

Cu-doped Ge-Se 박막의 스위칭 특성

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Programmable Metallization Cell (PMC) is a memory device based on the electrolytical characteristic of chalcogenide materials. PMC components of Ge-Se doped with Ag ions were studied with help of the previous studies and copper was used for metallic ions taking into account of economy of components. In this study, we investigated the nature of thin films formed by photo doping of Cu ions into chalcogenide materials for use in solid electrolyte of programmable metallization cell devices. We were able to do more economical approach by using copper which play role of electrolyte ions. The results imply that a Cu-rich phase separates owing to the reaction of Cu with free atoms from chalcogenide materials.