

Figure S1. XRD pattern of sintered EX/US sample (a) in parallel direction, (b) in perpendicular direction to press direction. (c) Heat capacity (C_p) values for pristine and EX/US. (d) Thermal diffusivity values for pristine, EX, and EX/US.

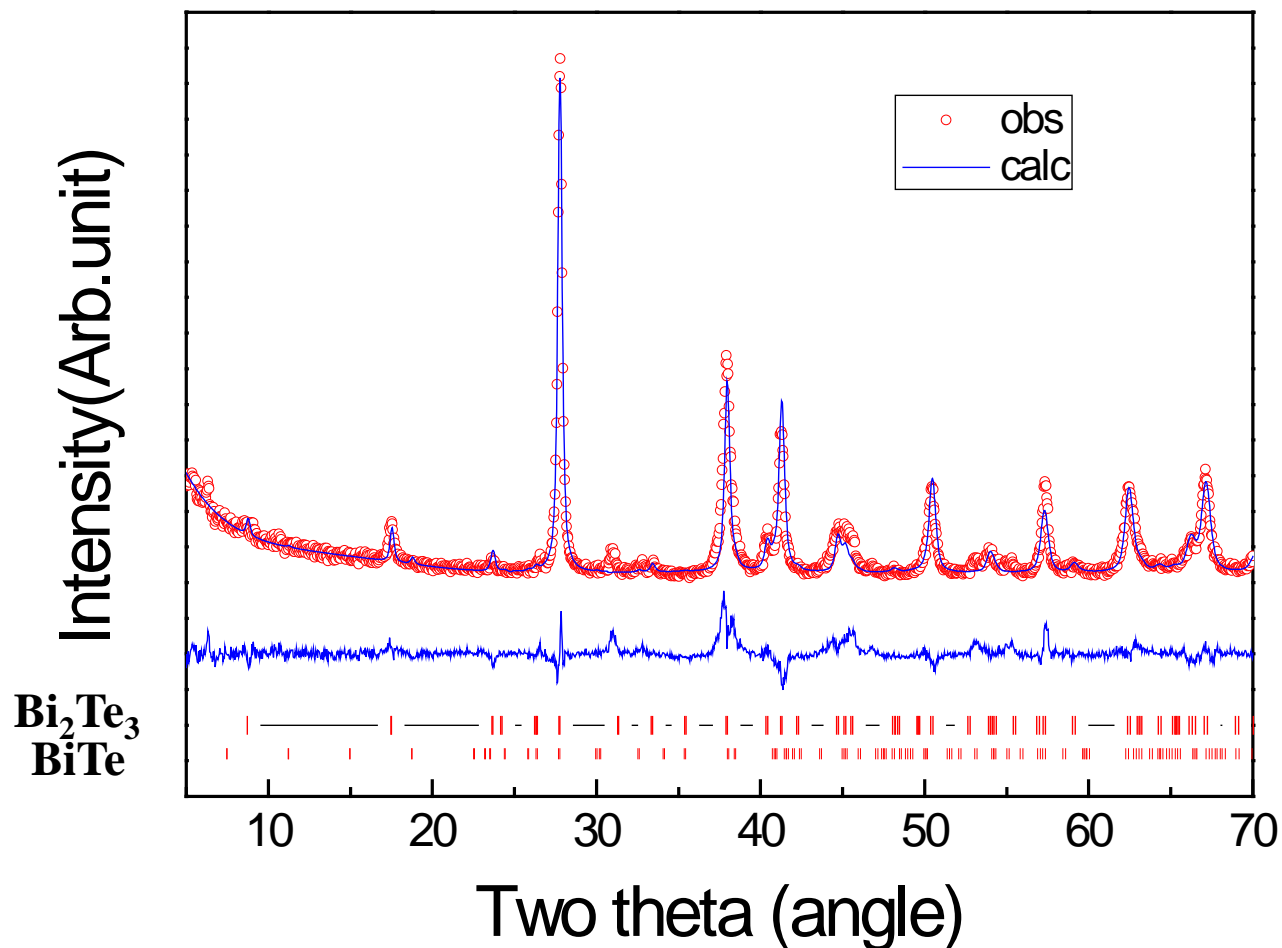


Figure S2. Reitveld refinement result of sintered EX/US sample in perpendicular direction to press direction. Weight and molar fractions (Bi_2Te_3 : BiTe) are calculated to be 92.02%:7.91% and 93.62%:6.38%, respectively. Reliability factors, goodness-of-fit indicator, and Durbin-Watson statistic are as follows; $R_{wp} = 19.077$, $R_p = 14.025$, $R_R = 29.371$, $R_e = 6.700$, $S = 2.8473$, $d1 = 0.5532$, $d2 = 0.3515$; For Bi_2Te_3 : $R_B = 9.792$, $R_F = 5.821$, $R_F^2 = 2.404$, $E(\text{SCIO}) = 1252.08$; For BiTe , $R_B = 16.524$, $R_F = 7.916$, $R_F^2 = 7.310$, $E(\text{SCIO}) = 1267.32$.