

Supporting Information

Ag Decorated Topological Surface State Protected Hierarchical Bi₂Se₃ Nanoflakes for Enhanced Field Emission Property

Biswajit Das^a, Debabrata Sarkar^b, Supratim Maity^b and Kalyan Kumar Chattopadhyay^{a,b*}

^aSchool of Material Science & Nanotechnology, Jadavpur University, Kolkata 700 032, India

^bThin Film & Nanoscience Laboratory, Department of Physics, Jadavpur University, Kolkata 700 032, India

*Corresponding author. Tel.: +91 9433389445; fax: +91 33 2414 600.

E-mail address: kalyan_chattopadhyay@yahoo.com (Kalyan Kumar Chattopadhyay).

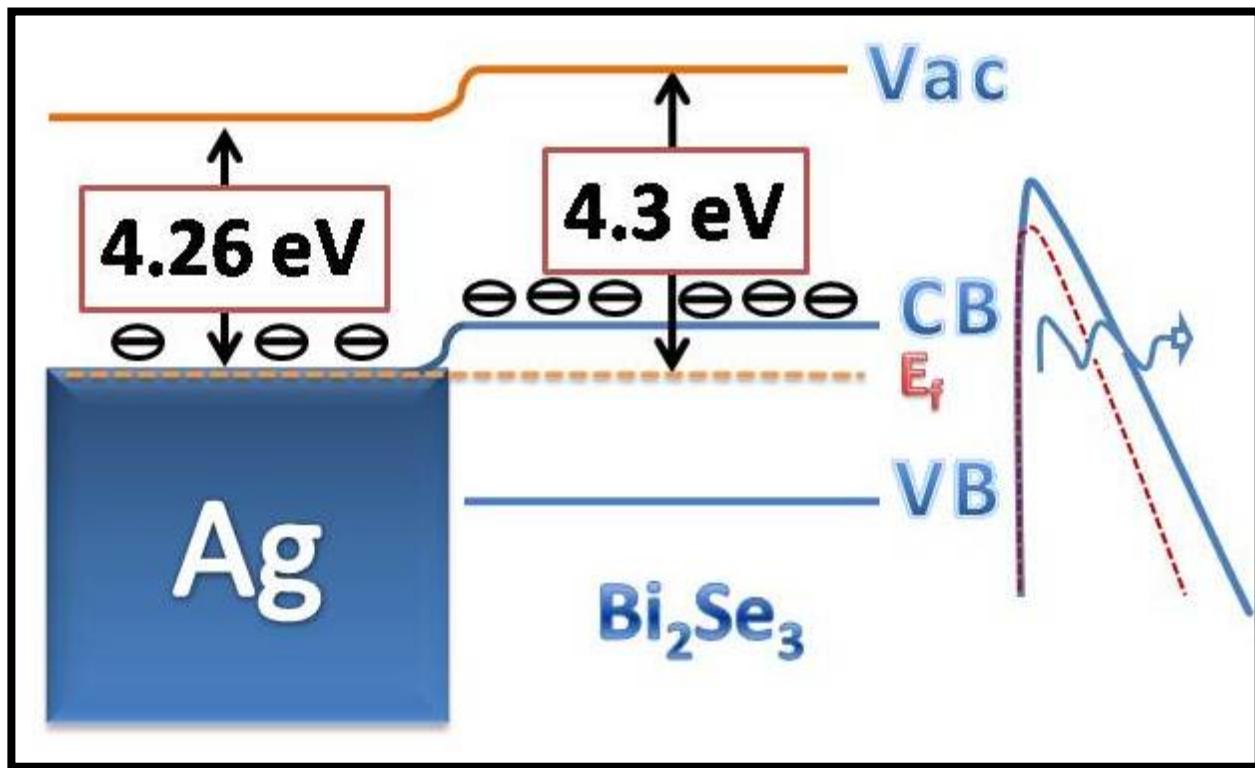


Figure S1. A schematic of the band alignment at the junction between Ag (metal) and Bi_2Se_3 (semiconductor), indicating carrier injection into the semiconductor

