

## Programmable Metallization Cell에서 칼코게나이드 물질의 열처리에 따른 특성

최 혁, 김현구, 남기현, 구용운, 정홍배  
광운대학교

### Properties on Annealing of Chalcogenide Materials at Programmable Metallization Cell

Hyuk Choi, Hyun-Gu Kim, Ki-Hyun Nam, Long-Yun Ju, Hong-Bay Chung  
Kwangwoon Univ.

**Abstract** : Photodiffusion of silver into chalcogenide thin film is one of the most interesting effects that occurs in chalcogenide glass as it theatrically changes the properties of the initial material and forms a ternary. Programmable Metallization Cell(PMC) Randon Access Memory use for photodiffusion of mobile metal is based on the electrochemical growth and removal of nanoscale metallic pathway in thin film of solid electrolyte. This paper investigates the anning properties on Ag-doped  $Ge_{25}Se_{75}$  thin film structure and describes the electrical characteristics of PMC-RAM. The composition of the intercalation products containing Ag is confirmed using X-ray diffraction which shows the formation of Ag-doped  $Ge_{25}Se_{75}$ .

**Key Words** : PMC(Programmable Metallization Cell), chalcogenide, solid electrolyte, Ag-doped, photodiffusion