

## Supporting Information

### **Annealing induced phase transformation in In<sub>10</sub>Se<sub>70</sub>Te<sub>20</sub> thin films and its structural, optical and morphological changes for optoelectronic applications**

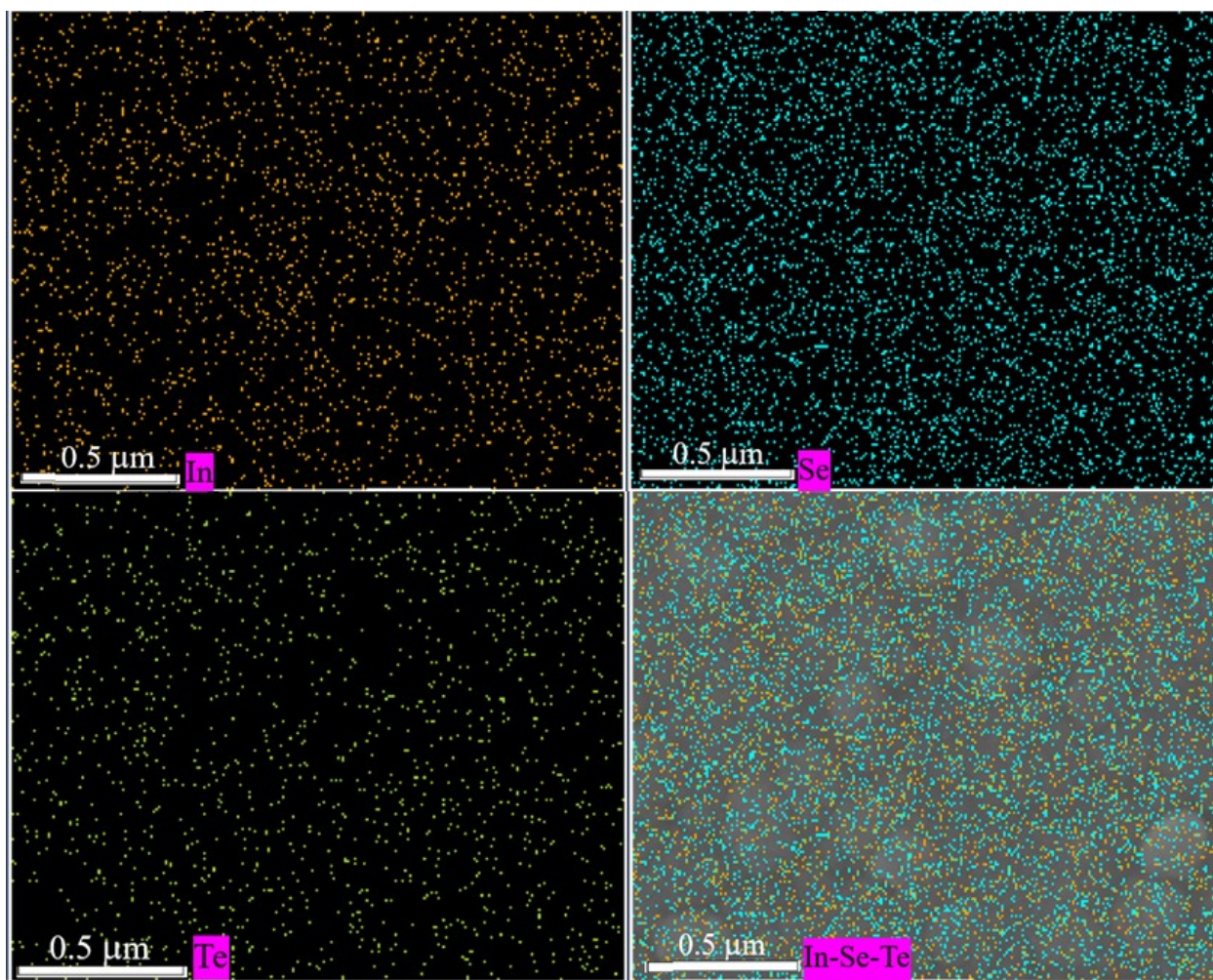
Sasmita Giri<sup>1</sup>, P. Priyadarshini<sup>1</sup>, D. Alagarasan<sup>2,3</sup>, R. Ganesan<sup>3</sup>, R. Naik<sup>1\*</sup>

<sup>1</sup>*Department of Engineering and Material Physics, ICT-IOC, Bhubaneswar, 751013, India*

<sup>2</sup>*Nitte Meenakshi Institute of Technology, Yelahanka, Bengaluru, 560064, India*

<sup>3</sup>*Department of Physics, Indian Institute of Science, Bangalore, 560012, India*

