Supporting Information for

High transparent polyimides derived from 2-phenyl-4,6-bis(4-aminophenoxy) Pyrimidine and 1,3-bis(5-amino-2-pyridinoxy)benzene: Preparation,characterization, and optical properties

Chunbo Wang[a], Yue Guan[a], Dongbo Tian[b], Guodong Dang[a], Daming Wang[a], Chunhai Chen[a], and Hongwei Zhou*[a]

[a]Alan G. MacDiarmid Institute, Jilin University, Changchun 130012, PR China

[b]Beijing Institute of Satellite Environment Engineering, Beijing 100094, China

Email: zhw@jlu.edu.cn

Characterization:

NMR was performed on a BRUKER-300 spectrometer with DMSO-d_6 or $CDCl_3$ as solvent at 300 MHz for ^{1}H. FT-IR (spectra Fourier transform infrared spectroscopy) was recorded on a Bruker Vector22 spectrometer with KBr (potassium bromide) pellets or about 10um thick films. From the Solubility data, PI-2,3,5 have no solubility in DMSO or $CDCl_3$, and those can't be measured with existing instruments in our lab. ^{1}HNMR spectrums of the polyimides (PI-2,3,5) were measured(Shown in Fig.1~6), and all the protons in the polyimides can be assigned clearly. For claritying the polyimide (PI-2,3,5) structure, FTIR figue was supplied. In FT-IR spectra of PIs(Shown in Fig.7), the characteristic imide absorption bands were detected for 1782cm^{-1} (asymmetrical C=O stretching), 1726cm^{-1} (symmetrical C=O stretching), 1374cm^{-1} (C-N stretching).

^{1}H NMR spectras of polyimide was liisted as follow:

