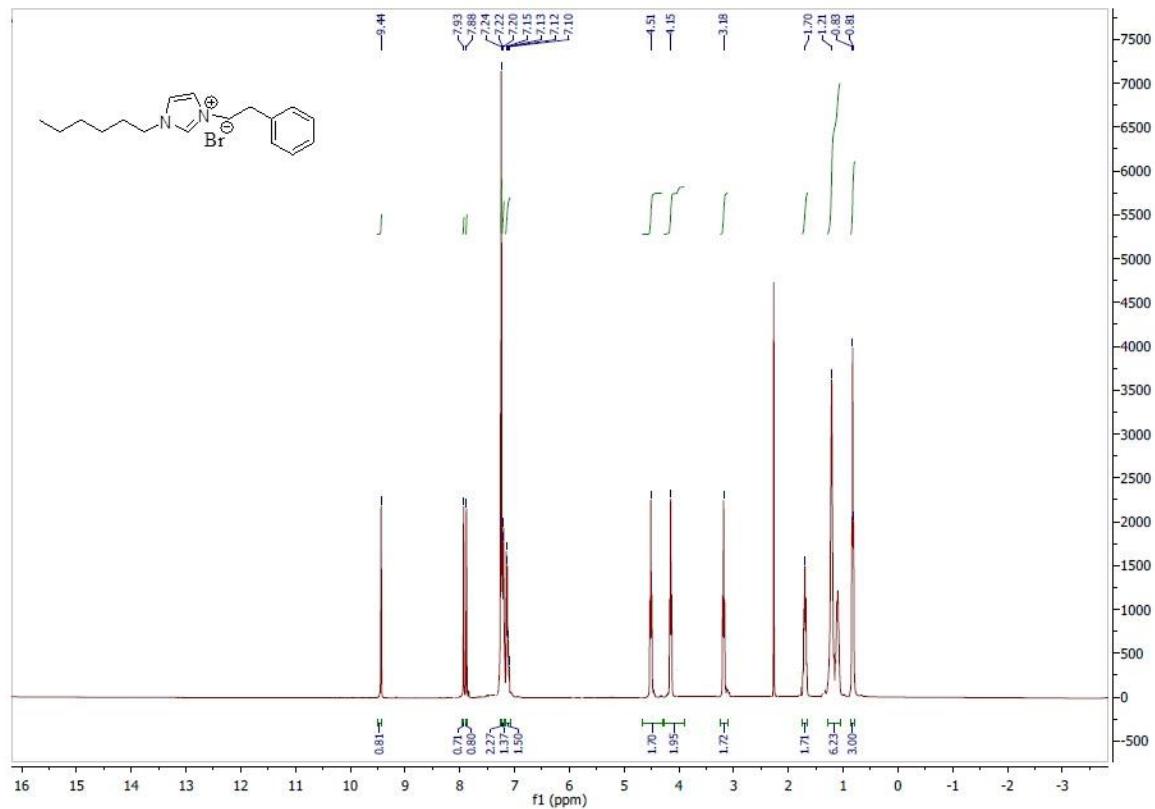


## Supporting Information

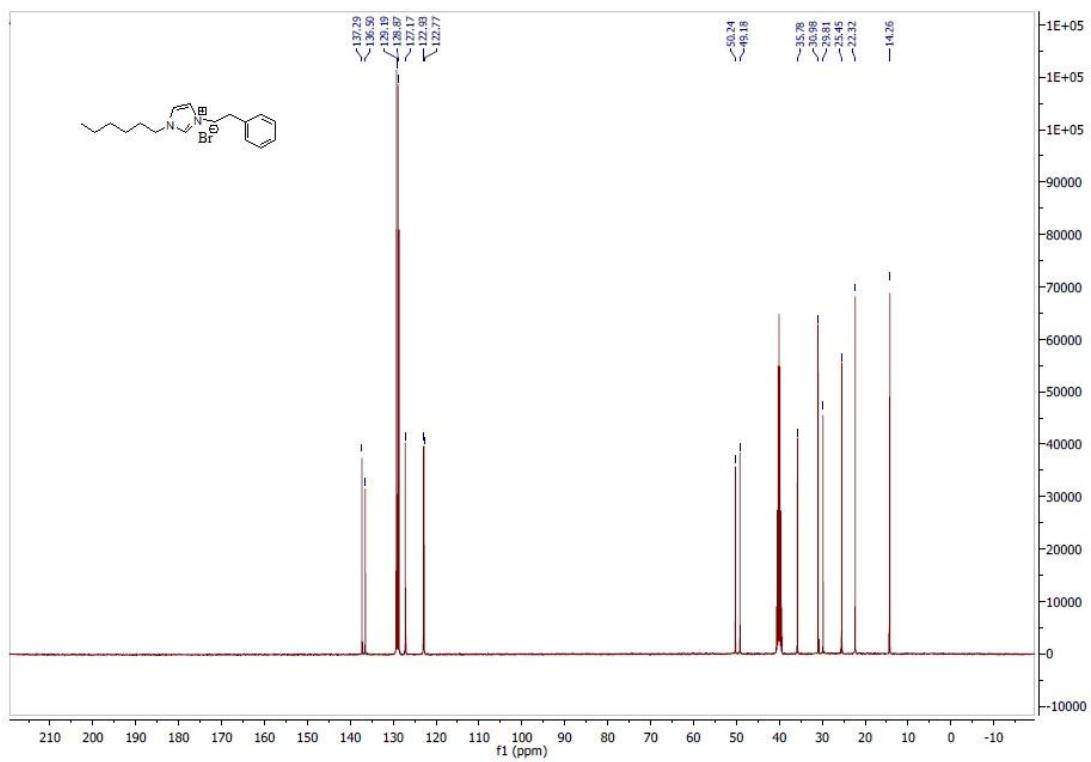
# Microwave-Assisted Synthesis of Some Potential Bioactive Imidazolium-Based Room-Temperature Ionic Liquids

Ahmed H. Albalawi, Wael S. El-Sayed, Ateyatallah Aljuhani, Saud M. Almutairi, Nadjet Rezki, Mohamed R. Aouad and Mouslim Messali\*

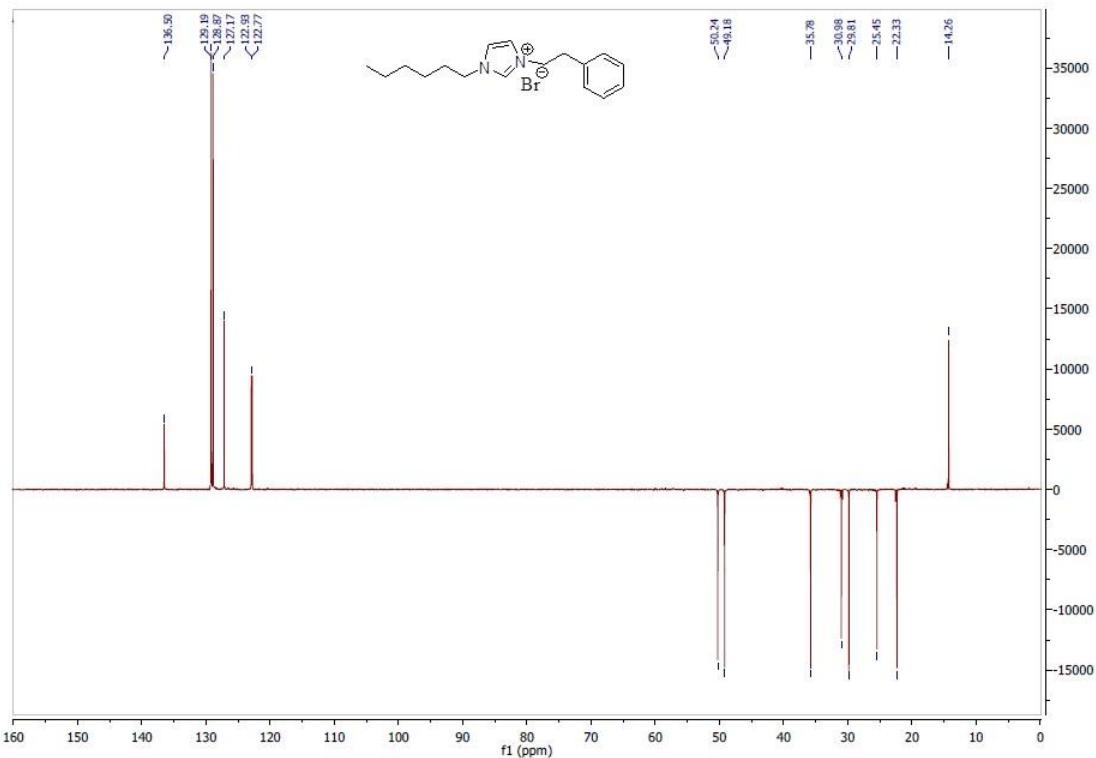
\*E-mail: [mouslim@mail.be](mailto:mouslim@mail.be)



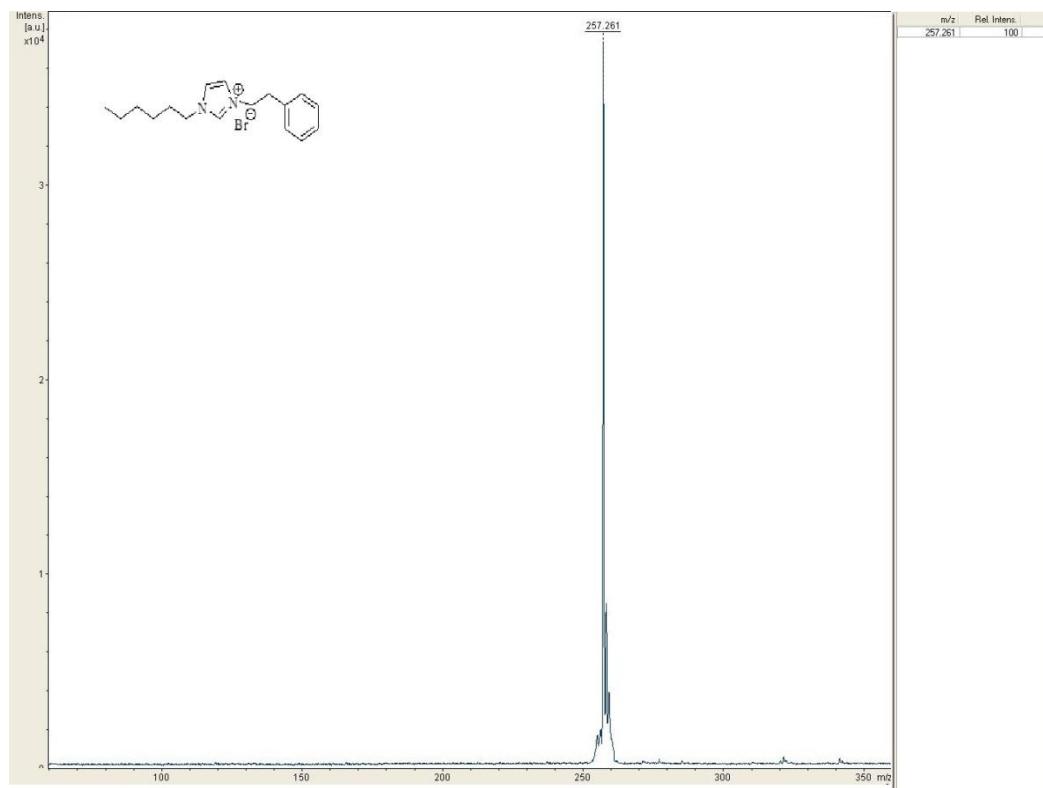
**Figure S1.** <sup>1</sup>H NMR spectrum of IL 1 in DMSO-*d*<sub>6</sub> (400 MHz)



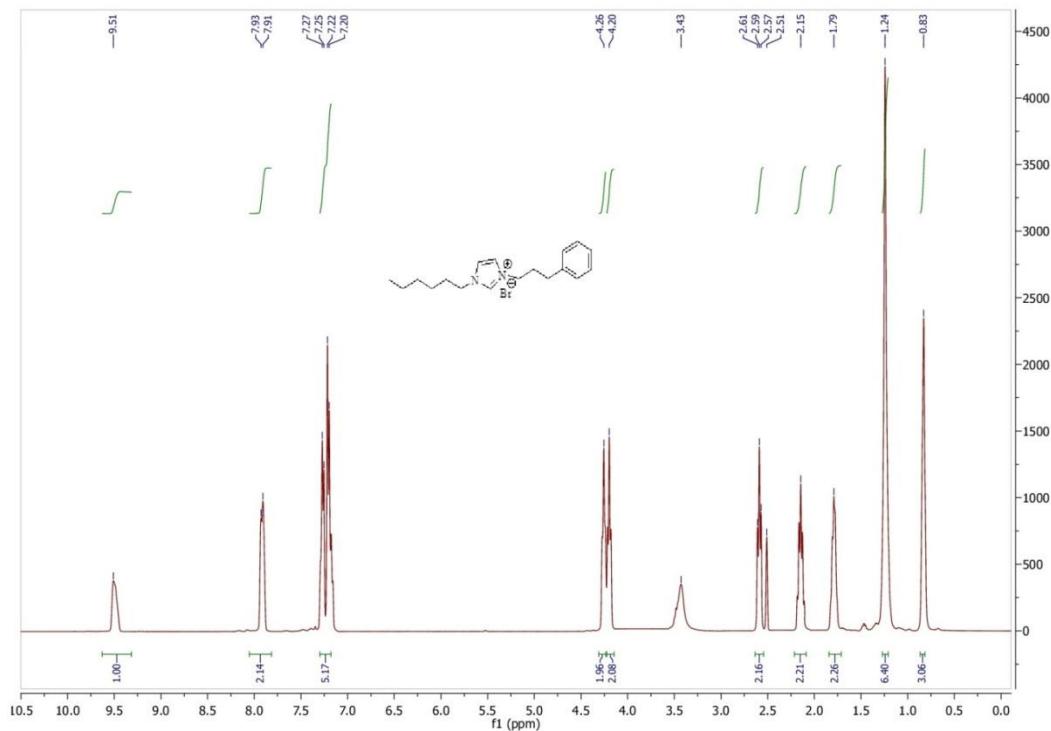
**Figure S2.**  $^{13}\text{C}$  NMR spectrum of IL **1** in  $\text{DMSO}-d_6$  (100 MHz)



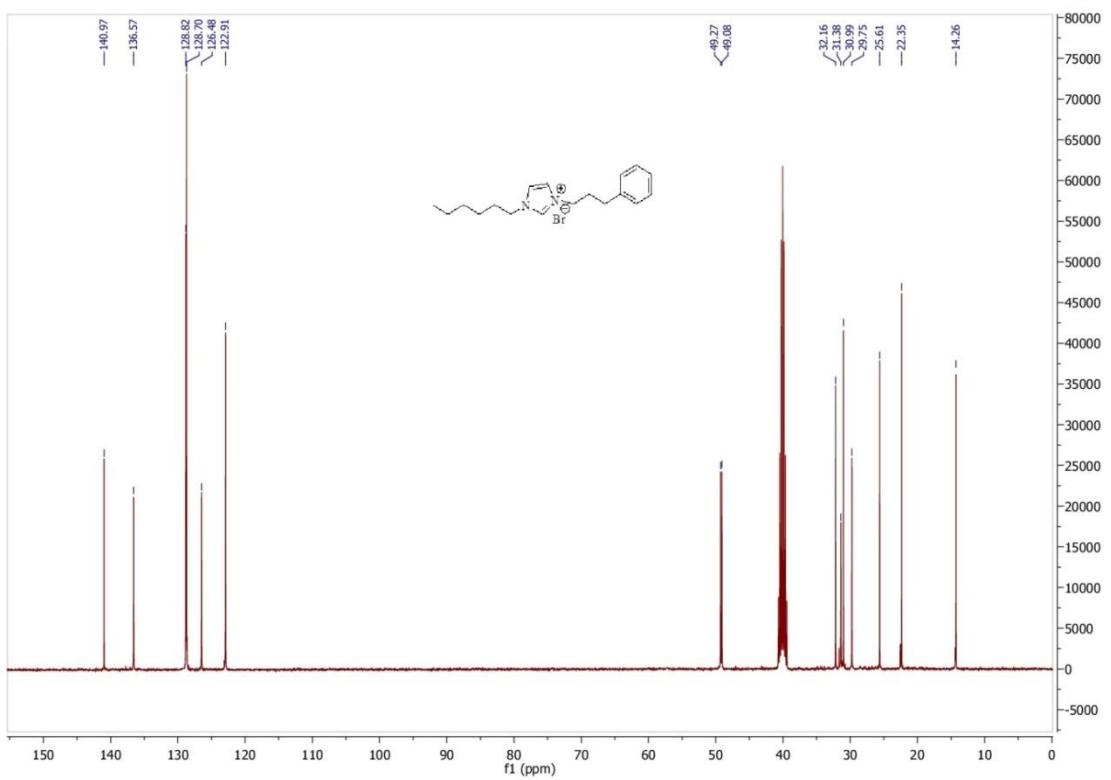
**Figure S3.**  $^{13}\text{C}$ -DEPT- NMR spectrum of IL **1** in  $\text{DMSO}-d_6$  (100 MHz)



