Supporting Information

New pyridazinium based ionic liquids: An eco-friendly ultrasound-assisted synthesis, characterization and biological activity

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[b]Laboratory of Environmental Engineering and Biotechnology, ENSA, Ibn Zohr University, Box 1136, 80000 Agadir, Morocco

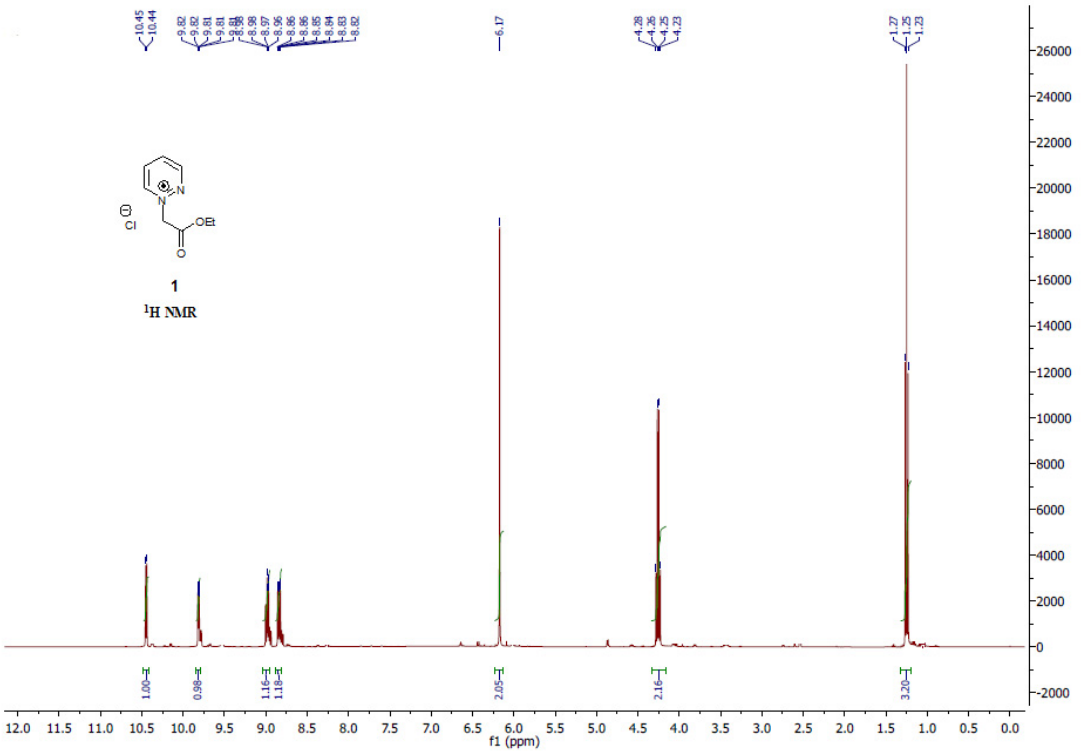
[c]Department of Chemistry, (LCECM) USTO-MB, University of Sciences and Technology Mohamed Boudiaf, BP 1505 Oran, El M`nouar, Algeria.

[d]Department of Chemistry, Mutah University, Mutah 61710, Karak-Jordan.

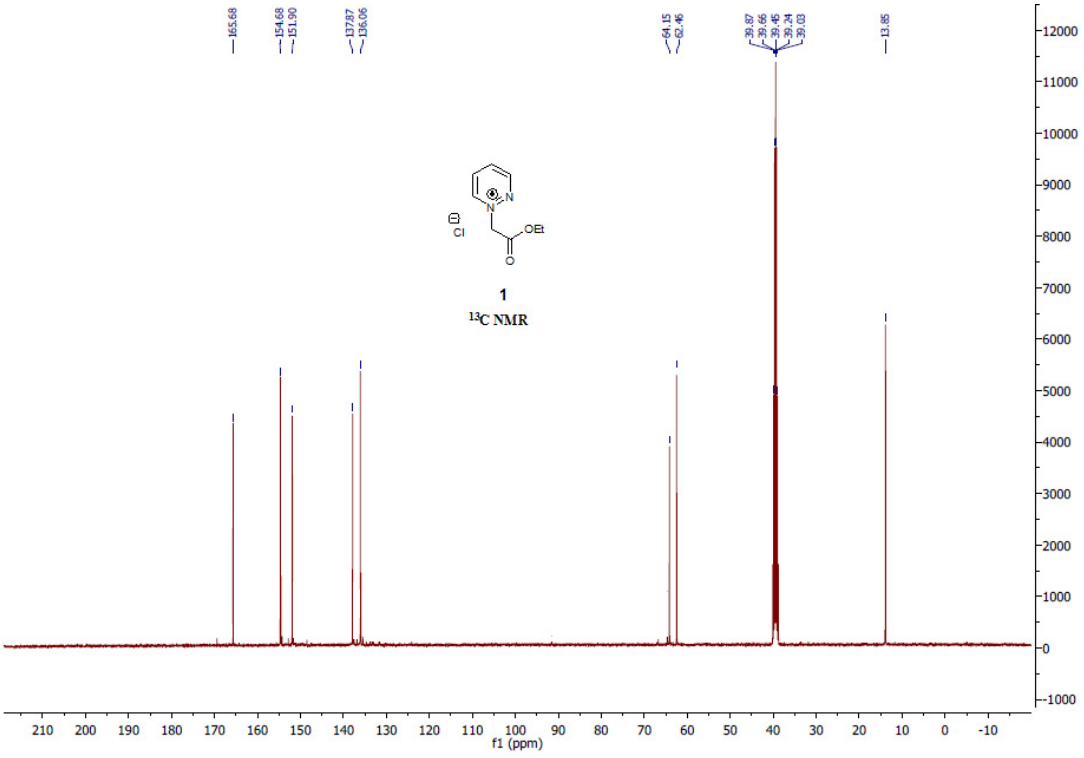
*E-mail: mouslim@mail.be

The following spectra are included:

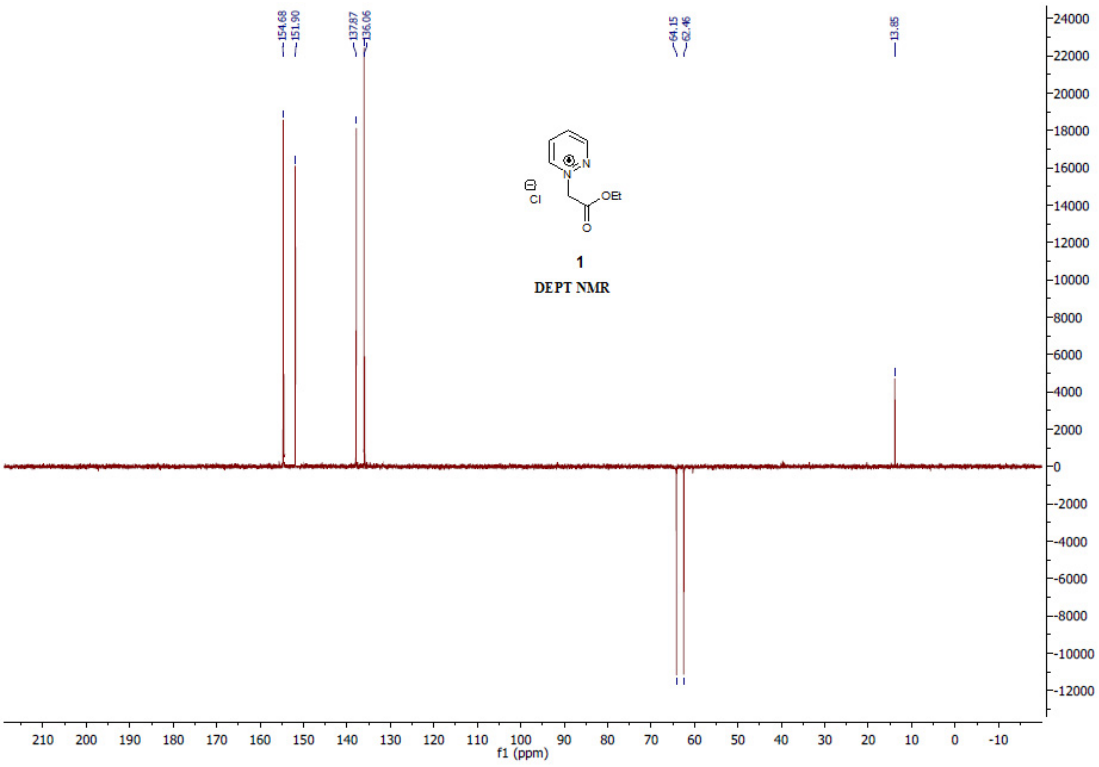
S1: ^{1}H NMR, ^{13}C NMR, Dept135 NMR, mass and IR spectra of IL **1**
S2: ^{1}H NMR, ^{13}C NMR, Dept135 NMR, mass and IR spectra of IL **2**
S3: ^{1}H NMR, ^{13}C NMR, Dept135 NMR, mass and IR spectra of IL **3**
S4: ^{1}H NMR, ^{13}C NMR, Dept135 NMR, mass and IR spectra of IL **4**
S5: ^{1}H NMR, ^{13}C NMR, Dept135 NMR, mass and IR spectra of IL **5**
S6: ^{1}H NMR, ^{13}C NMR, Dept135 NMR, mass and IR spectra of IL **6**
S7: ^{1}H NMR, ^{13}C NMR, Dept135 NMR, mass and IR spectra of IL **7**
S8: ^{1}H NMR, ^{13}C NMR, Dept135 NMR, mass and IR spectra of IL **8**



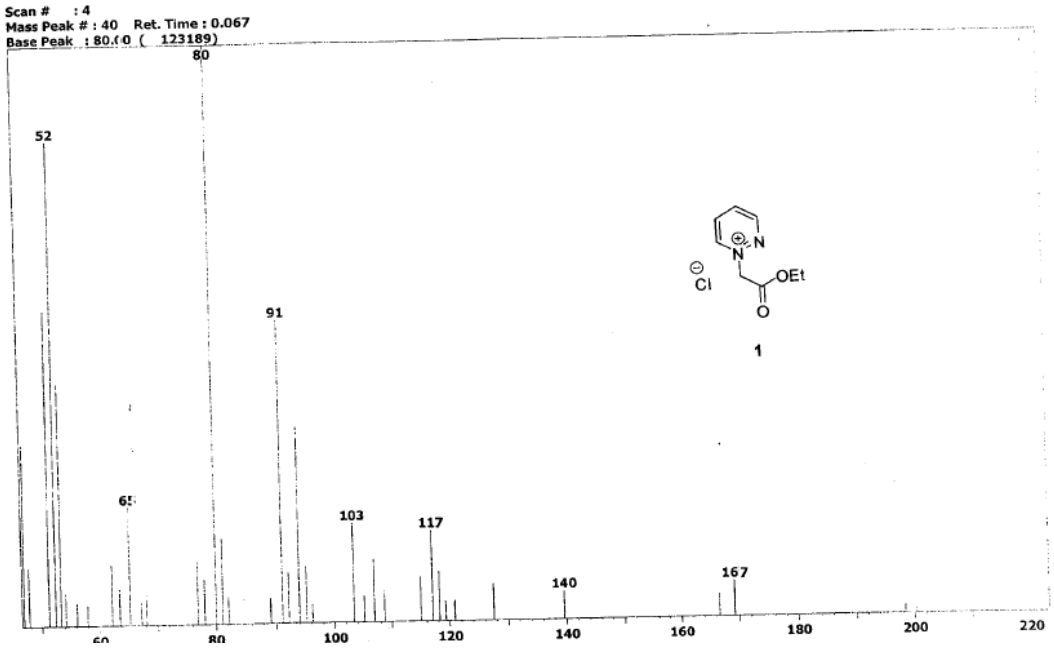
S1: ^{1}H NMR spectrum of IL 1 in DMSO (400 MHz)



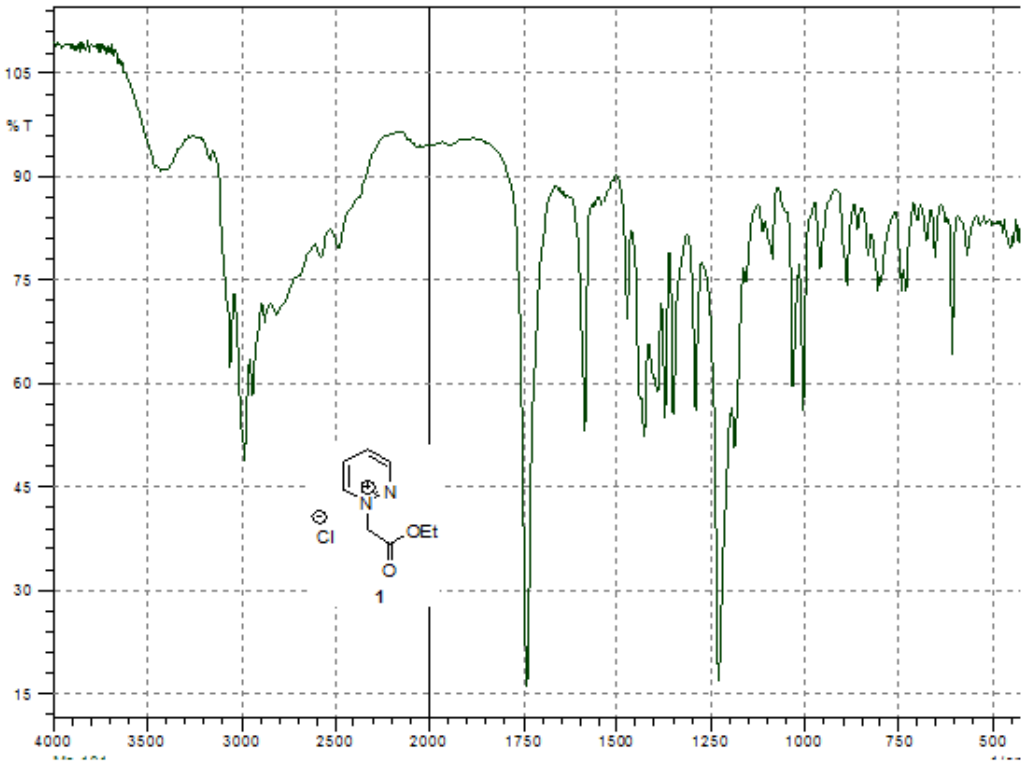
S1: ^{13}C NMR spectrum of IL 1 in DMSO (100 MHz)



