

Proceedings of the International Semiconductor Conference, CAS, 2010, vol.2, pages 371-374

Temperature dependence of capture coefficients in trapping phenomena

Lepadatu A., Stavarache I., Lazanu S., Iancu V., Mitroi M., Nigmatulin R., Ciurea M.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The temperature dependence of the capture coefficients in trapping phenomena is investigated. It is proved that, besides the dependence induced by the thermal velocity of the carriers, the stress-induced traps at the interfaces of the multi-layered structures present a supplementary temperature dependence. This dependence is found to be of Gaussian type and is in a good agreement with the experimental results. © 2010 IEEE.

<http://dx.doi.org/10.1109/SMICND.2010.5649094>

Keywords

Capture coefficients, Gaussian distribution, Relaxation currents, Traps