

INFLUENCE OF PULSE LASER IRRADIATION
ON THE DETECTING PROPERTIES
OF Pt—*p*-CdTe:Cl CONTACTS
WITH A SCHOTTKY BARRIER

*P.M. Gorley, O.I. Vorobets, G.I. Vorobets,
K.S. Ulyanytskyi, V.V. Homyak*

Yuri Fedkovych Chernivtsi National University
(2, Kotsyubynskyi Str., Chernivtsi 58012, Ukraine;
e-mail: vgeorge@chnu.cv.ua)

S u m m a r y

The physical mechanisms of the influence of the millisecond pulse laser irradiation with subthreshold intensity on the formation of the interface layer in Schottky diodes (SDs) Pt—*p*-CdTe:Cl and the current flowing in them have been investigated. The procedure of exposing Pt—*p*-CdTe:Cl structures to laser radiation have been developed, and its optimal parameters, at which the reduction of the density of deep levels associated with impurity-induced structural defects in the semiconductor and the reduction of the generation-recombination component of the current in a SD become possible, have been found. The magnitude of the potential barrier in Pt—*p*-CdTe:Cl contacts, $\varphi_b = (0.84 \pm 0.02)$ eV, and the activation energies of deep levels — $E'_a = (0.58 \pm 0.02)$ eV, $E''_a = (0.72 \pm 0.02)$ eV, and $E'''_a = (0.43 \pm 0.02)$ eV — have been determined.