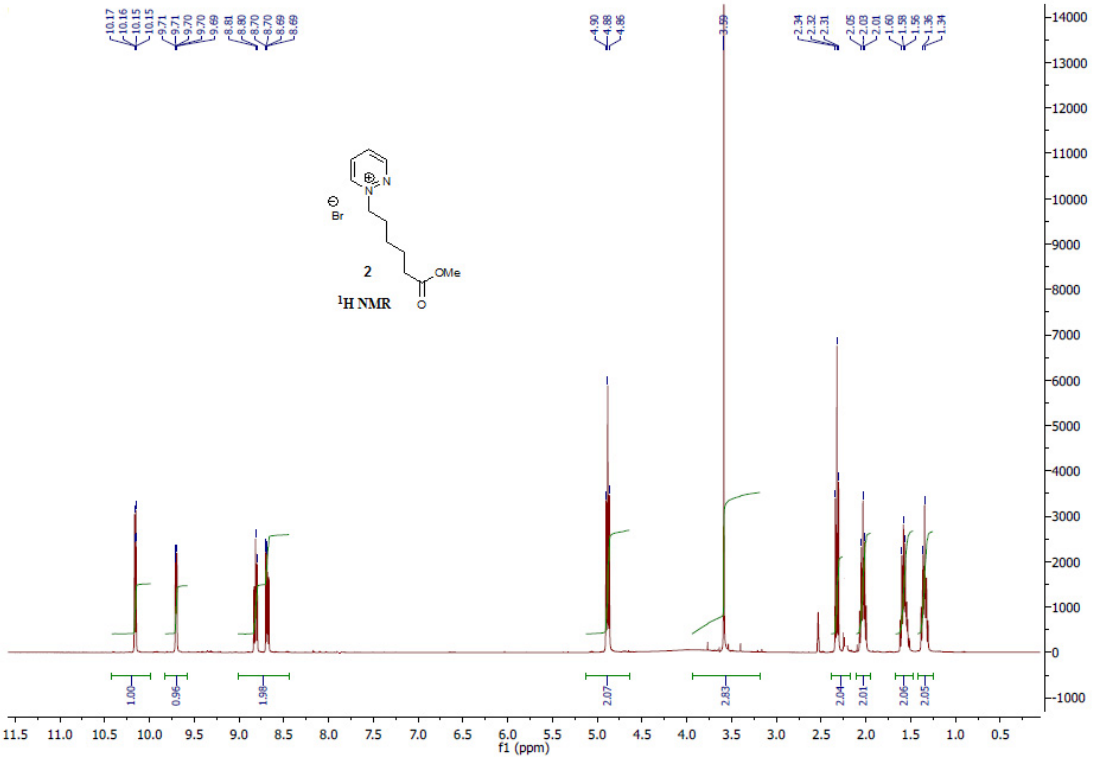
S1: DEPT- 135 NMR spectrum of IL 1 in DMSO (100 MHz)



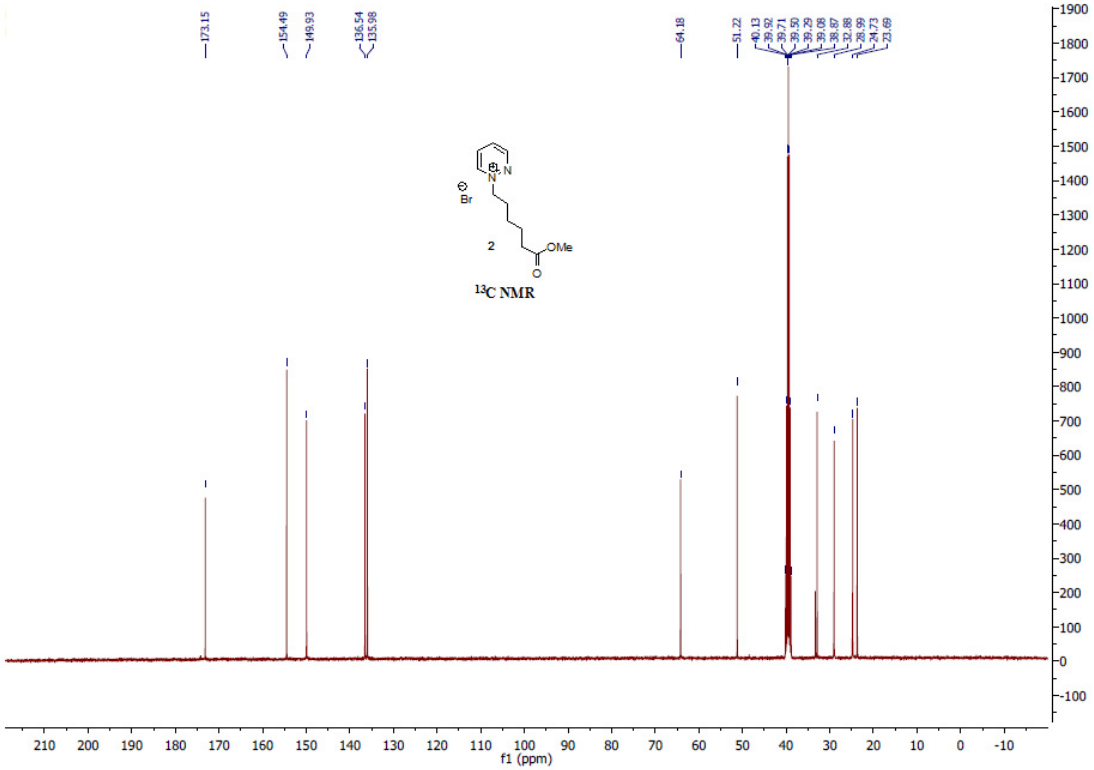
S1: (LCMS) Mass spectrum of IL 1



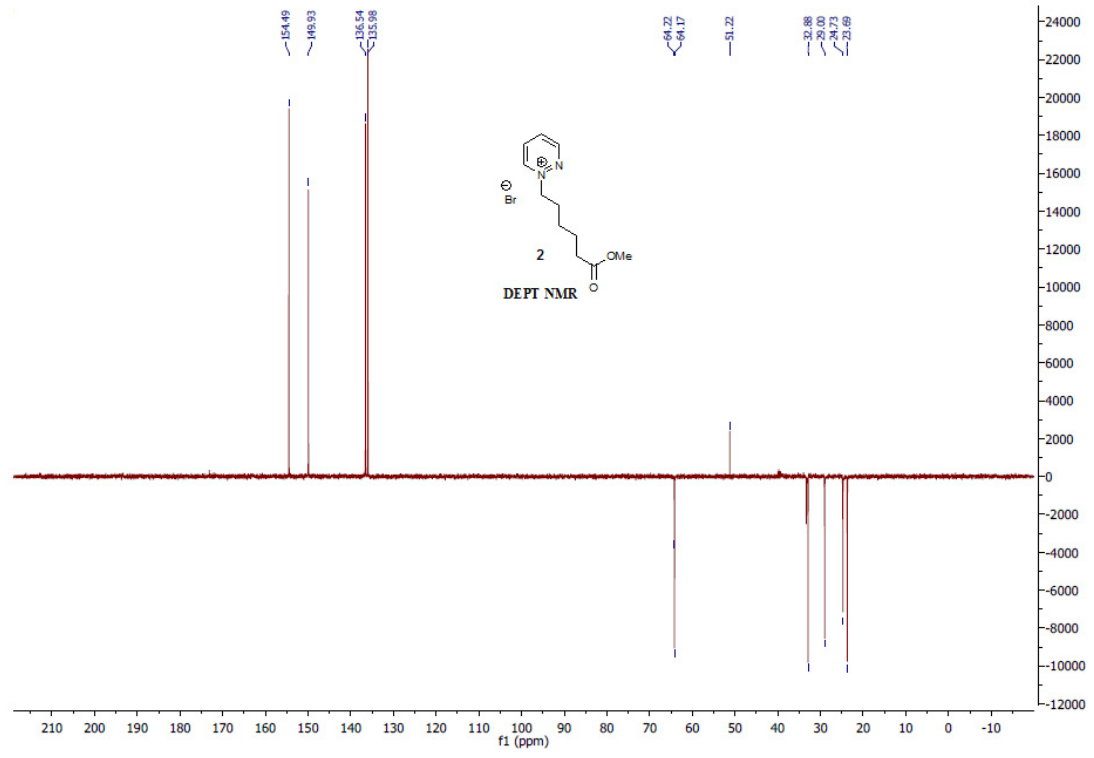
S1: IR spectrum of IL 1



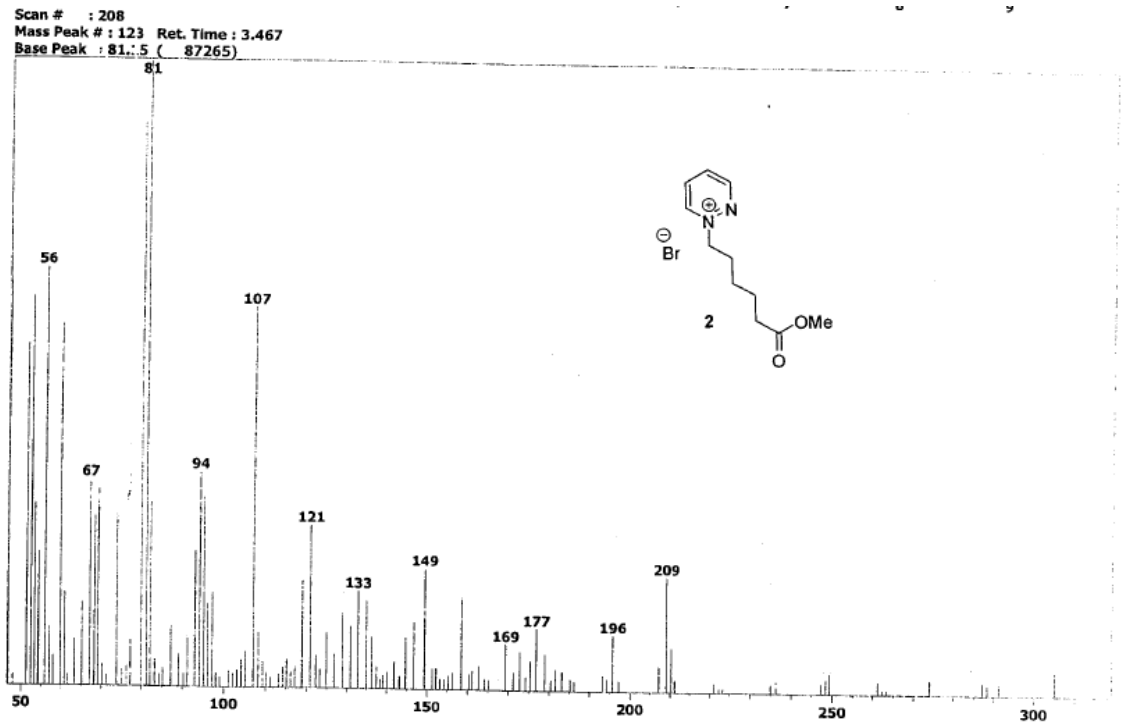
S2: ^{1}H NMR spectrum of IL 2 in DMSO (400 MHz)



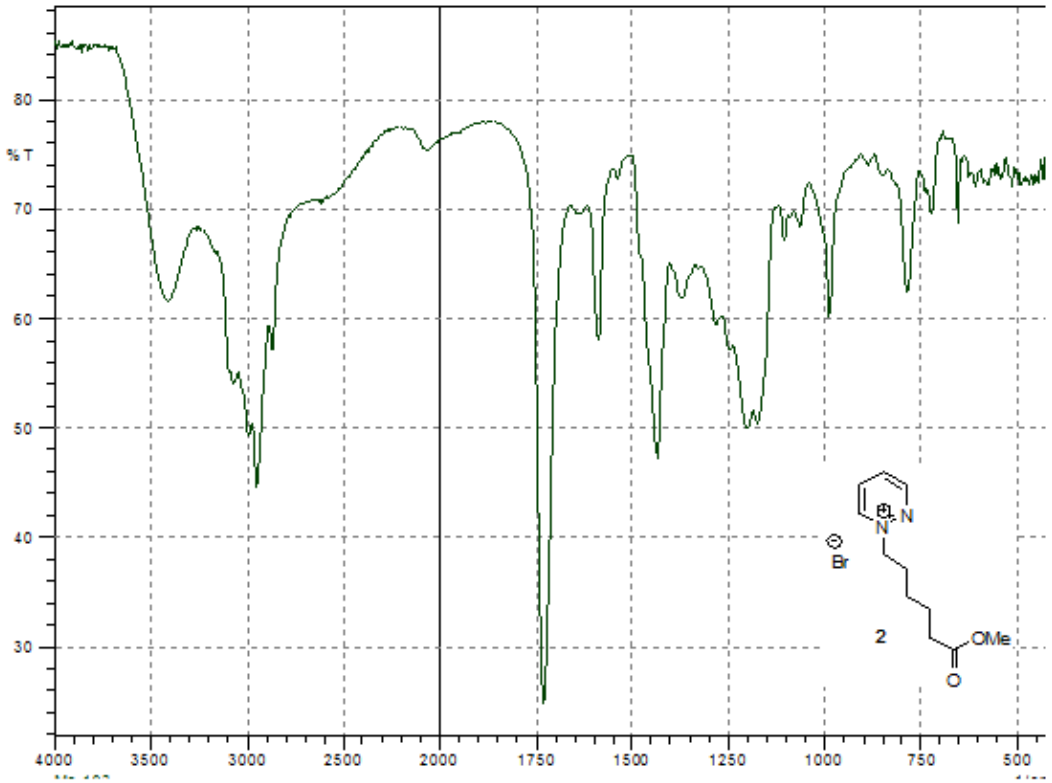
S2: ^{13}C NMR spectrum of IL 2 in DMSO (100 MHz)



