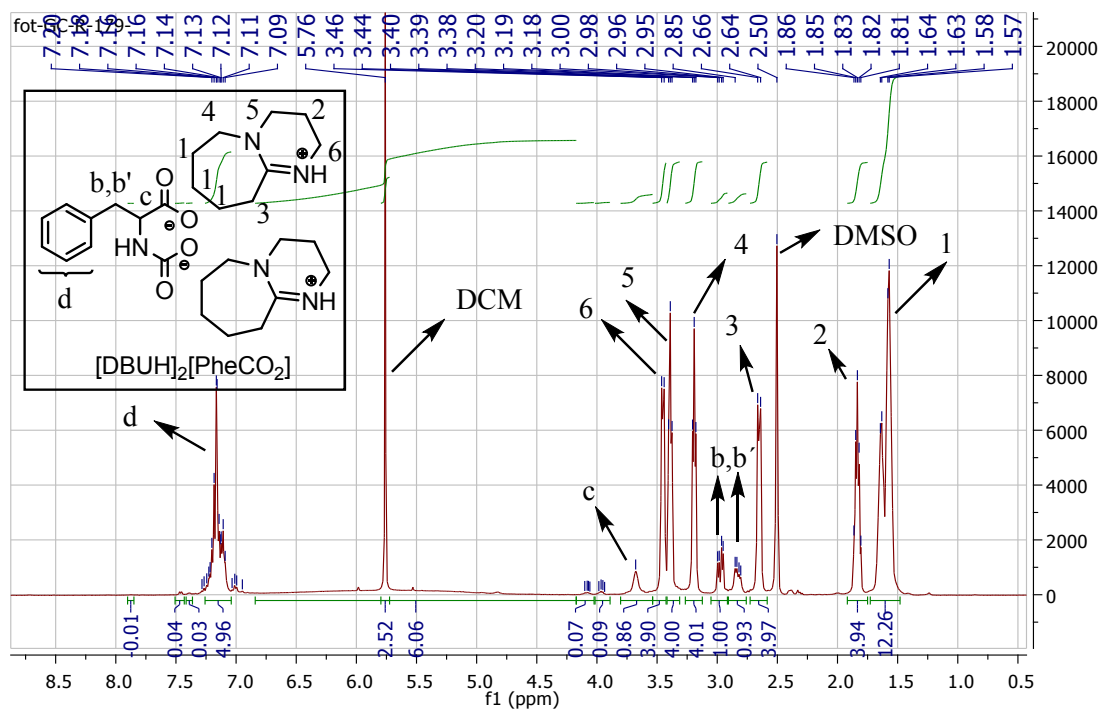
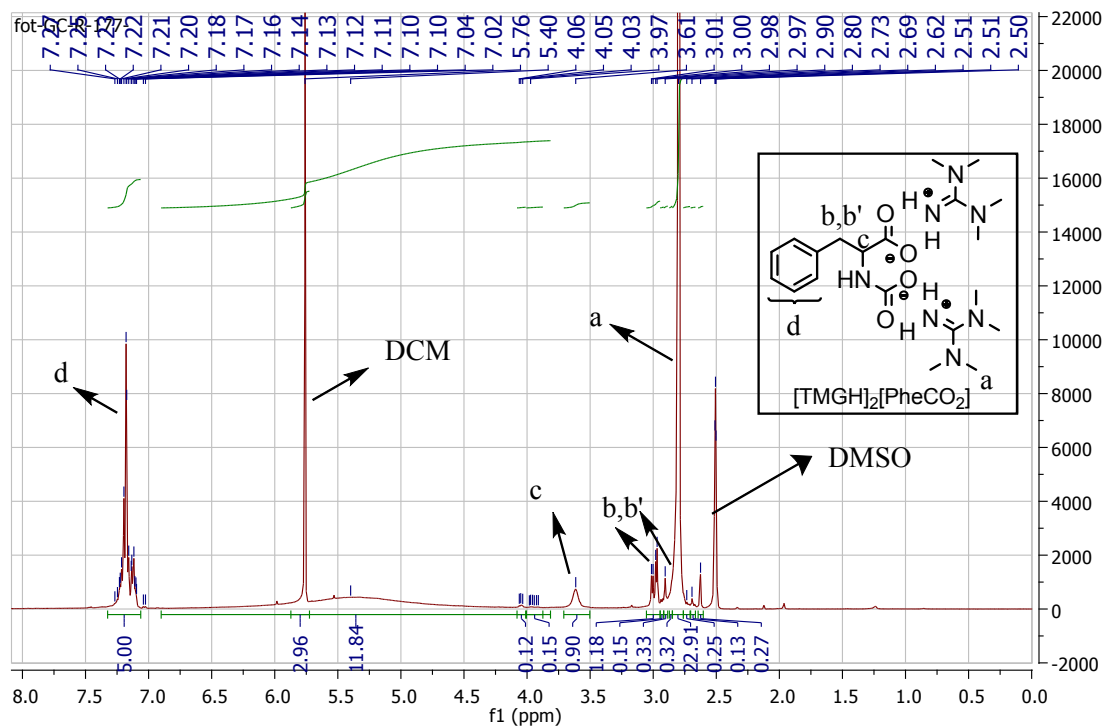
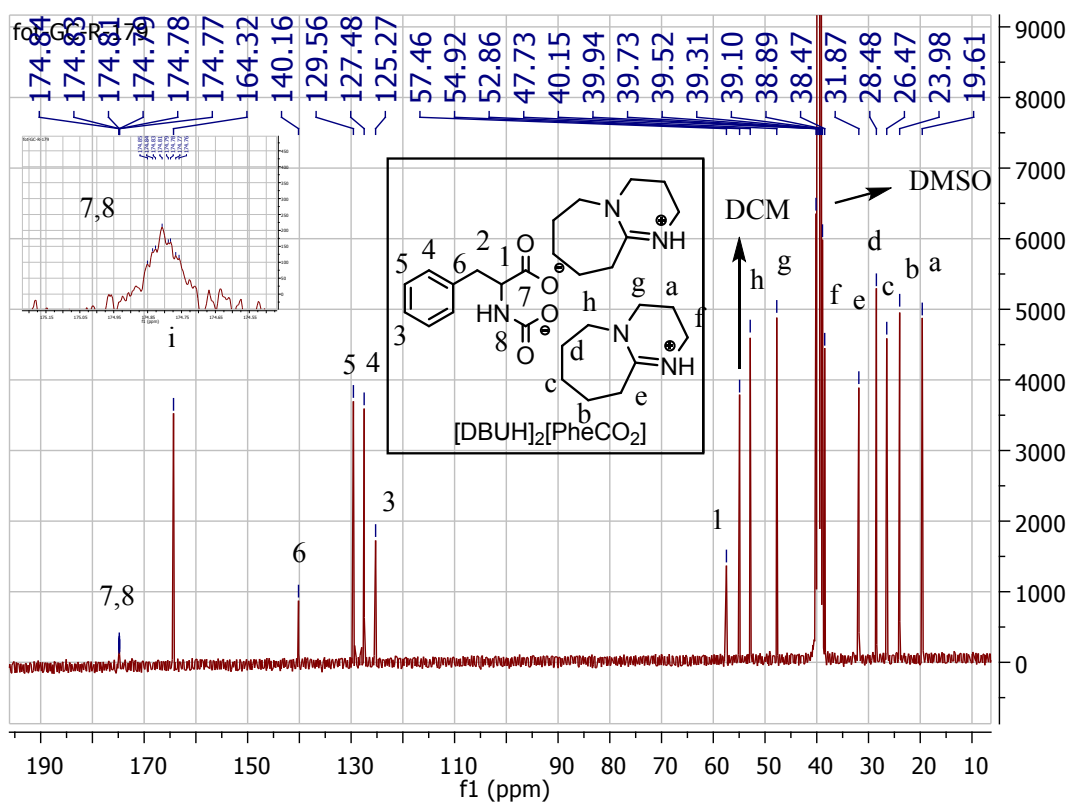
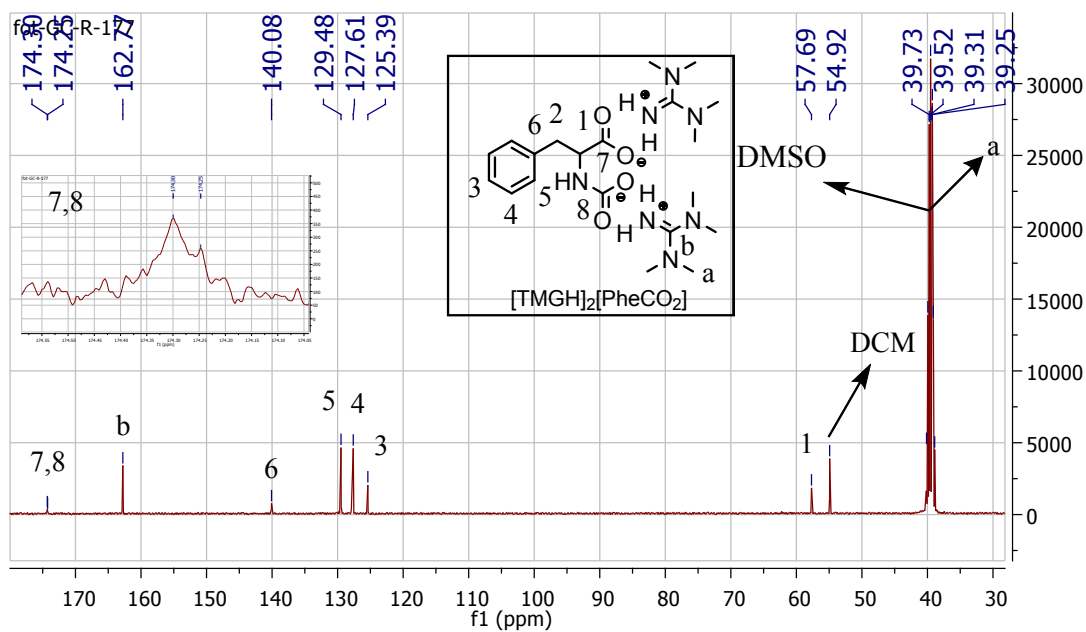


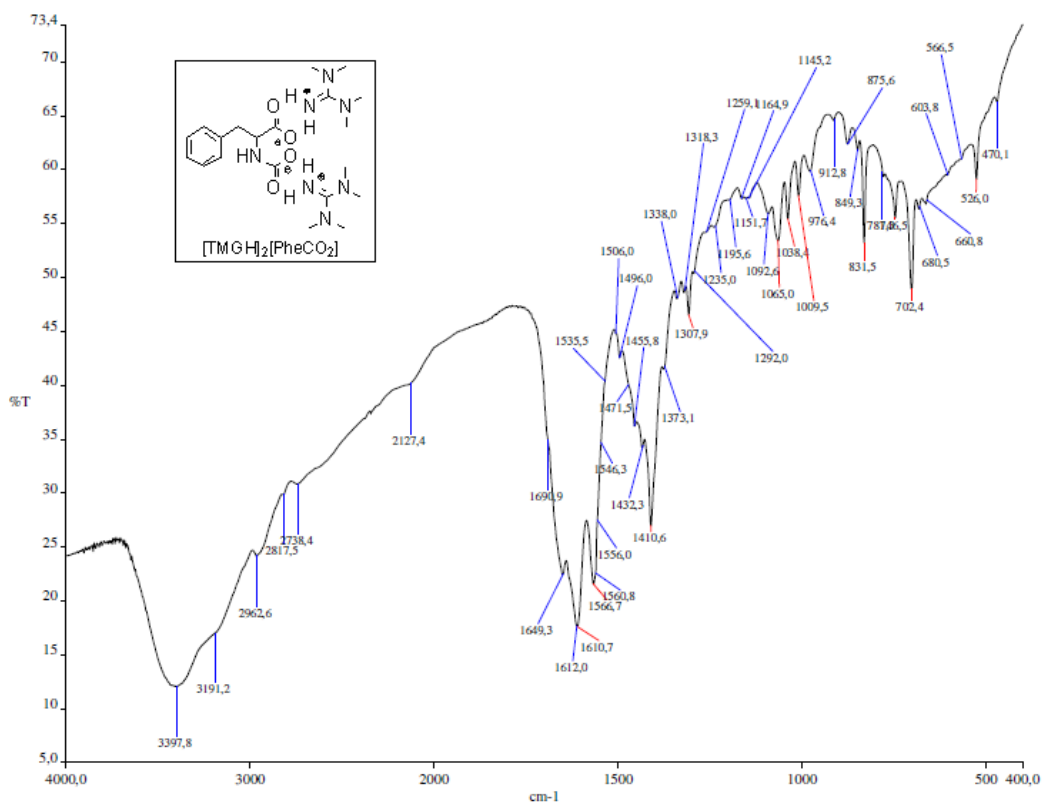
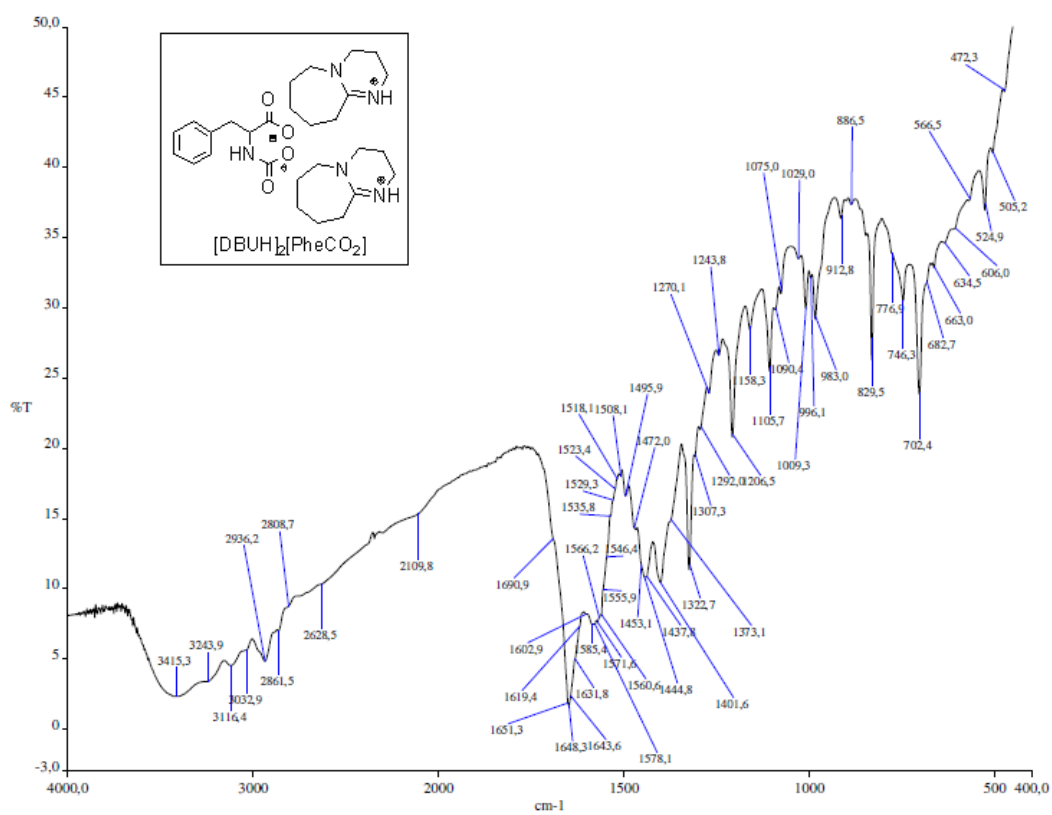
$^1\text{H-NMR}$ spectra of $[\text{TMGH}]_2[\text{PheCO}_2]$ and $[\text{DBUH}]_2[\text{PheCO}_2]$ in DMSO



¹³C-NMR spectra of [TMGH]₂[PheCO₂] and [DBUH]₂[PheCO₂] in DMSO



FTIR spectra of [TMGH]₂[PheCO₂] and [DBUH]₂[PheCO₂] in KBr



FTIR: carbamate and carboxylate characteristic bands of the prepared TMG based compounds