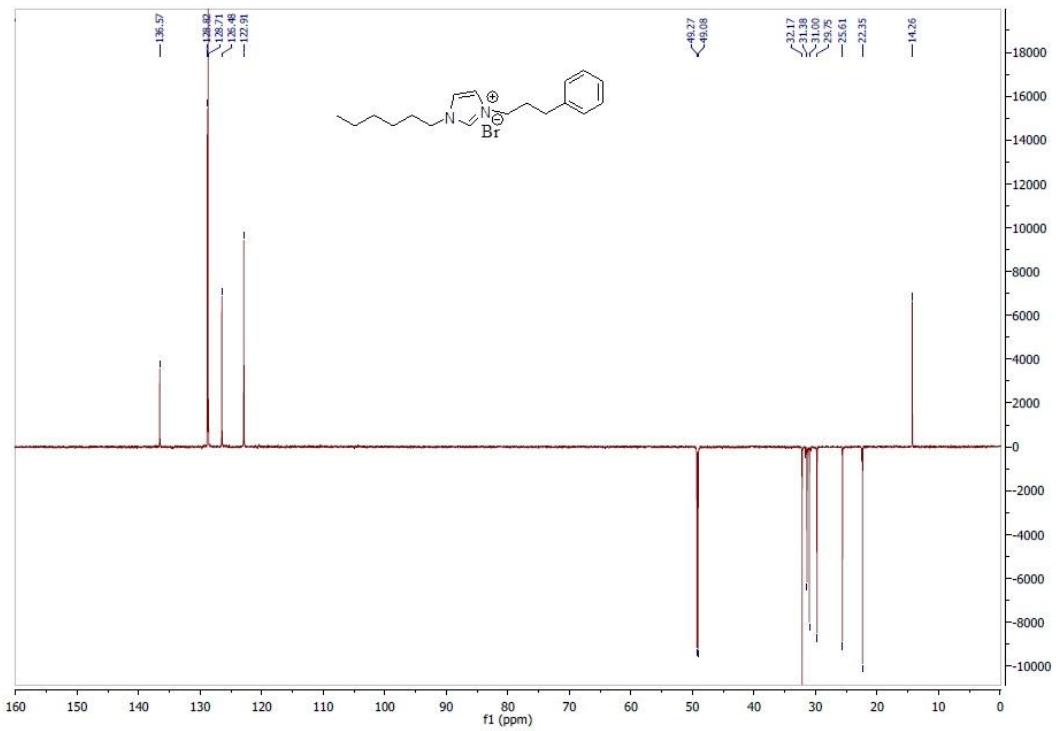
**Figure S4.** Mass spectrum of IL 1



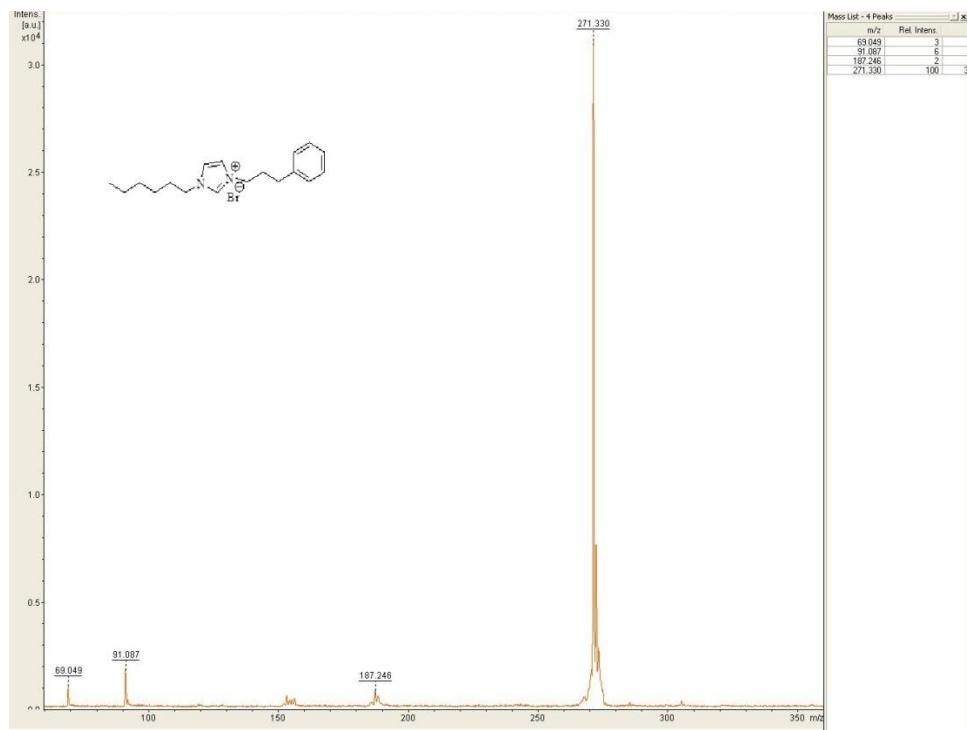
**Figure S5.**  $^1\text{H}$  NMR spectrum of IL 2 in  $\text{DMSO}-d_6$  (400 MHz)



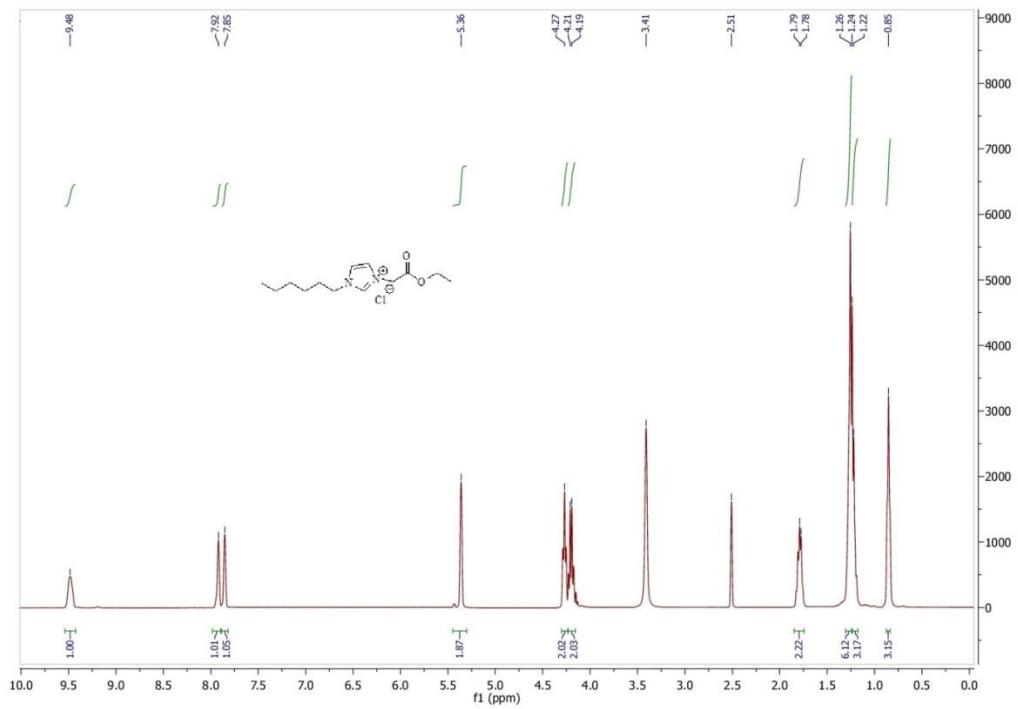
**Figure S6.**  $^{13}\text{C}$  NMR spectrum of IL **2** in  $\text{DMSO}-d_6$  (100 MHz)



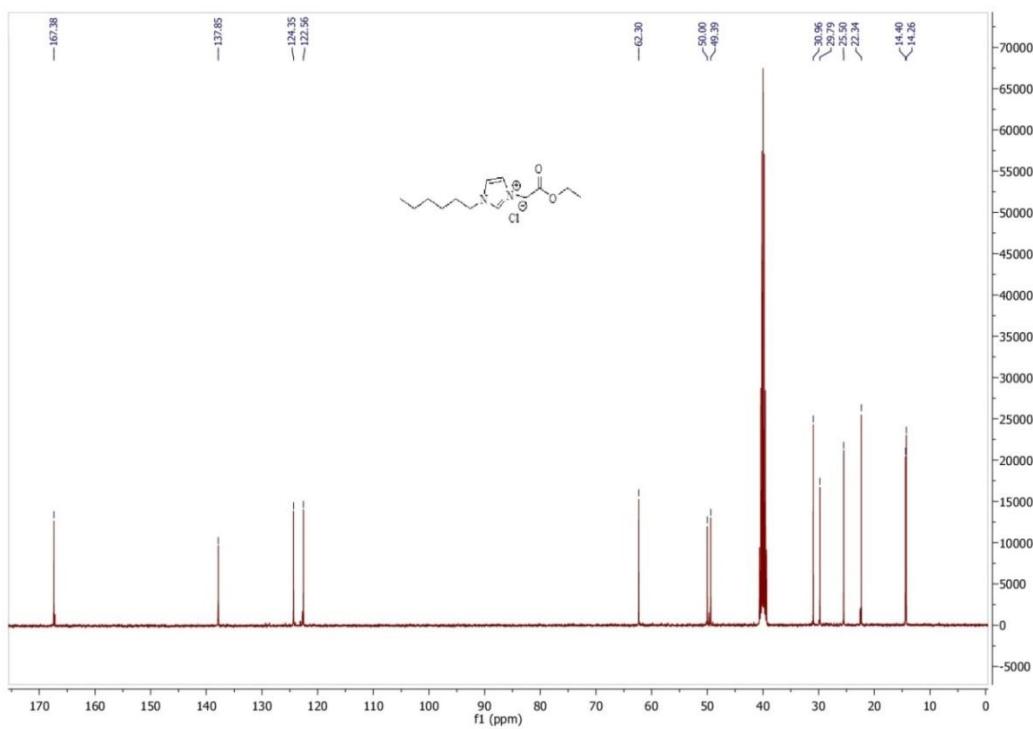
**Figure S7.**  $^{13}\text{C}$ -DEPT- NMR spectrum of IL **2** in  $\text{DMSO}-d_6$  (100 MHz)



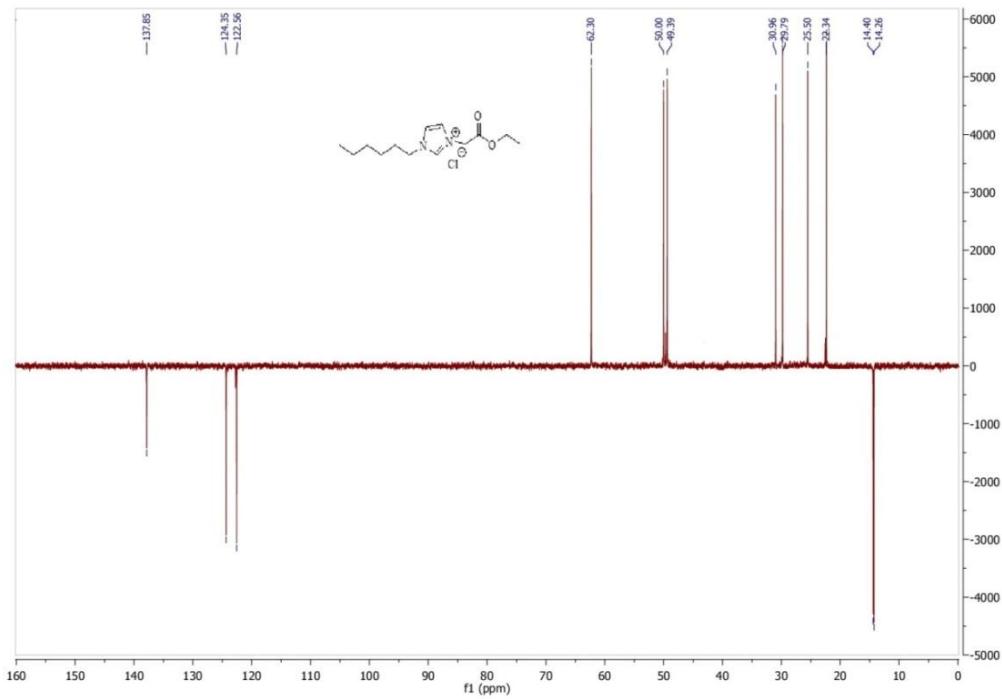
**Figure S8.** Mass spectrum of IL 2



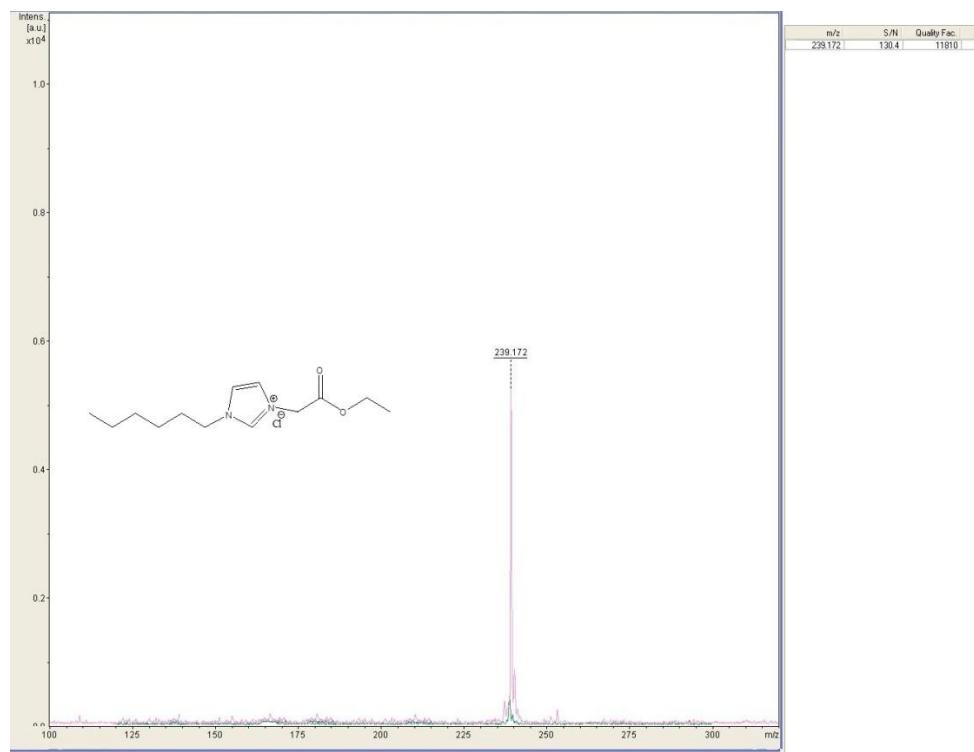
**Figure S9.** <sup>1</sup>H NMR spectrum of IL 3 in DMSO-*d*<sub>6</sub> (400 MHz)



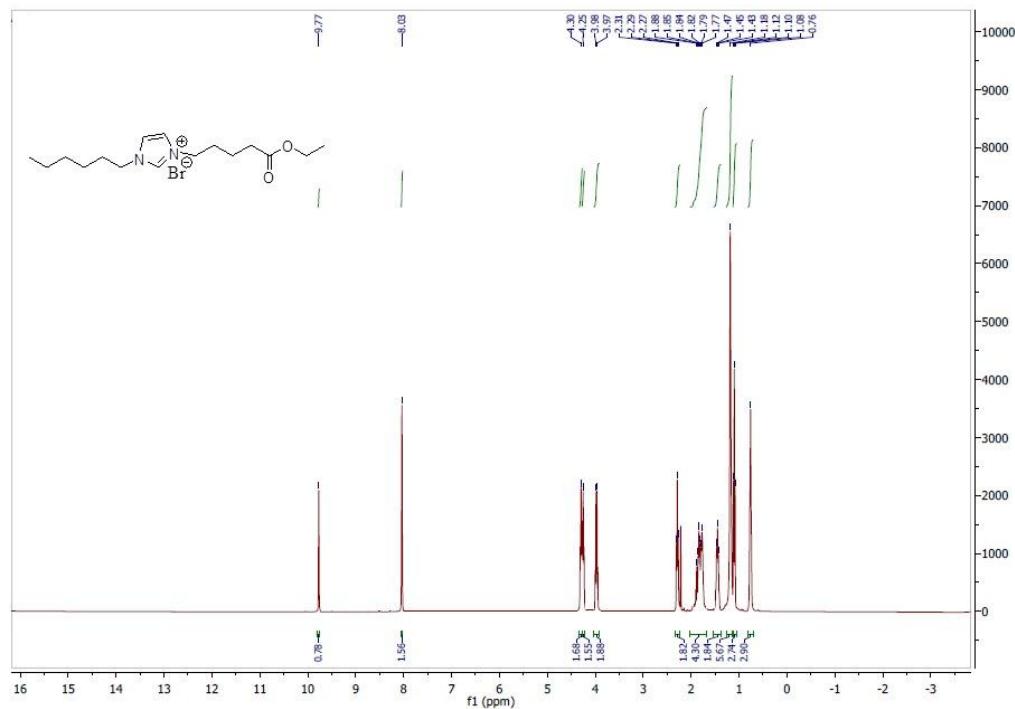
**Figure S10.**  $^{13}\text{C}$  NMR spectrum of IL **3** in  $\text{DMSO}-d_6$  (100 MHz)



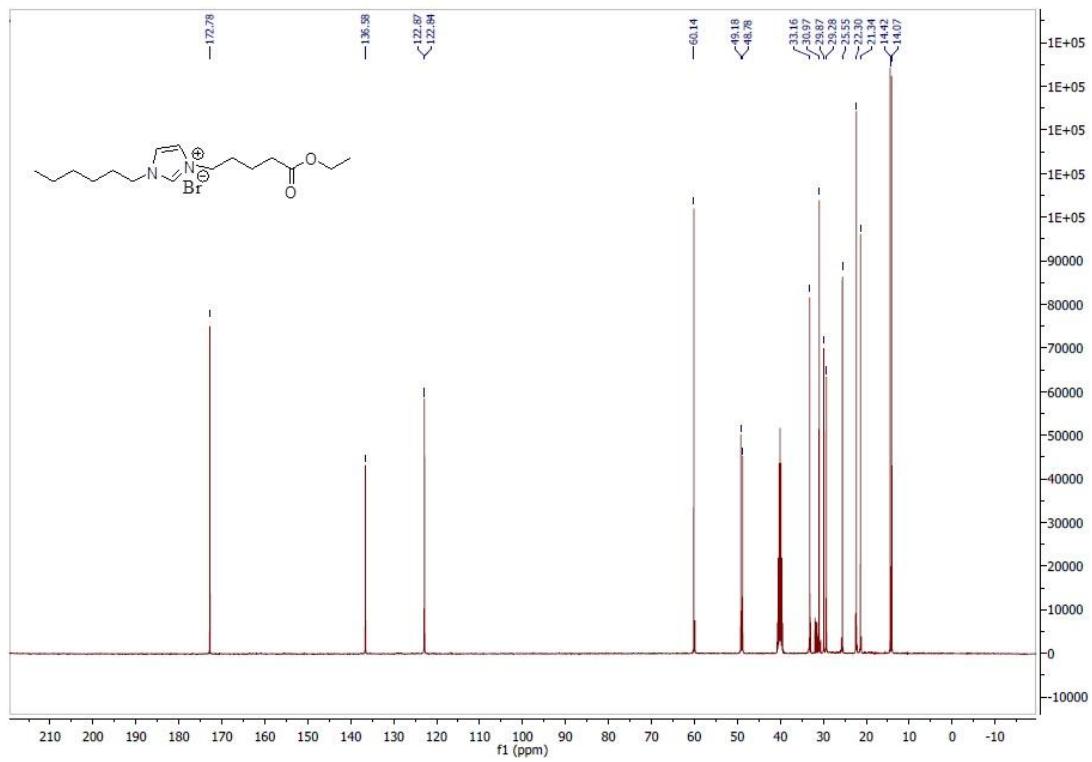
**Figure S11.**  $^{13}\text{C}$ -APT- NMR spectrum of IL **3** in  $\text{DMSO}-d_6$  (100 MHz)



