Supporting Information for

High mobility, large linear magnetoresistance, and quantum transport phenomena in Bi_2Te_3 films grown by Metallo-Organic Chemical Vapor Deposition (MOCVD)

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This PDF file includes:

Figs.S1, S2, S3, S4, and S5

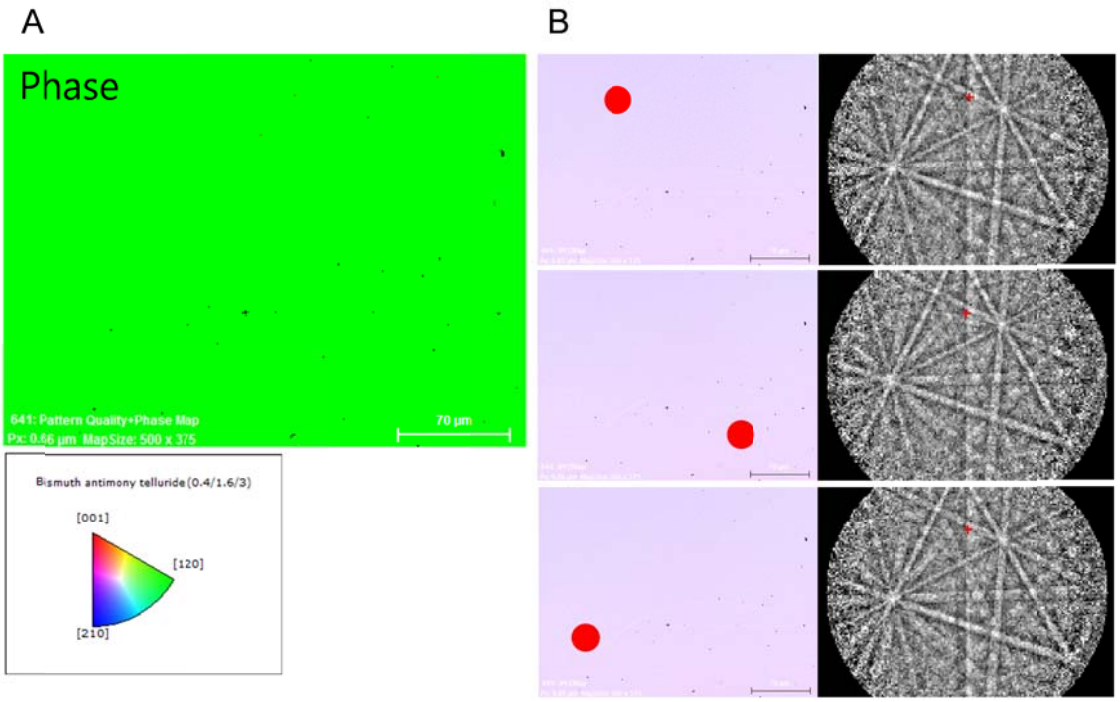

Figure S1. Electron backscattering diffraction analysis of a 200 nm-thick Bi_2Te_3 film. (A) Phase map of in-plane crystallographic orientation, (B) Kikuchi patterns at different positions of a Bi_2Te_3 film. Scale bar: 70 µm.

