

S1-P.2

Application of CdS Insulator Nano Layers in SIS Structures Based on pSi

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It was investigated the works of SIS structures pSi-CdS-ITO in which has been found experimentally the effect multiplication process. For created this SIS structures was used thin films CdS with $\rho=10^9-10^{10} \Omega \cdot \text{cm}$ and transparency 80-85% deposited by method spray pyrolysis. The layer thickness was controlled by the deposition time and consta 15-180 A°. ITO layers was deposited on CdS layer with thicknesses 70-100 nm method spray pyrolysis too. Ohmic contacts was fored : Ni to pSi and In to ITO. At the illumination by laser light $\lambda=0,63 \mu\text{m}$ and the flux of $N=6,3 \cdot 10^{15} \text{ s}^{-1} \text{cm}^{-2}$ the amplification coefficient $M=10-12$, the fotocurrent density was 4-6 mA/cm²