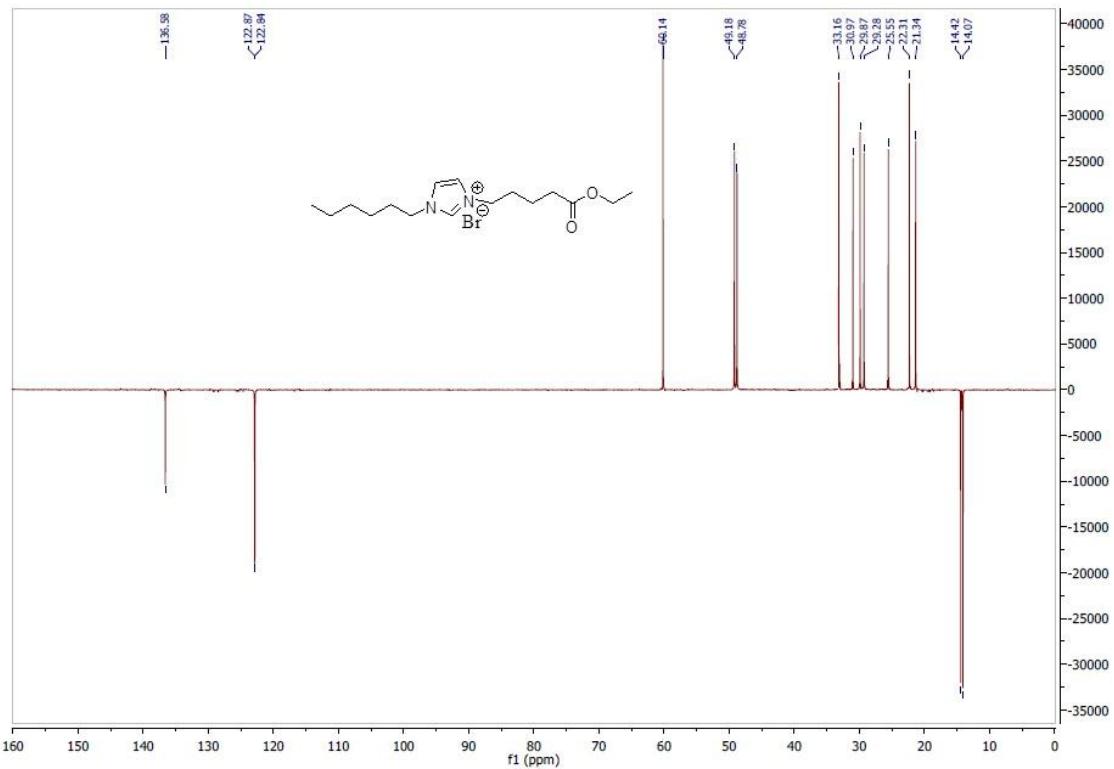
**Figure S12.** Mass spectrum of IL 3



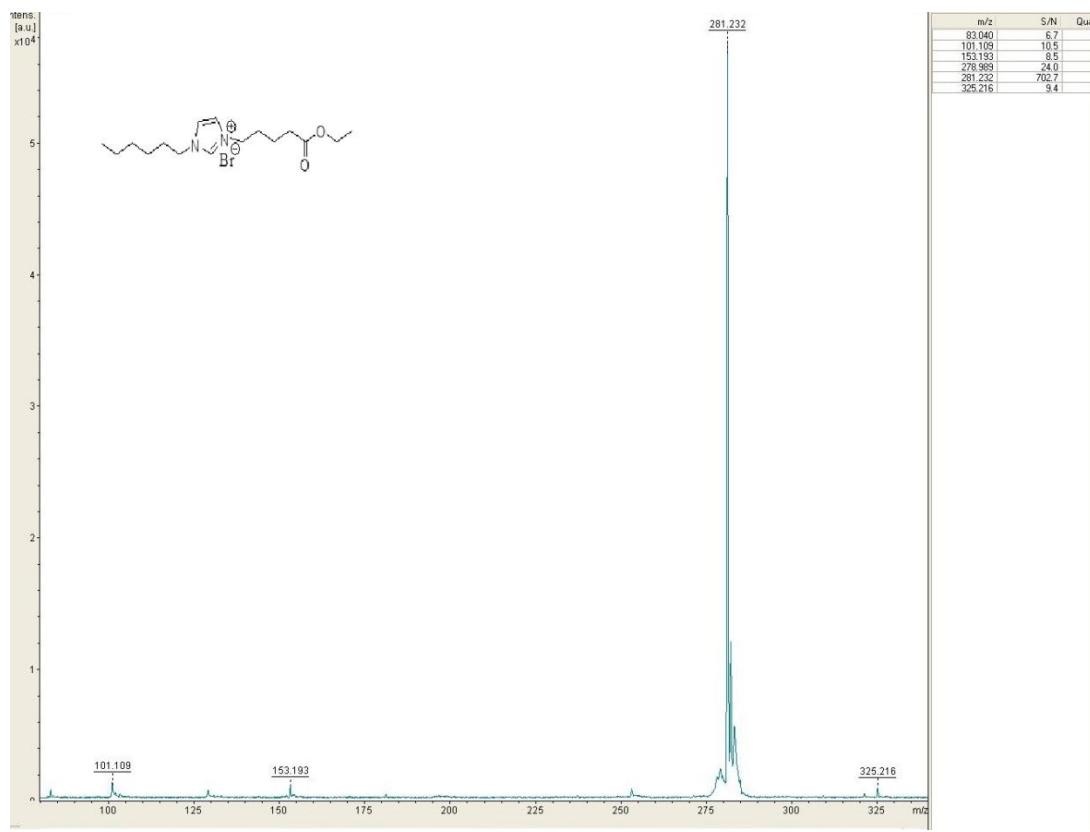
**Figure S13.** <sup>1</sup>H NMR spectrum of IL 4 in DMSO-*d*<sub>6</sub> (400 MHz)



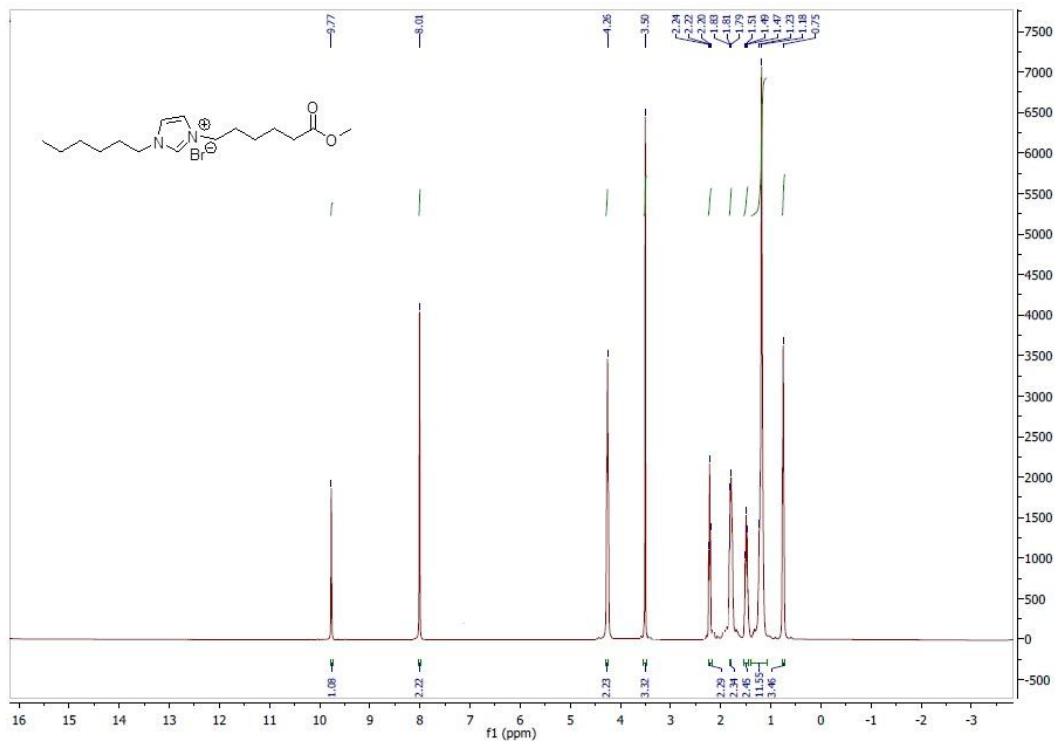
**Figure S14.**  $^{13}\text{C}$  NMR spectrum of IL **4** in  $\text{DMSO}-d_6$  (100 MHz)



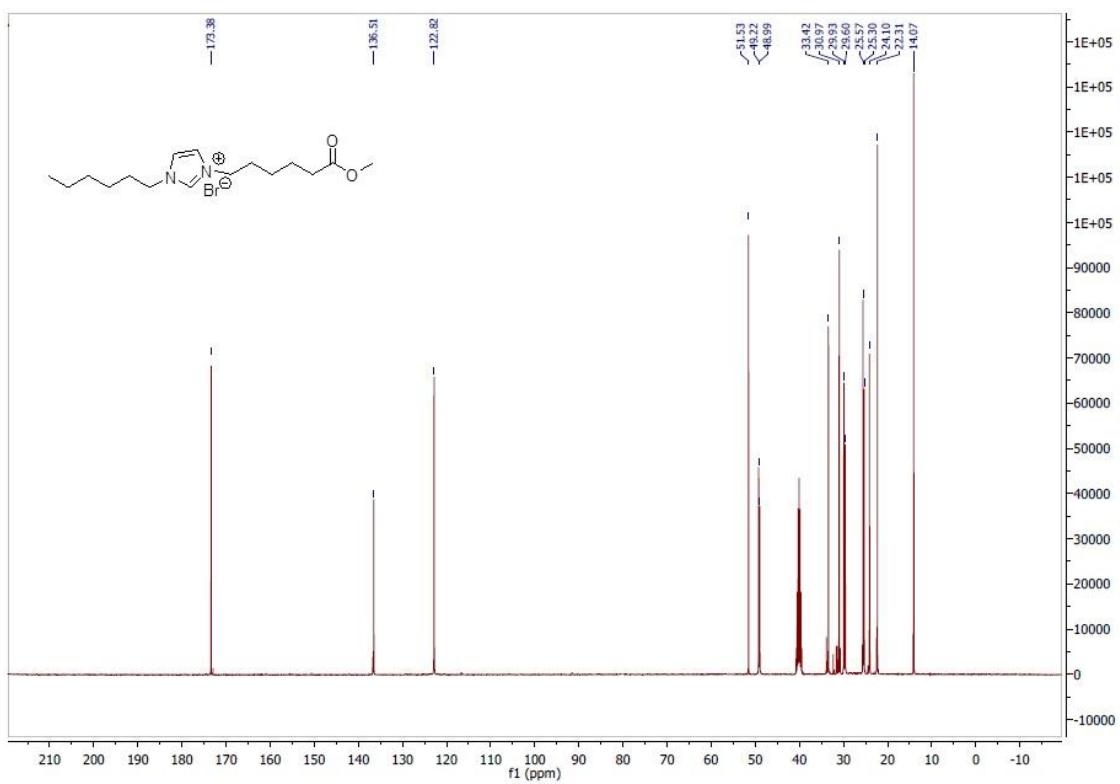
**Figure S15.**  $^{13}\text{C}$ -APT- NMR spectrum of IL **4** in  $\text{DMSO}-d_6$  (100 MHz)



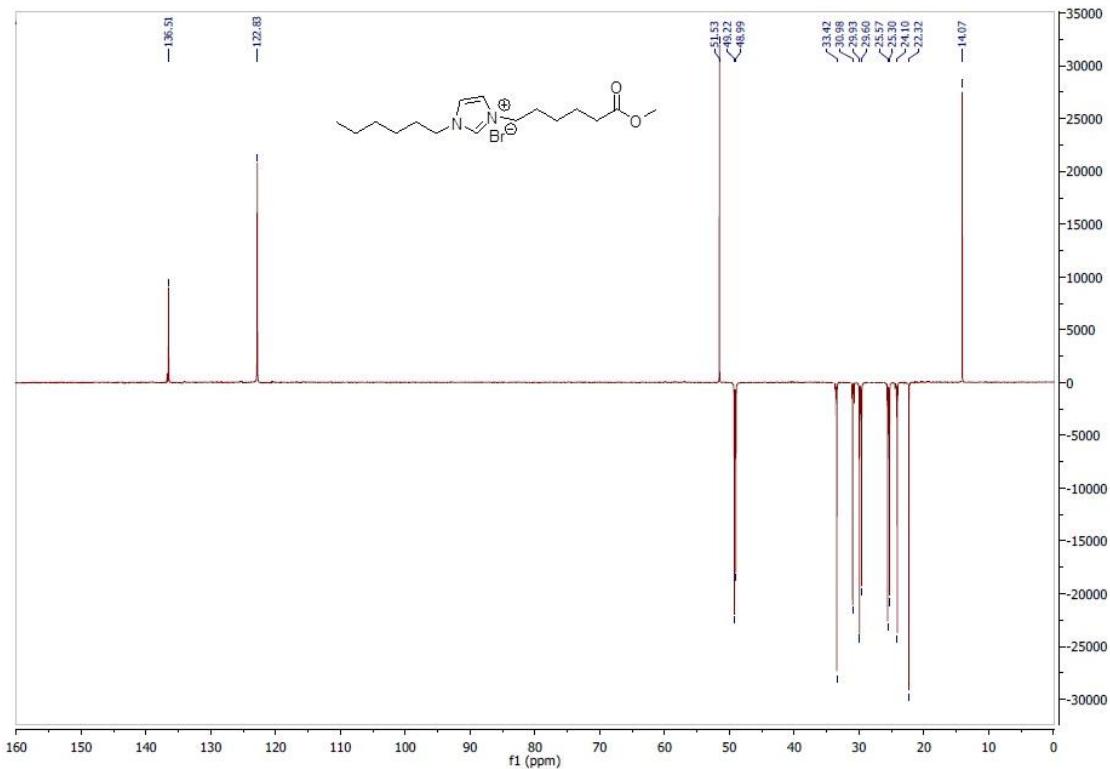
**Figure S16.** Mass spectrum of IL 4



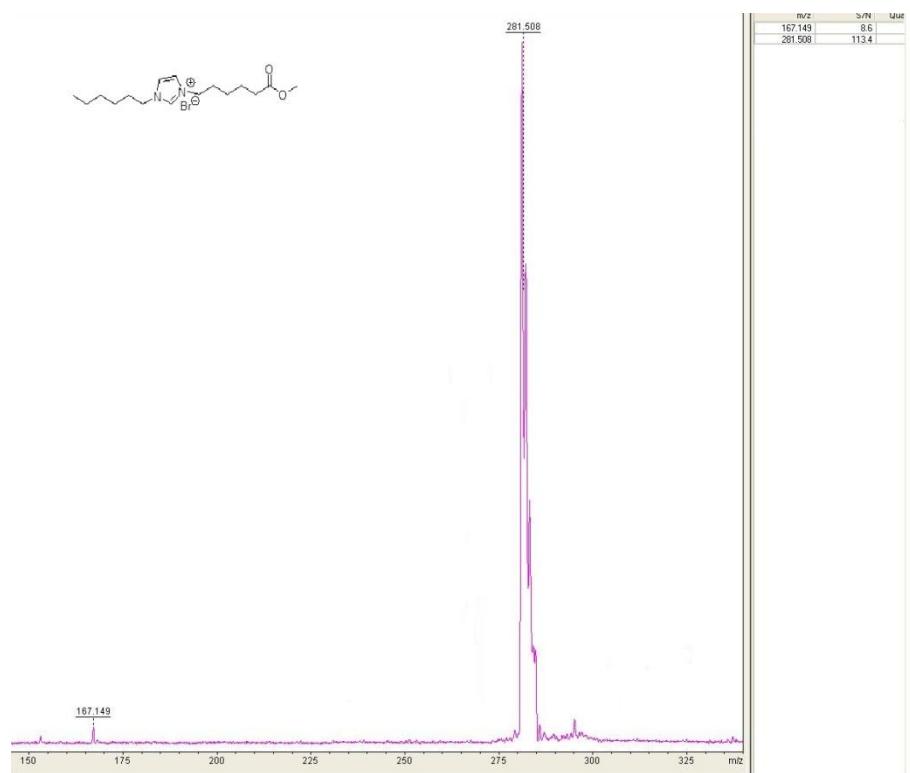
**Figure S17.**  $^1\text{H}$  NMR spectrum of IL **5** in  $\text{DMSO}-d_6$  (400 MHz)



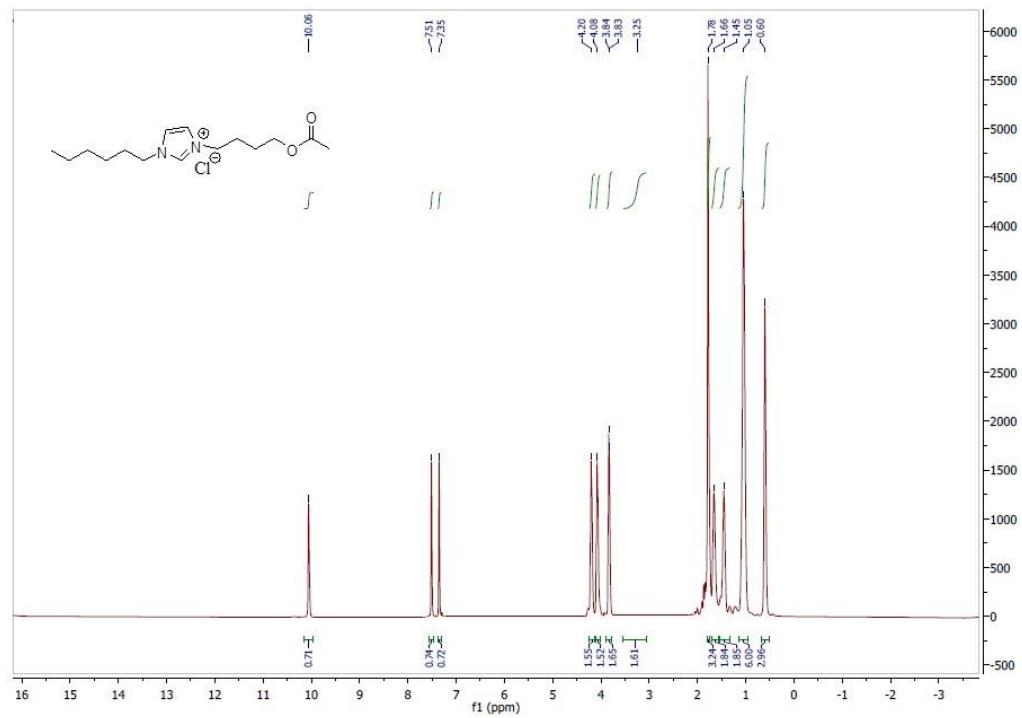
**Figure S18.**  $^{13}\text{C}$  NMR spectrum of IL 5 in  $\text{DMSO}-d_6$  (100 MHz)



