General Remarks

All melting and boiling points were measured by normal Thiels tube method and are uncorrected. Distilled solvents used in all cases. Hexanes refers to petroleum fraction boiling between 60-80°C. Anhydrous hexanes and benzenes were prepared by preliminary washing with conc. H₂SO₄, drying over fused calcium chloride followed by distillation and final storage over sodium wires. Anhydrous diethyl ether was prepared preliminary drying over fused calcium chloride followed by sodium wires. Anhydrous chloroform and dichloromethane were obtained by storing over fused calcium chloride followed by distillation and final storage over molecular sieves. Dry acetone was prepared by heating under refluxed with successive quantities of KMnO₄, followed by distillation and final storage over anhydrous potassium carbonate. Anhydrous diphenyl ether was prepared preliminary drying over fused calcium chloride followed by distillation and final storage over sodium wires.

Column chromatography was performed on silica gel 60-120 mesh size and TLC on silica gel (13% CaSO₄ as binder). IR spectra were recorded on a Shimadzu FT-IR spectrophotometer, (solids-KBr pellet/ liquid-neat, unless otherwise stated). ¹H NMR and ¹³C NMR were recorded on Bruker 300 MHz instrument. PMR data, using standard notations were presented in the following order: chemical shift (δ)/splitting pattern (J = coupling constant)/ relative proton ratio/ Assignments. The multiplicities of carbon signals were obtained from DEPT experiment. NMR spectra were obtained in deuterated chloroform unless otherwise noted. Chemical shift values were expressed in δ-units with tetramethylsilane (TMS) as an internal standard. Chemical shift in square brackets give the values of the amide torsion isomer. High resolution mass spectra (HRMS) were recorded on a MicroMass ES-QTOF Mass spectrometer. High performance liquid chromatography (HPLC) were recorded on a Jasco HPLC (model MX-2080-31) instrument.