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Calorimetric Studies of the Crystallization Growth Process in Glassy  $\text{Se}_{70}\text{Te}_{30-x}\text{Ag}_x$  Alloys

N. MEHTA<sup>1</sup>, D. KUMAR<sup>2</sup>, A. KUMAR<sup>1</sup>

<sup>1</sup>Department of Physics, Harcourt Butler Technological  
Institute, Kanpur - 208 002, INDIA

<sup>2</sup>Department of Physics, Christ Church College, Kanpur - 208 001, INDIA  
e-mail: dr\_a\_shok\_kumar@yahoo.com

 [Keywords](#)  
[Authors](#)



[phys@tubitak.gov.tr](mailto:phys@tubitak.gov.tr)

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**Abstract:** Differential Scanning Calorimetry (DSC) is performed at different heating rates under non-isothermal conditions to study the crystallization kinetics of  $\text{Se}_{.70}\text{Te}_{.26}\text{Ag}_{.04}$  and  $\text{Se}_{.70}\text{Te}_{.24}\text{Ag}_{.06}$  chalcogenide glasses in terms of the activation energy of nucleation and growth process. To understand the nucleation and growth process, the values of the growth morphology parameter  $n$  and the numerical factor  $m$  of crystallization mechanism have been evaluated using different non-isothermal methods. The values of  $n$  and  $m$  have been found to be nearly equal, indicating that the present glasses have sufficient nuclei before DSC experiment and the activation energy for nucleation process  $E_N$  is zero. Hence, the effective activation energy for overall crystallization  $E_c$  is equal to the activation energy for growth process  $E_G$ .

**Key Words:** Chalcogenide glasses, Differential Scanning Calorimetry, Crystallization Kinetics.

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