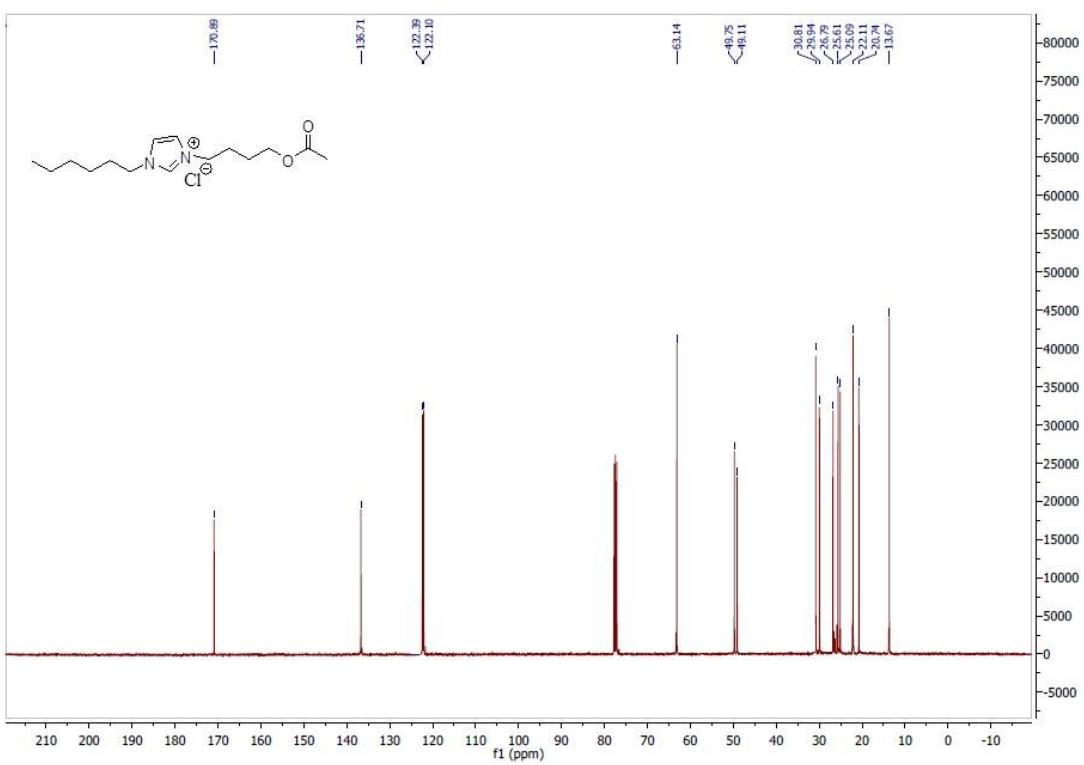
**Figure S19.**  $^{13}\text{C}$ -DEPT- NMR spectrum of IL 5 in  $\text{DMSO}-d_6$  (100 MHz)



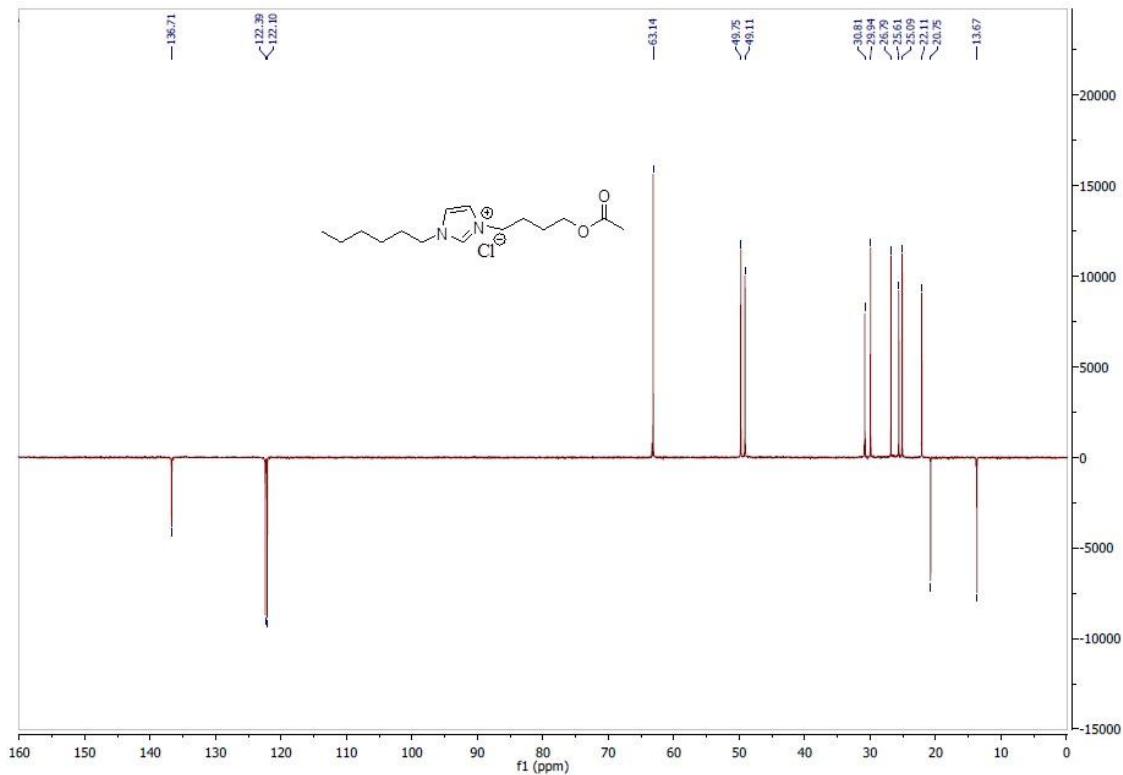
**Figure S20.** Mass spectrum of IL 5



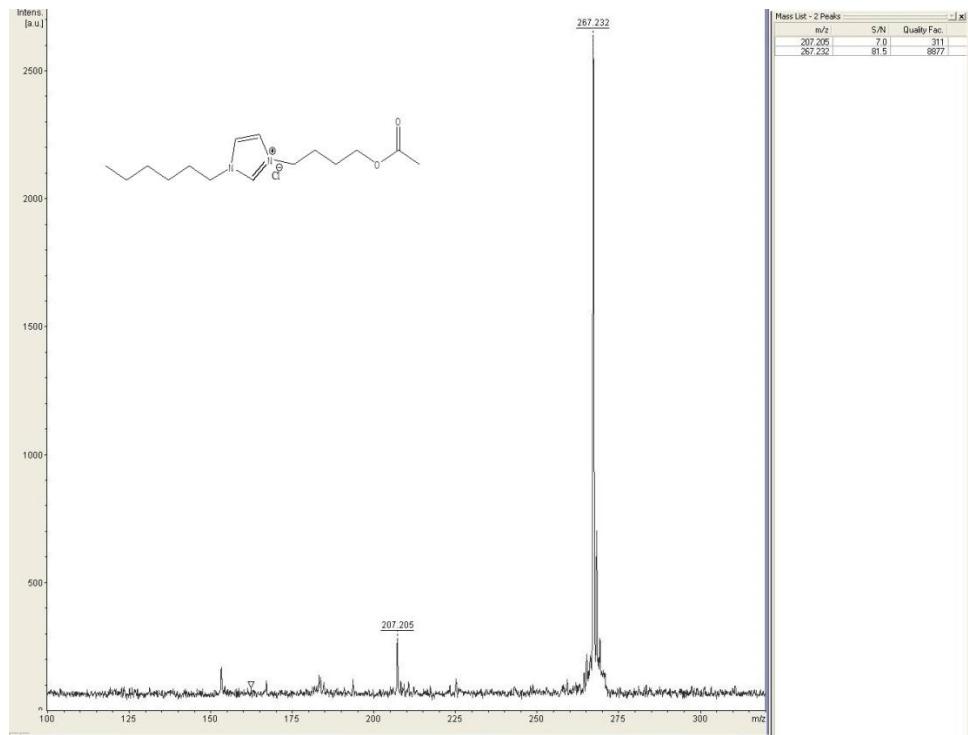
**Figure S21.**  $^1\text{H}$  NMR spectrum of IL 6 in  $\text{CDCl}_3$  (400 MHz)



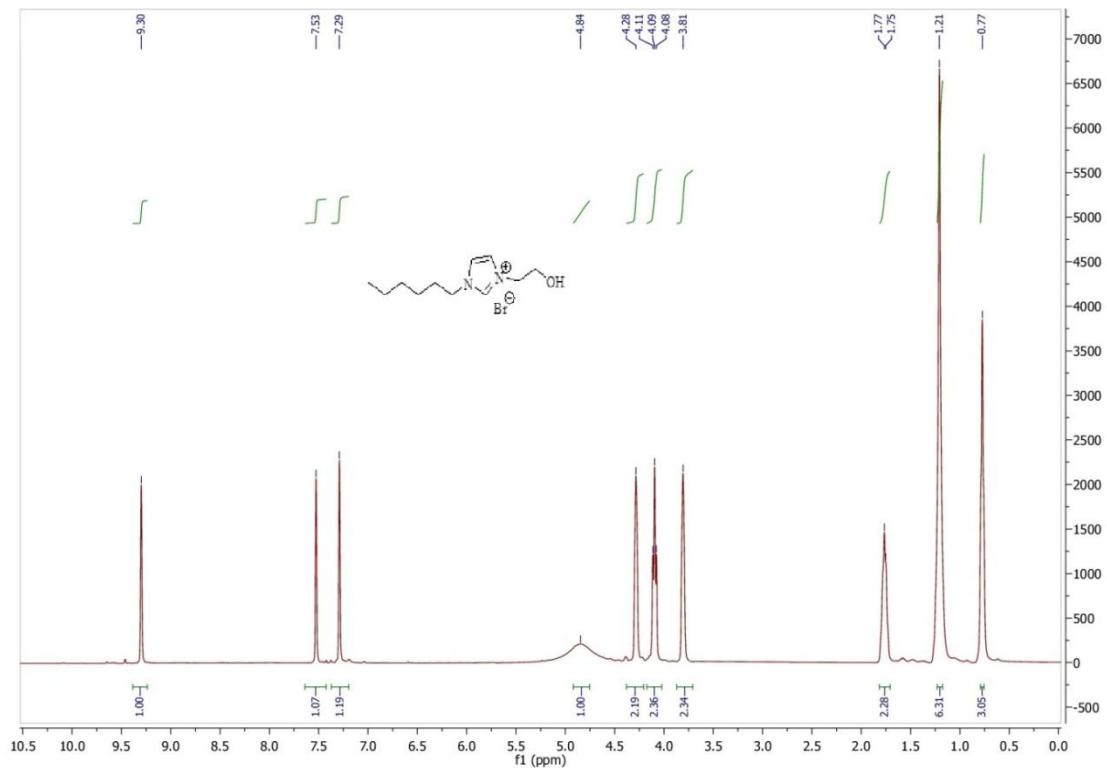
**Figure S22.**  $^{13}\text{C}$  NMR spectrum of IL **6** in  $\text{CDCl}_3$  (100 MHz)



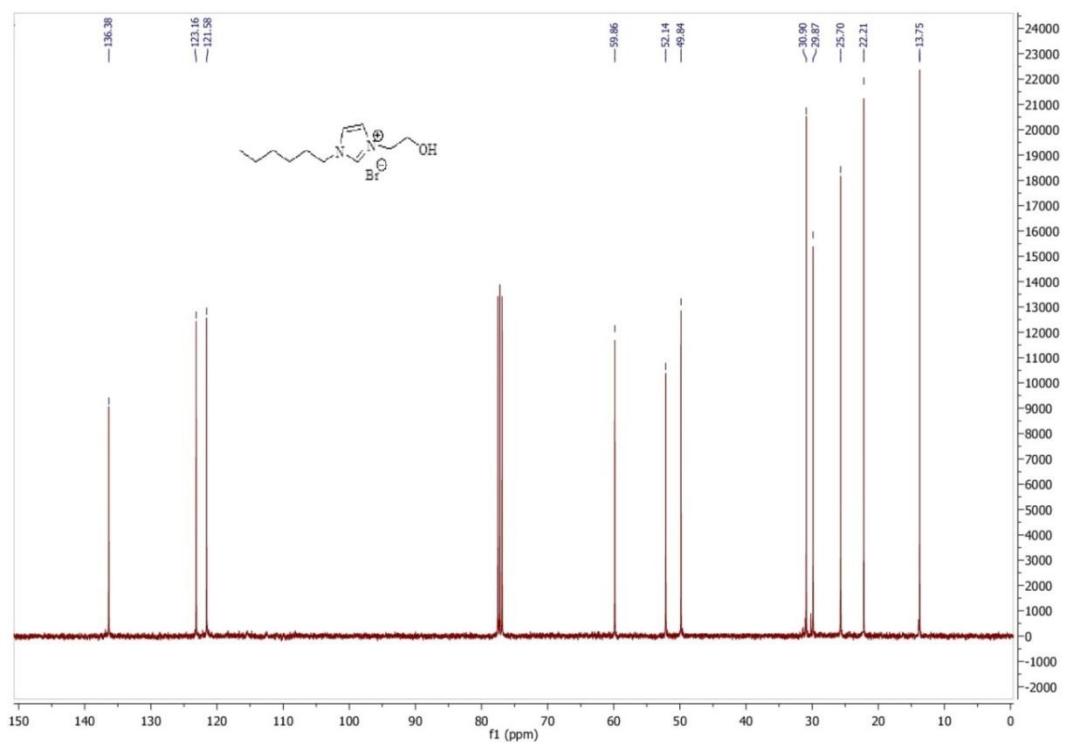
**Figure S23.**  $^{13}\text{C}$ -APT- NMR spectrum of IL **6** in  $\text{CDCl}_3$  (100 MHz)



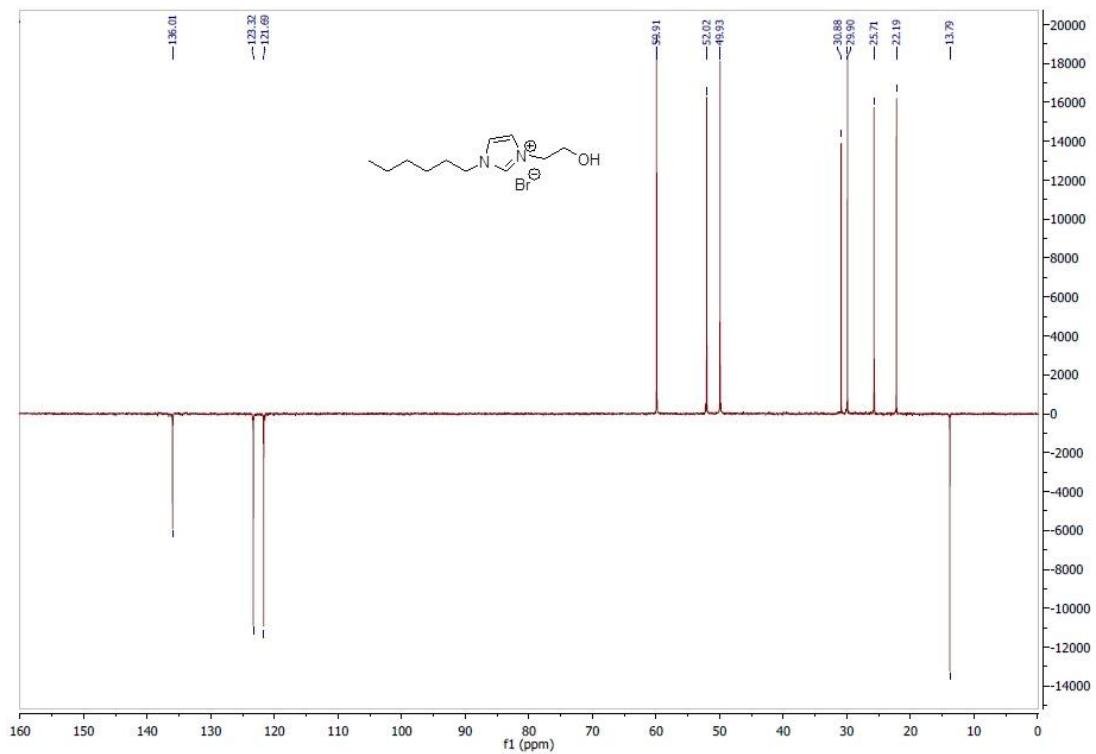
**Figure S24.** Mass spectrum of IL 6



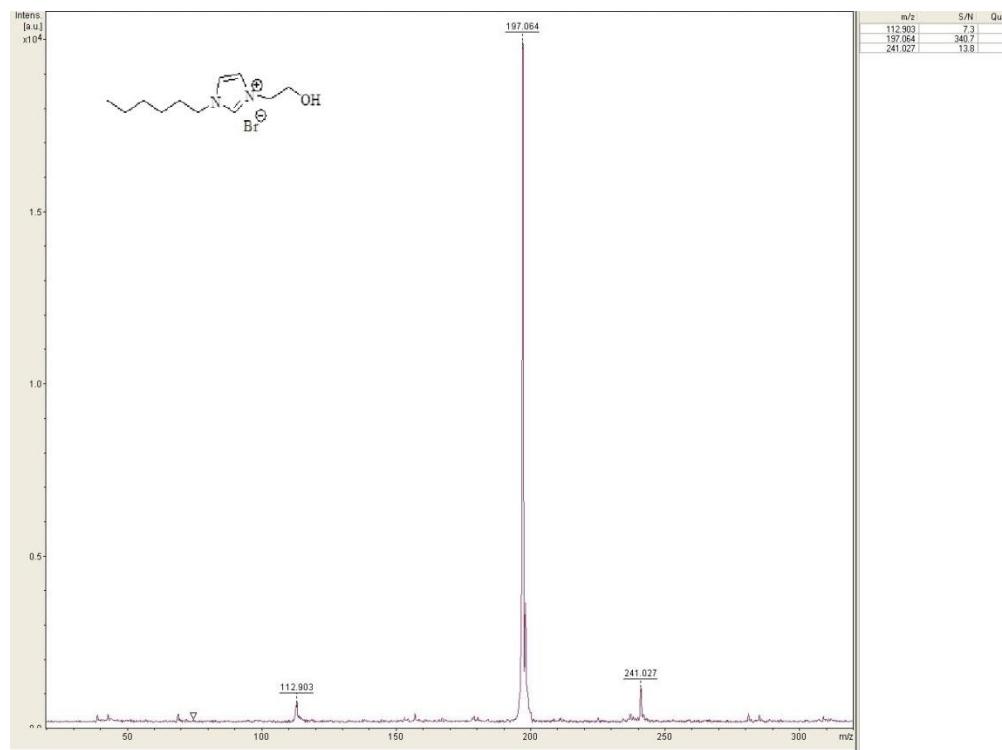
**Figure S25.** <sup>1</sup>H NMR spectrum of IL 7 in  $\text{CDCl}_3$  (400 MHz)