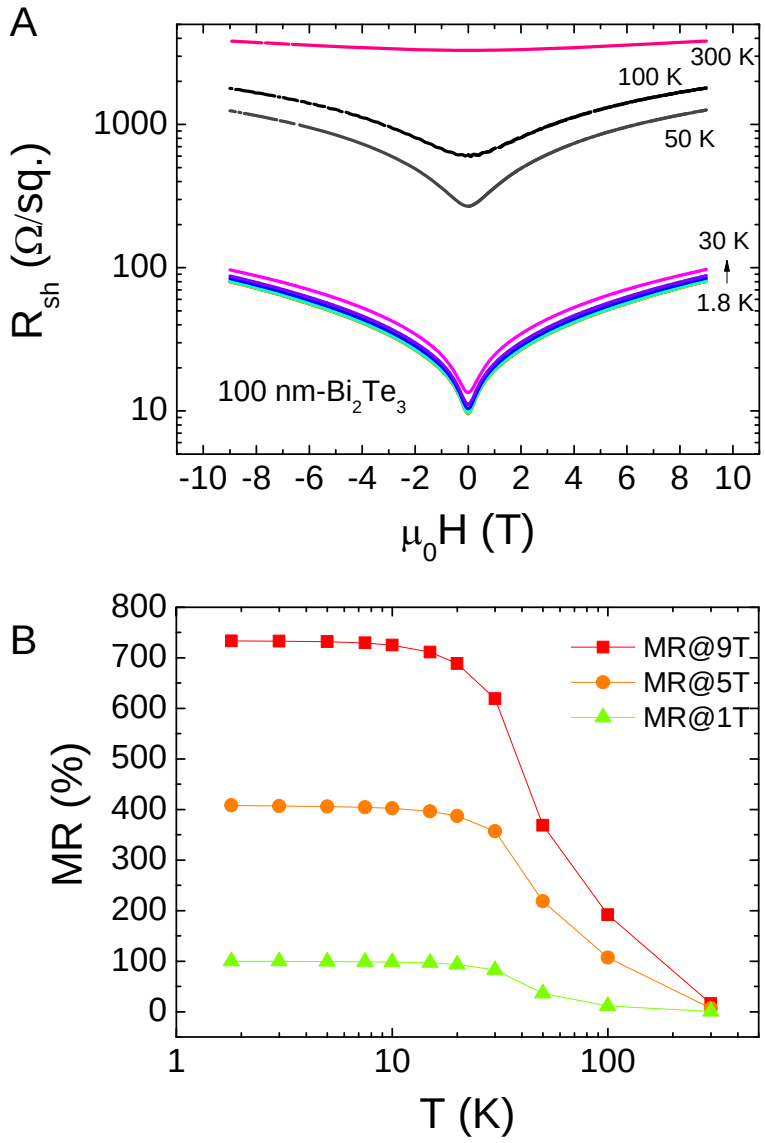

Figure S2. (A) Resistance of a 100 nm-thick Bi_2Te_3 film as a function of magnetic field with varying temperature. (B) MR of a 100 nm-thick Bi_2Te_3 film at 1, 5, 9 T as a function of temperature.

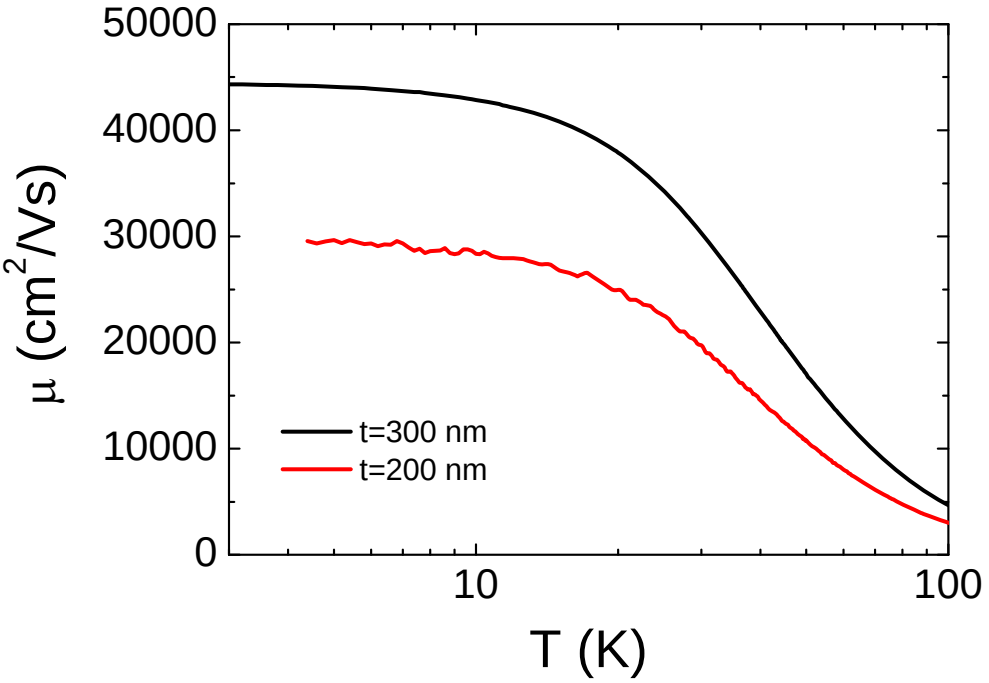

Figure S3. Hall mobility of Bi_2Te_3 films with different thickness (black: 300 nm, red: 200 nm) as a function of temperature. The Hall measurement was performed under an external magnetic field (*B*) of ± 2 T.

