Supporting Information

Bi_2Te_3–MoS_2 Layered Nanoscale Heterostructures for Electron Transfer Catalysis

*C. Nethravathi, Anusha Dattatreya Manganahalli, Michael Rajamathi**

Materials Research Group, Department of Chemistry, St. Joseph's College, 36 Lalbagh Road, Bangalore 560 027, India

Corresponding author: mikerajamathi@rediffmail.com

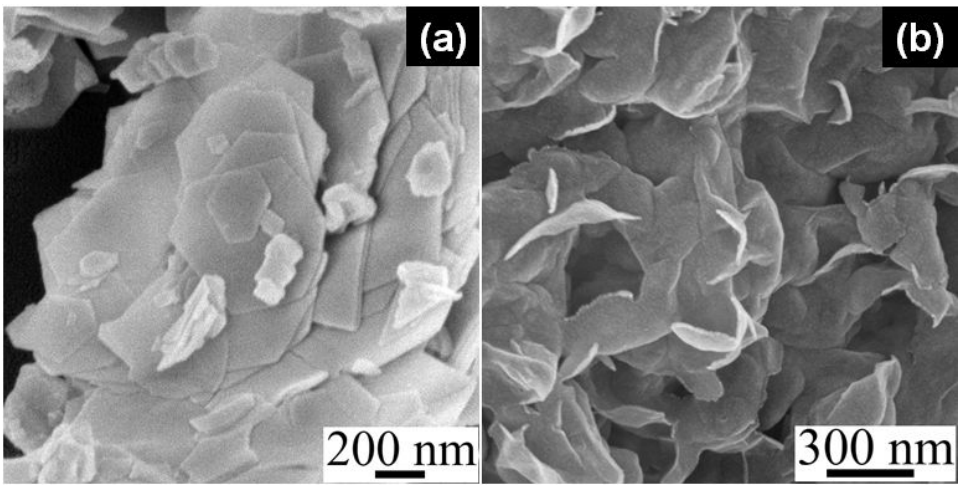

Figure S1 SEM images of pristine (a) hexagonal nanoplatelets of Bi_2Te_3 and (b) MoS_2.

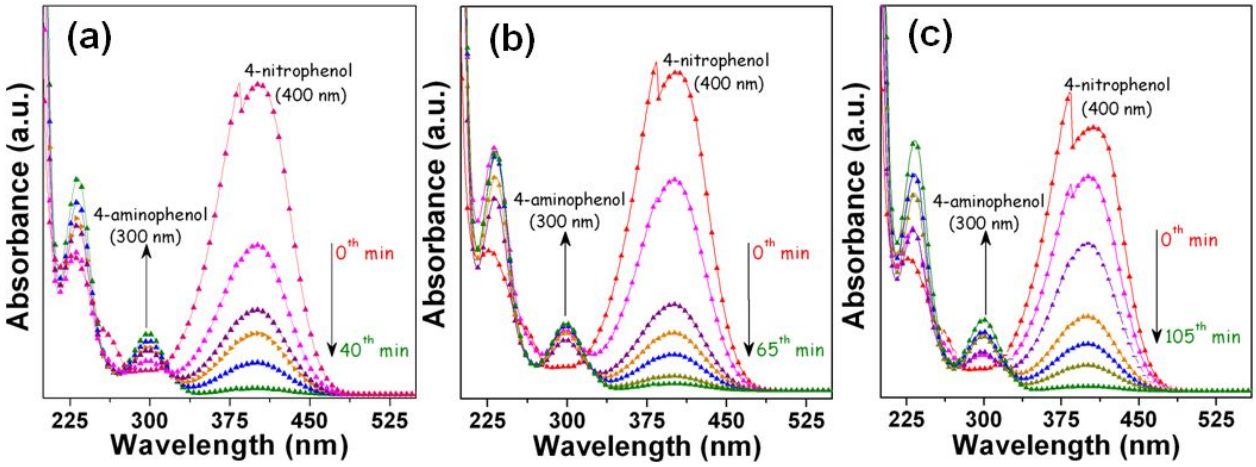

Figure S2 Evolution of UV-visible absorption spectra with time for the reduction of 4-nitrophenol using Bi_2Te_3–MoS_2 heterostructure catalysts of mole ratios (a) 15:85 (b) 50:50 (c) 75:25.

