

The ¹H (left) and ¹³C NMR spectra of compounds 1 (a), 3a (b) and 3b (c)



Reactions of 3a and 1 with N-(2-pyridyl)piperazine

Diaminofullerene **3a** or **1** (50 mg, 0.048 mmol) was dissolved in 80 ml of 1,2-dichlorobenzene and then N-(2-pyridyl)piperazine was added (76.7 mg or 0.47 mmol for **3a**; 390 mg or 2.39 mmol for **1**). After that the reaction mixture was stirred in an opened flask and irradiated from the top by 60W incandescent light bulb within 6 h. Then the reaction mixtures were diluted by toluene and n-hexane (1:3:3 v./v. ratio). Resulting solutions were filtered and poured at the top of silica gel column (Acros Organics, 30-75 μ , 90 Å) pre-eluted with 1:1 v./v. hexane : toluene mixture. Passing toluene : MeOH 99:1 v./v. mixture through the column yielded two fractions. The first one corresponded to a small amount of compound **1** (ca. 2-3% yield); the second one was a major fraction (55-60 mg) and corresponded to a complex mixture of products.



The ¹H NMR spectrum of the polyaddition product



The ¹³C NMR spectrum of the polyaddition product