

Abstract Submitted
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Observance of Negative Photocurrent in amorphous thin films of $\text{Se}_{75}\text{Te}_{20}\text{Ag}_5$ DIPTI SHARMA, Wentworth Institute of Technology, Boston, MA 02115, USA, R.K. SHUKLA, ASHOK KUMAR, HBTI, Kanpur, India — This study explores the effect of Ag^+ ions on transient photoconductivity of thin films of $\text{Se}_{75}\text{Te}_{20}\text{Ag}_5$. The thin films of $\text{Se}_{75}\text{Te}_{20}\text{Ag}_5$ chalcogenide alloys were made by evaporation method using a vacuum chamber at HBTI Kanpur, India. This amorphous system showed the presence of negative photocurrent when white light was stopped showing on the sample. The rise and decay of photoconductivity was observed. The photoconductivity increased initially, reached to a maximum value and then decreased with time. The decay of photocurrent showed a negative current and indicated the presence of negative photoconductivity. The photoconductivity was studied as a function of temperature, and exposure times. The results have been explained in terms of interaction between photo-excited holes and Ag^+ ions present in the system [1,2].

- [1] **D. Sharma**, R.K. Shukla and A. Kumar, Thin Solid Films 357 (1999) 214-217
[2] **D. Sharma**, R.K. Shukla, A. Singh, A. K. Nagpal and A. Kumar, Adv. Mater. Opt. Electron. 10 (2000) 251-259

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