\*Corresponding author: [ramakanta.naik@gmail.com](mailto:ramakanta.naik@gmail.com)



**Fig. S1.** EDX mapping of the elements in 250 °C annealed In<sub>10</sub>Se<sub>70</sub>Te<sub>20</sub> film

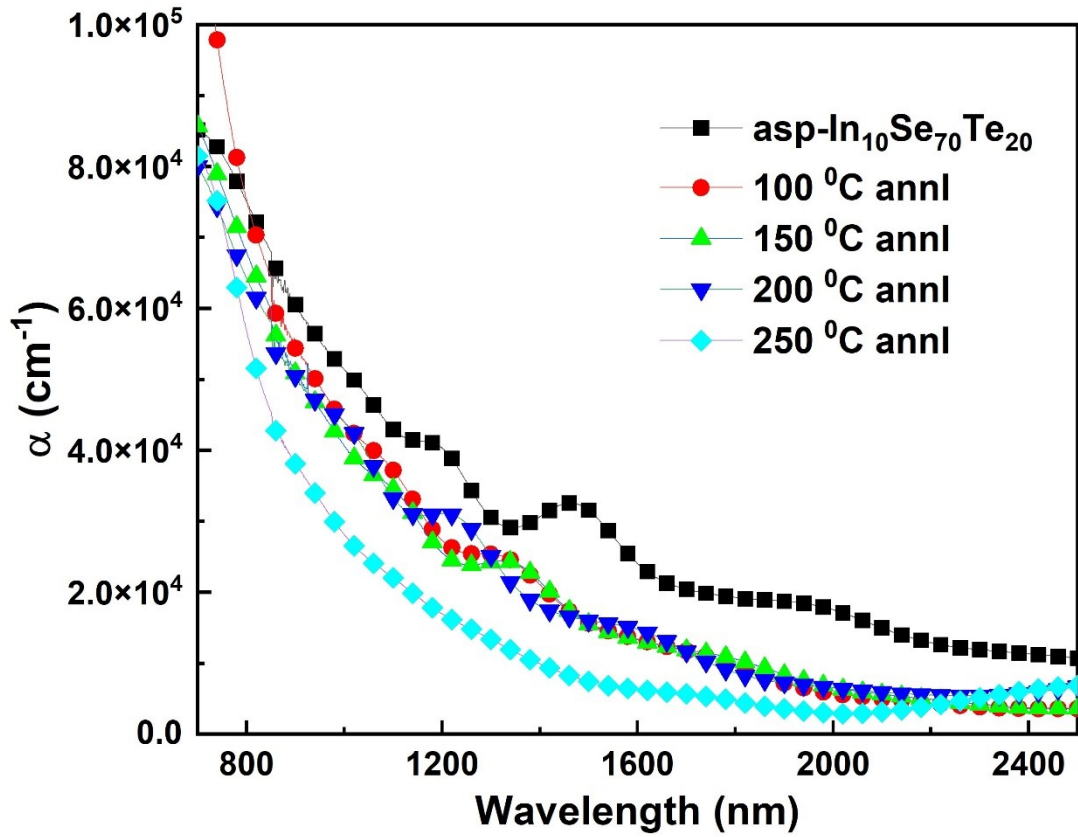


Fig.S2. Change in absorption coefficient of In<sub>10</sub>Se<sub>70</sub>Te<sub>20</sub> thin films.

