**TEMPLATE FOR ABSTRACT**

**Comparison of GeS2 crystal growth kinetics in (GeS2)x(Sb2S3)1-x (x=1;0,9;0,8) thin film glasses**

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During the last three decades much attention has been devoted to the properties of chalcogenide glasses. Glasses based on germanium disulfide are widely studied due to their high infrared transparency which is also used for construction of passive optical elements used in the IR region [1]. In this contribution we will focus on optical study of germanium disulfide crystal growth rate in undercooled melt of (GeS2)x(Sb2S3)1-x system where x=1; 0,9; 0,8.

The process of crystallization was investigated in thin film form for all compositions x=1; 0,9; 0,8. Thin films were prepared by the simplest way of material deposition on substrate, it means by vacuum thermal evaporation. The thickness of all prepared films was about 1µm. Small pieces of samples were separately temperated in furnace for specified time at selected temperatures.

The crystal growth was observed by optical microscope Olympus BX51. Based on optical monitoring crystal growth rate could be calculated. Reduced growth rate was set by using the viscosity data [2]. Temperature models of crystal growth rate were predicted for all compositions.

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**References**

[1] J. Málek, J. Thermal. Anal. 40 (1993) 159-170

[2] J. Shánělová et al., J. Non-Cryst. Solids 352 (2006) 3952-3955

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