Etude de la dévitrification des verres Sb2O3-PbI2

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Authors: M. Legouera, F. Rahal, P. Kostka, M. Poulain.

Abstract

Devitrification of oxyhalide glasses in the (1-x)Sb2O3--xPbI2 system has been investigated by Differential Scanning Calometry (DSC). A single exotherm is observed in the DSC scan beyond the glass transition temperature Tg, which ensures the applicability of the Mehl-Johnson-Avrami-Kolmogorov relations. Non-isothermal measurements give access to the values of Avrami exponent n and activtion energy E. E lies with PbI2 concentration : it ranges from 2.8 to 3.8. These results are consistent with the stability factors based on characteristic temperatures and confirm that the 90% Sb2O3 glass is the most stable. Crystal growth mechanism is discussed in relation to SEM observations.

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