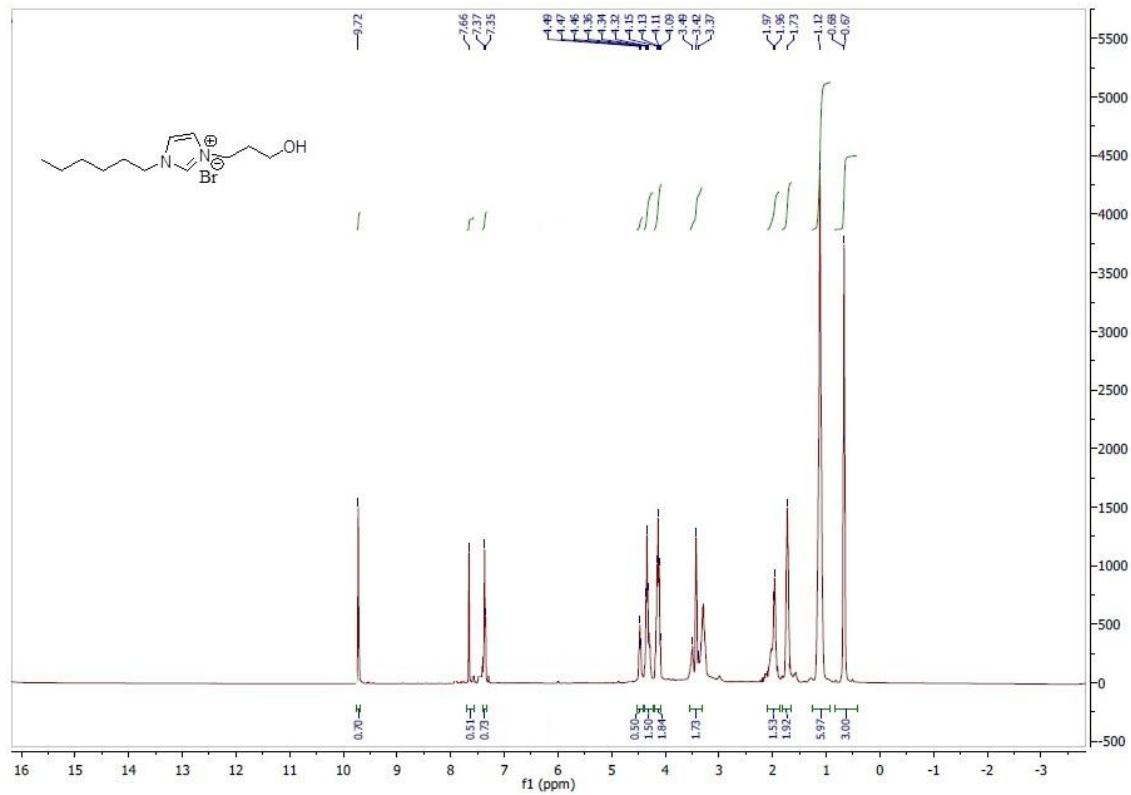
**Figure S26.**  $^{13}\text{C}$  NMR spectrum of IL 7 in  $\text{CDCl}_3$  (100 MHz)



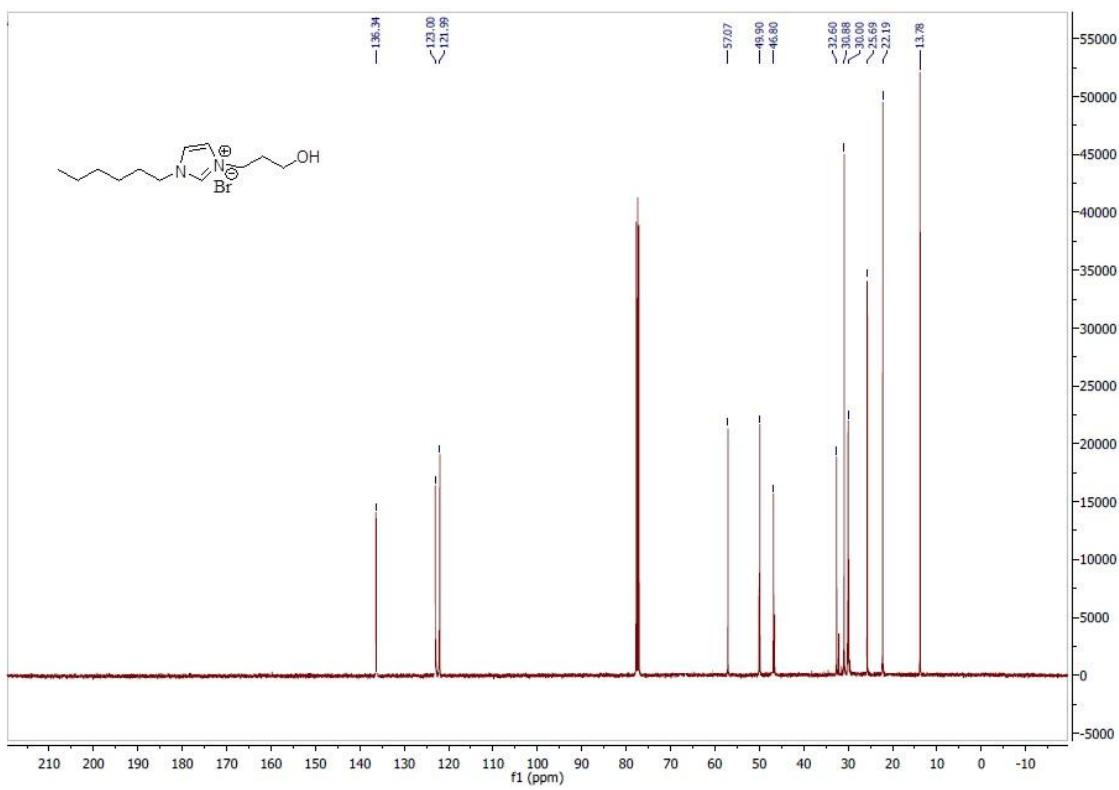
**Figure S27.**  $^{13}\text{C}$ -APT- NMR spectrum of IL 7 in  $\text{CDCl}_3$  (100 MHz)



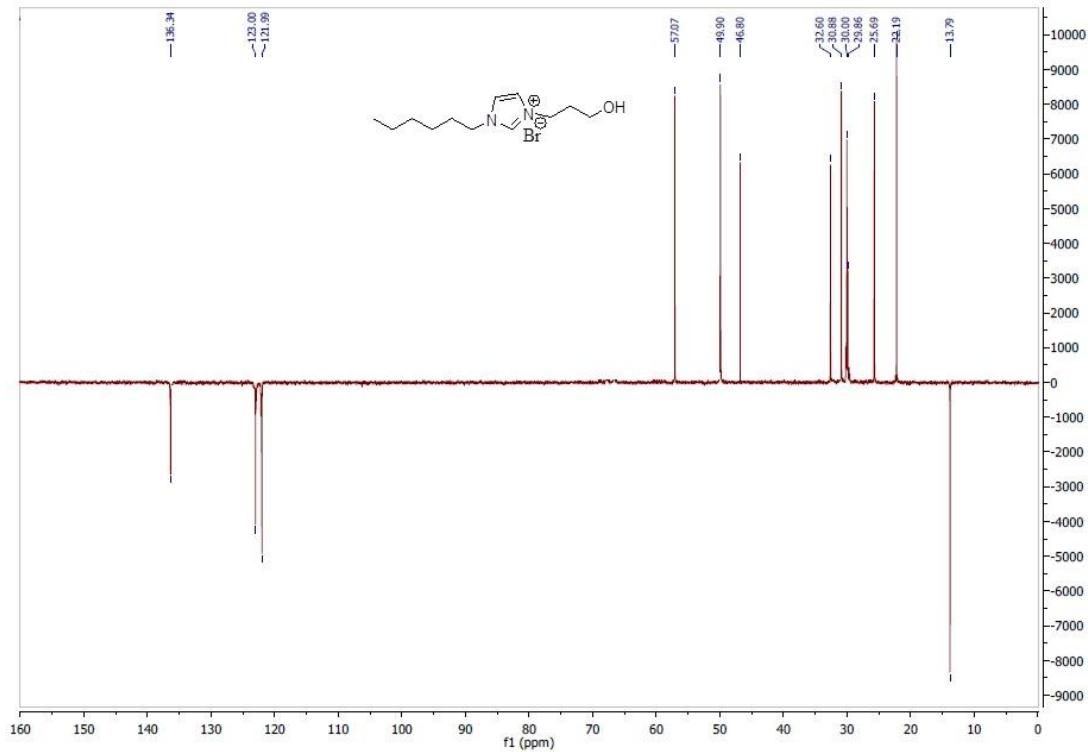
**Figure S28.** Mass spectrum of IL 7



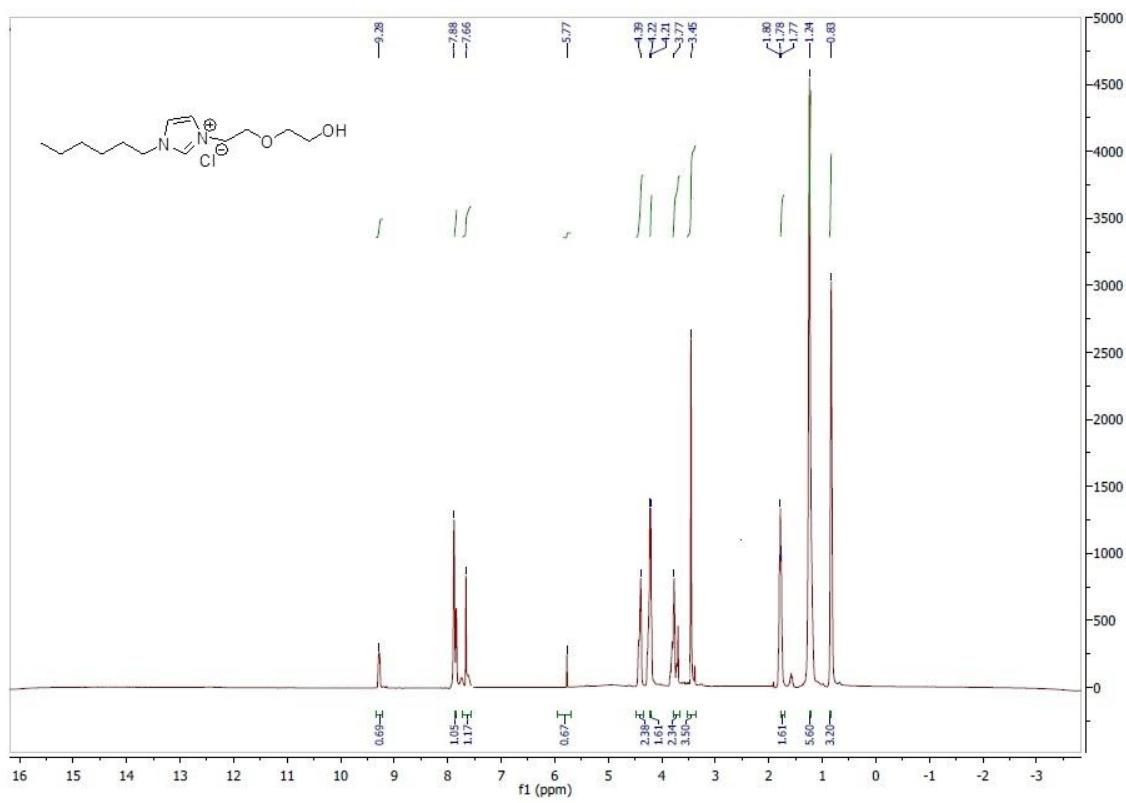
**Figure S29.**  $^1\text{H}$  NMR spectrum of IL 8 in  $\text{CDCl}_3$  (400 MHz)



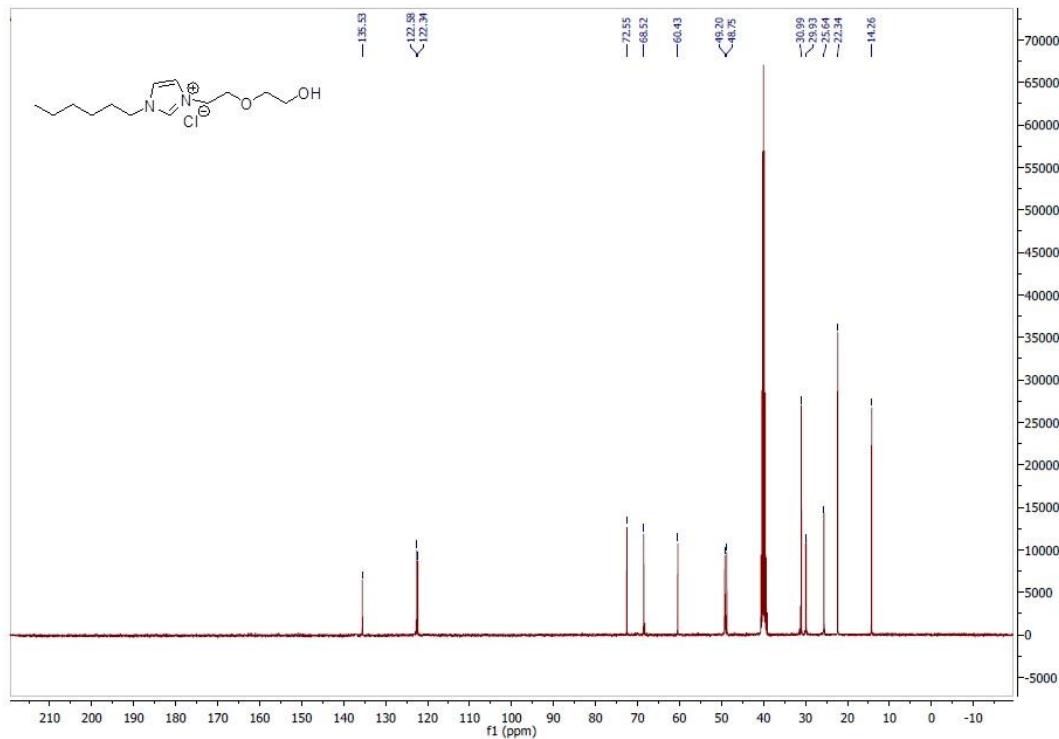
**Figure S30.**  $^{13}\text{C}$  NMR spectrum of IL **8** in  $\text{CDCl}_3$  (100 MHz)



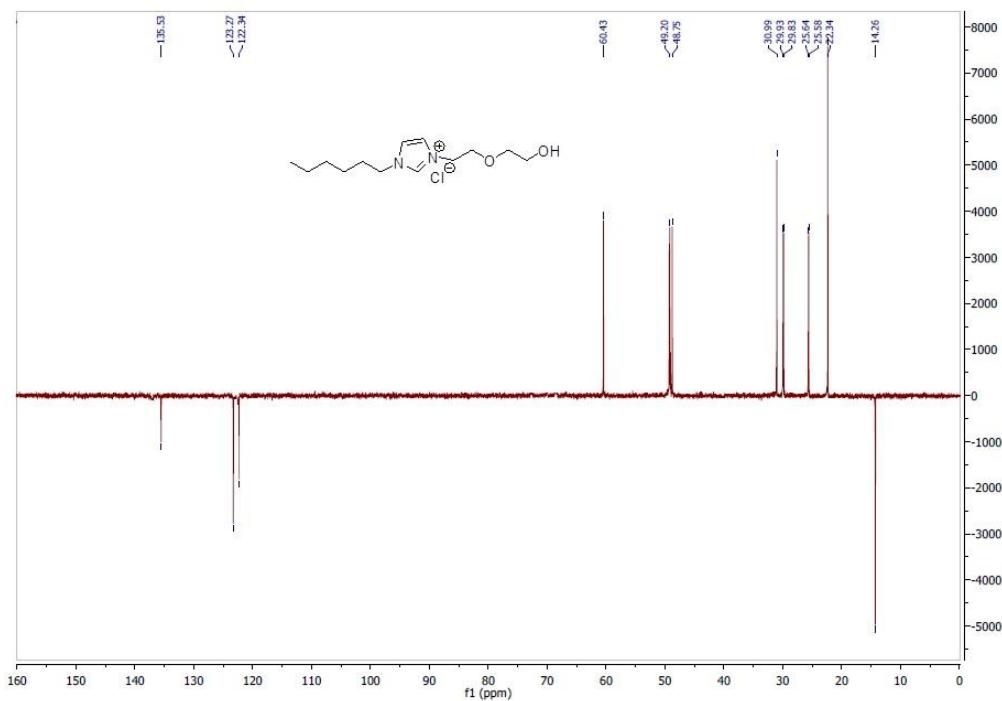
**Figure S31.**  $^{13}\text{C}$ -APT- NMR spectrum of IL **8** in  $\text{CDCl}_3$  (100 MHz)



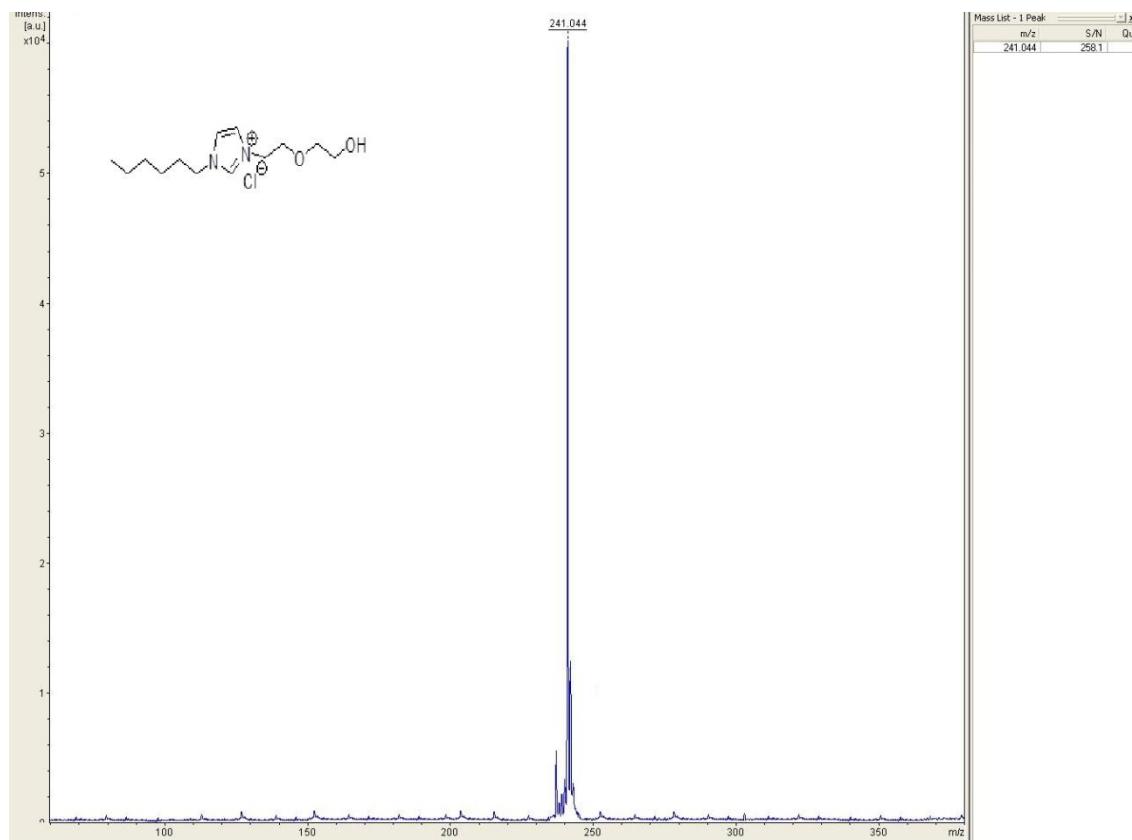
**Figure S32.**  $^1\text{H}$  NMR spectrum of IL **9** in  $\text{DMSO}-d_6$  (400 MHz)



