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상변화메모리 응용을 위한 Sb 첨가량에 따른 $Ge_1Se_1Te_2$의 상변화 특성 연구

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In the past work, we showed that $Ge_1Se_1Te_2$ thin films provide a promising alternative for PRAM applications to overcome the problems of conventional $Ge_2Sb_2Te_5$ PRAM devices. However, $Ge_1Se_1Te_2$ thin films were unstable at SET and RESET process. Because of instable state and its melting temperature, we alloyed Sb for 10wt%, 15wt% and 20wt% respectively. Our successful study is showed that the phase transition temperature of $Ge_1Se_1Te_2$-only thin film is found to be 210℃ while Sb 15wt% alloyed $Ge_1Se_1Te_2$ showed phase transition at 184℃ with more stability.