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(54) **METHOD OF FORMING GERMANIUM ANTIMONY TELLURIUM FILM**

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(57) **ABSTRACT**

A method of forming a germanium antimony tellurium (GeSbTe) layer includes forming a germanium antimony (GeSb) layer by repeatedly performing a GeSb supercycle; and forming the GeSbTe layer by performing a tellurization operation on the GeSb layer, wherein the GeSb supercycle includes performing at least one GeSb cycle; and performing at least one Sb cycle, the GeSbTe has a composition of $Ge_2Sb_{2+a}Te_{5+b}$, in which a and b satisfy the following relations: $-0.2<a<0.2$ and $-0.5<b<0.5$.