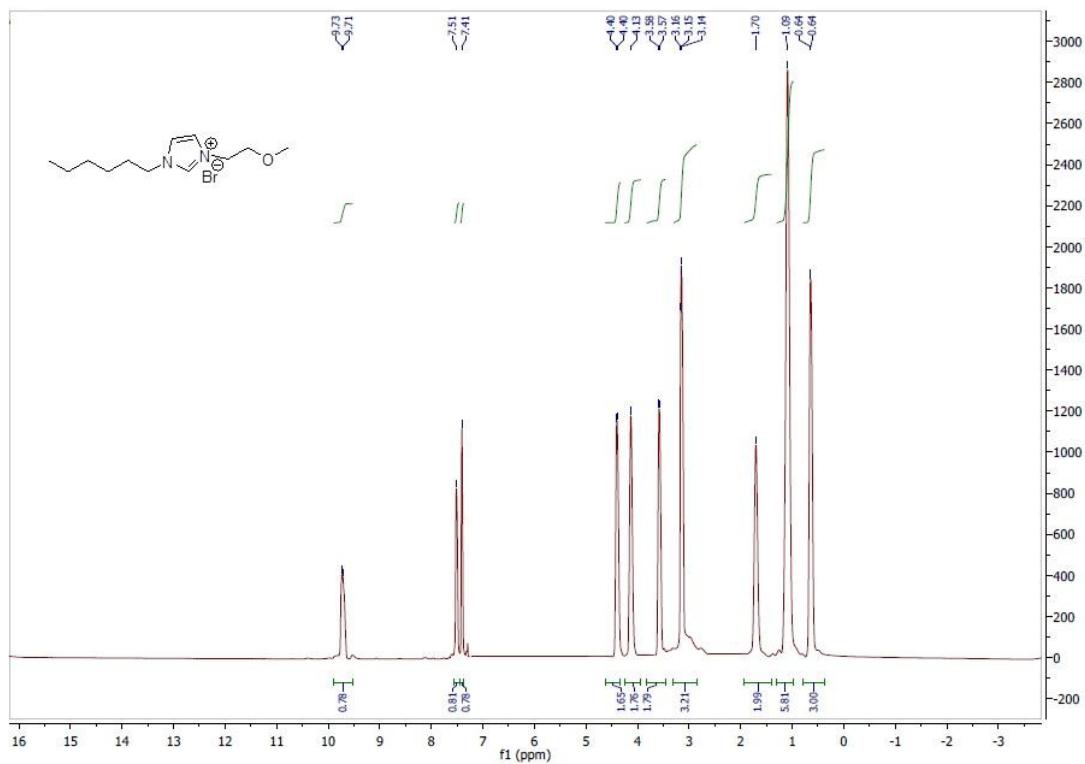
**Figure S33.**  $^{13}\text{C}$  NMR spectrum of IL **9** in  $\text{DMSO}-d_6$  (100 MHz)



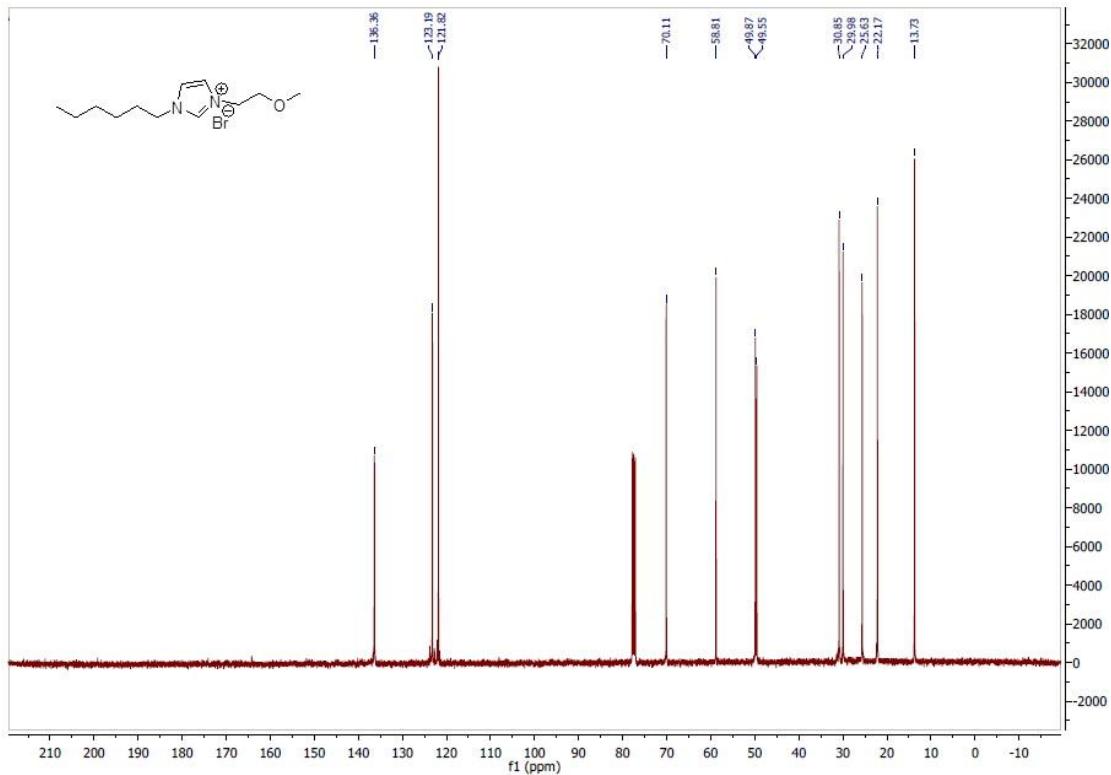
**Figure S34.**  $^{13}\text{C}$ -APT- NMR spectrum of IL **9** in  $\text{DMSO}-d_6$  (100 MHz)



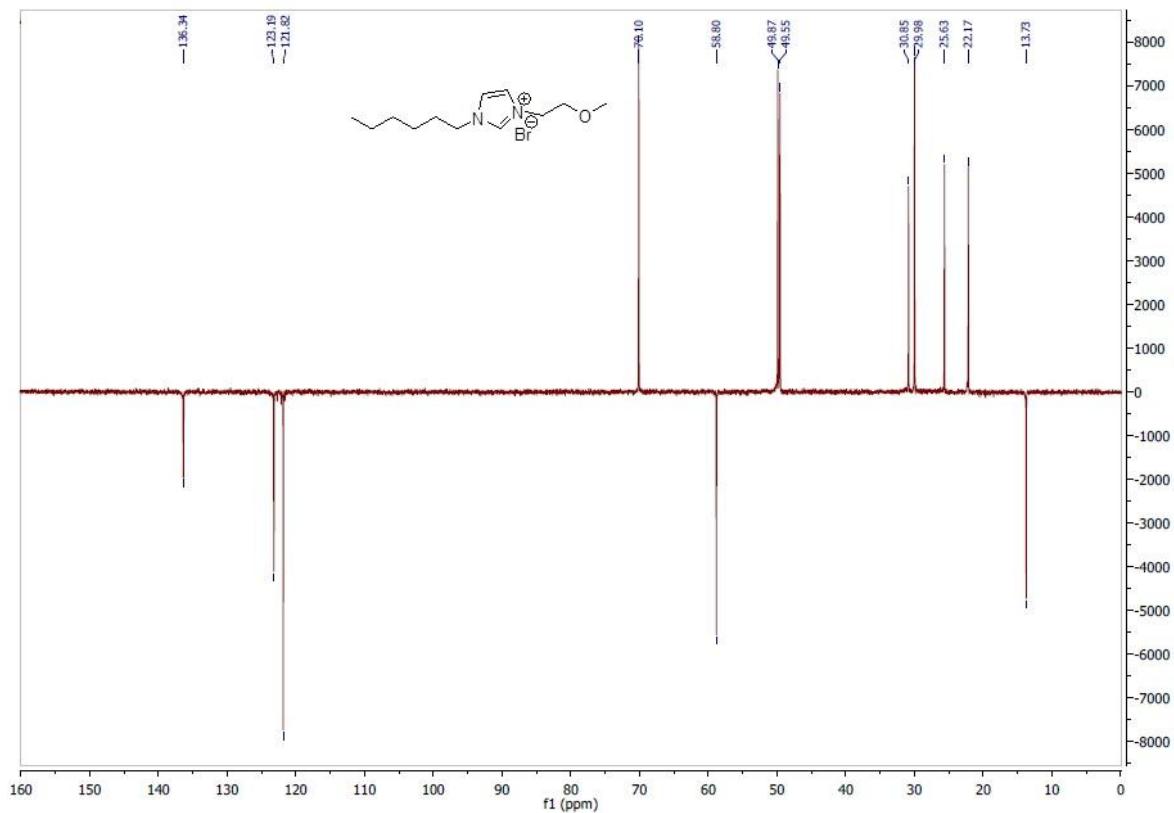
**Figure S35.** Mass spectrum of IL **9**



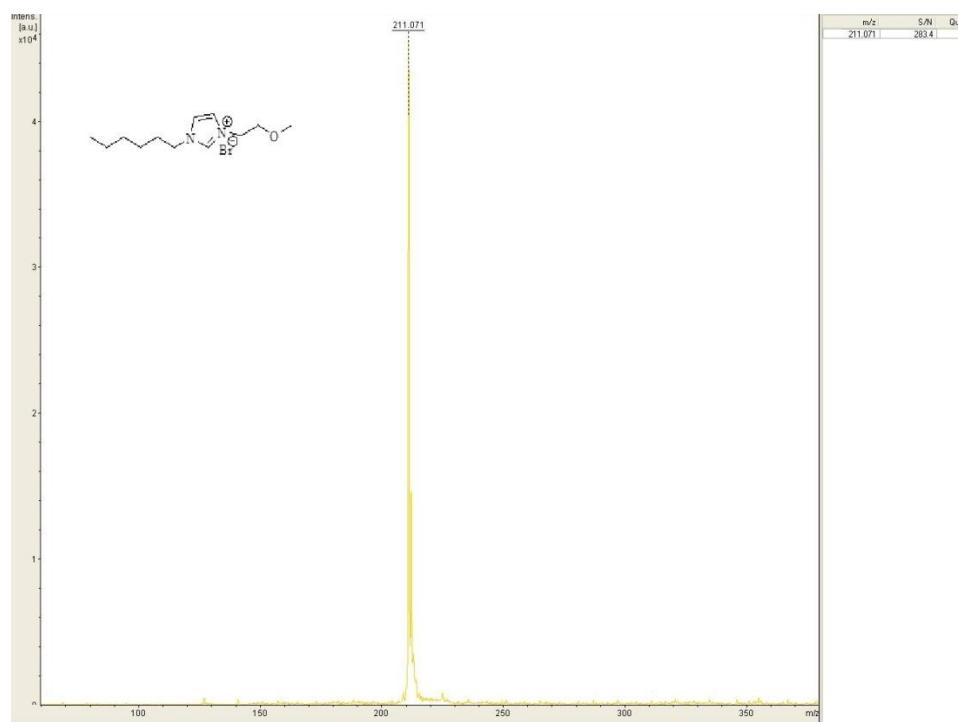
**Figure S36.**  $^1\text{H}$  NMR spectrum of IL **10** in  $\text{CDCl}_3$  (400 MHz)



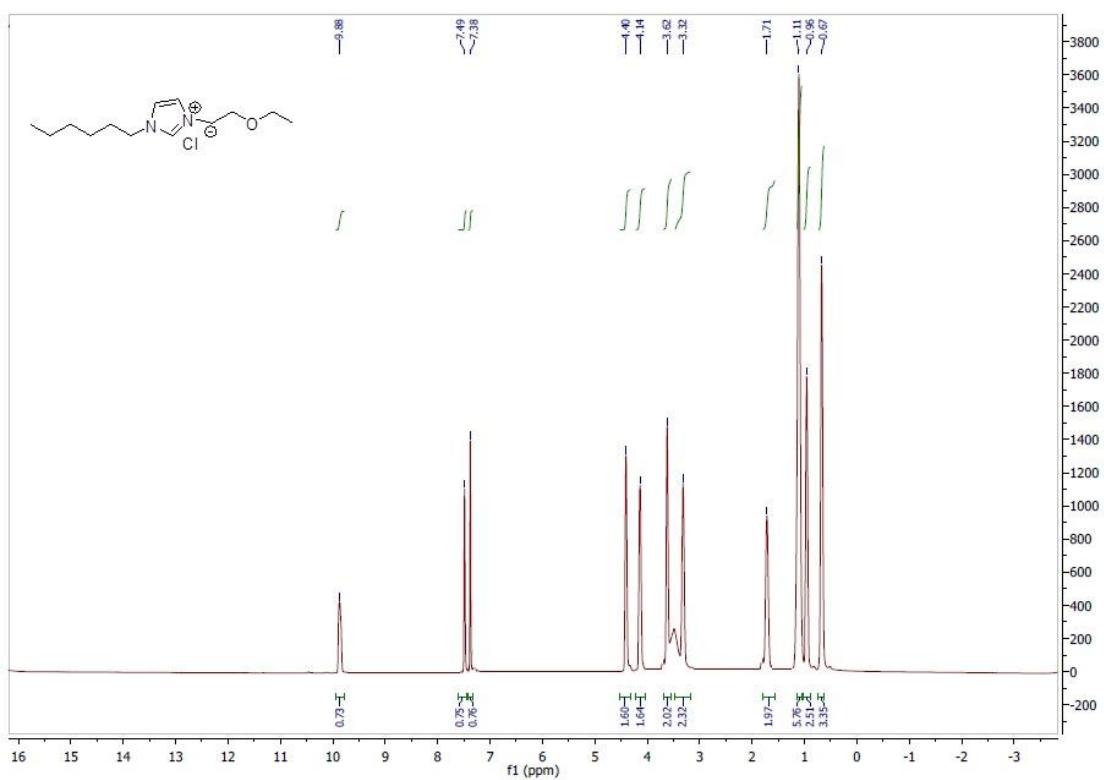
**Figure S37.**  $^{13}\text{C}$  NMR spectrum of IL **10** in  $\text{CDCl}_3$  (100 MHz)



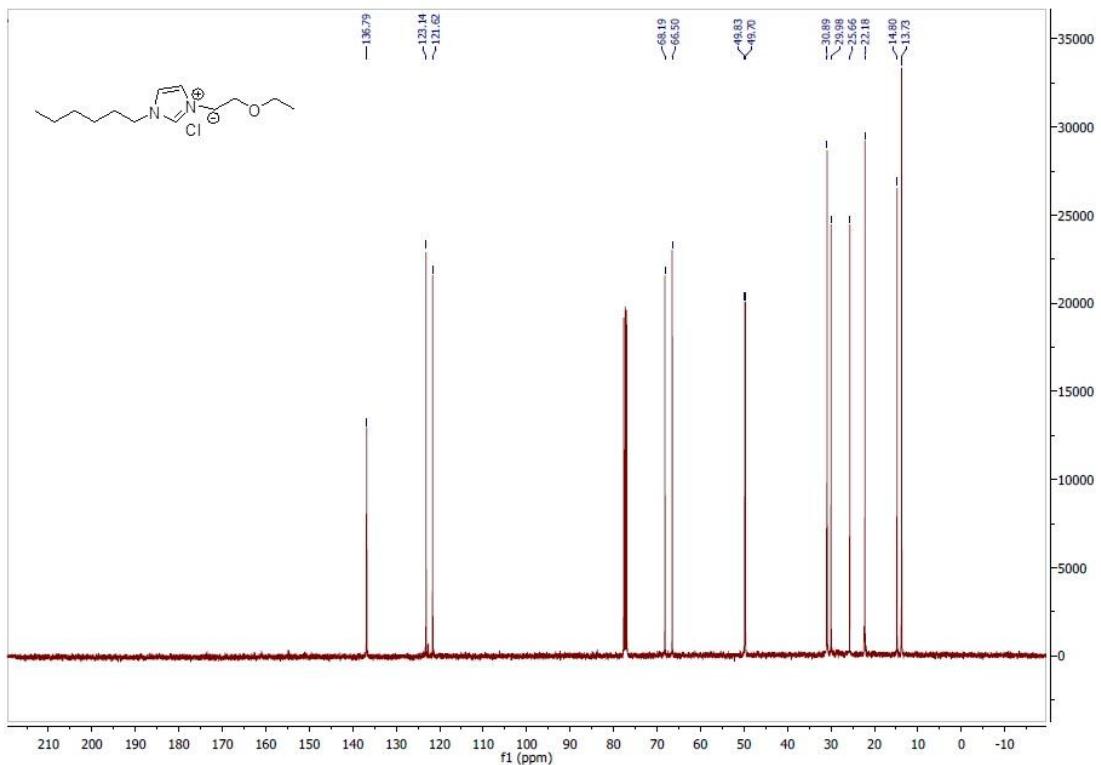
**Figure S38.**  $^{13}\text{C}$ -APT- NMR spectrum of IL **10** in  $\text{CDCl}_3$  (100 MHz)



