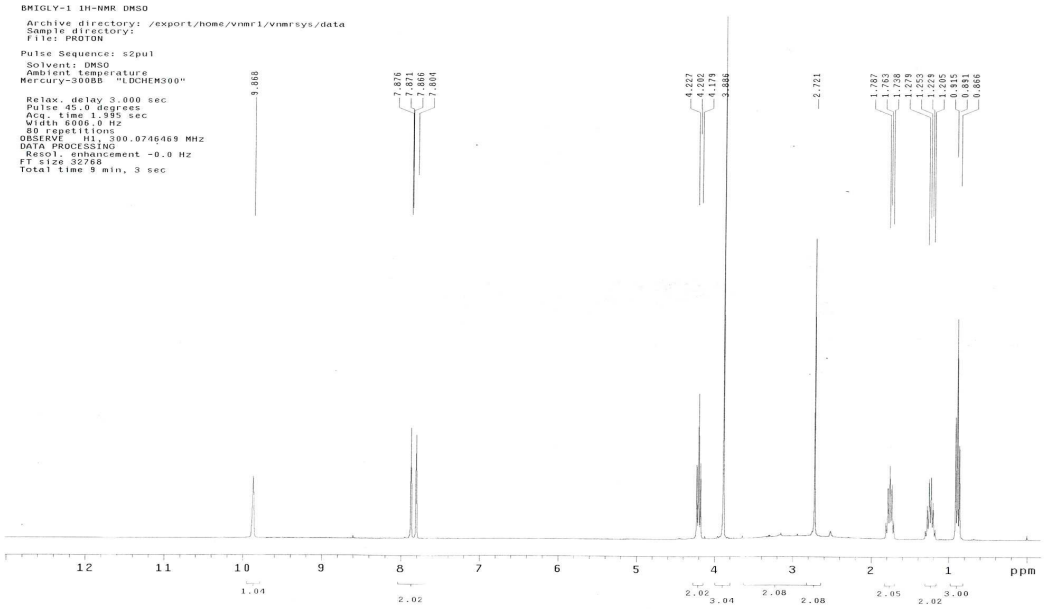

Fig. S1 ^{1}H NMR of [C_4mim][Gly].

The structure of [C_4mim][Gly] IL was confirmed by^{1}H NMR (Varian XL-300, DMSO, δ/ppm relative to TMS) : 0.866-0.915 (t, 3H, J = 7.35 Hz), 1.205-1.279 (m, 2H, J = 7.4 Hz), 1.738-1.787 (m, 2H, J = 7.35Hz), 2.721 (s, 2H), 2.998(d, 2H), 3.886 (s, 2H), 4.179-4.227 (q, 2H J = 7.2 Hz), 7.753 (s, 1H), 7.704 (s, 1H), 9.868(s, 1H). Elemental analysis. Calcd for $C_{10}H_{19}N_3O_2$. $1.3H_2O$: C, 50.74; H, 9.20; N, 17.75; O, 22.31. Found: C, 51.01; H, 9.24; N, 17.55; O, 22.20.

Table S1 ^{1}H NMR spectrum (300 MHz, DMSO) of BMIGly

Chemical shift	Hydrogen number	Radical
0.866-0.915 (t, *J*=7.35Hz)	3	$NCH_2CH_2CH_2CH_2CH_3$
1.205-1.279(m, *J*=7.4Hz)	2	CH_2CH_3
1.738-1.787 (m, *J*=7.35Hz)	2	$CH_2CH_2CH_3$
2.721(s)	2	CH_2NH_2
2.998(d)	2	NH_2
3.886(s)	3	NCH_3
4.179-4.227(q, *J*=7.2Hz)	2	NCH_2
7.753 (s)	1	C(4)H
7.704 (s)	1	C(5)H
9.868(s)	1	C(2)H