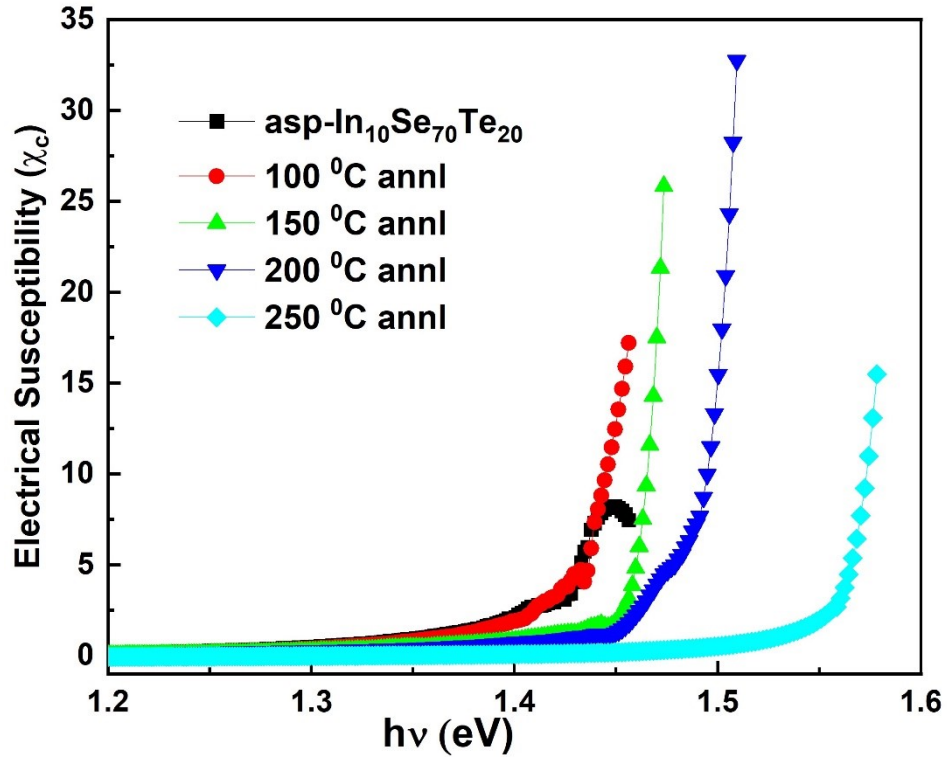


Fig.S3. Change in electrical susceptibility of  $\text{In}_{10}\text{Se}_{70}\text{Te}_{20}$  thin films.

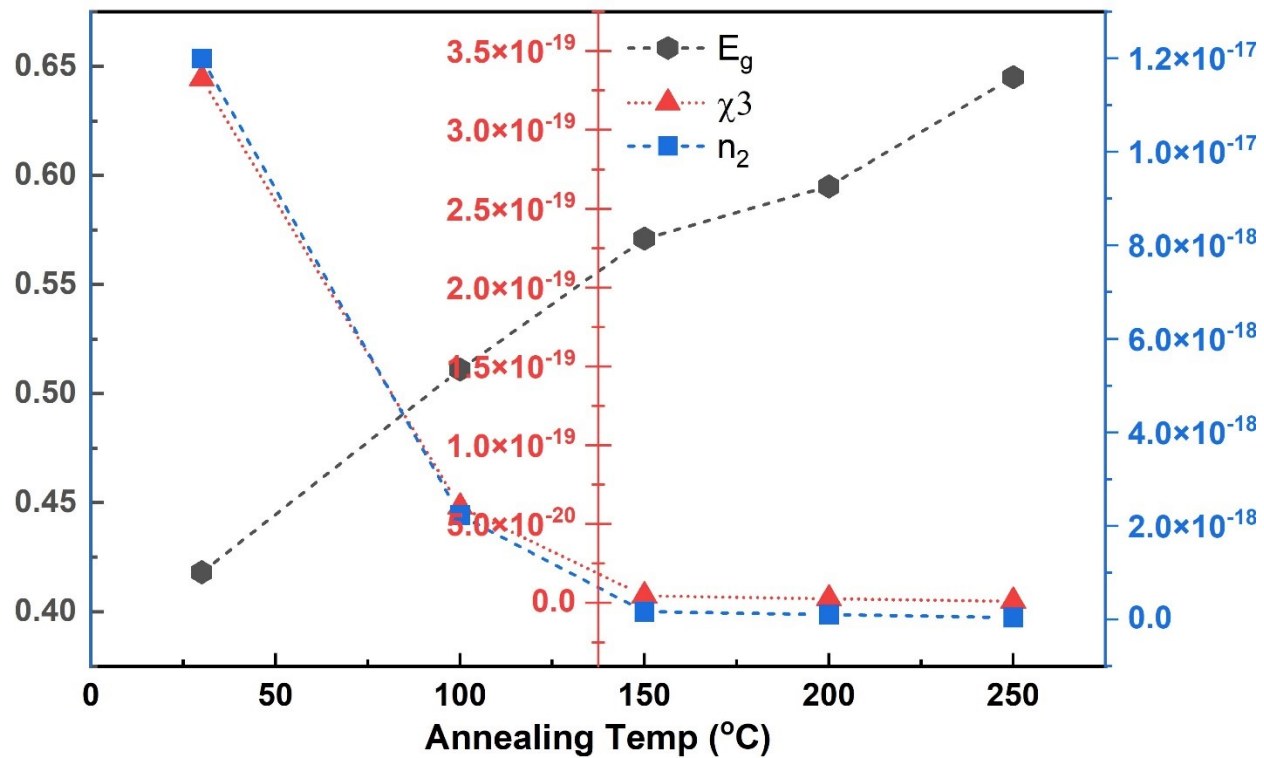


Fig.S4. Variation of  $E_g$ ,  $\chi^3$  and  $n_2$  of  $\text{In}_{10}\text{Se}_{70}\text{Te}_{20}$  thin films.