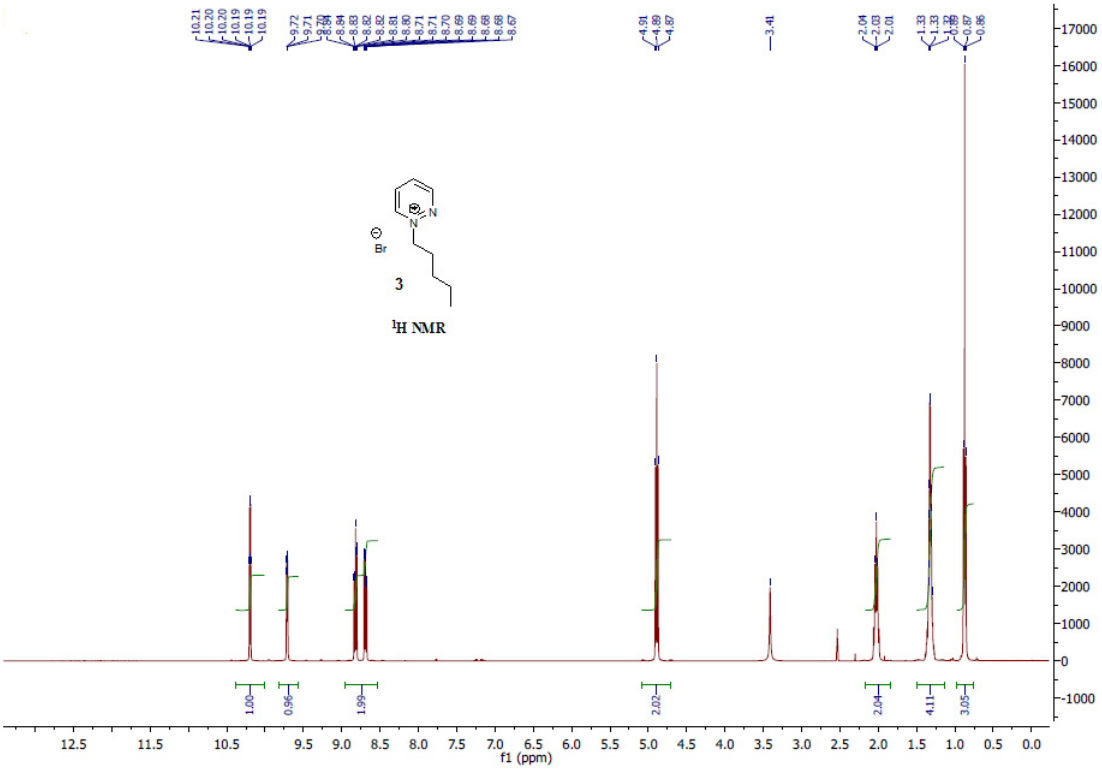
S2: DEPT- 135 NMR spectrum of IL 2 in DMSO (100 MHz)



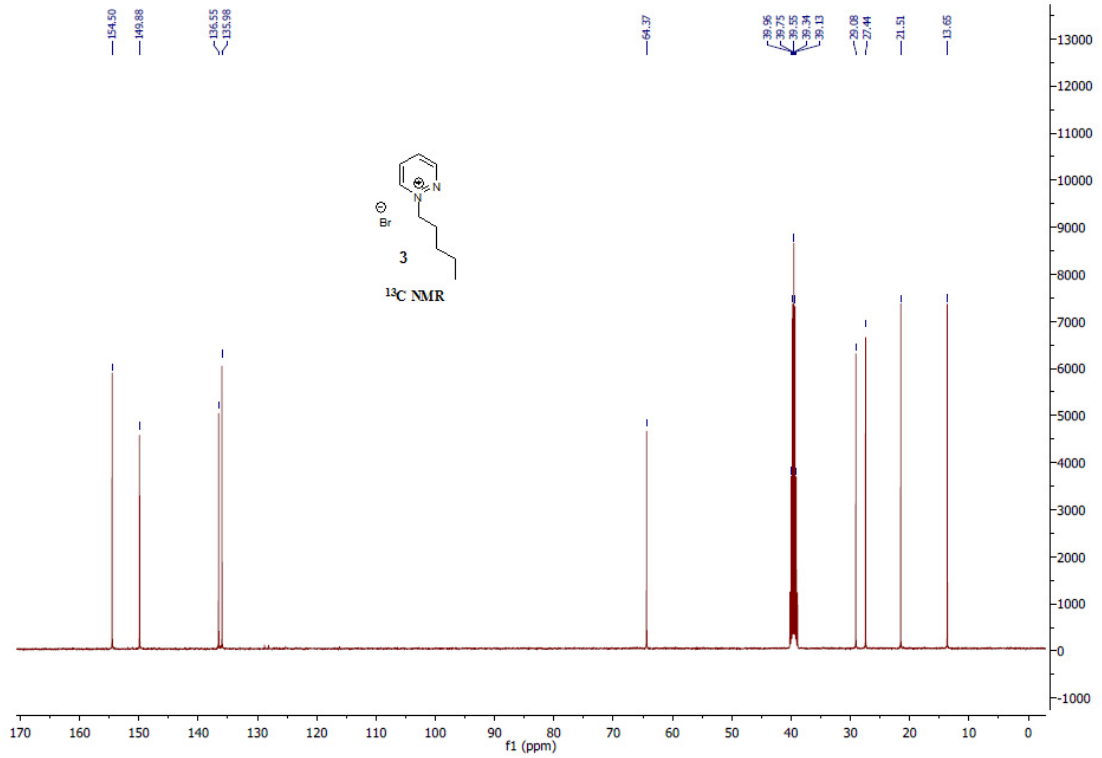
S2: (LCMS) Mass spectrum of IL 2



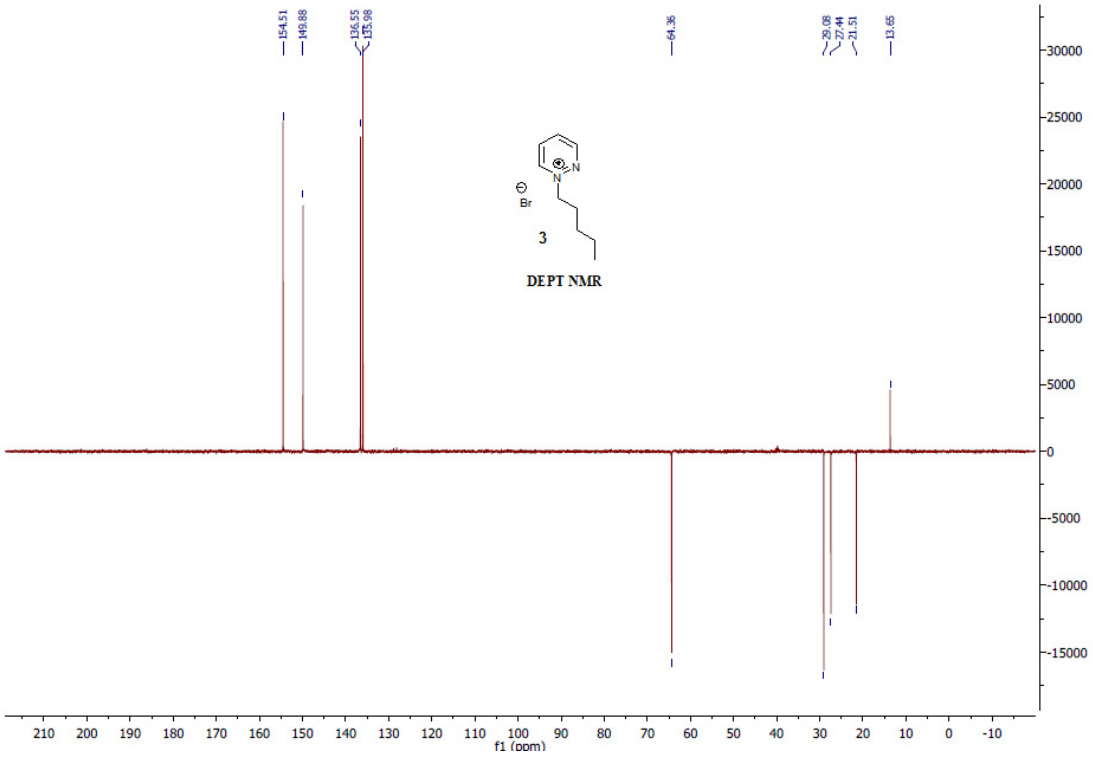
S2: IR spectrum of IL 2



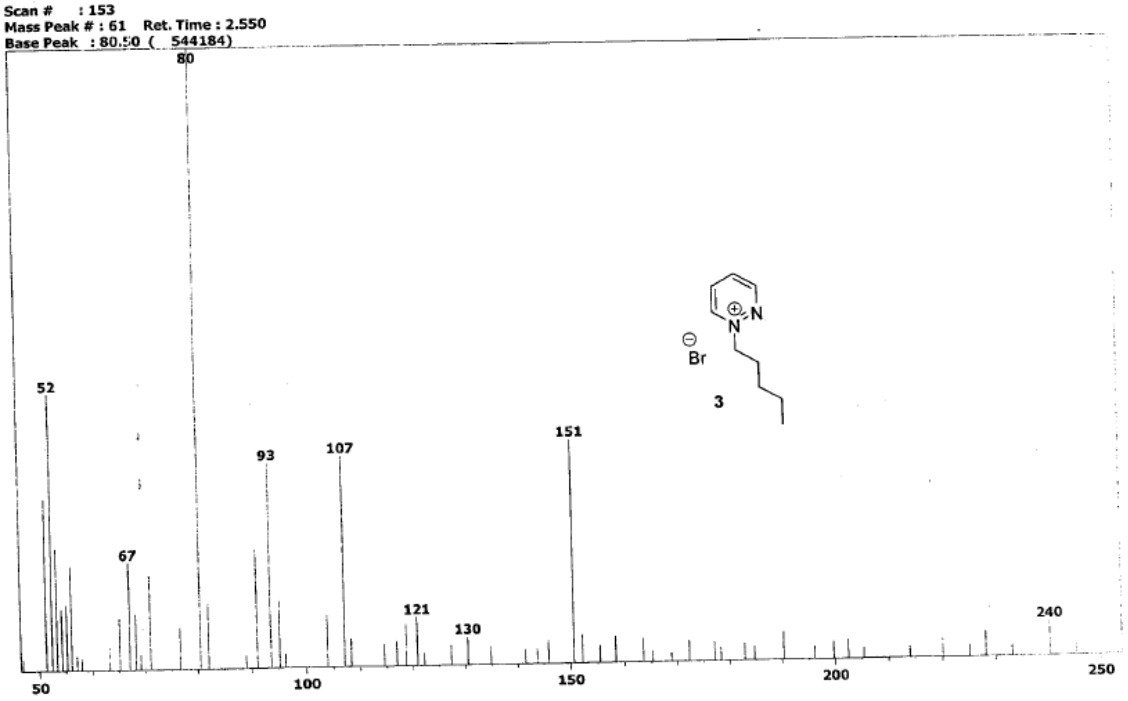
S3: ^{1}H NMR spectrum of IL 3 in DMSO (400 MHz)



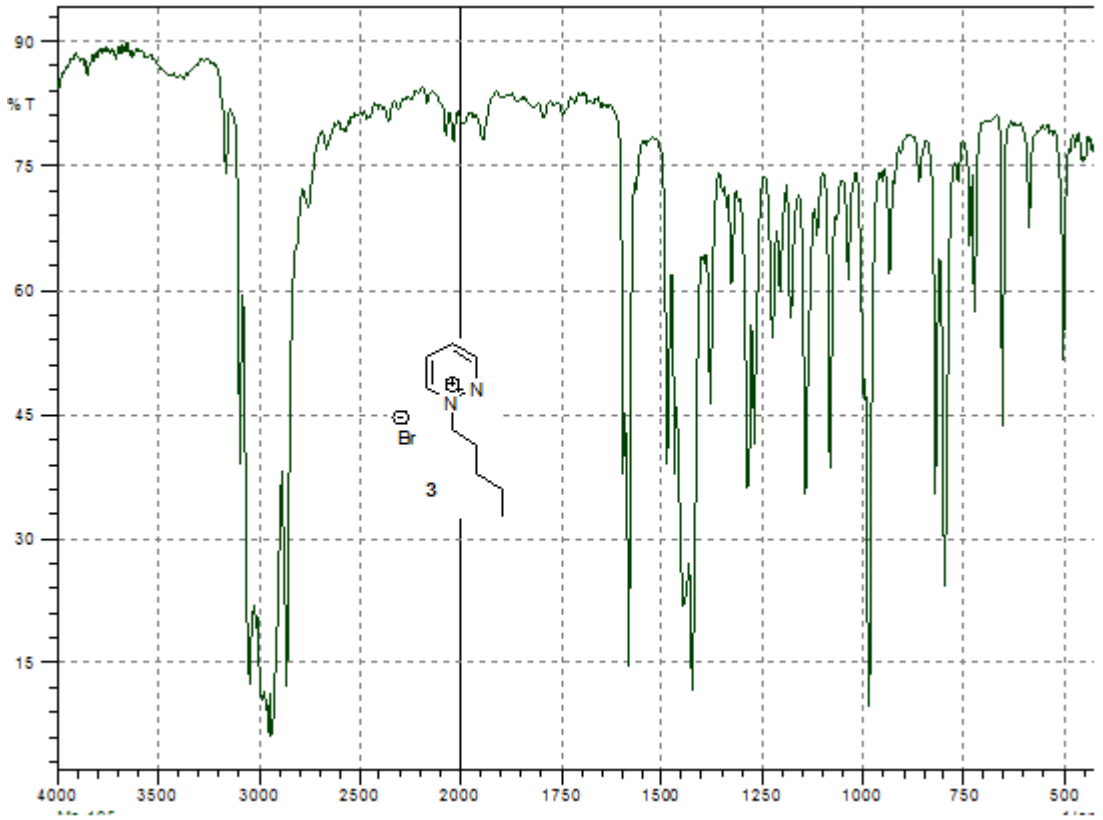
S3: ^{13}C NMR spectrum of IL 3 in DMSO (100 MHz)



