

عنوان مقاله:

GROWTH OF ZnS SINGLE CRYSTALS BY CVT TECHNIQUE UNDER DIFFERENT MASS TRANSPORT STABILITY CONDITIONS

محل انتشار:

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نویسندگان:

M. J. Tafreshi

B. Dibaie

M. Fazli

خلاصه مقاله:

Abstract: A thermodynamic model was used to find out the optimum temperature for the growth of ZnS single crystals in closed ampoules by chemical vapor transport technique. Based on this model 1002°C was found to be optimum temperature for 2 mg/cm^3 concentration of transporting agent (iodine). ZnS Crystals were grown in optimum (1002°C) and non-optimum (902°C and 1102°C) temperatures. The composition structure and microstructure of the grown crystals were studied by Atomic absorption spectroscopy, X-ray diffraction and Scanning electron microscopy measurements. Properties of the grown crystals were correlated to the growth conditions especially a stability in mass transport along the closed tube length.

کلمات کلیدی:

.Keywords: Semiconductors, Crystal growth, Electron microscopy, X-ray diffraction, Microstructure

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