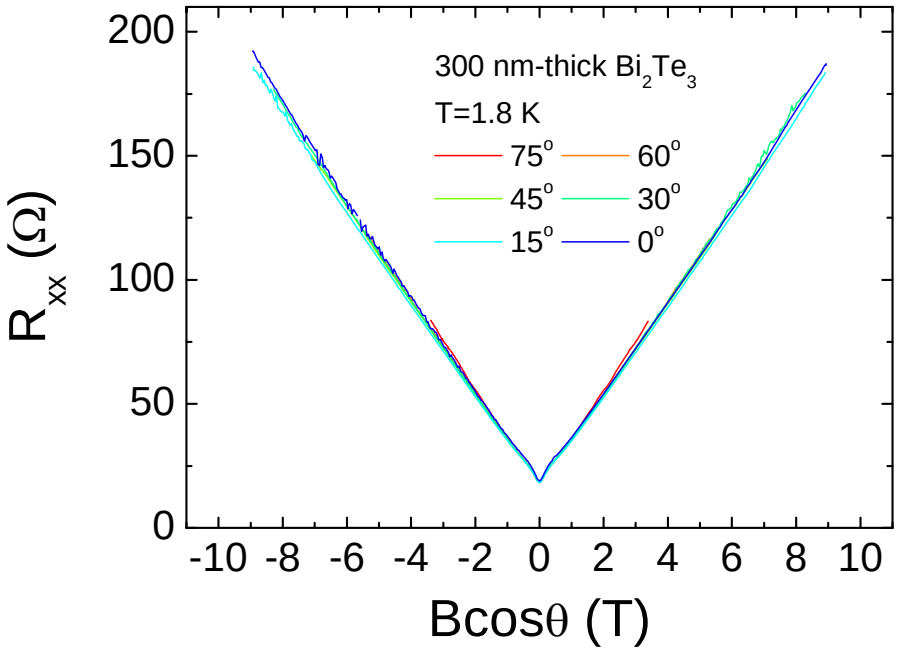

Figure S4. Magnetoresistance of a 300 nm-thick Bi_2Te_3 film as a function of the perpendicular component of the magnetic field. The measurement temperature was 1.8 K.

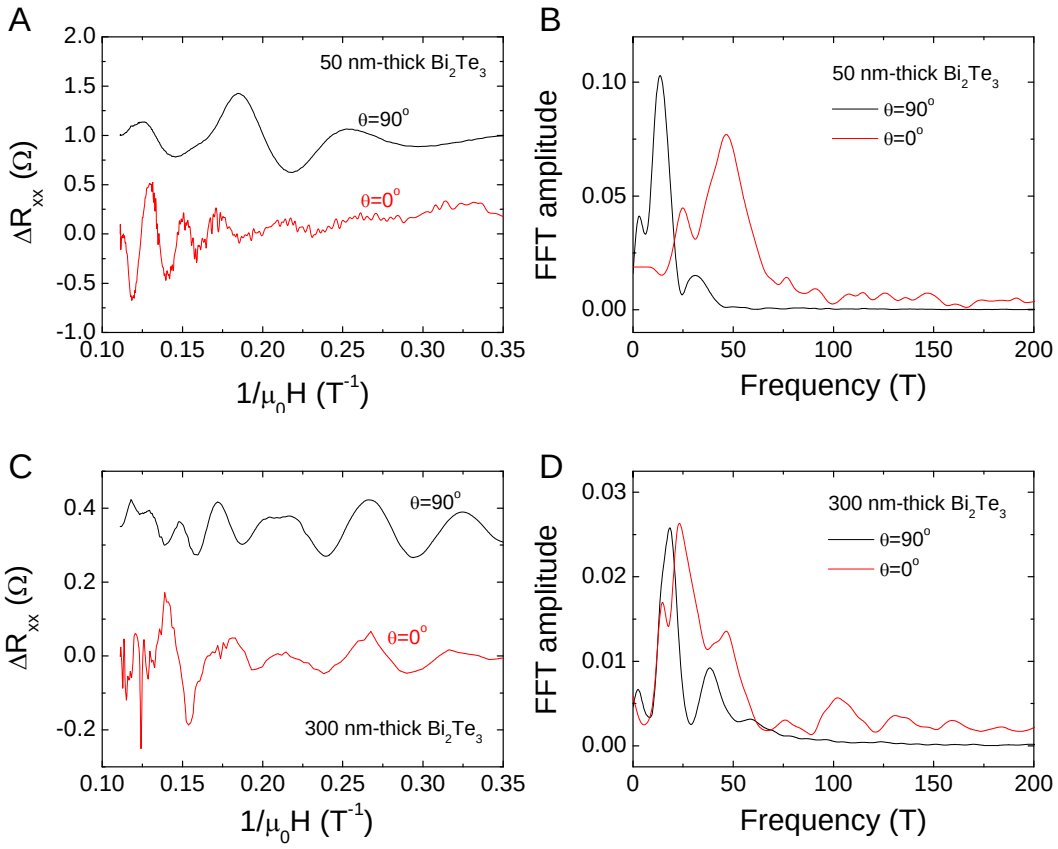

Figure S5. Shubnikov-de Hass oscillation (SdHO) and the Fast Fourier Transform (FFT) of Bi_2Te_3 films with different thickness. (A) SdHO of a 50 nm-thick Bi_2Te_3 film for θ=0° (red) and θ=90° (black). (B) FFT of SdHO of a 50 nm-thick Bi_2Te_3 film for θ=0° (red) and θ=90° (black). (C) SdHO of a 300 nm-thick Bi_2Te_3 film for θ=0° (red) and θ=90° (black). (D) FFT of SdHO of a 300 nm-thick Bi_2Te_3 film for θ=0° (red) and 90° (black).