Supplementary Information

Microwave assisted synthesis, characterization and thermoelectric properties of nanocrystalline copper antimony selenide thin films

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Figure S1 shows XRD patterns of as deposited thin film samples using microwave assisted technique at different time. As deposited samples shows $CuSbSe_2$ films with mixed phases of Sb_2Se_3, Cu_3Se_2 and CuSe. In order to study further phase purity we have annealed these samples at 450 K and recorded respective XRD patterns as shown in Figure S2 of Cu_3SbSe_4. From XRD results it is clear that all samples in Figure S2 shows perfect pure phase tetragonal Cu_3SbSe_4. From the above discussion, we can say that the reported synthetic procedure by home microwave oven for Cu_3SbSe_4 thin films is highly reproducible. Also photographs of as deposited and annealed films are given in Figure S3.

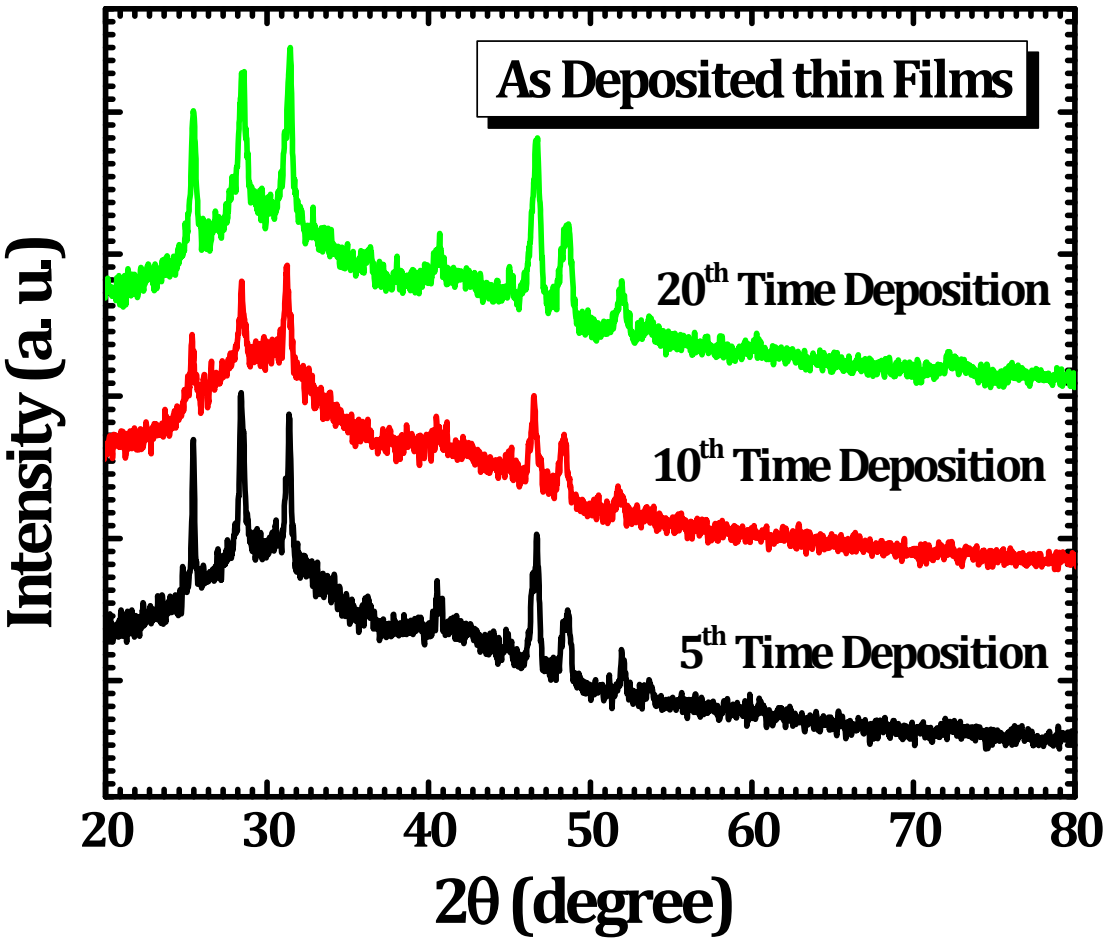

Figure S1. XRD patterns of as deposited thin films deposited at different days by microwave assisted technique.

