

INFLUENCE OF A SURFACE TREATMENT  
ON THE ELECTRIC AND LUMINESCENT  
PROPERTIES OF CHLORINE-DOPED CdTe

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S u m m a r y

We investigate the influence of a surface treatment on the electric and luminescent properties of semi-insulating CdTe:Cl single crystals grown from the vapour phase. It is shown that the etching of CdTe:Cl samples in a 2 bromine-methanol etchant results in the change of the defect structure of their surface region, which is revealed in the essential decrease of the specific resistance and the spreading of the exciton bands of photoluminescence (PL). The treatment of the etched samples in a hydrogen gas discharge provides a partial recover of the quality of the near-surface region. In this case, the initial value of the electroconductivity of the CdTe:Cl samples is achieved, while the spreading of the PL exciton bands decreases.