Compounds (TMGH ⁺ based carbamates)	FTIR cm ⁻¹ COO ⁻ COO ⁻ Zwitterionic aminoacid	FTIR cm ⁻¹ NCOO ⁻ {NCOO- from carbamate based TSILs [17]; from carbamate based amino-esters [13]; (NCOO ammonium carbamate ^a [22]) Bands not present in the spectra of TMGH ⁺ . AA: [24] ^b }
[TMGH ⁺] ₂ [GlyCOO ⁻]		1606 s, 1592 s {1666, 1575} (1650 s, 1400 s, 1300 m, 1024 w, 1010 w, 978 w, 831 m, 701 m, 666) 1700.00 m, 1561.57 s, 1561.6 s 1373.24 m, 1317.21 m, 1008.72 w, 979.81 w, 831.40 mw, 703.25 w, 668.29 w
[TMGH ⁺] ₂ [AlaCOO ⁻]		1621 s, 1589 s {1666, 1575} (1400 s, 1300 m, 1024 w, 1010 w, 978 w, 831 m, 701 m, 666 w) 1668.42 s, 1587.17 s, 1567.35 s, 1508.34 m 1372.48 m, 1329.95 m, 1m, 1009.1 w, 989.47 w, 830.8 w, 703.6 w, 669.3 w
