

## Topology of Thin Films and Nanostructures II-VI, IV-VI Received vapor Phase Methods

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Today there are a number of methods for the thin films and nanostructures CdTe, including a special place is hot-wall method [1]. This method, due to design features, you can get condensation in a well controlled technological process in many crystalline substrates – as silicon, gallium arsenide, barium fluoride and others. At the same time and even now remains a large number of outstanding physical and technological problems, which become an obstacle to obtaining high-quality structures based on CdTe.

The conditions of forming thin films of CdTe, deposited on the fresh chips (0001) mica-muscovite in quasireserved capacity by hot wall. Evaporation temperature of the batch synthesized compounds CdTe changed within the  $T_V = (400 - 500)^\circ \text{C}$ . In this area temperature CdTe evaporates congruent with more than 98% of molecules in a pair CdTe [2]. The temperature of deposition was  $T_S = (250, 300, 350)^\circ \text{C}$ . Thickness of obtained films were determined by two methods: optical (interference pattern by optical transmission spectra) and mechanical (using profilometer). The structure of the condensate were studied by microscope MI-4. Rate of condensation on the substrate was  $V = 0,02-2 \text{ mkm/min}$ . Wall temperature maintained at  $50^\circ \text{C}$  higher temperature evaporator. Thickness of condensate deposition time asked within (0,1-20) mkm.

In the paper the dependence of grain size  $b$ ,  $V$  condensation rate and film thickness of technological factors in their growth by hot wall. Shown that experimental results can be explained by the peculiarities of evaporation of the batch compounds and adsorption-desorption processes in the zone of condensation.

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2. Sukarno Olavo Ferreira $\square$ , F'abio Fagundes Leal $\square$ , Tatiana Estorani de Faria, Jos'e Eduardo de Oliveira $\square$ , Paulo Motisuke and Eduardo Abramof. Characterization of CdTe Thin Films Grown on Glass by Hot Wall Epitaxy // *Brazilian Journal of Physics*. – 2006. – Т. 36, №2A. – P. 317.