

Ge-Se의 스위칭 특성 향상을 위한 Sb-doping에 관한 연구

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Electrolyte Mechanizm Study of Amorphous Ge-Se Materials for Memory Application

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Abstract : In other to progress better crystallization transition and long phase-transformation data of phase-change memory (PRAM), we investigated about the effect of Sb doping and Ag ions percolating into Ge-Se-Te phase-change material. Doped Sb concentrations was determined each of 10 wt%, 20 wt% and 30 wt%. As the Sb-doping concentration was increased, the resistivity decreased and the crystallization temperature increased. Ionization of Ag was progressed by DPSS laser (532 nm) for 1 hour. The resistivity was more decreased and the crystallization temperature was more increased in case of adding Ag layer under Sb-(Ge-Se-Te) thin film. At the every condition of thin films included Ag layer more stable states were indicated compare with just Sb-doped Ge-Se-Te thin films.

Key Words : PRAM, chalcogenide, phasd-change, Sb-doping, DPSS laser