[TMGH ⁺] ₂ [ValCOO ⁻]		1612 s, 1586 s, 1566 s {1666, 1575} (1400 s, 1300 m, 1024 w, 1010 w, 978 w, 831 m, 701 m, 666 w) 1672.13 m, 1587.17 s, 1567.35 s 1372.48 m, 1329.95 w, 1008.34 w, 980.38 w, 830.95 w, 703.68 w, 664.43 w
[TMGH ⁺] ₂ [LeuCOO ⁻]		1610 s, 1583 s {1666, 1575} (1400 s, 1300 m, 1024 w, 1010 w, 978 w, 831 m, 701 m, 666 w) 1688 m, 1566.36 sl 1373.14 m, 1316.54 m, 1297.16 m, 1009.73 w, 979.28 w, 831.21 m, 703.81 m, 668.97 m
[TMGH ⁺] ₂ [PheCOO ⁻]		1626 s, 1562 s {1666, 1575} (1400 s, 1300 m, 1024 w, 1010 w, 978 w, 831 m, 701 m, 666 w) 1690.9 m, 1566.7 s, 1560.8 s, 1556.0 s, 1546.3 s, 1535.5 m 1373.10 m, 1307.90 m, 1292.0 m, 1009.5 w, 976.4 w, 831.5 m, 702.4 m, 660.8 w 1373.10, 1009.5, 976.4, 831.5, 702.4, 660.8
