

DEGRADATION OF LUMINESCENCE  
CHARACTERISTICS OF CdZnSe/ZnSe  
QUANTUM WELL HETEROSTRUCTURES  
UNDER  $\gamma$ -IRRADIATION

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S u m m a r y

The influence of  $^{60}\text{Co}$   $\gamma$ -irradiation at a dose of  $2 \times 10^8$  rad on the low-temperature photoluminescence (PL) spectra of  $\text{Cd}_x\text{Zn}_{1-x}\text{Se}/\text{ZnSe}$  heterostructures containing a single quantum well (QW) with various cadmium content ( $x = 0.21$ ,  $x = 0.23$ ,  $x = 0.35$ , and  $x = 0.43$ ) has been investigated. It has been shown that a partial strain relaxation in the QW and ZnSe layers occurs after irradiation. The mechanism of the strain relaxation in the QW was found to depend on the cadmium content. The strain relaxation in the ZnSe layer and the QW with  $x = 0.21 \div 0.23$  was suggested to occur via the formation (or the transformation) of specifically oriented extended defects, whereas, in the case of QW with  $x = 0.35 \div 0.4$ , this process is due to the diffusion of Cd from the QW into the ZnSe layer enhanced by the deformation and concentration gradients near the QW/ZnSe heterointerface.