

CURRENTS
LIMITED BY SPACE CHARGES
IN GLASS-LIKE CHALCOGENIDE
SEMICONDUCTORS OF THE $\text{Se}_{95}\text{As}_5$
SYSTEM CONTAINING Sm IMPURITY

*A.I. Isayev, S.I. Mekhtiyeva, R.I. Alekperov,
N.Z. Jalilov., G.K. Akberov*

Institute of Physics, Nat. Acad. of Sci. of Azerbaijan
(*G. Javid Ave., Baku 1143, Azerbaijan*)

S u m m a r y

We have established that the transfer of charge carriers (holes) in the Al– $\text{Se}_{95}\text{As}_5$ –Te structure is carried out by the mechanism of a monopolar injection current limited by space charges in the presence of two groups of traps [shallow traps (E_{t_1}) corresponding to charged intrinsic defects C_1^- due to the broken bonds of Se and deep traps (E_{t_2}) corresponding to charged intrinsic defects P_2^- due to As atoms with broken coordination]. It is shown that the Sm impurity influences strongly both the mechanism of formation of the current flow path and the trap parameters (energy position and concentration); especially, it influences the parameters of deep traps.