[TMGH ⁺] ₂ [TrpCOO ⁻]		1665 s, 1612 s, 1584 s {1666, 1575} (1400 s, 1300 m, 1024 w, 1010 w, 978 w, 831 m, 701 m, 666 w) 1663.30 s, 1654.20 s, 1636.00 s, 1584.8 s, 1577.9 s, 1570.3 s, 1560.5 s, 1545.2 m, 1534.5 w, 1527.6 w 1375.0 m, 1313.9 w, 1292.0 w, 1007.1 w, 985.2 w, 829.5 w, 704.6 w, 660.8 w 1375.0, 1292.0, 829.5, 704.6

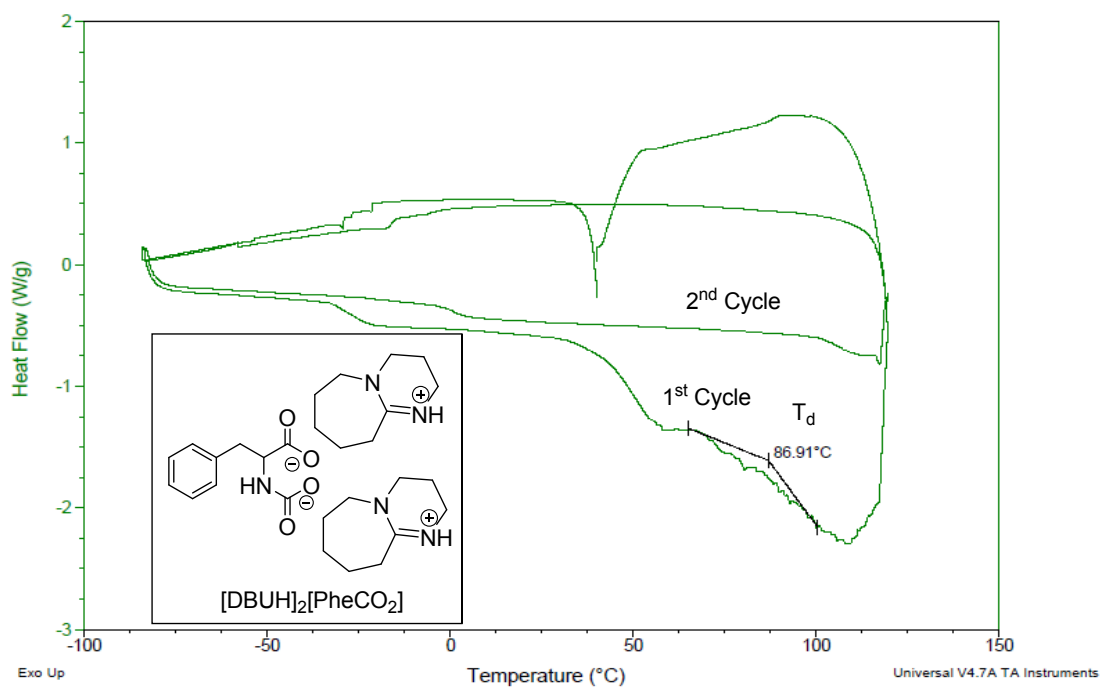
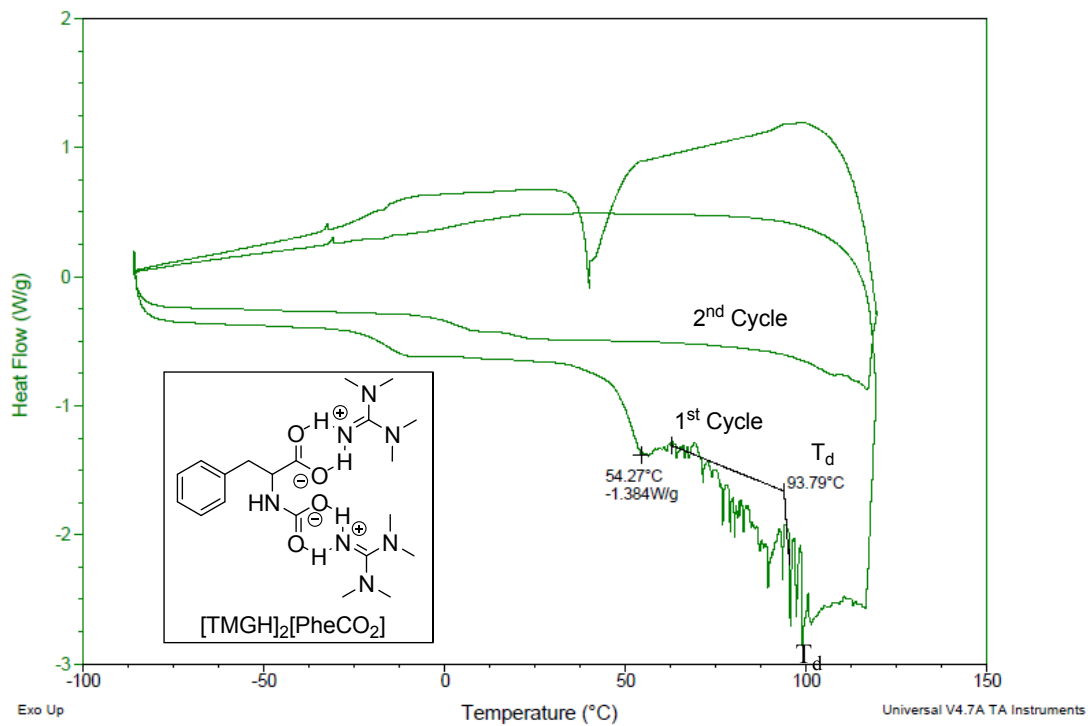
a: characteristic bands of ammonium carbamate after comparison with ammonium chloride. b: Not present within 5 cm⁻¹ interval.