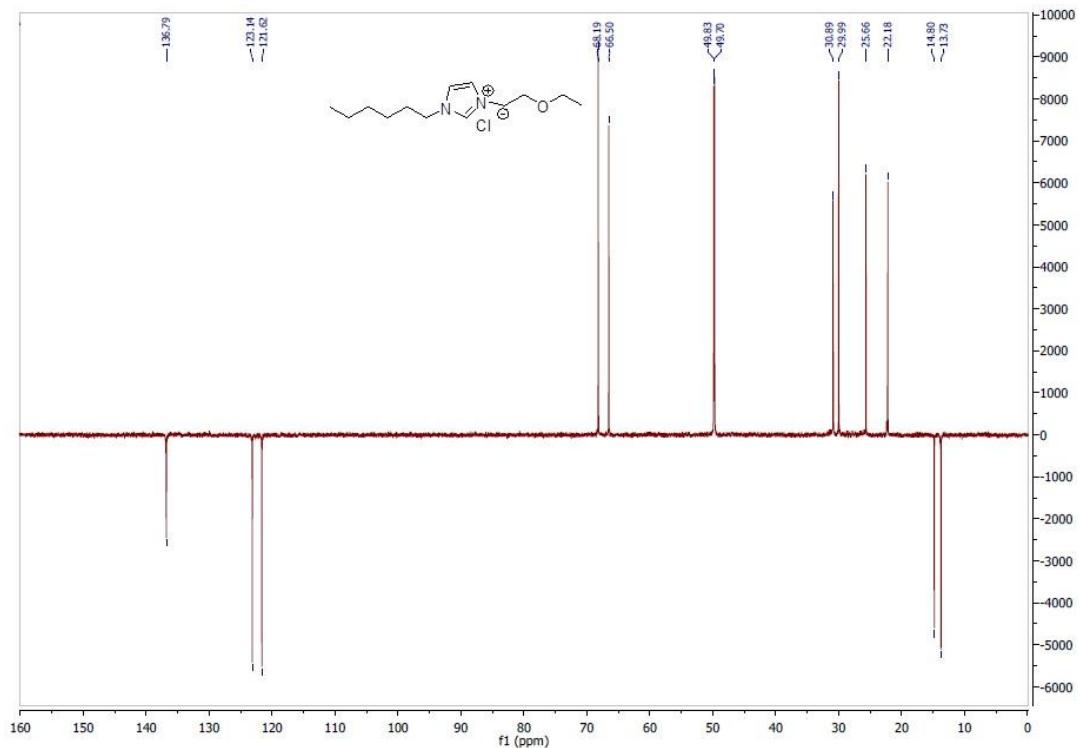
**Figure S39.** Mass spectrum of IL **10**



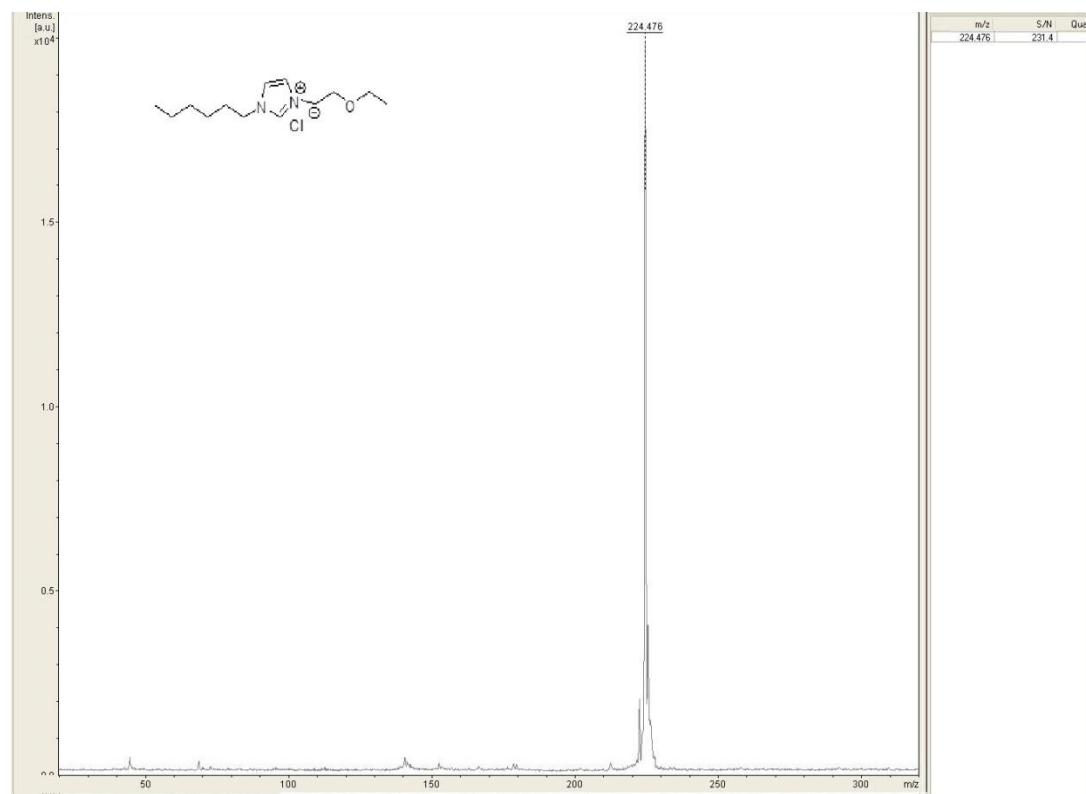
**Figure S40.**  $^1\text{H}$  NMR spectrum of IL 11 in  $\text{CDCl}_3$  (400 MHz)



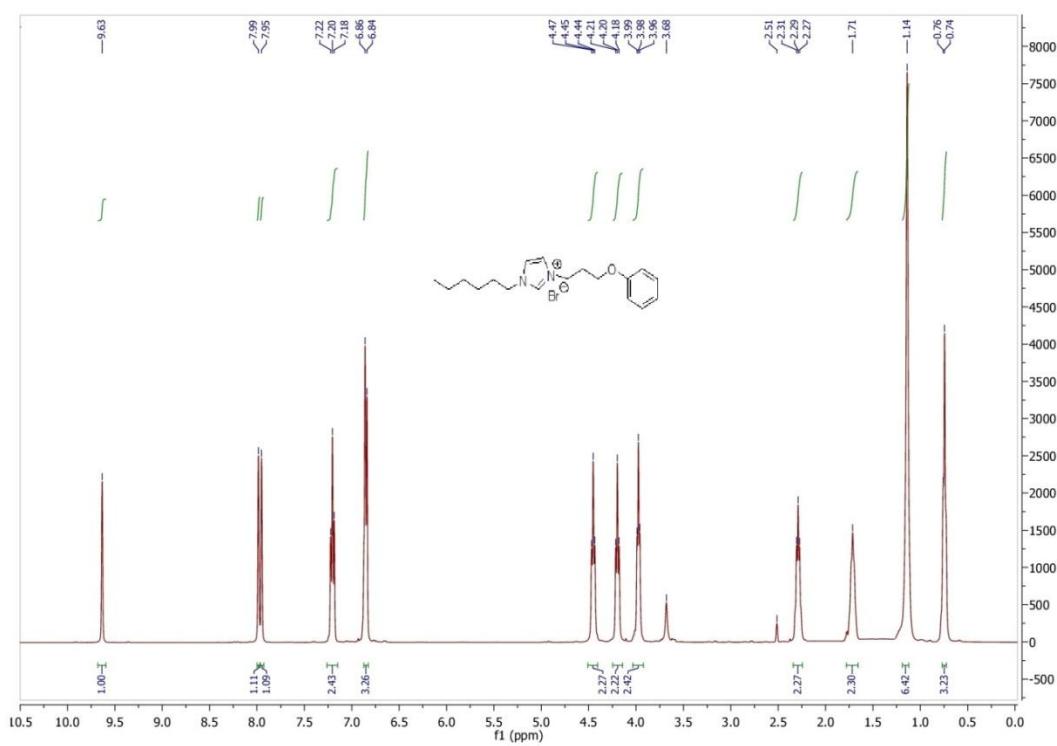
**Figure S41.**  $^{13}\text{C}$  NMR spectrum of IL 11 in  $\text{CDCl}_3$  (100 MHz)



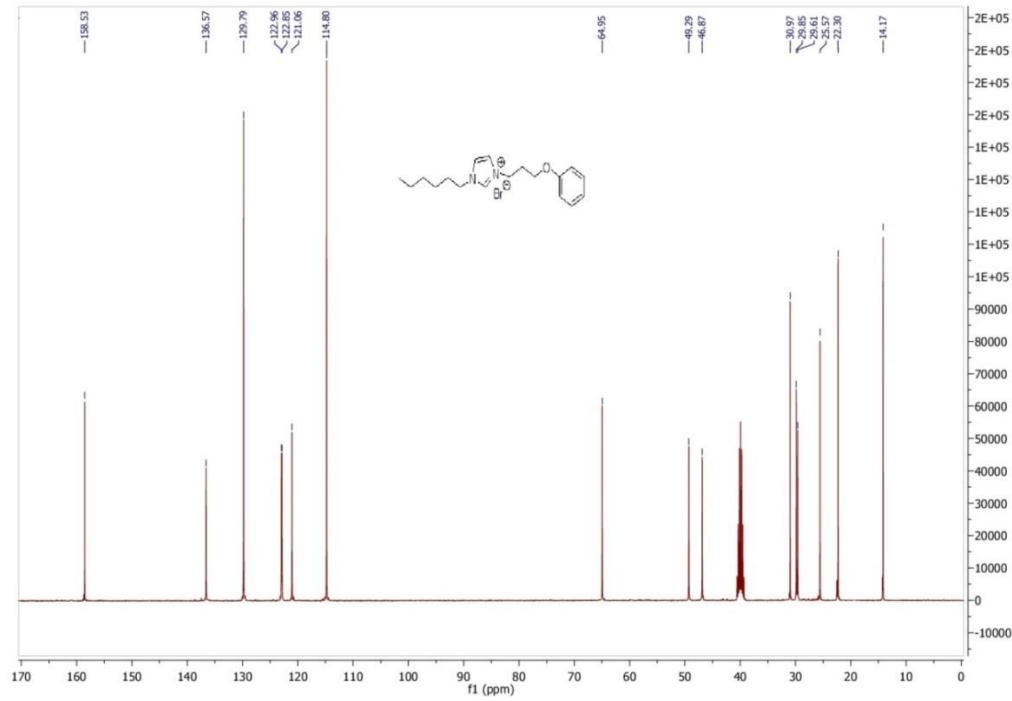
**Figure S42.**  $^{13}\text{C}$ -APT- NMR spectrum of IL **11** in  $\text{CDCl}_3$  (100 MHz)



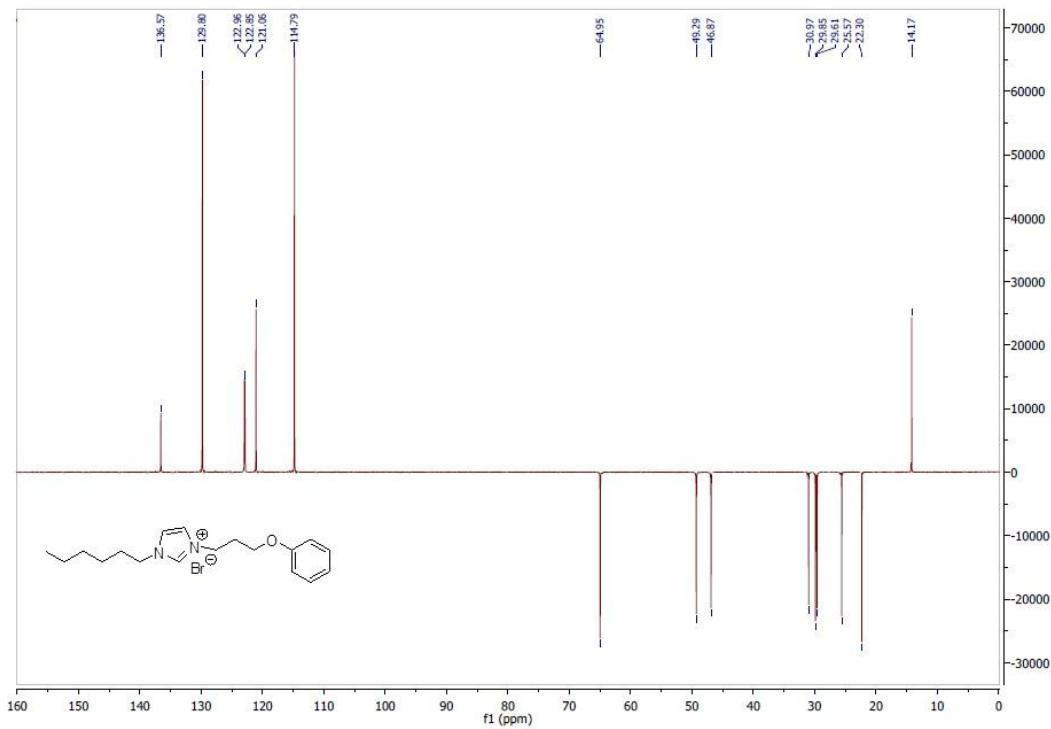
**Figure S43.** Mass spectrum of IL **11**



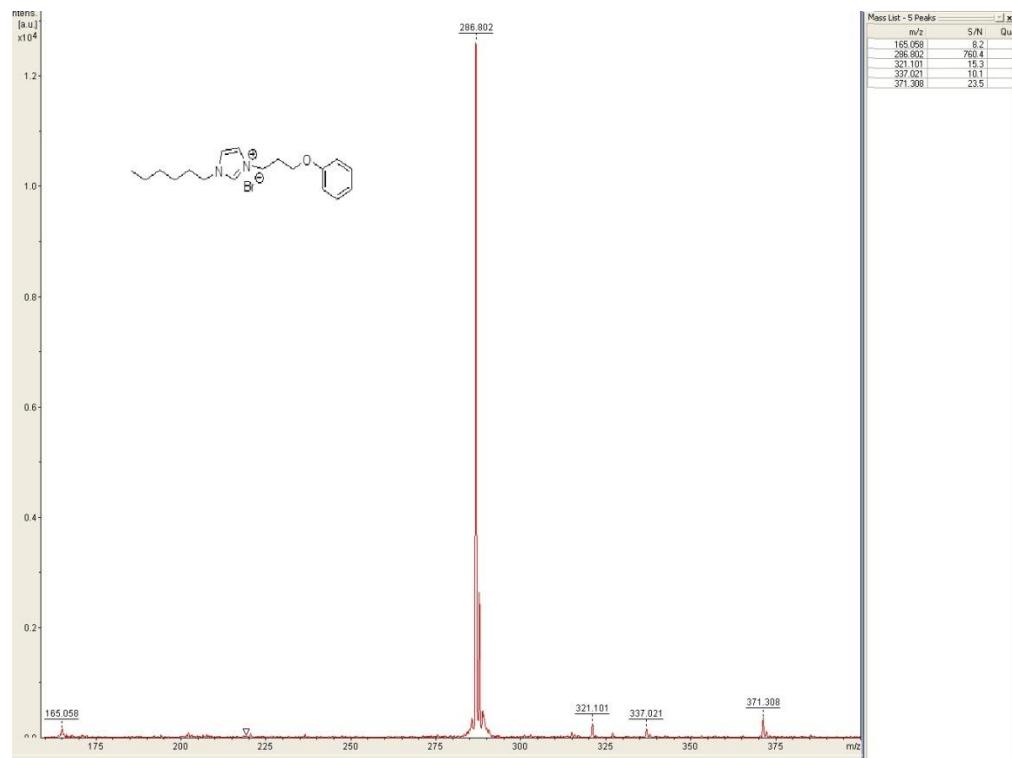
**Figure S44.**  $^1\text{H}$  NMR spectrum of IL **12** in  $\text{DMSO}-d_6$  (400 MHz)



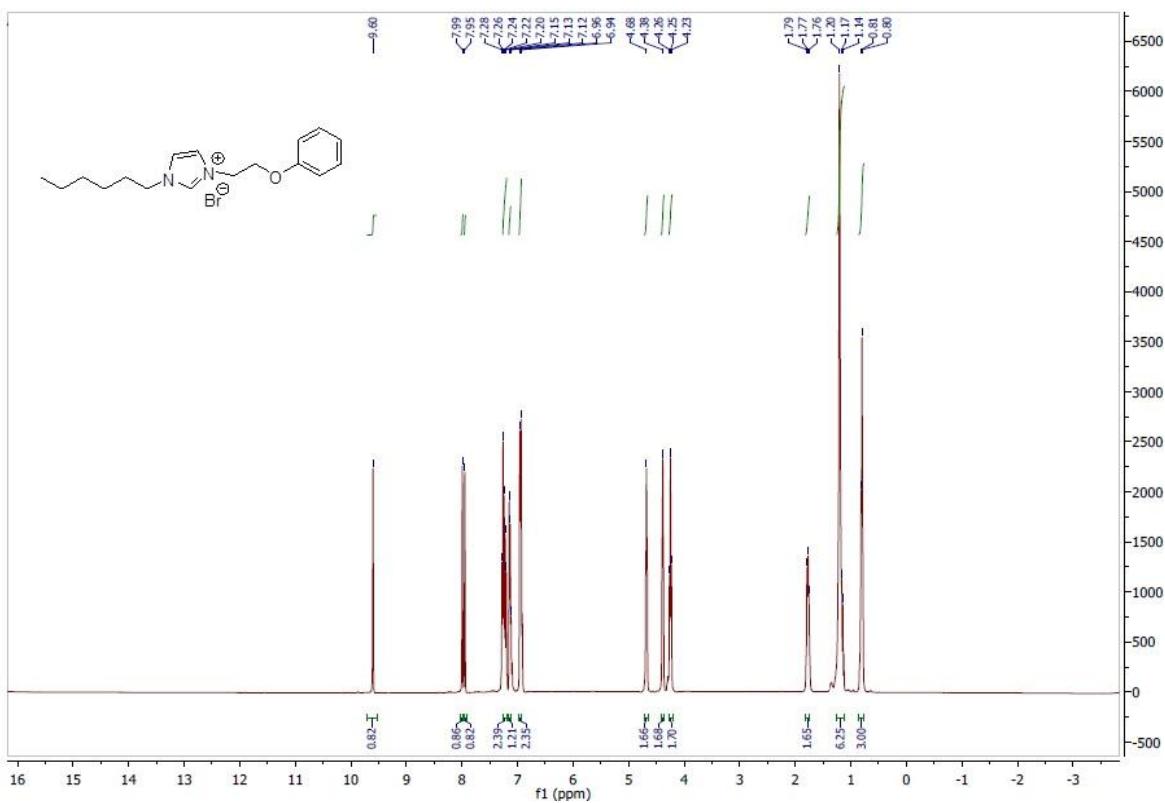
**Figure S45.**  $^{13}\text{C}$  NMR spectrum of IL **12** in  $\text{DMSO}-d_6$  (100 MHz)



