

STUDY OF RECOMBINATION AND ELECTRIC  
PROPERTIES OF  $p$ -Si CRYSTALS  
IRRADIATED WITH ELECTRONS

*T.A. Pagava, D.Z. Khocholava, N.I. Maisuradze,  
L.S. Chkhartishvili*

Georgian Technical University, Department of Physics  
(77, Kostava Str., Tbilisi 0175, Georgia;  
*e-mail: tpagava@gtu.ge*)

S u m m a r y

Specimens of  $p$ -Si irradiated with 8-MeV electrons have been studied. Various radiation-induced defects have been identified by analyzing the temperature dependences of the hole concentration and the curves of isochronous annealing of irradiated specimens. By analyzing the dependences of the lifetime of minority charge carriers  $\tau$ , the specific resistance  $\rho$ , the hole concentration  $p$ , and the Hall mobility  $\mu_H$  on the isochronous annealing temperature  $T_{\text{ann}}$ , the annealing-induced features in the behavior of  $p$  and  $\mu_H$  are revealed. We determined which radiation-induced defects are recombination centers. From the curves of isochronous annealing carried out during various time intervals, the activation energies of annealing,  $E_{\text{ann}}$ , are determined for a number of radiation-induced defects.