FTIR: carbamate and carboxylate characteristic bands of the prepared DBU based compounds

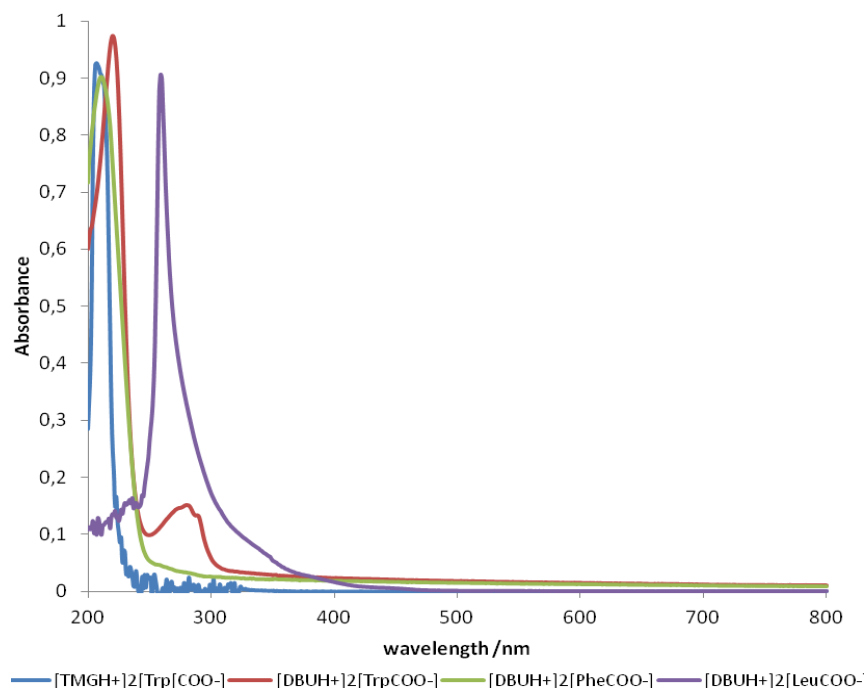
Compounds (DBUH ⁺ based carbamates)	FTIR cm ⁻¹ COO ⁻ Zwitterionic aminoacid COO ⁻	FTIR cm ⁻¹ NCOO ⁻ (NCOO ⁻ ammonium carbamate ^a [22]) {NCOO ⁻ from carbamate based amino-esters [13]; from carbamate based TSILs [17]} Bands not present in the spectra of TMGH ⁺ . AA ⁻ [24] ^b
[DBUH ⁺] ₂ [GlyCOO ⁻]		1606 s, 1592 s {1666, 1575} (1400 s, 1300 m, 1024 w, 1010 w, 978 w, 831 m, 701 m, 666 w) 1687.00 m, 1603.00 m, 1593.00 m 1372.51 w, 1324.78 m, 1301.59 w, 1008.91 w, 984.43 w, 831.37 w, 704.11 w 1372.51, 704.11