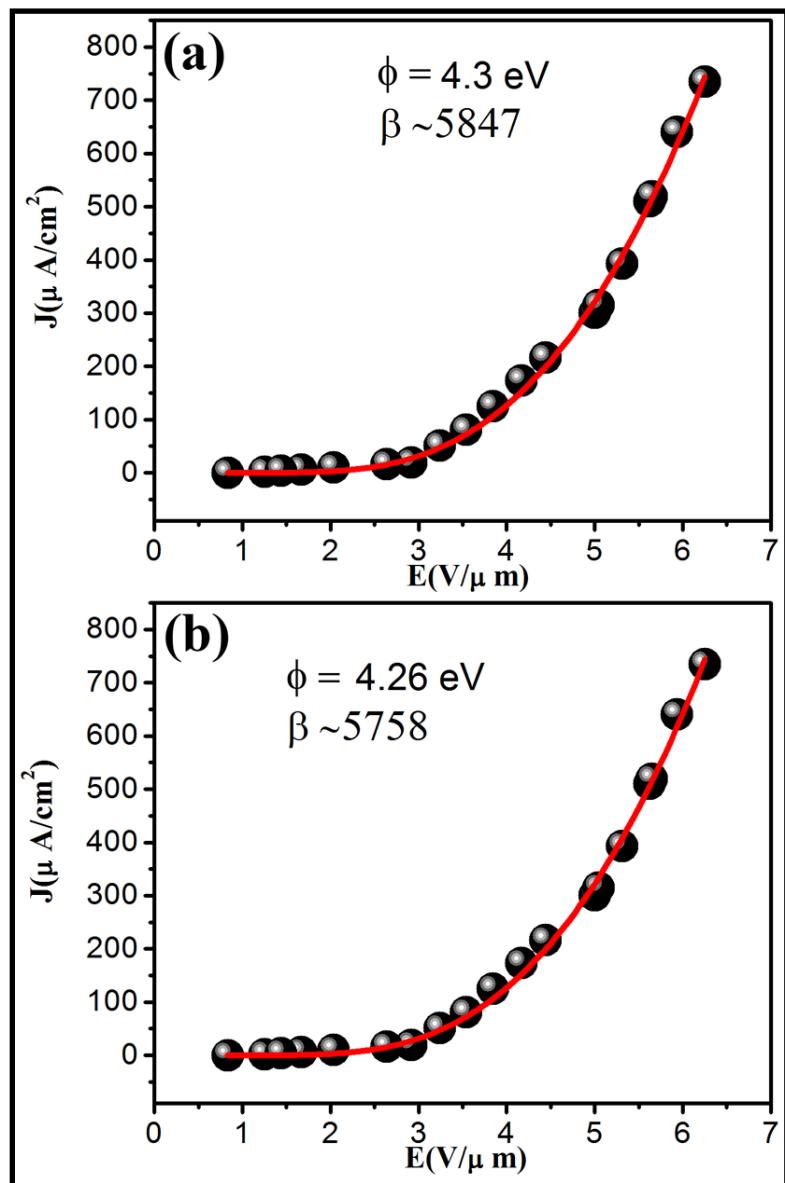


Figure S2. Plot of electric field vs current density and the same fitted by FN equation considering different work functions (a) 4.3 eV and (b) 4.26 eV; inset shows obtained enhancement factors

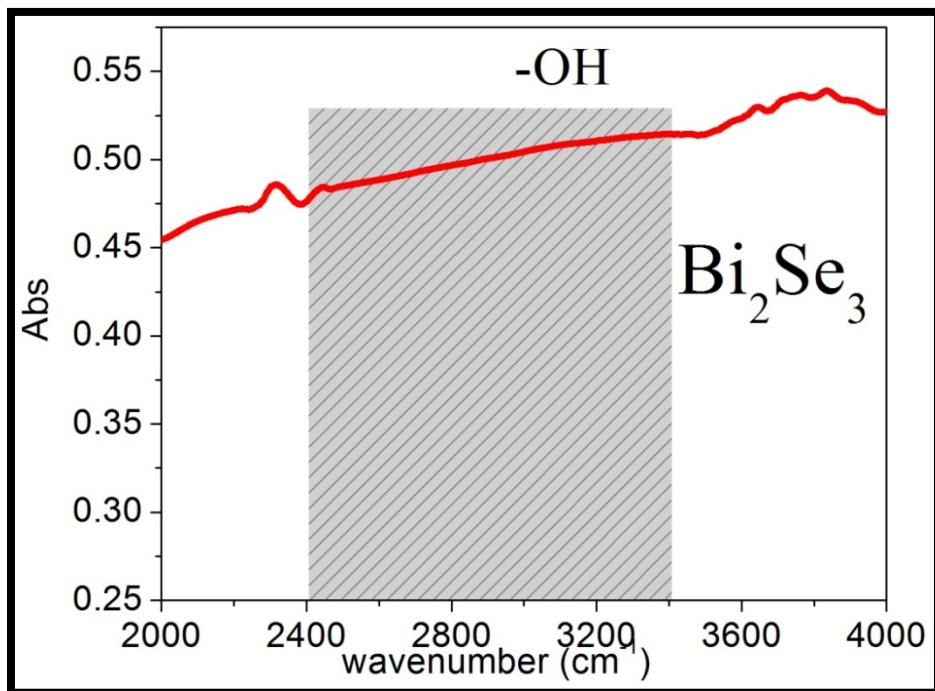


Figure S3. FT-IR spectrum of pure hierarchical Bi₂Se₃ film showing no significance presence of -OH groups.