

GROWTH AND SPECTROSCOPIC PROPERTIES OF YTTERBIUM DOPED KY(WO₄)₂ NANOCOMPOSITES

**M.T.Borowiec¹, Deptula², W.Lada², A.Prokhorov³,
V.Domukhovski², P.Aleshkevych¹, T.Zayarnyuk¹, T.Olczak¹,
D.Wawszczak¹, H.Szymczak¹**

¹Institute of Physics, PAS Al. Lotników 32/46 Warsaw, Poland

²Institute of Nuclear Chemistry and Technology, ul. Dorodna 16,
03-175 Warsaw, Poland.

³A. A. Galkin Donetsk Physic-Technical Institute, Donetsk, Ukraine
e-mail: zayar@ifpan.edu.pl

Nanocomposites(nanocrystals) of KY(WO) and KY(WO)+1% mol Yb have been synthesized using a Complex Sol-Gel Process (CSGP).

X-ray diffraction and EPR spectra of these nanocomposites have been studied.

The expected monoclinic phase C2/c of the KYW nanocomposites has been confirmed using XDR technique. From the X-ray diffraction measurements, the unit cell parameters and the size of particles have been determined.

Electron spin resonance studies in the X band have been performed on the KYW and KYW:Yb nanocomposites as well as on the KYW single crystals. Several additional lines observed for the doped KYW are definitely related to the presence of Yb ions. Analyzing the EPR spectra the main values of **g** tensor were determined.

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