[DBUH ⁺] ₂ [AlaCOO ⁻]		1621 s, 1589 s {1666, 1575} (1400 s, 1300 m, 1024 w, 1010 w, 978 w, 831 m, 701 m, 666 w) 1691.43 m, 1641.00 s, 1589.56 s, 1566.43 s, 1519.76 m 1365.18 m, 1326.57 m, 1309.24 m, 1012.19 w, 986.89 w, 833.55 w, 706.15 w, 666.11 w 1326.57, 833.55, 706.15
[DBUH ⁺] ₂ [ValCOO ⁻]		1612 s, 1586 s, 1566 s {1666, 1575} (1400 s, 1300 m, 1024 w, 1010 w, 978 w, 831 m, 701 m, 666 w) 1690.84 m, 1632.50 m, 1586.60 s, 1583.00 m 1371.73 m, 1326.50 m, 1308.72 w, 1009.02 w, 985.20 w, 831.32 w, 703.71 w, 664.86 w
[DBUH ⁺] ₂ [LeuCOO ⁻]		1610 s, 1583 s {1666, 1575} (1400 s, 1300 m, 1024 w, 1010 w, 978 w, 831 m, 701 m, 666 w) 1692.22 m, 1625.47 s, 1614.05 m, 1603.19 m, 1568.39 m, 1563.17 m 1371.23 m, 1325.20 m, 1296.31 m, 1009.42 w, 984.41 w, 831.38 w, 703.40 w, 669.43 w