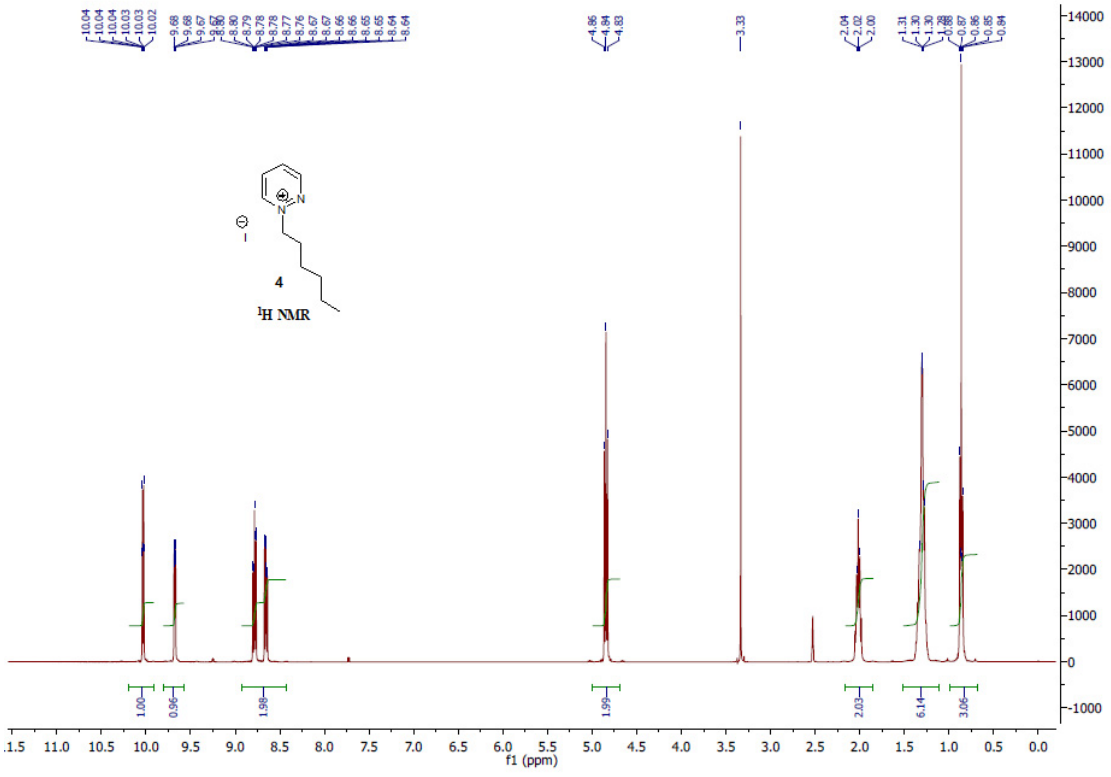
S3: DEPT- 135 NMR spectrum of IL 3 in DMSO (100 MHz)



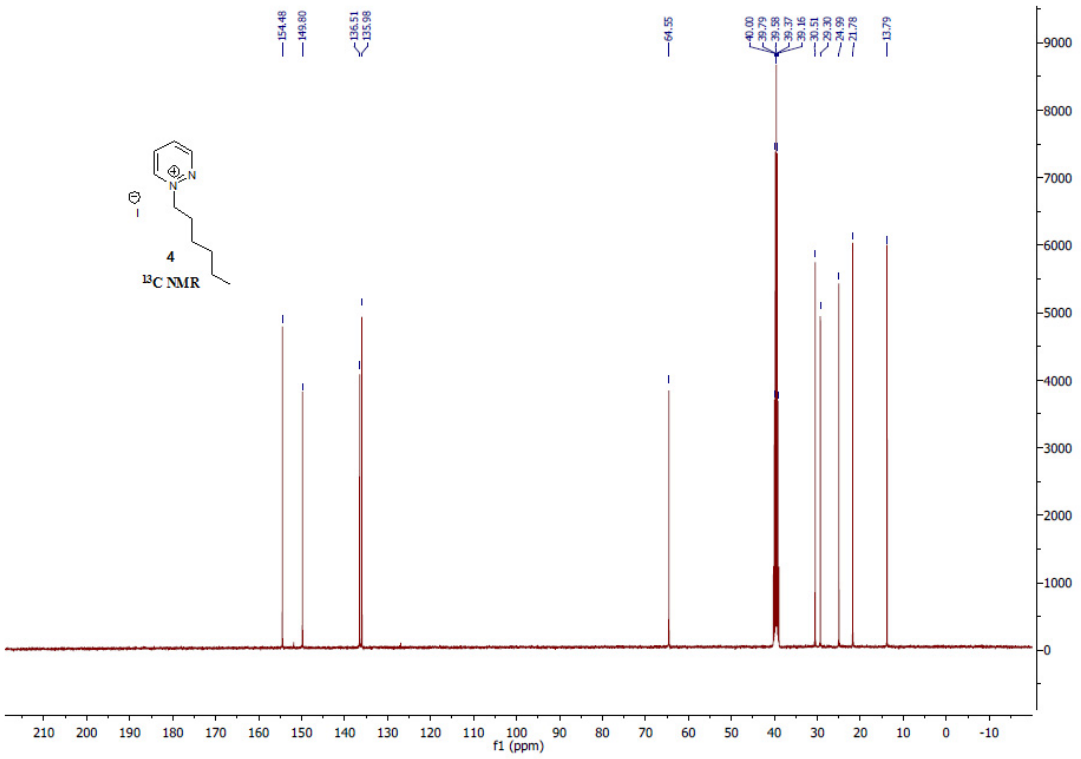
S3: (LCMS) Mass spectrum of IL 3



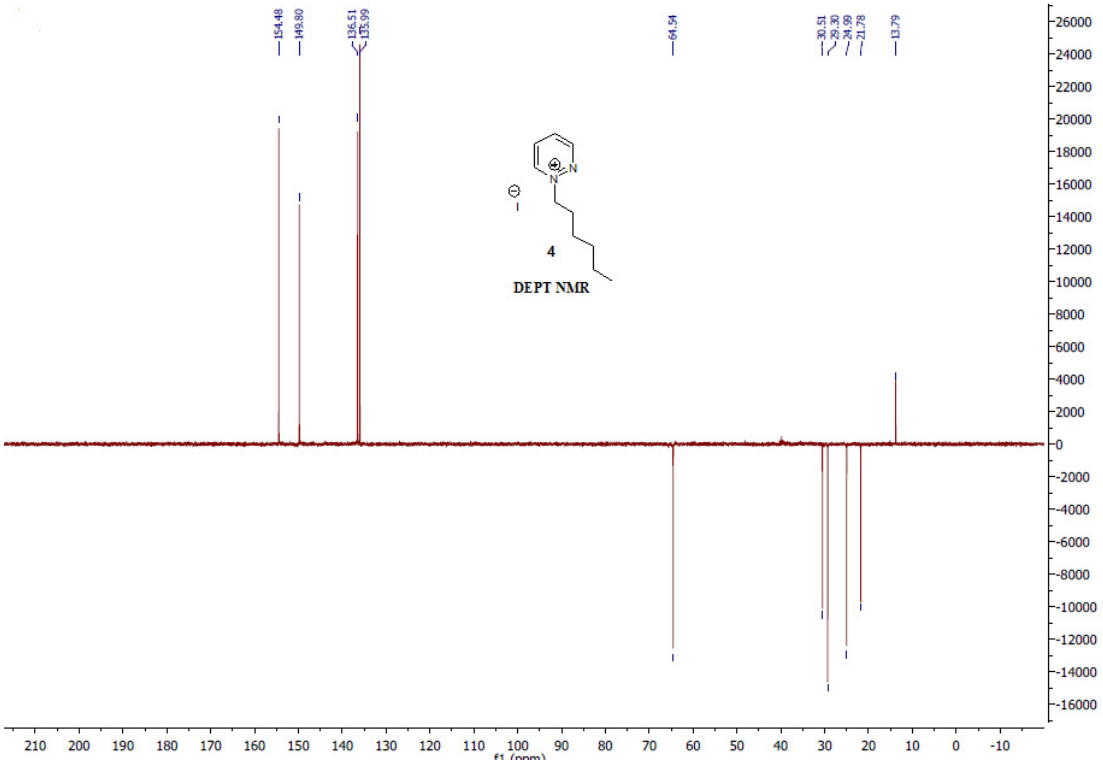
S3: IR spectrum of IL 3



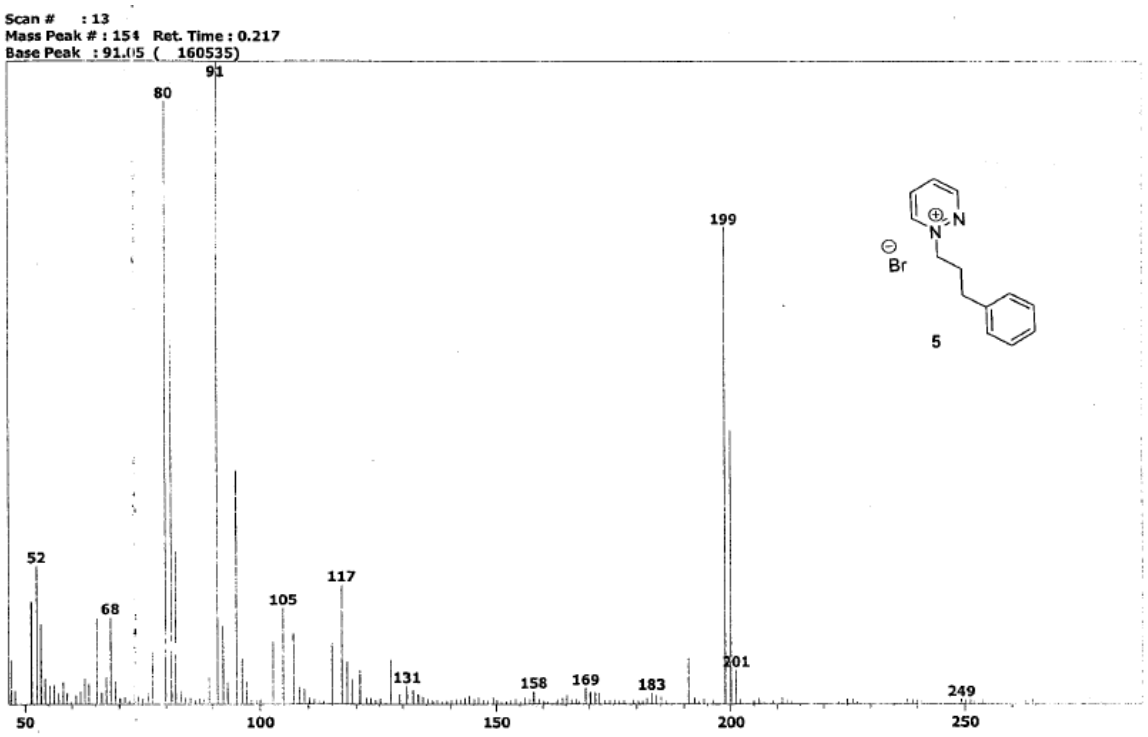
S4: ^{1}H NMR spectrum of IL 4 in DMSO (400 MHz)



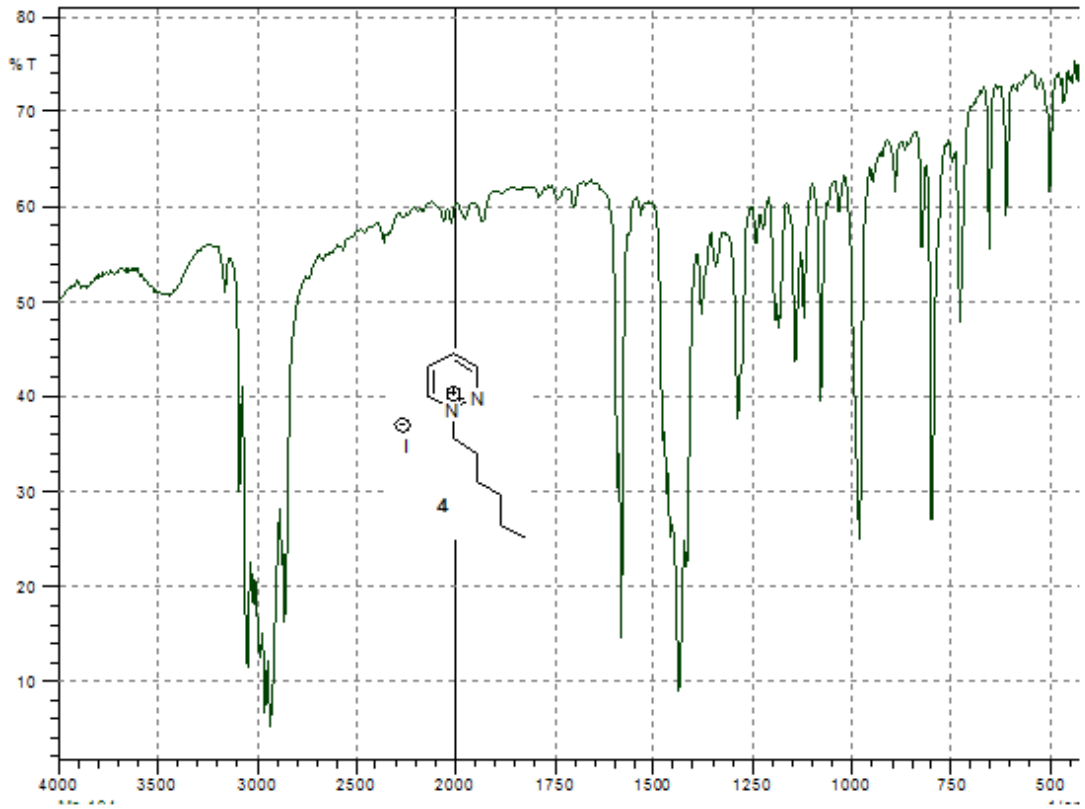
S4: ^{13}C NMR spectrum of IL 4 in DMSO (100 MHz)