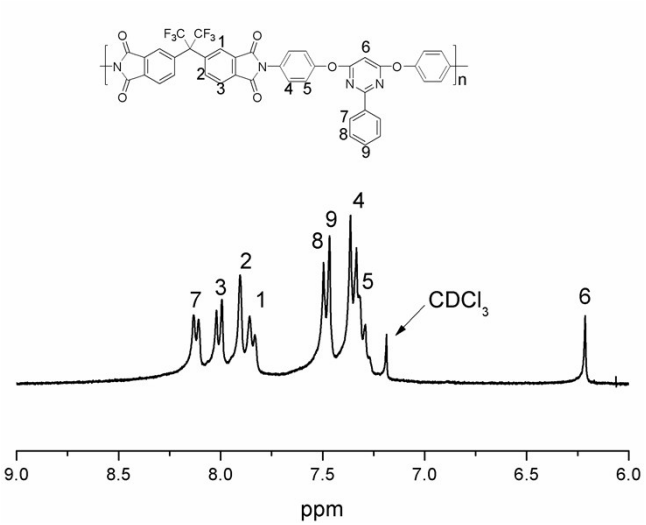

Fig.1 ^{1}HNMR spectra of the polyimides PI-1

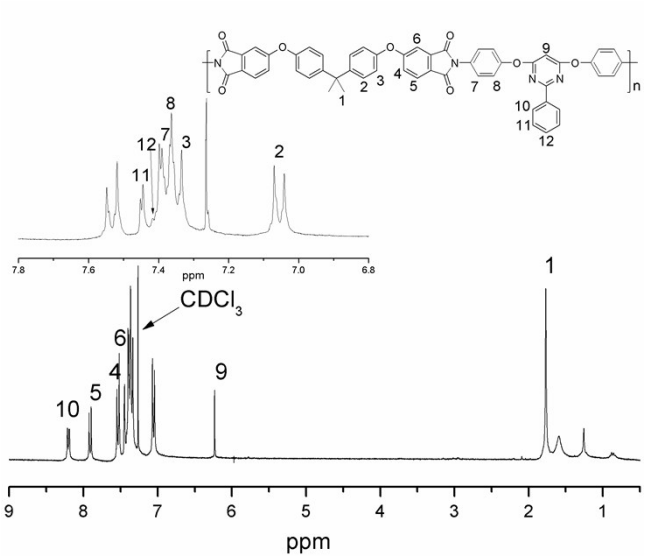

Fig.2 [1]HNMR spectra of the polyimides PI-4

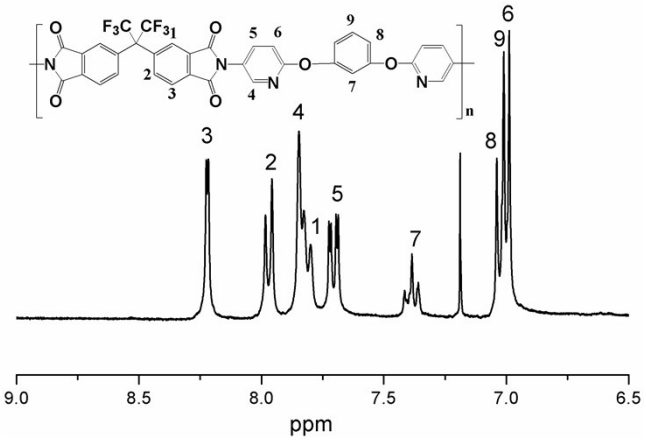

Fig.3 [1]HNMR spectra of the polyimides PI-6

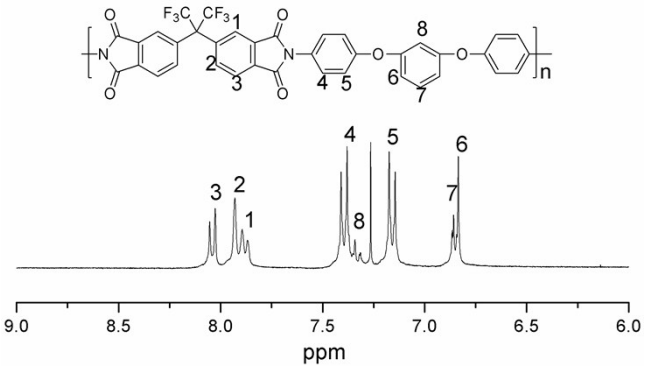

Fig.4 [1]HNMR spectra of the polyimides PI-7

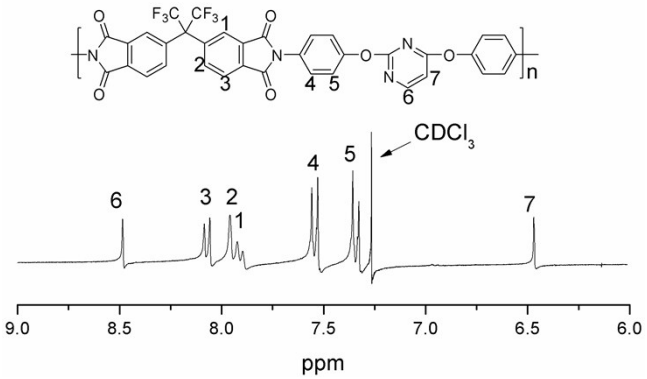

Fig.5 ^{1}HNMR spectra of the polyimides PI-8

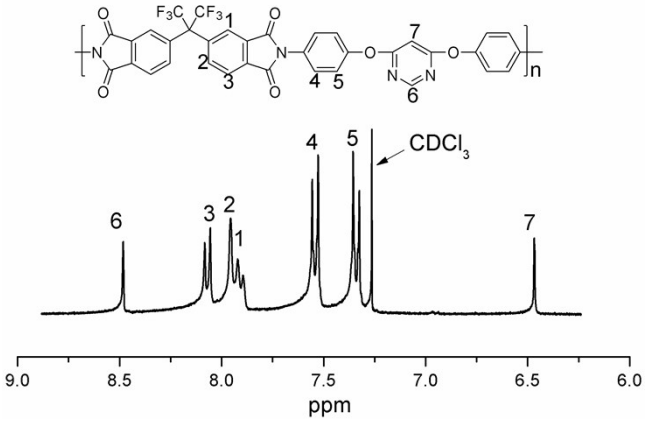

Fig.6 ^{1}HNMR spectra of the polyimides PI-9

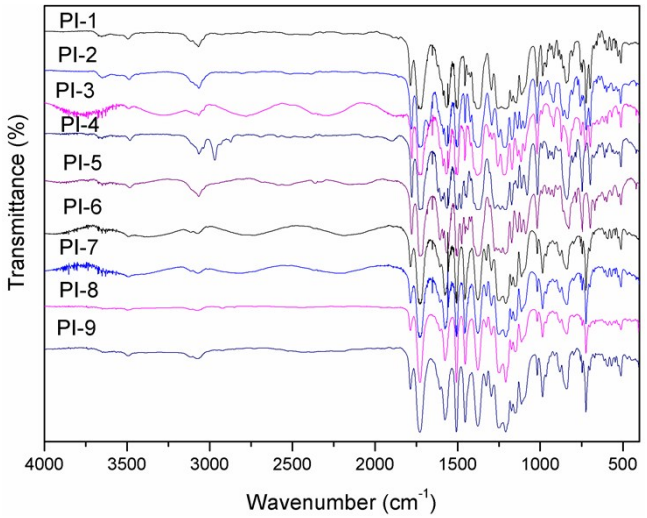

Fig.7 FT-IR spectra of the polyimides