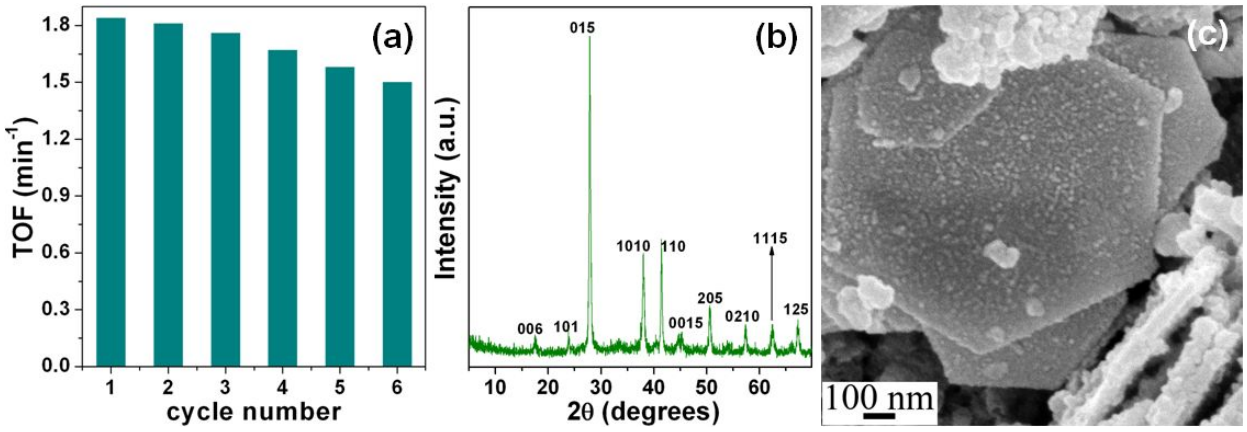

Figure S3 Efficiency of the Bi_2Te_3–MoS_2 (25:75) catalyst in six consecutive cycles of 4-nitrophenol reduction (a); XRD pattern (b) and SEM image (c) of the Bi_2Te_3–MoS_2 (25:75) catalyst after 6 cycles.

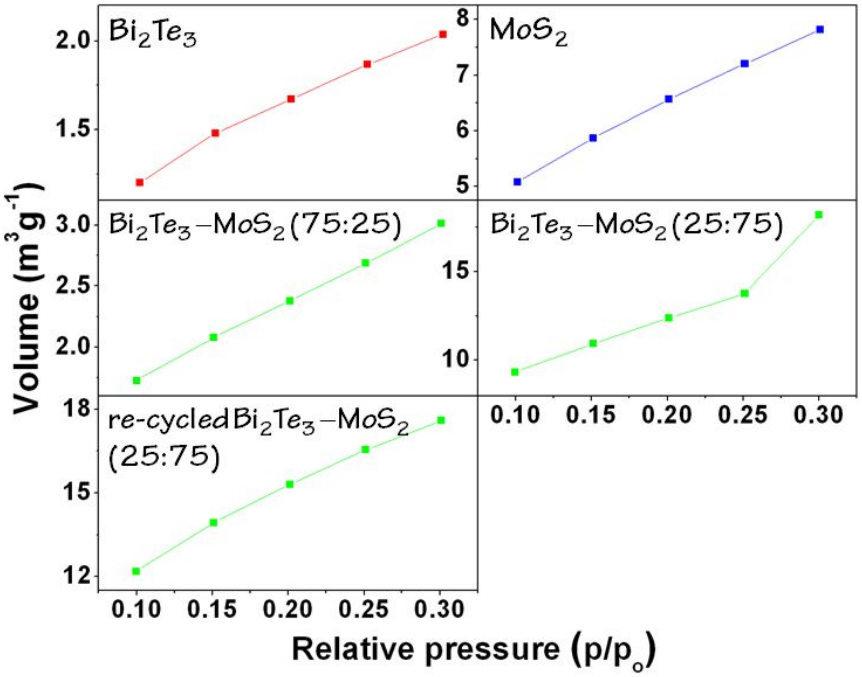

Figure S4 The specific surface area was calculated using Brunauer-Emmett-Teller method from the gas adsorption data collected at 5 different points in the partial pressure (P/P_o) range from 0.1 to 0.3.