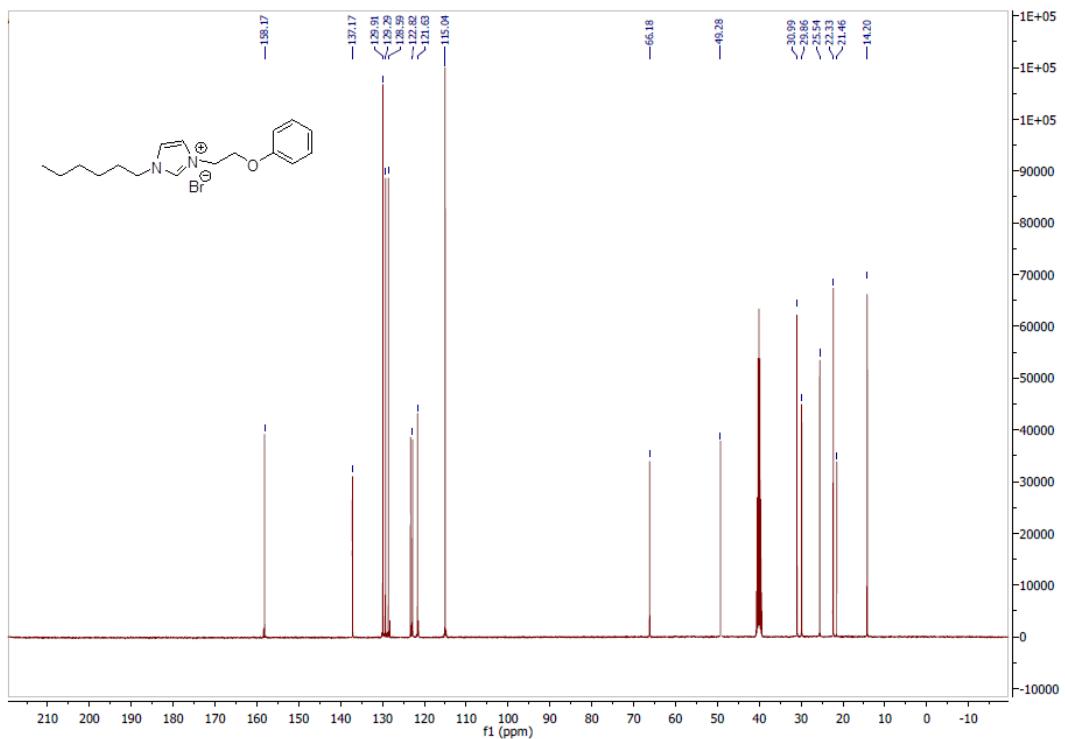
**Figure S46.** <sup>13</sup>C-DEPT- NMR spectrum of IL 12 in DMSO-*d*<sub>6</sub> (100 MHz)



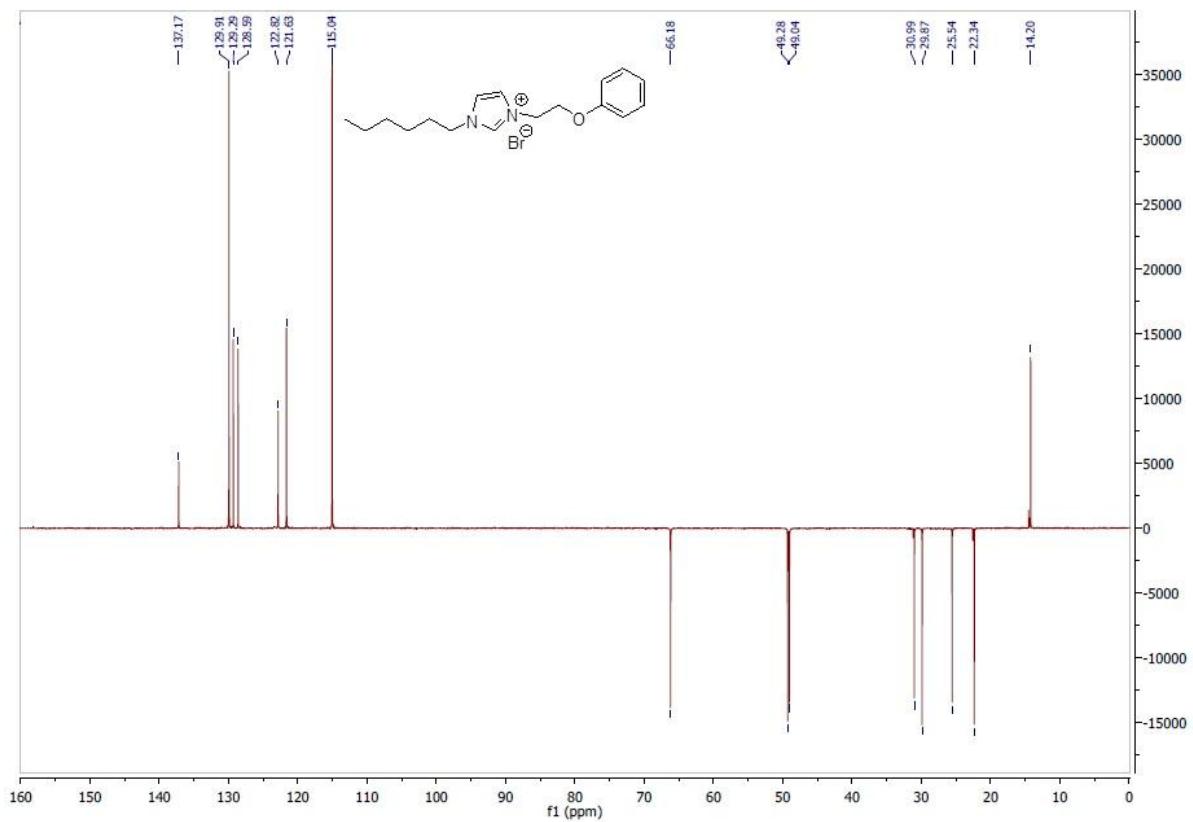
**Figure S47.** Mass spectrum of IL 12



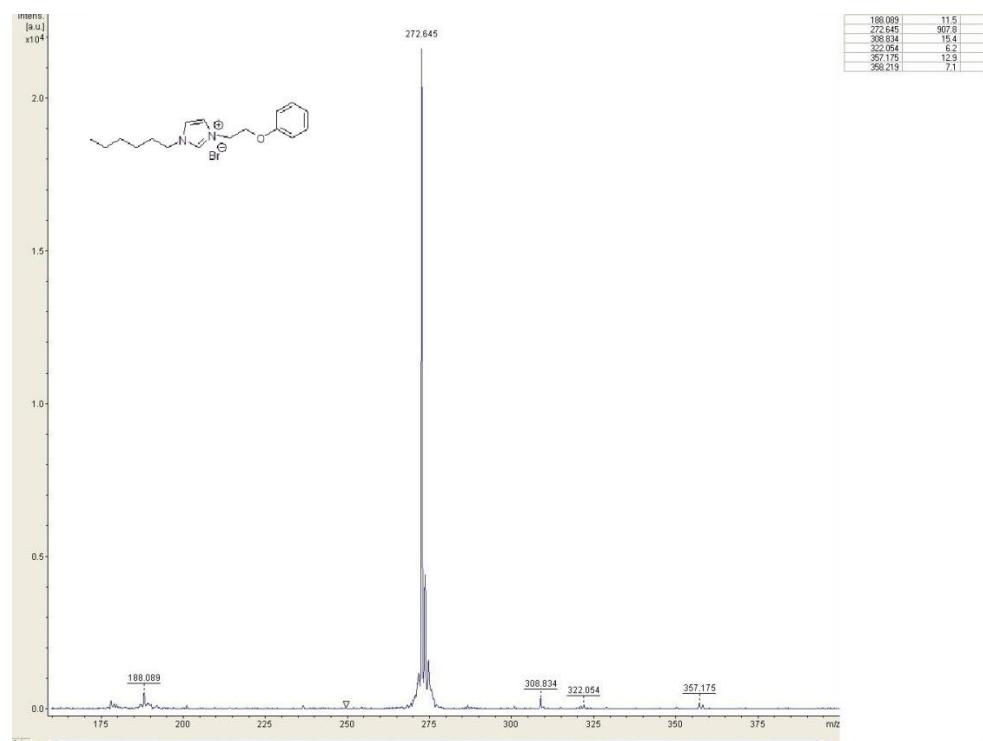
**Figure S48.**  $^1\text{H}$  NMR spectrum of IL 13 in  $\text{DMSO}-d_6$  (400 MHz)



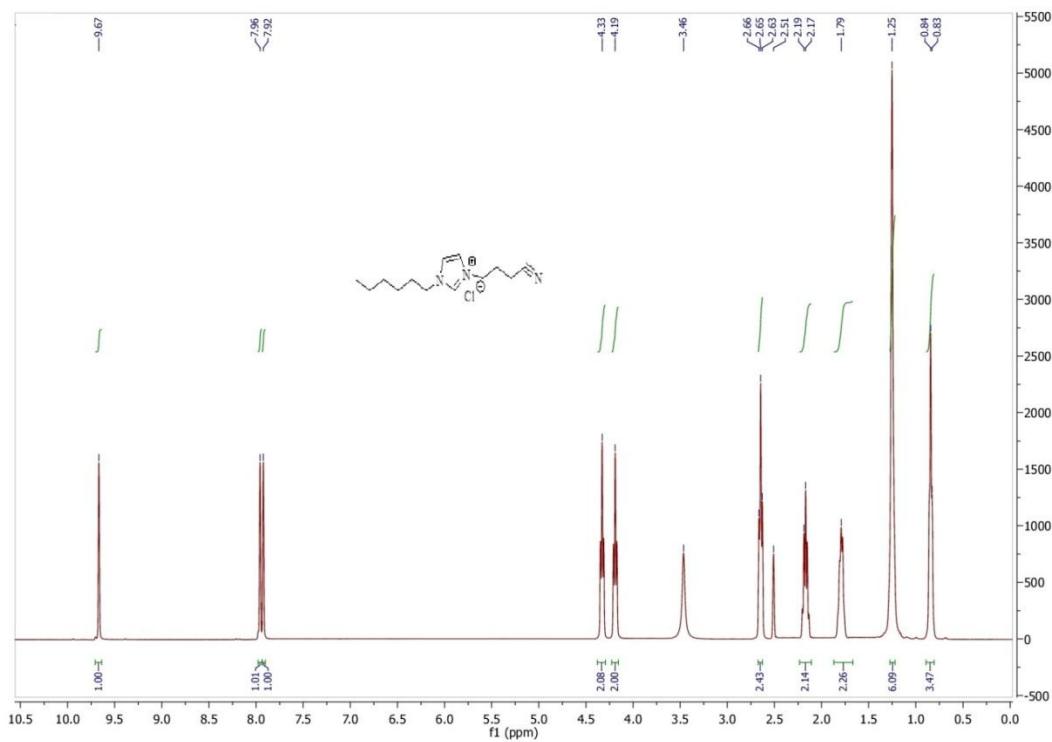
**Figure S49.**  $^{13}\text{C}$  NMR spectrum of IL **13** in  $\text{DMSO}-d_6$  (100 MHz)



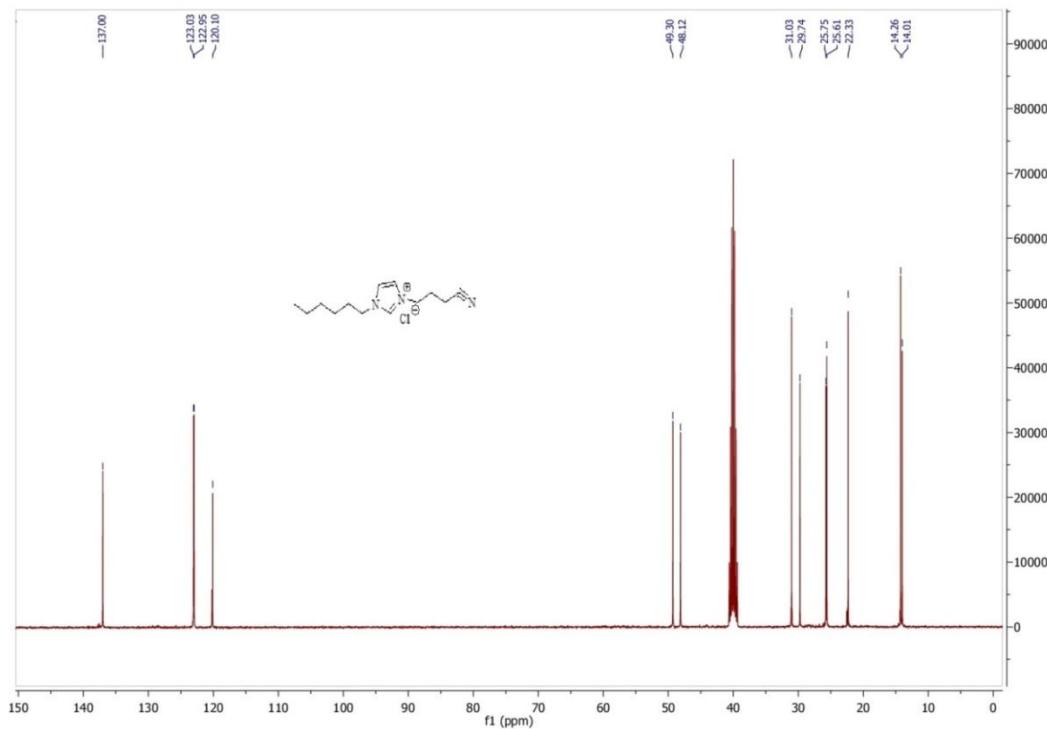
**Figure S50.** <sup>13</sup>C-DEPT- NMR spectrum of IL 13 in DMSO-*d*<sub>6</sub> (100 MHz)



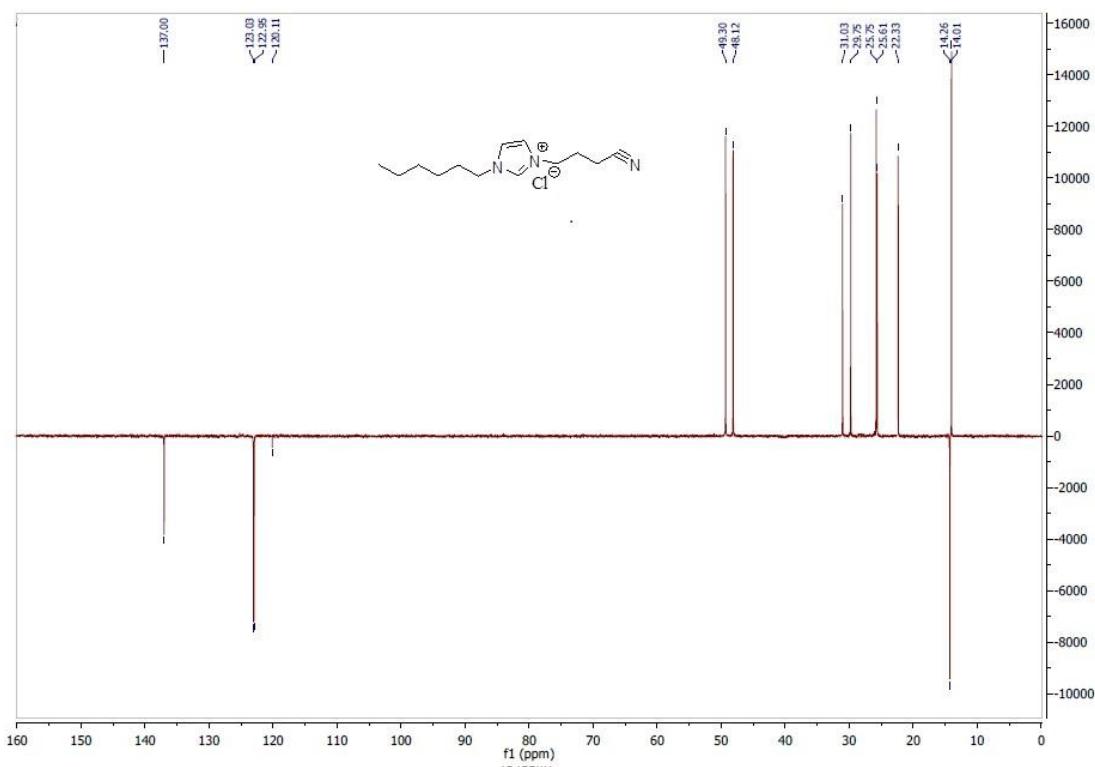
**Figure S51.** Mass spectrum of IL 13



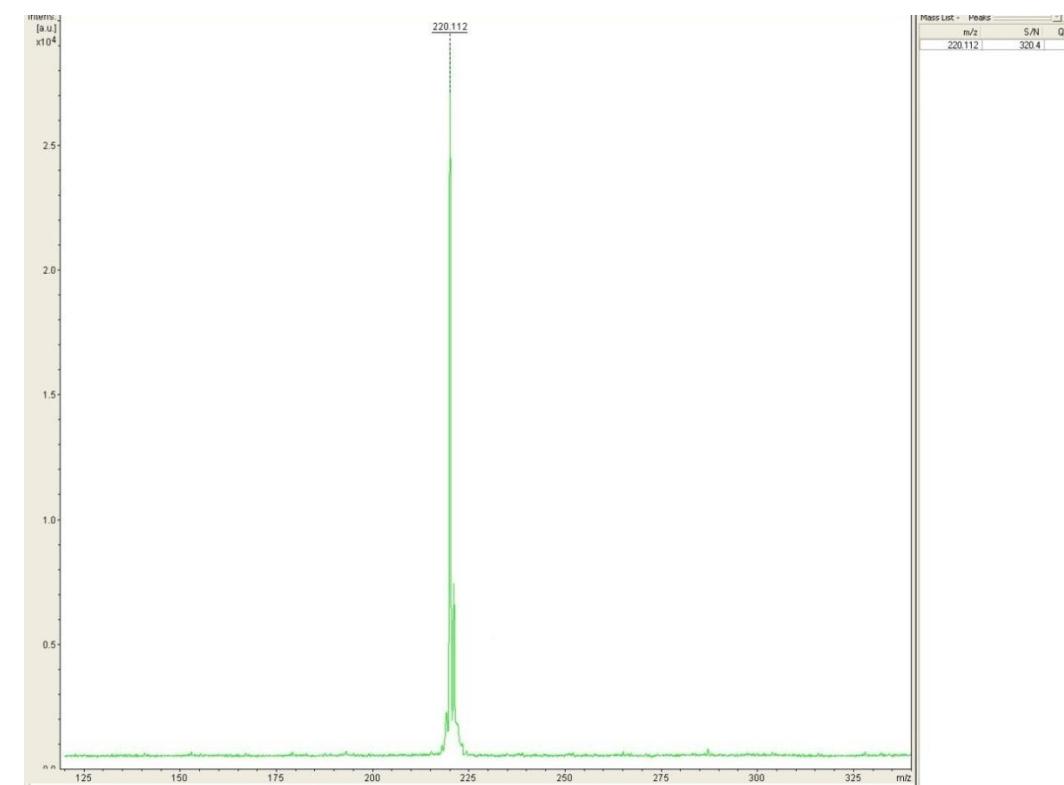
**Figure S52.**  $^1\text{H}$  NMR spectrum of IL **14** in  $\text{DMSO}-d_6$  (400 MHz)



**Figure S53.**  $^{13}\text{C}$  NMR spectrum of IL **14** in  $\text{DMSO}-d_6$  (100 MHz)



**Figure S54.**  $^{13}\text{C}$ -APT- NMR spectrum of IL **14** in  $\text{DMSO}-d_6$ (100 MHz)



**Figure S55.** Mass spectrum of IL **14**