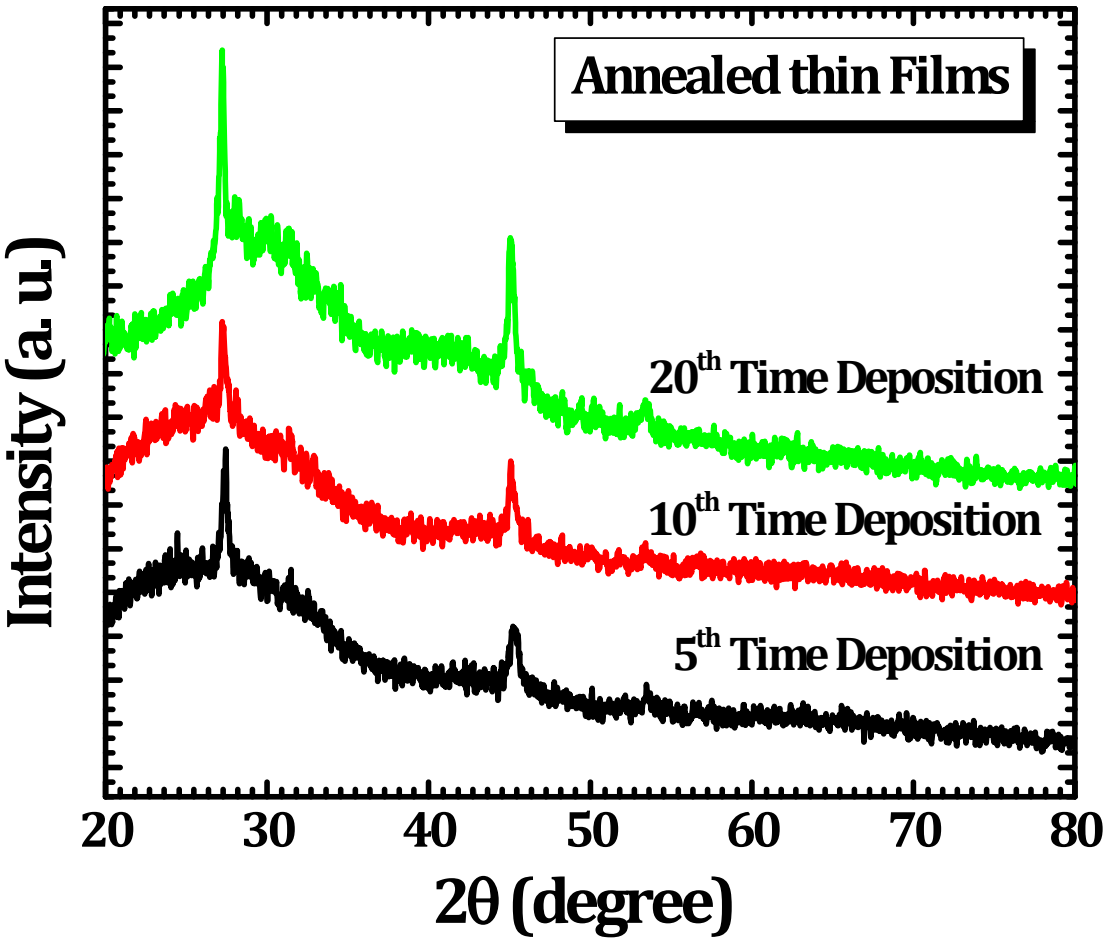

Figure S2. XRD patterns of annealed Cu_3SbSe_4 thin films deposited at different days by microwave assisted technique.

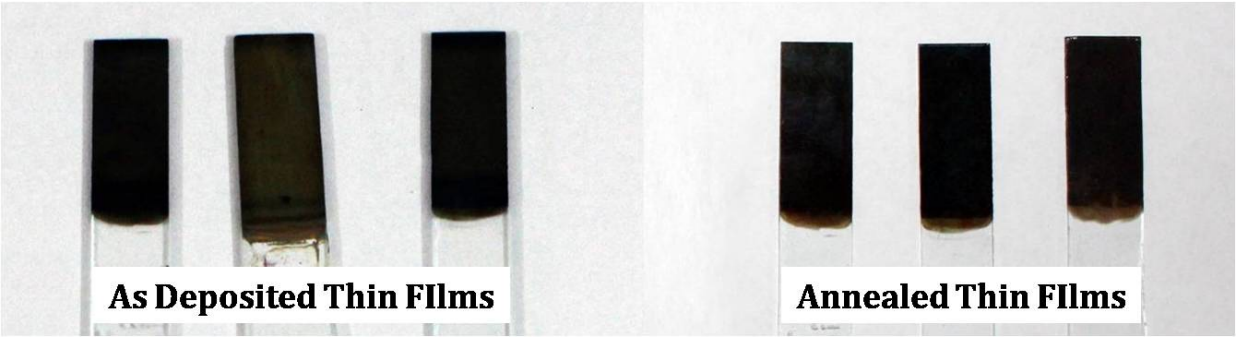

Figure S3. Photographs of both as deposited $CuSbSe_2$ and annealed Cu_3SbSe_4 thin films.