Supplementary Information (SI) for Nanoscale.

Supporting information

Design of new process for stabilization of FeS-Bi_2S_3 hybrid nanostructure and its application as field emitter

Arushi Arora [a], Anima Mahajan [b], Nausad Khan [a], Santanu Ghosh [b] and Menaka Jha [a]

[a]*Institute of Nano Science & Technology, Knowledge City, Sector 81, Mohali, Punjab–140306, India*

[b]*Department of Physics, Indian Institute of Technology, Hauz Khas, New Delhi 110016, India*

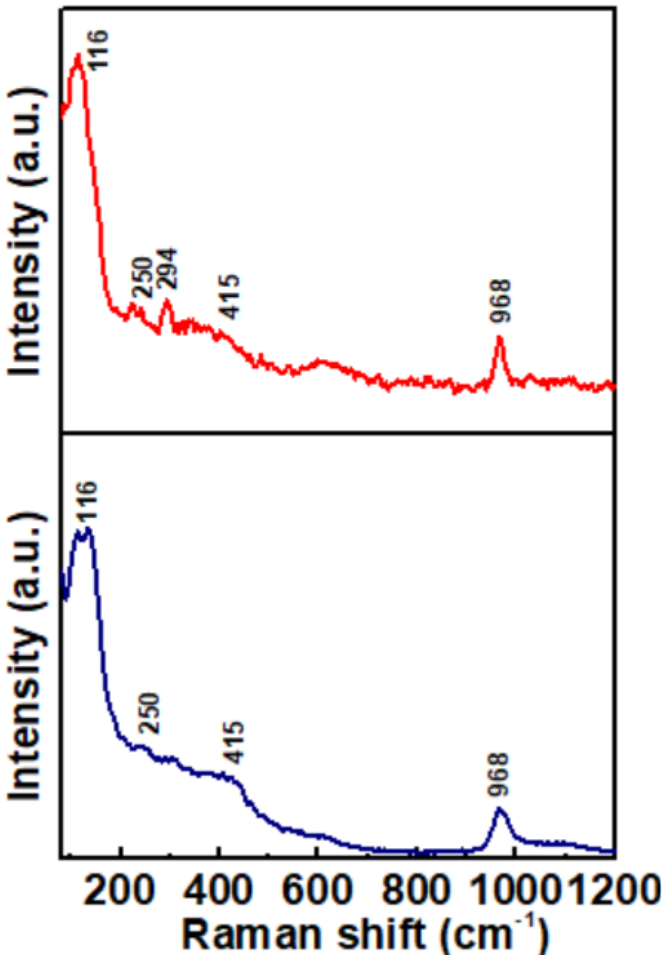

Figure S1: (a) Raman spectra of Bi_2S_3 and (b) FeS-Bi_2S_3

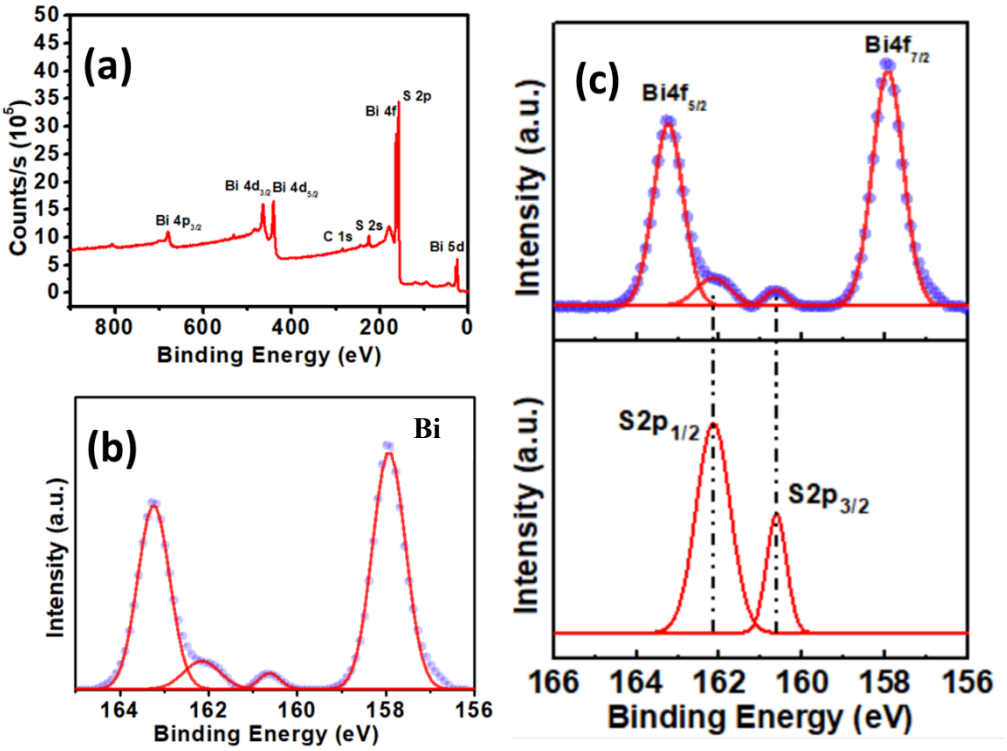

Figure S2: (a) Wide scan X-ray photoelectron spectroscopy (XPS) survey spectra of Bi_2S_3 and High-resolution spectra of (b) Bi4f and (c) S2p

=

Table S1: Atomic % of Fe, Bi and S by TEM-EDX, XPS and ICP-MS

% Atomic composition		Bi (%)	S (%)	Fe (%)
Bi_2S_3	TEM EDAX	38.69	61.81	-
	XPS	41.39	58.6	-
	ICP-MS	-	-	-
	CHNS	-	16.9	-
FeS-Bi_2S_3	TEM EDAX	39.90	55.21	4.82
	XPS	34.92	60.01	5.07

	ICP-MS	40.03	-	5.93
	CHNS	-	20.39	-

The observed atomic % are in close agreement with observed ratio of Bi:S 2:3 i.e. 0.66”.