

INFLUENCE
OF THERMODONORS ON THE DISLOCATION
MOTION PROCESSES IN SILICON CRYSTALS

*V. A. Makara, L. P. Steblenko, N. Ya. Gorid'ko,
A. N. Kolymiec, V. M. Kravchenko*

Taras Shevchenko Kyiv National University,
Faculty of Physics
(6, Academician Glushkov Prosp., Kyiv 03127, Ukraine)

S u m m a r y

The regularities of dislocation motion in silicon crystals containing electrically active thermodonors have been studied using selective chemical etching. The introduction of charged thermodonors (TD) into these crystals leads to increasing the delay time and start stresses of dislocation motion as well as a decrease of their velocity. The magnitude of the electroplasticity effect is strongly dependent on the TD nature. The obtained results are discussed in terms of the formation of the specific impurity atmospheres around TD, which causes a change of the Coulomb constituent of the dislocation-impurity interaction.