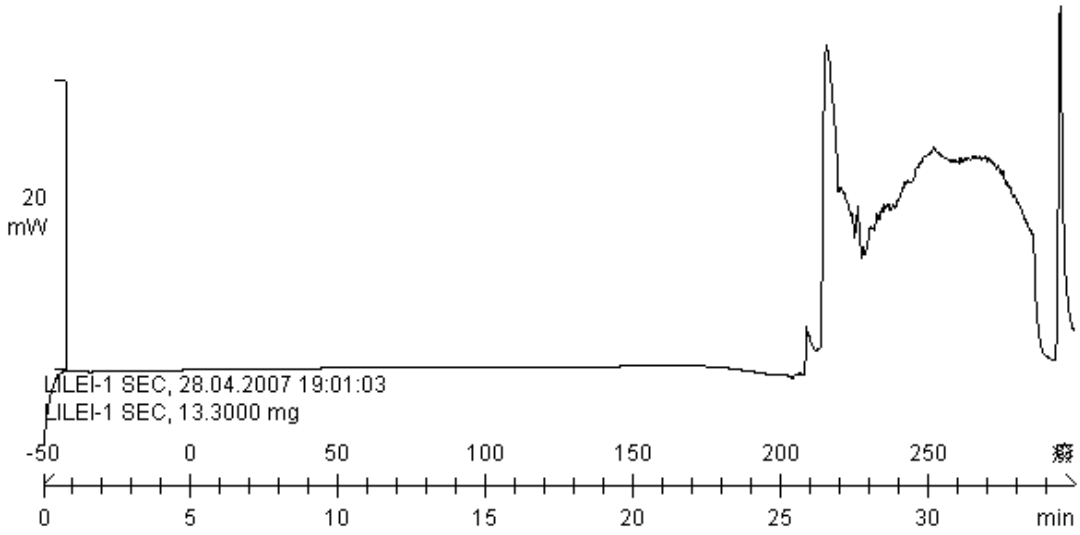

Fig. S2 DSC of [C_4mim][Gly].

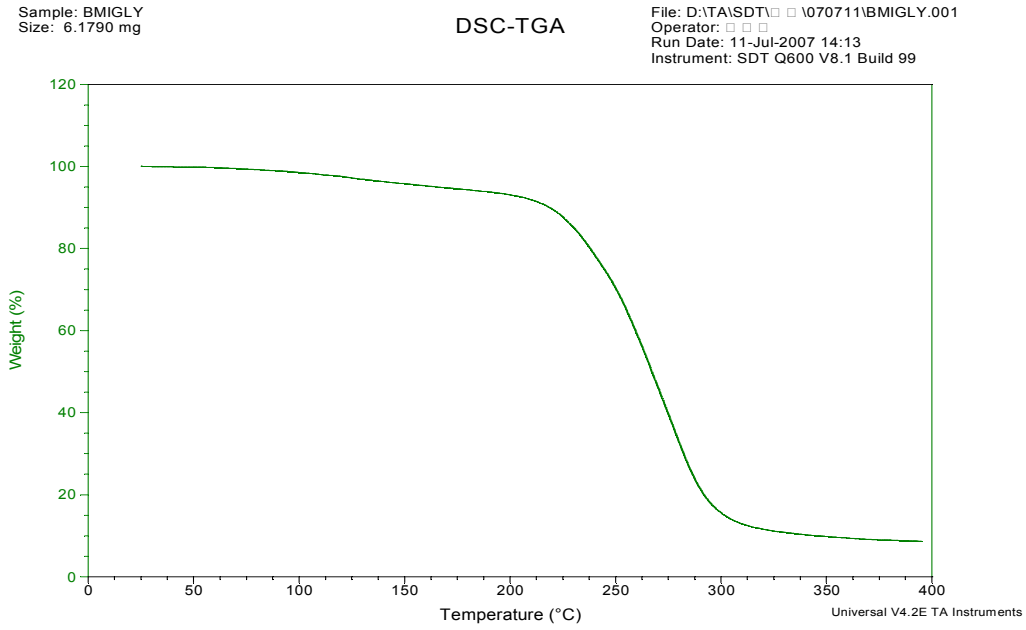

Fig. S3 TG of [C_4mim][Gly].

The thermal decomposition temperatures, T_d, 483.5 K, for [C_4mim][Gly] was determined using a TA Instruments (SDT) model Q600 thermogravimetric analyzer.