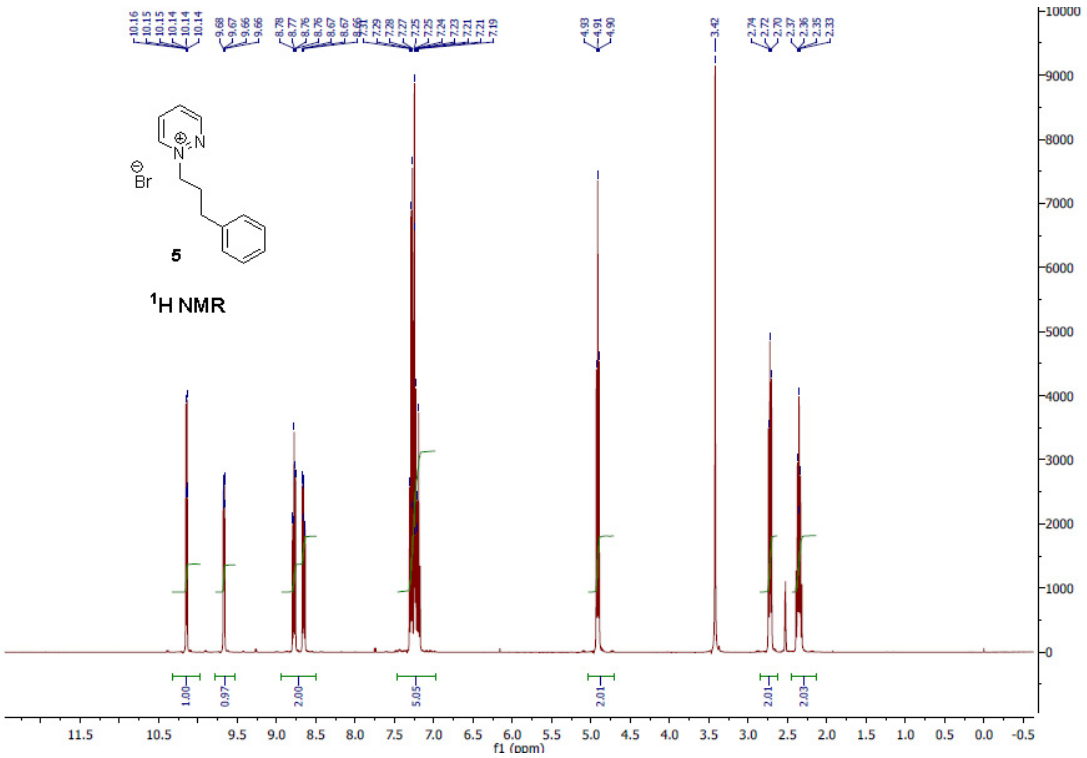
S4: DEPT- 135 NMR spectrum of IL 4 in DMSO (100 MHz)



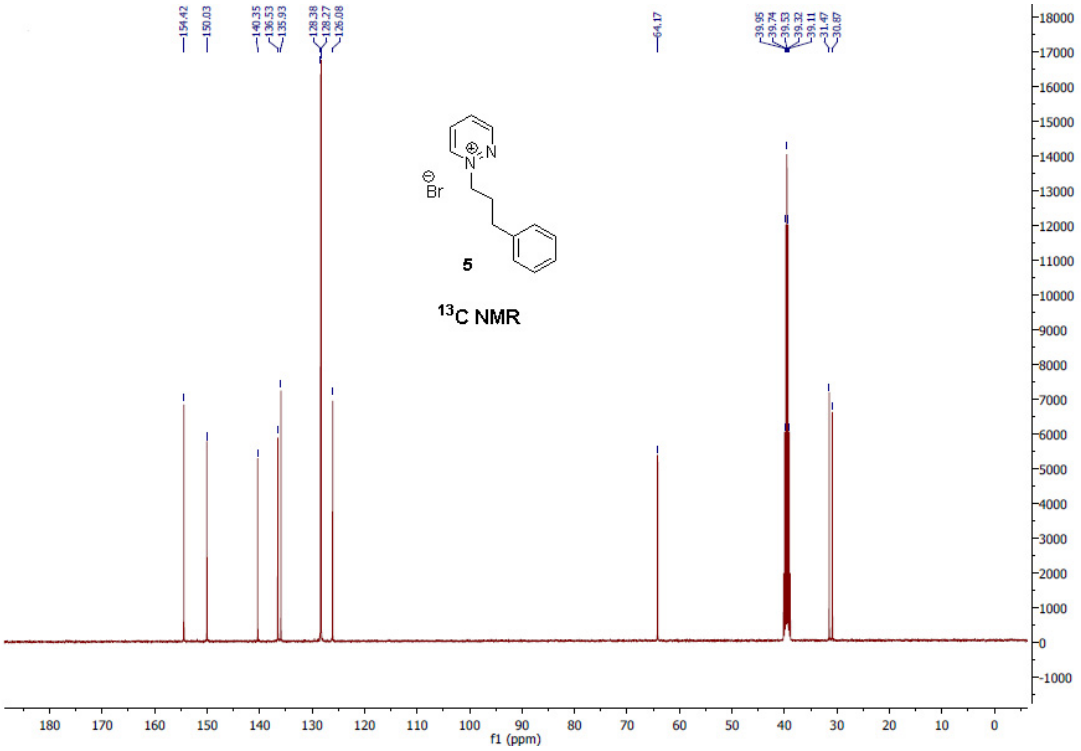
S4: (LCMS) Mass spectrum of IL 4



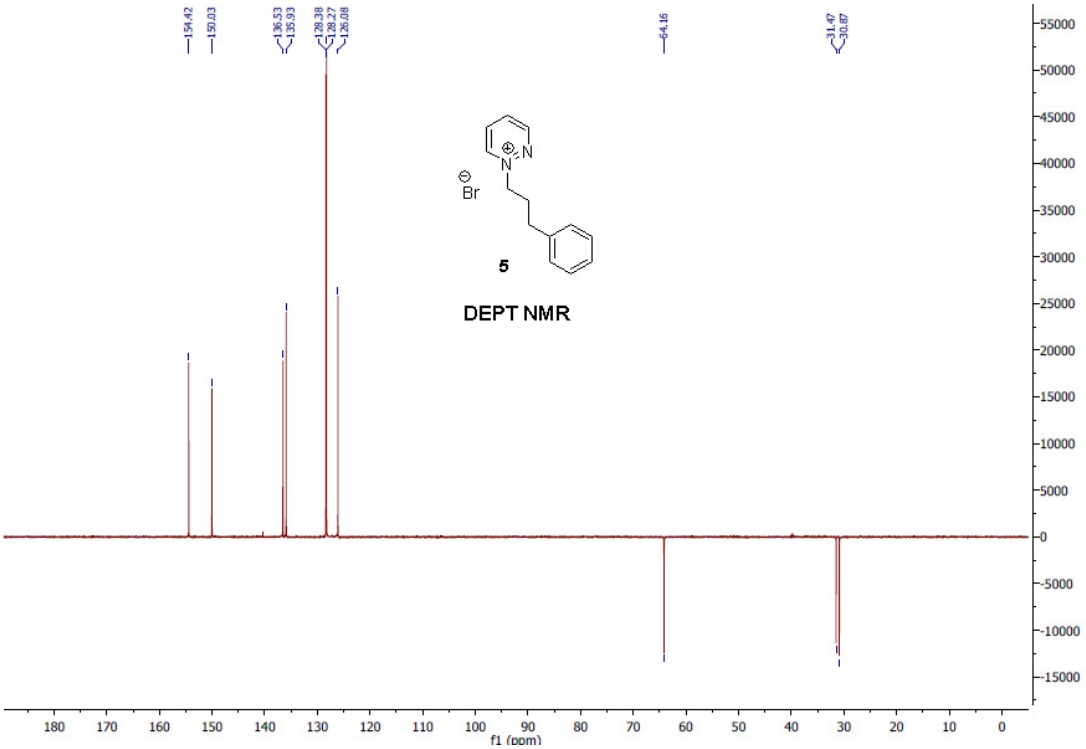
S4: IR spectrum of IL 4



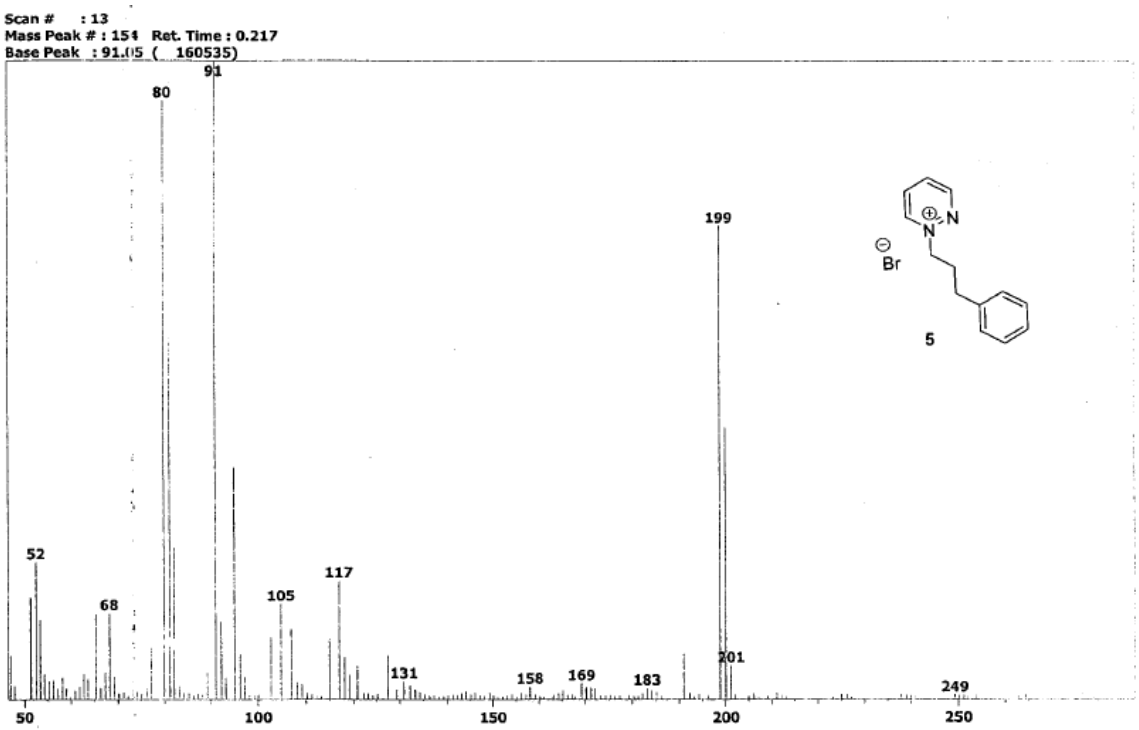
S5: ^{1}H NMR spectrum of IL 5 in DMSO (400 MHz)



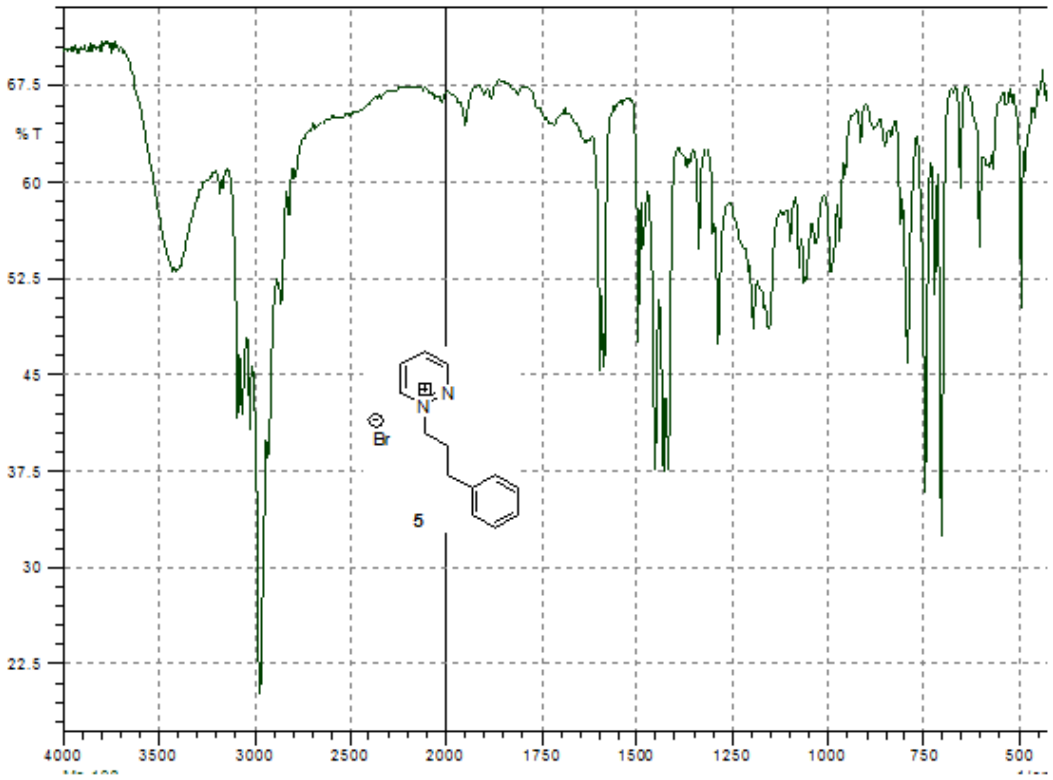
S5: ^{13}C NMR spectrum of IL 5 in DMSO (100 MHz)



