Instrumentation details

Melting points

Melting points were recorded on electro-thermal melting point apparatus and are uncorrected.

IR spectroscopy

The FT-IR spectra of the compounds were taken in KBr pellet (100 mg) using Shimadzu Fourier Transformed Infrared (FT-IR) Spectrophotometer.

NMR spectroscopy

$^1$H NMR and $^{13}$C NMR spectra were recorded on Bruker 400 MHz spectrometer in IISc, Bangalore, Karnataka, IIIT/M Chennai and IIT Kanpur, India. The chemical shifts are shown in δ values (ppm) with tetramethylsilane (TMS) as an internal standard.

Mass spectroscopy

LC-MS were obtained using C 18 column on Shimadzu, LCMS 2010A, Japan. The column chromatography was performed using silica gel (230-400 mesh).

Thin Layer Chromatography (TLC)

Silica gel GF254 plates from Merck were used for TLC and spots located and identified by UV Chamber. The chemicals were purchased from Sigma-Aldrich Co and from SD Fine chemicals. The solvents for column chromatography were of reagent grade and were purchased from commercial source.