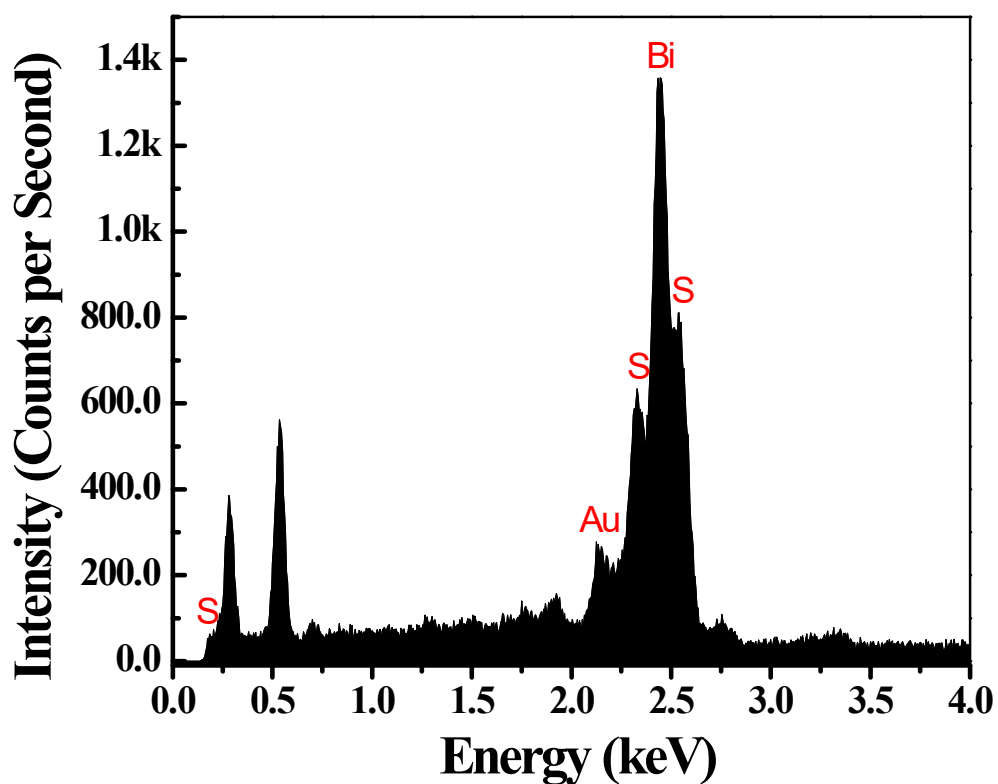


## Supporting Information

Figure S1:



Sr. no.	Element	Weight%
1.	Au	8.20
2.	S	10.73
3.	Bi	81.07

Figure S1: EDAX analysis of Au nanoparticle decorated Bi<sub>2</sub>S<sub>3</sub> nanoflower.

Figure S2:

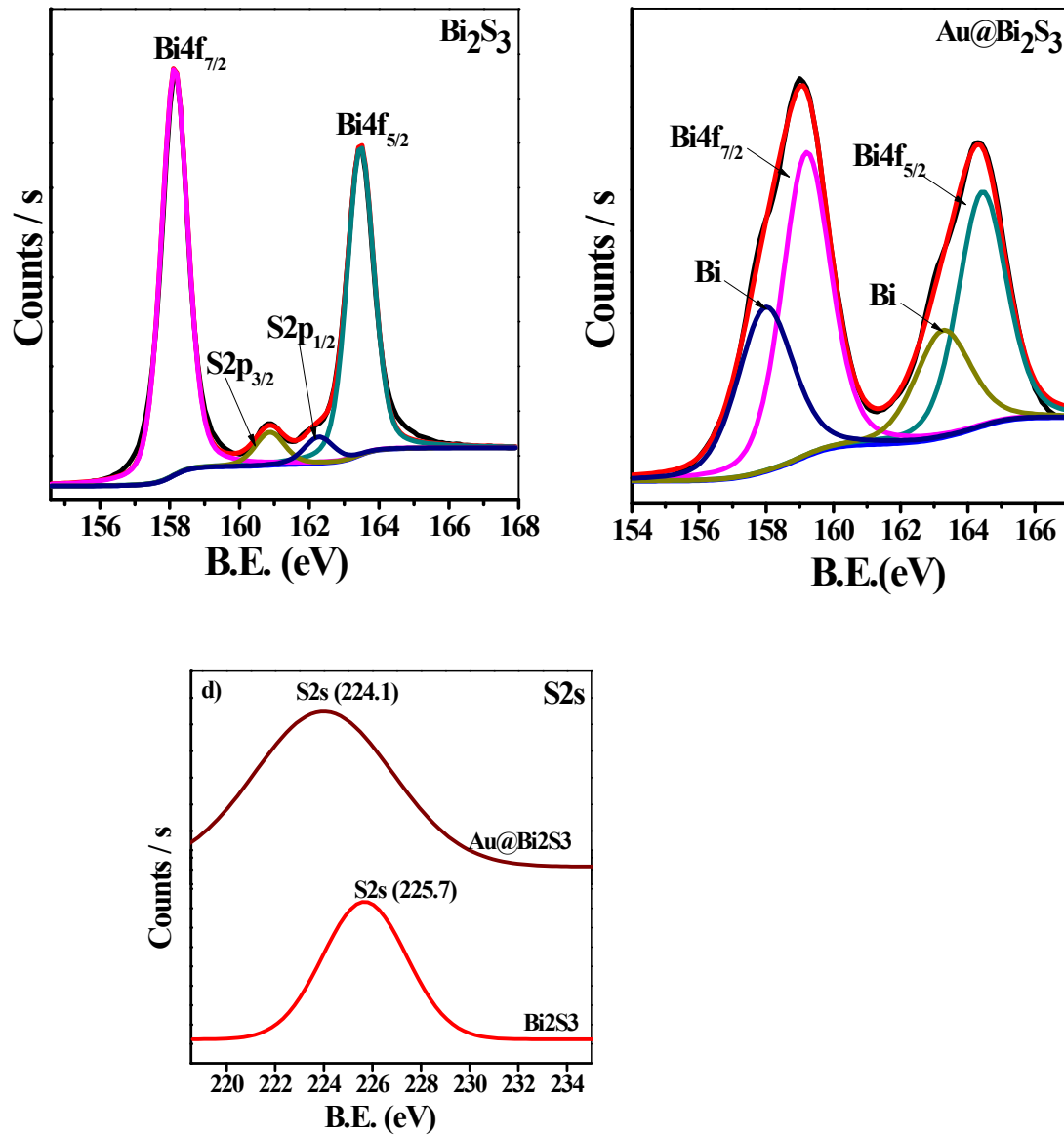


Figure S2: XPS deconvolution spectra for Bi<sub>2</sub>S<sub>3</sub> nanoflower and Au decorated Bi<sub>2</sub>S<sub>3</sub> nanoflower.

**Figure S3:**

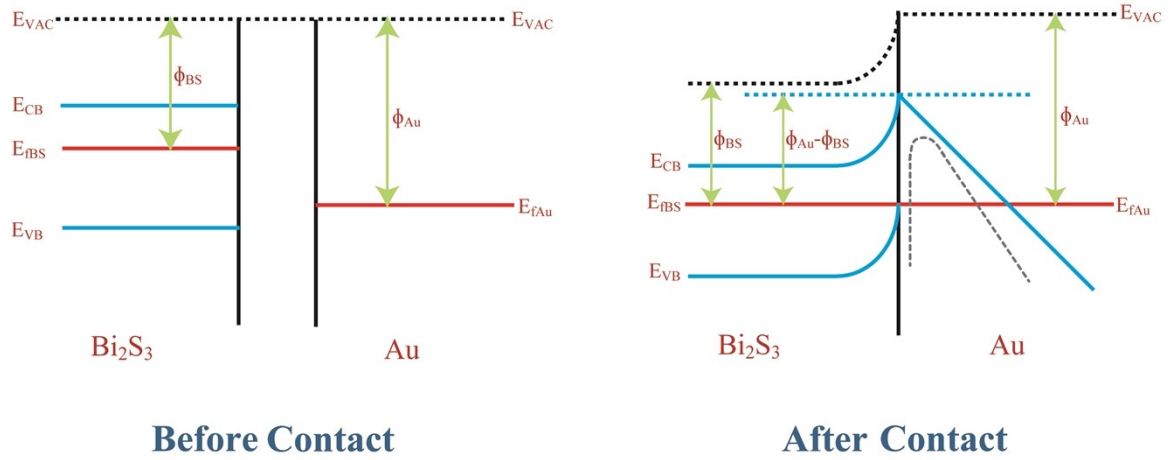


Figure S3: Field emission Energy band Diagram showing emission current tunneling from VB to CB at an intense electric field.