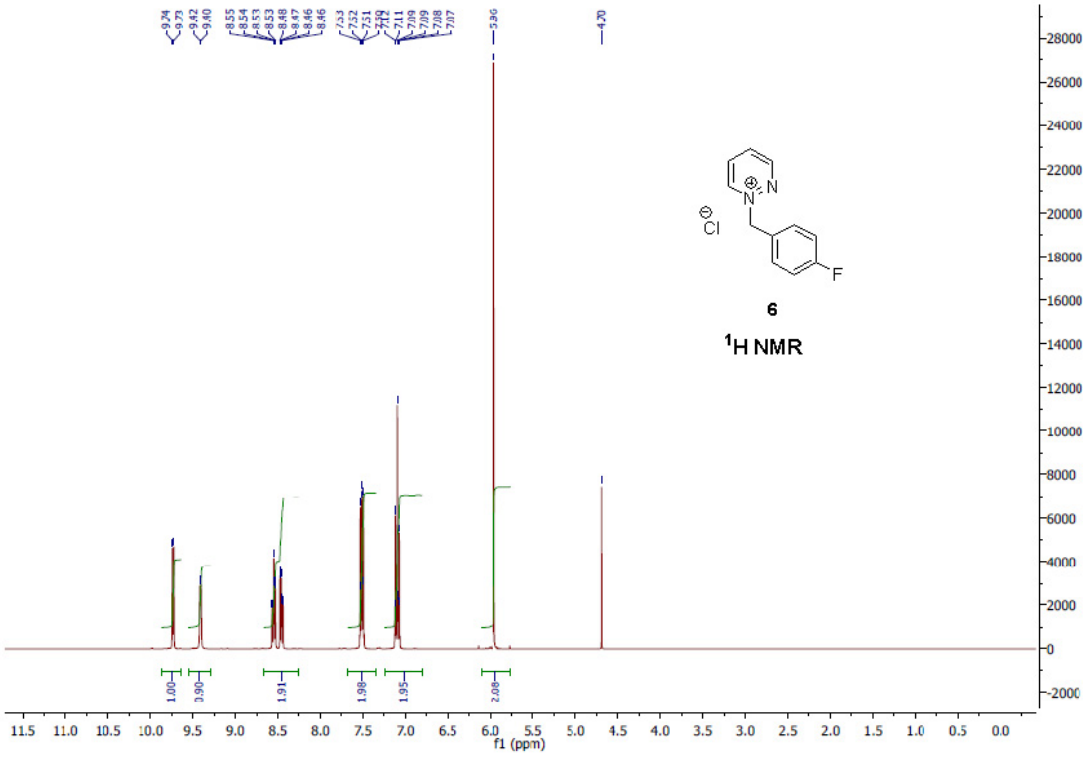
S5: DEPT- 135 NMR spectrum of IL 5 in DMSO (100 MHz)



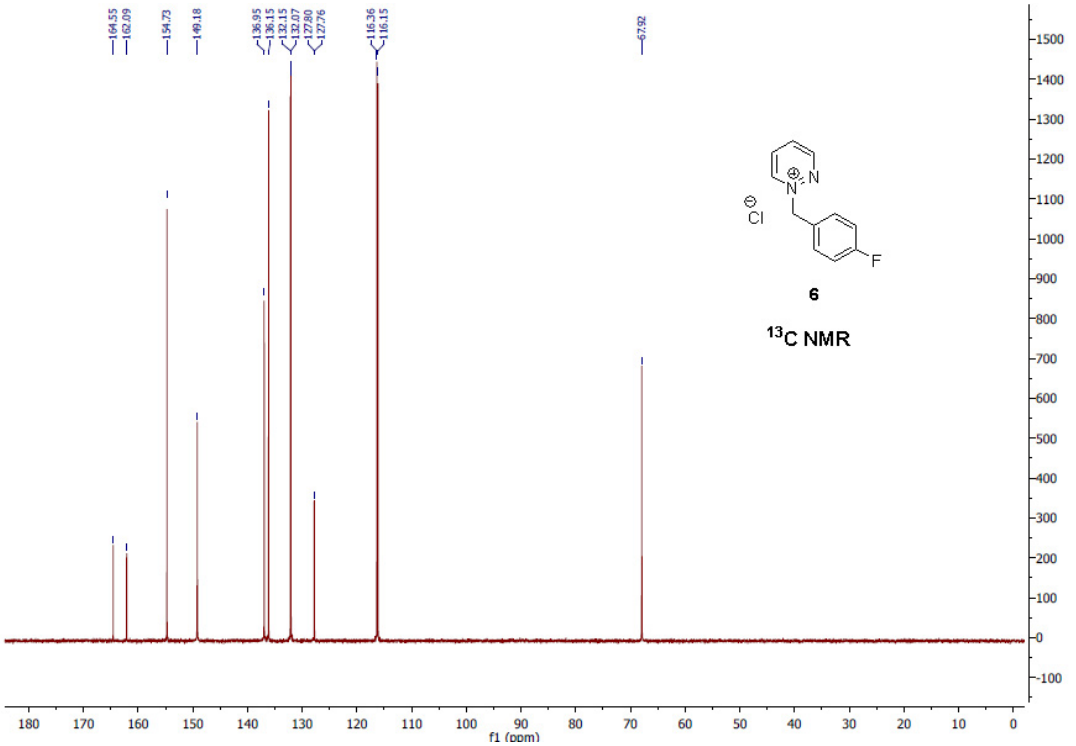
S5: (LCMS) Mass spectrum of IL 5



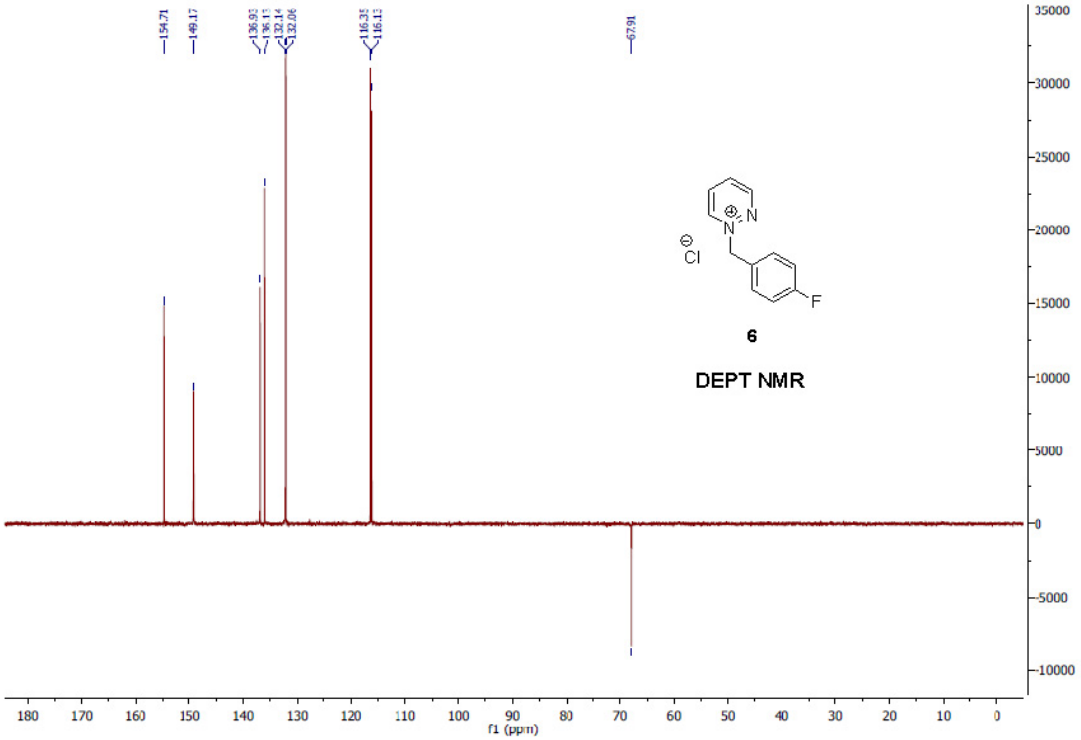
S5: IR spectrum of IL 5



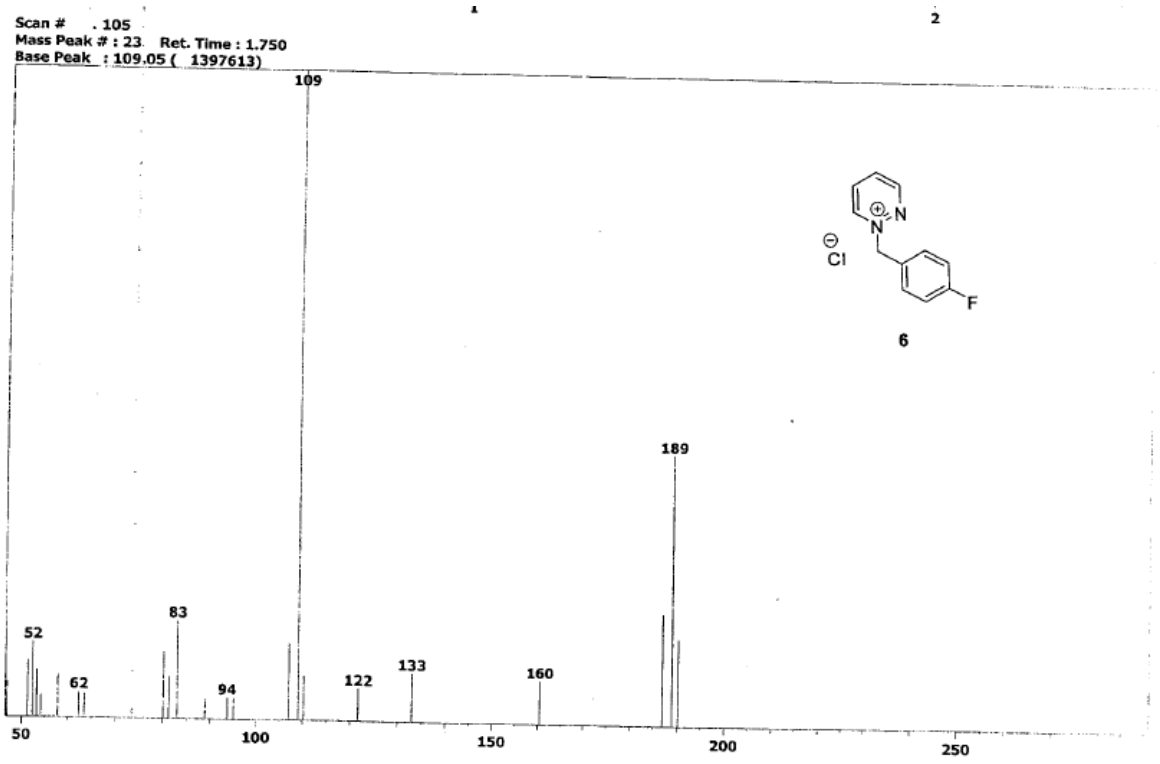
S6: ^{1}H NMR spectrum of IL 6 in D_2O (400 MHz)



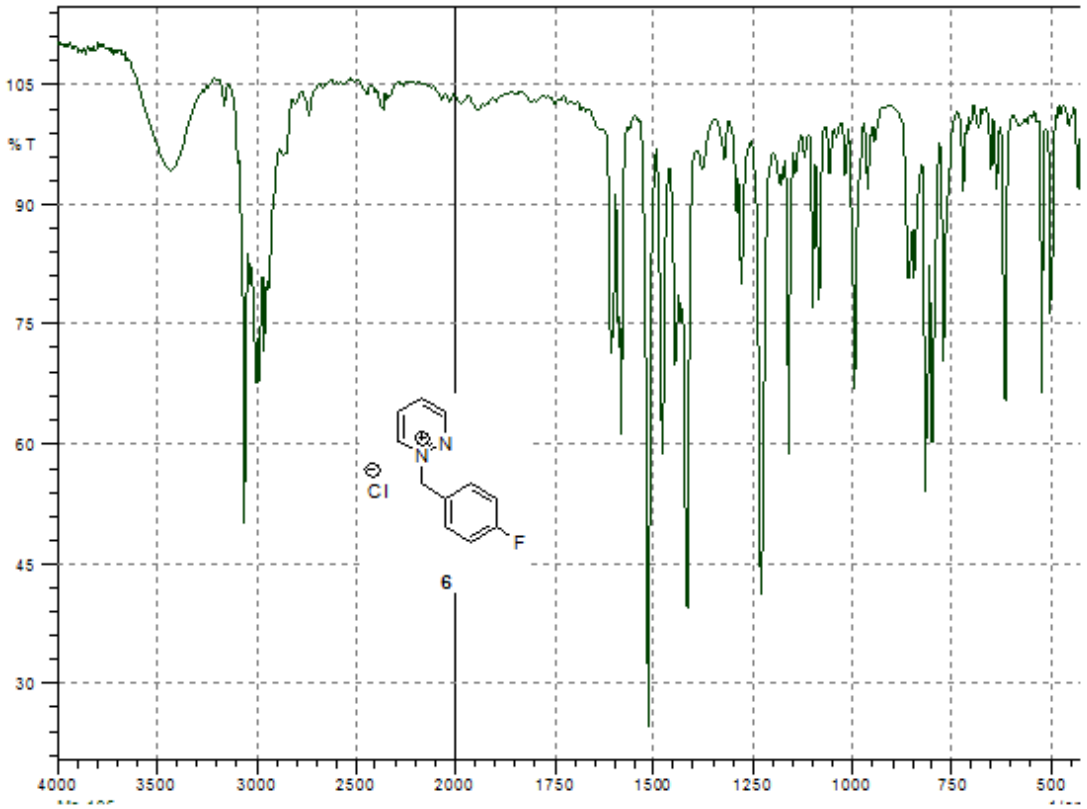
S6: ^{13}C NMR spectrum of IL 6 in D_2O (100 MHz)