[DBUH ⁺] ₂ [PheCOO ⁻]		1626 s, 1562 s {1666, 1575} (1400 s, 1300 m, 1024 w, 1010 w, 978 w, 831 m, 701 m, 666 w) 1690.9 m, 1651.3 s, 1643.6 s, 1631.8 s, 1619.4 s, 1602.9 s, 1585.4 s, 1578.1 s, 1571.6 s, 1566.2 s, 1560.6 s, 1555.9 s, 1546.4 m, 1535.8 m, 1529.3 m, 1523.4 m, 1518.1 m 1373.1 m, 1322.7 s, 1307.3 m, 1292.0 m, 1009.3 w, 970.5 w, 829.5 w, 702.4 w, 663.0 w 1373.1, 1292.0, 1009.3, 970.5, 829.5, 663.0
[DBUH ⁺] ₂ [TrpCOO ⁻]		1665 s, 1612 s, 1584 s {1666, 1575} (1400 s, 1300 m, 1024 w, 1010 w, 978 w, 831 m, 701 m, 666 w) 1692.4 m, 1630.8 s, 1620.0 s, 1585.0 s, 1572.4 s, 1556.2 s, 1536.7 m 1370.8 m, 1324.2 s, 1295.9 m, 1008.6 w, 968.2 w, 830.6 w, 703.1 w, 662.7 w 1370.8, 1295.9

a: characteristic bands of ammonium carbamate after comparison with ammonium chloride. b: within 5 cm⁻¹ interval.

DSC Thermograms of [TMGH]₂[PheCO₂] and [DBUH]₂[PheCO₂]



UV-Visible spectra



The UV/Vis spectra were collected using a Cary 100 Bio spectrometer and 10 mm quartz absorbance cells.

Compound	Solvent	Concentration /M	λ_{\max} /nm
[TMGH ⁺] ₂ [TrpCOO ⁻]	Acetone	2.41×10^{-5}	207
[DBUH ⁺] ₂ [TrpCOO ⁻]	Ethanol	2.35×10^{-5}	220, 280
[DBUH ⁺] ₂ [PheCOO ⁻]	Ethanol	3.37×10^{-5}	211
[DBUH ⁺] ₂ [LeuCOO ⁻]	DMSO	6.66×10^{-3}	259