## Supplementary information

## Enhanced thermoelectricity of three-dimensionally mesostructured Bi<sub>x</sub>Sb<sub>2-x</sub>Te<sub>3</sub> nanoassemblies: from microscaled open gaps to isolated sealed mesopores

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Fig. S1 DSC and TGA characterizations of the raw Bi<sub>0.5</sub>Sb<sub>1.5</sub>Te<sub>3</sub> powders.



Fig. S2 (a) top-view and (b) cross-sectional SEM images of the BST nanoassemblies grown at substrate temperatures ( $T_s$ ) ranging from 300 K to 873 K and ambient pressures (P) ranging from 10<sup>-1</sup> torr to 10<sup>-3</sup> torr.