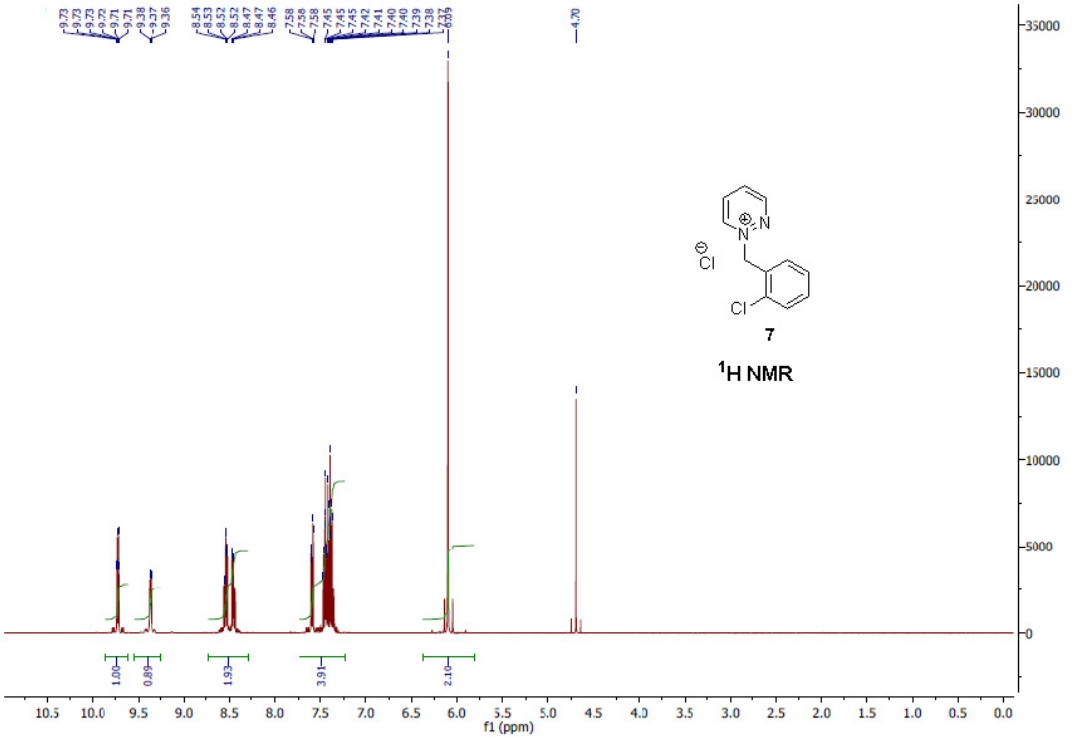
S6: DEPT- 135 NMR spectrum of IL 6 in D_2O (100 MHz)



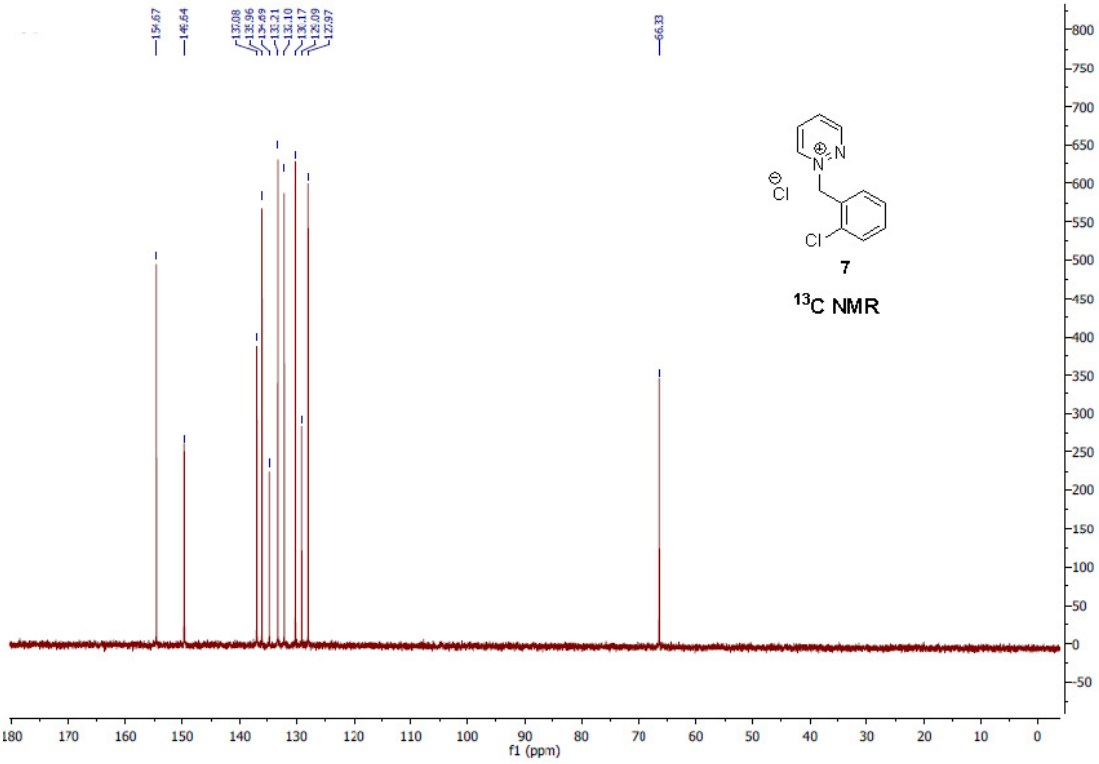
S6: (LCMS) Mass spectrum of IL 6



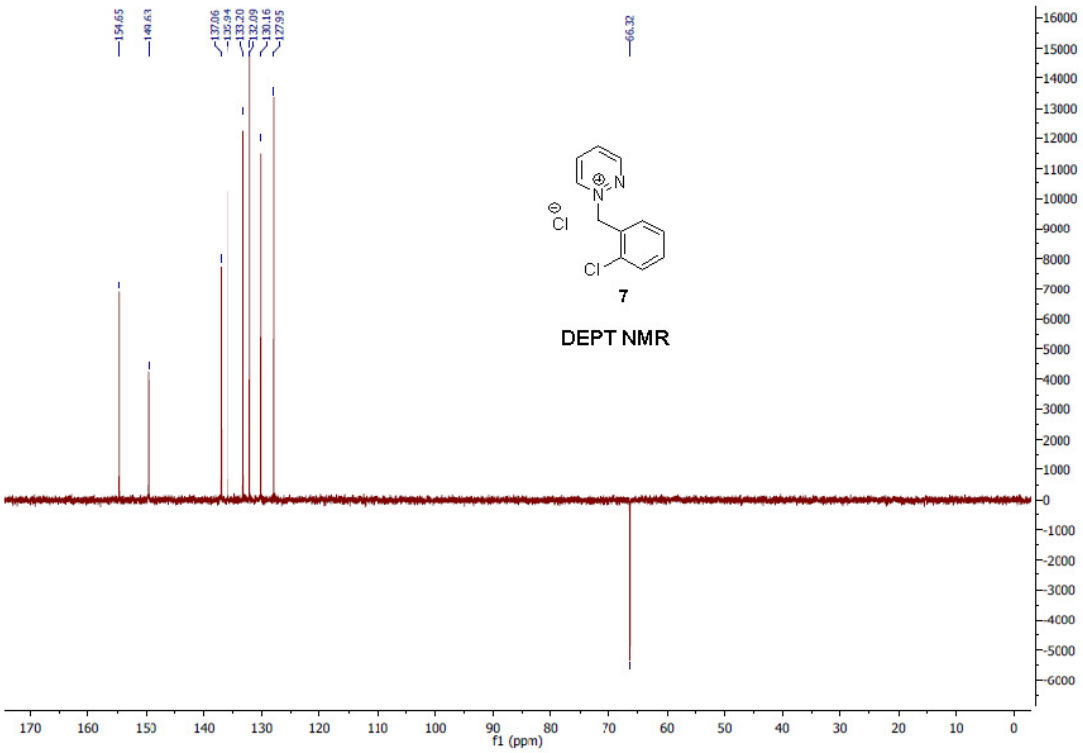
S6: IR spectrum of IL 6



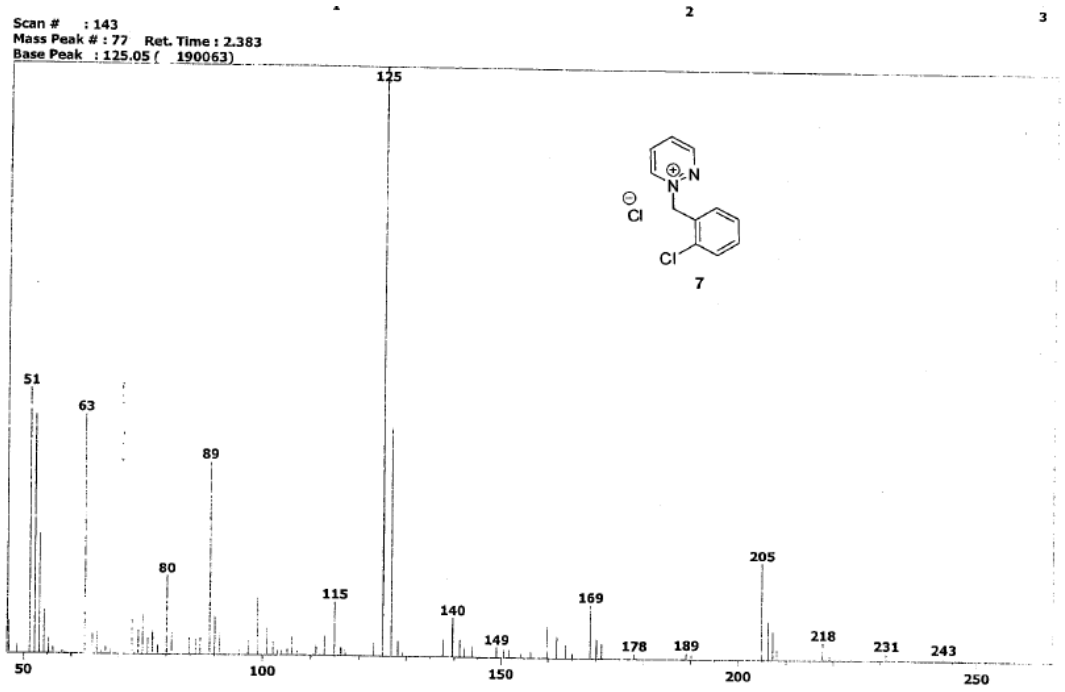
S7: ^{1}H NMR spectrum of IL 7 in D_2O (400 MHz)



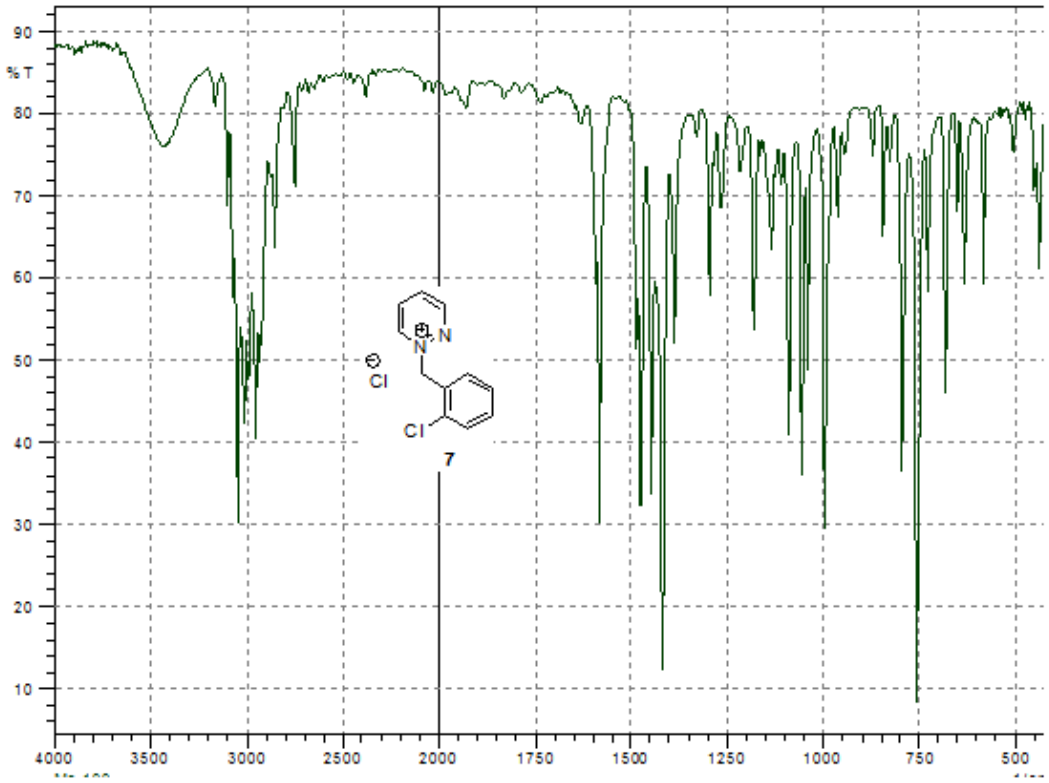
S7: ^{13}C NMR spectrum of IL 7 in D_2O (100 MHz)



