiadamiamy, że w **PIĄTEK**

3 listopada br., o godz. 10.00

w sali 203 (bud.1) odbędzie się seminarium, na którym

Prof. dr hab. Karel Závěta

Inst. of Phys. Acad. Sci. CR and Faculty of Math.Phys. Charles University, Prague

wygłosi referat na temat:

„Superparamagnetic properties of γ -Fe₂O₃ particles: Mössbauer spectroscopy and DC magnetic measurements”

Streszczenie

Particles of Fe oxide were prepared by chemical coprecipitation and their sizes were shown by TEM and XRD to be in the range of 5 nm. The Mössbauer spectra at 120 K indicated maghemite (γ -Fe₂O₃) as the dominant phase. We studied the transition of this system to superparamagnetic behaviour, which strongly depends on the relevant time window ($\sim 10^{-7}$ s for Mössbauer spectroscopy of ⁵⁷Fe and units of seconds for d.c. magnetic measurements). From the temperature dependences of magnetic moments of Zero-Field-Cooled and Field-Cooled samples the distributions of blocking temperatures were determined. The comparison of the transition temperatures derived from these two types of measurements gave an independent estimate for the preexponential factor and the energy barrier. The derived constant of magnetocrystalline anisotropy was in an order-of-magnitude agreement with the published data for bulk γ -Fe₂O₃.

Obecność pracowników naukowych Oddziału obowiązkowa, goście mile widziani.

Roman Puźniak

Andrzej Wiśniewski