

Fig. 3. Temperature dependence thermal diffusivity of pure BiSbTe & 2 vol.% MWCNT/BiSbTe.

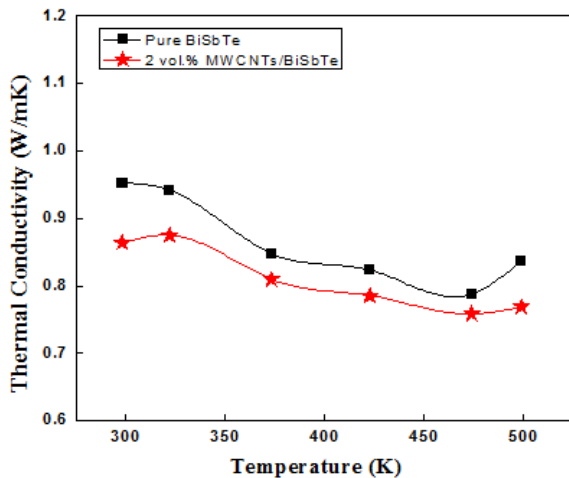


Fig. 4. Temperature dependence thermal conductivity of pure BiSbTe & 2 vol.% MWCNT/BiSbTe.

IV. CONCLUSION

The temperature dependence thermal conductivity of 2 vol. % MWCNTs/BiSbTe sample and pure BiSbTe has been studied and compared. Special attention is given to uniform dispersion of MWCNTs into pristine BiSbTe. Their consolidation is done using Spark Plasma Sintering (SPS). The maximum reduction in thermal conductivity (almost 10%) is found near room temperature by the addition of 2 vol. % MWCNTs (0.95 W/mK to 0.86 W/mK). This study is important to develop high performance thermoelectric material by using MWCNTs and SPS, as less work is done in past using these nanocomposite materials.

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