Appendix 1

General Experimental

In experiments reported in all the chapters:

1. All the melting points are uncorrected and expressed in degree Celcius (°C). The melting points were determined with a Thomas Hoover Capillary apparatus.

2. \(^1\)H NMR & \(^{13}\)C NMR spectra were recorded on Brucker AC 300F (300 MHz) and JEOL AL-300 (300 MHz) FT NMR spectrometers. Chemical shifts are expressed as δ values (ppm) downfield from tetramethylsilane (TMS) as internal standard.

3. Infrared spectra (IR) were recorded using Perkin Elmer Model 1430 RXI/FT spectrophotometer and were calibrated against polystyrene. Only principal peaks of interest were reported and are expressed in cm\(^{-1}\).

4. The elemental analysis (C, H, N) were carried out in the micro analytical section of the RSIC of Panjab University, Chandigarh using a Perkin Elmer 2400 (C, H, N) Elemental Analyzer.

5. TLC was performed using Merck TLC plates coated with silica gel. The spots were made visible by exposing to iodine vapours.


7. THF was freshly distilled from sodium benzophenone ketal prior to use.

8. All organic extracts were dried over anhydrous sodium sulphate.

9. Nitrogen gas was purified & dried by passing through traps of copper catalyst heated at 200°C, followed by those of calcium chloride, sodium hydroxide & dry molecular sieves.
Appendix 1

10. The compounds were purified by column chromatography over silica gel of 250-400 mesh.

11. Optical rotation was measured in Rudolph Autopol III Polarimeter using sodium 589 nm wavelength and expressed in degrees.