Supporting Information

Y Doped Sb_2Te_3 Phase-Change Materials: Towards a Universal Memory

Bin Liu[1], Wanliang Liu[2], Zhen Li[1], Kaiqi Li[1], Liangcai Wu[2], Jian Zhou[1], Zhitang Song[2], Zhimei Sun[1,]*

[1] *School of Materials Science and Engineering and Center for Integrated Computational Materials Engineering, International Research Institute for Multidisciplinary Science, Beihang University, Beijing 100191, China.*

[2] *State Key Laboratory of Functional Materials for Informatics, Shanghai Institute of Micro-system and Information Technology, Chinese Academy of Sciences, Shanghai 200050, China.*

[*] Corresponding author: Zhimei Sun (zmsun@buaa.edu.cn)

Figure S1. FESEM images and corresponding EDS mapping patterns of YST (a) powders and (b) target. High-yield hexagon nanosheets with a distance of 100~1000 nm between the opposite edges were obtained. Flat surface and sharp edges indicate excellent crystallization. (c) TEM bright field image and corresponding EDS mapping patterns of annealed crystalline YST film. Obviously, all three elements Y, Sb and Te are equally distributed in powder, target and film.

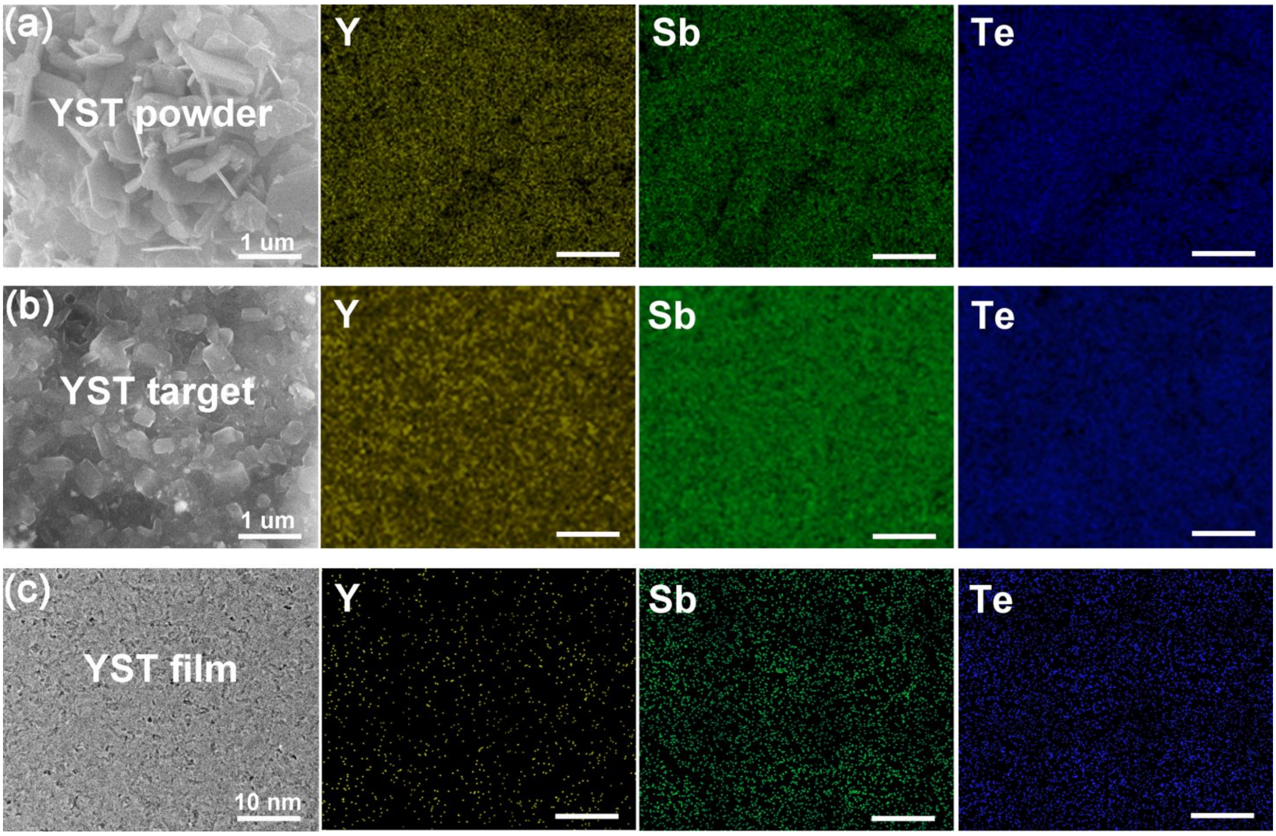

Figure S2. The EDS patterns of YST film. The measured atom ratio is consistent with the designed component $Y_{0.250}Sb_{1.750}Te_3$.