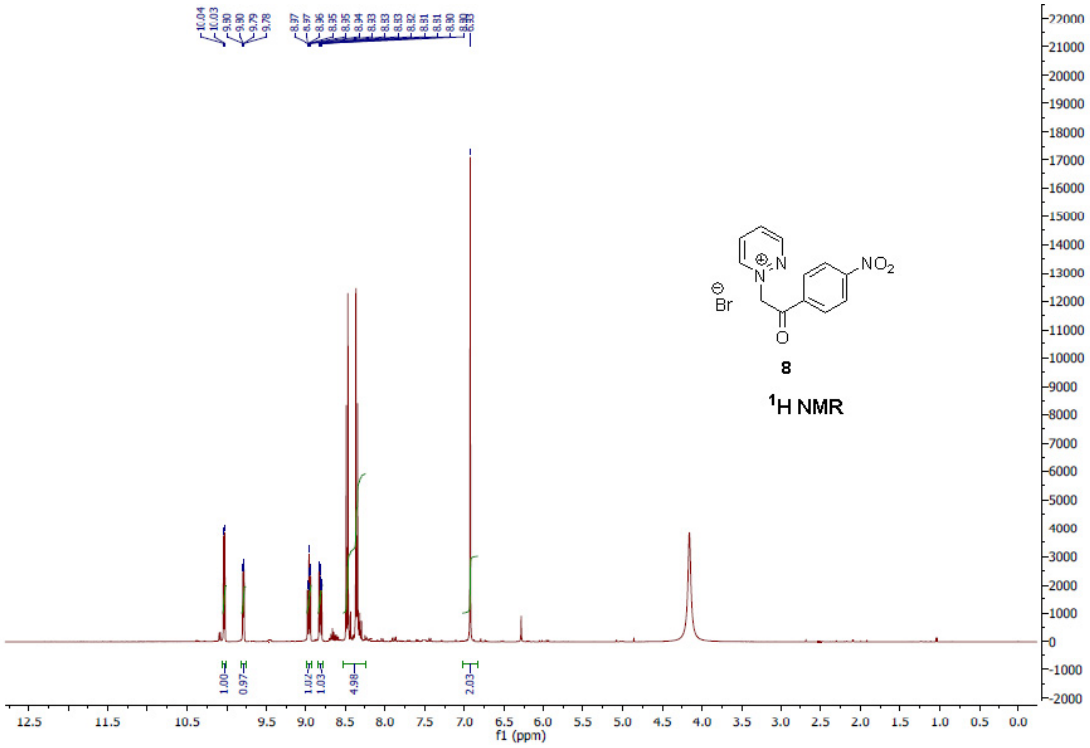
S7: DEPT- 135 NMR spectrum of IL 7 in D_2O (100 MHz)



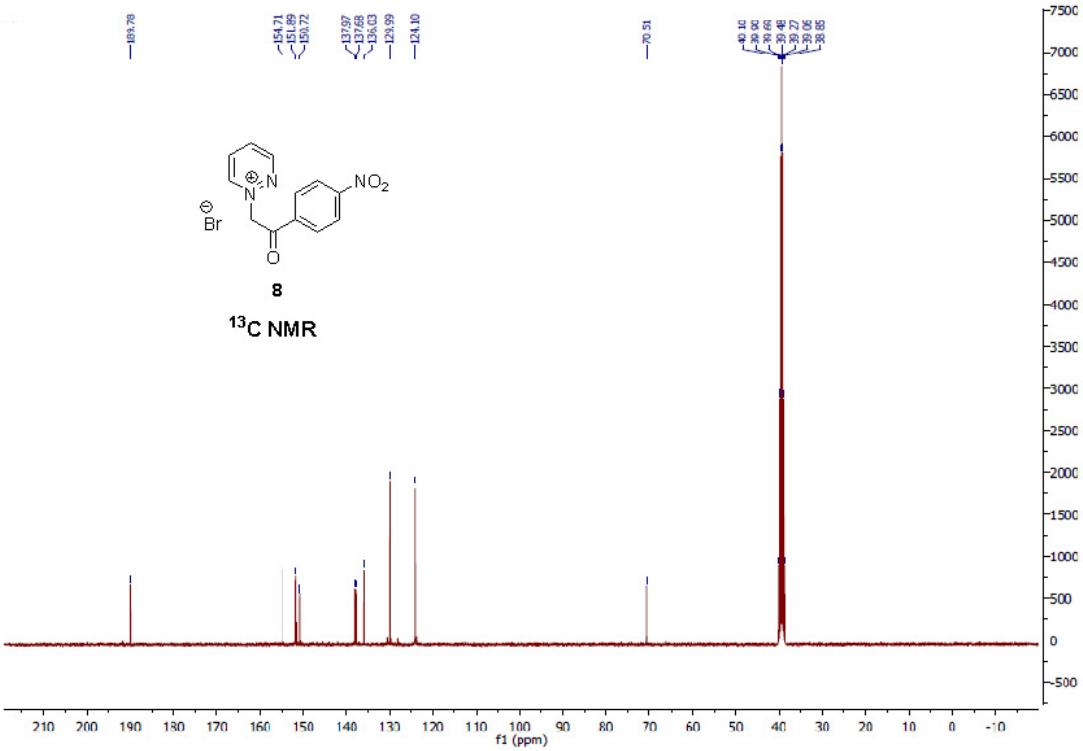
S7: (LCMS) Mass spectrum of IL 7



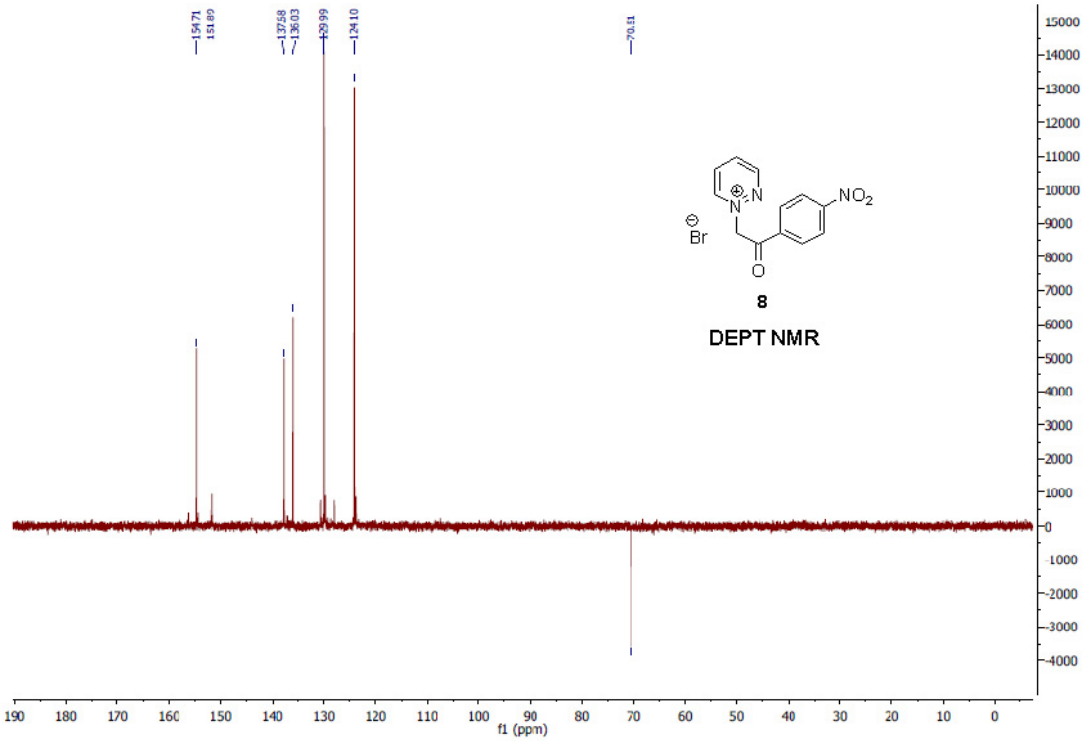
S7: IR spectrum of IL 7



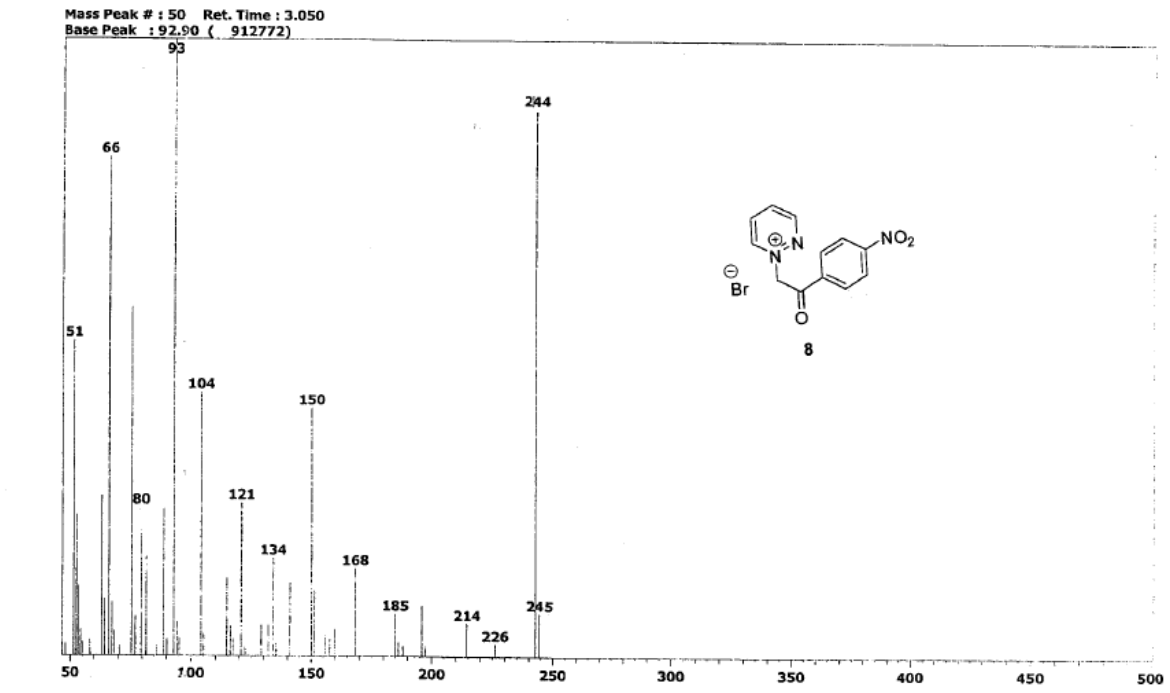
S8: ^{1}H NMR spectrum of IL 8 in DMSO (400 MHz)



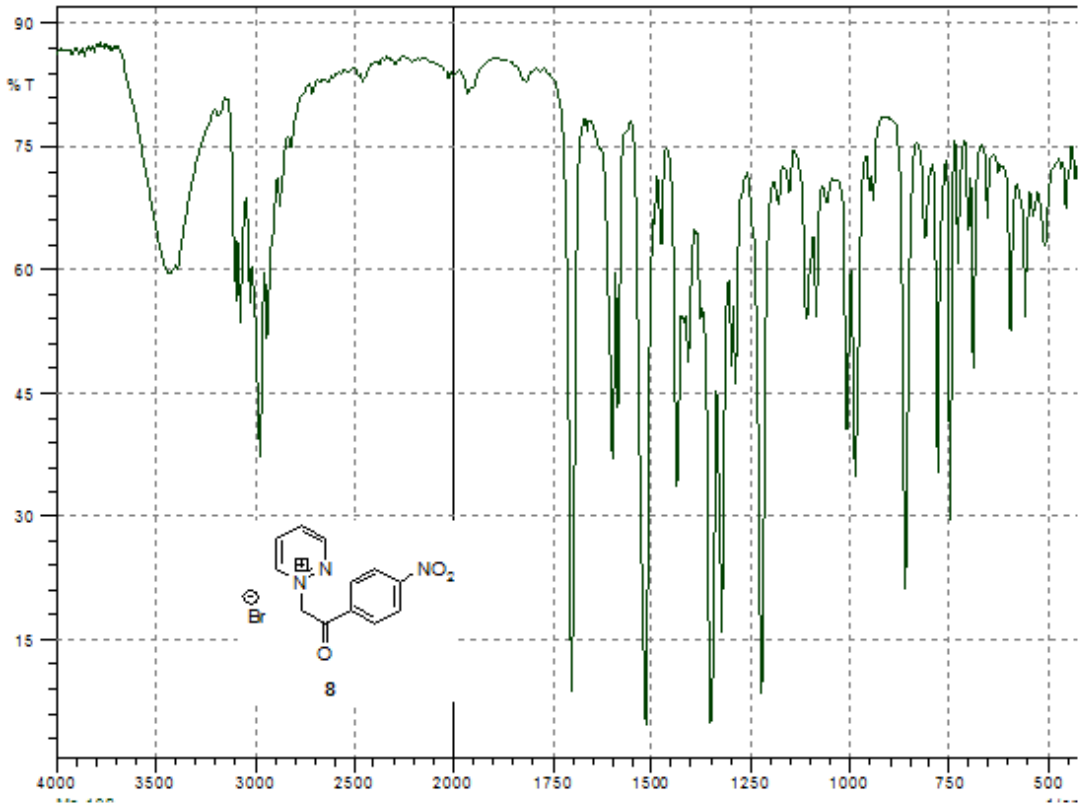
S8: ^{13}C NMR spectrum of IL 8 in DMSO (100 MHz)



S8: DEPT- 135 NMR spectrum of IL 8 in DMSO (100 MHz)



S8: (LCMS) Mass spectrum of IL 8



S8: IR spectrum of IL 8