

Supplementary Information Figure S1a: Effect of the skimmer 1 voltage (sk_1) on the ESI (+) mass spectra of [BuMeIm][Tf₂N] in acetonitrile–water solution.

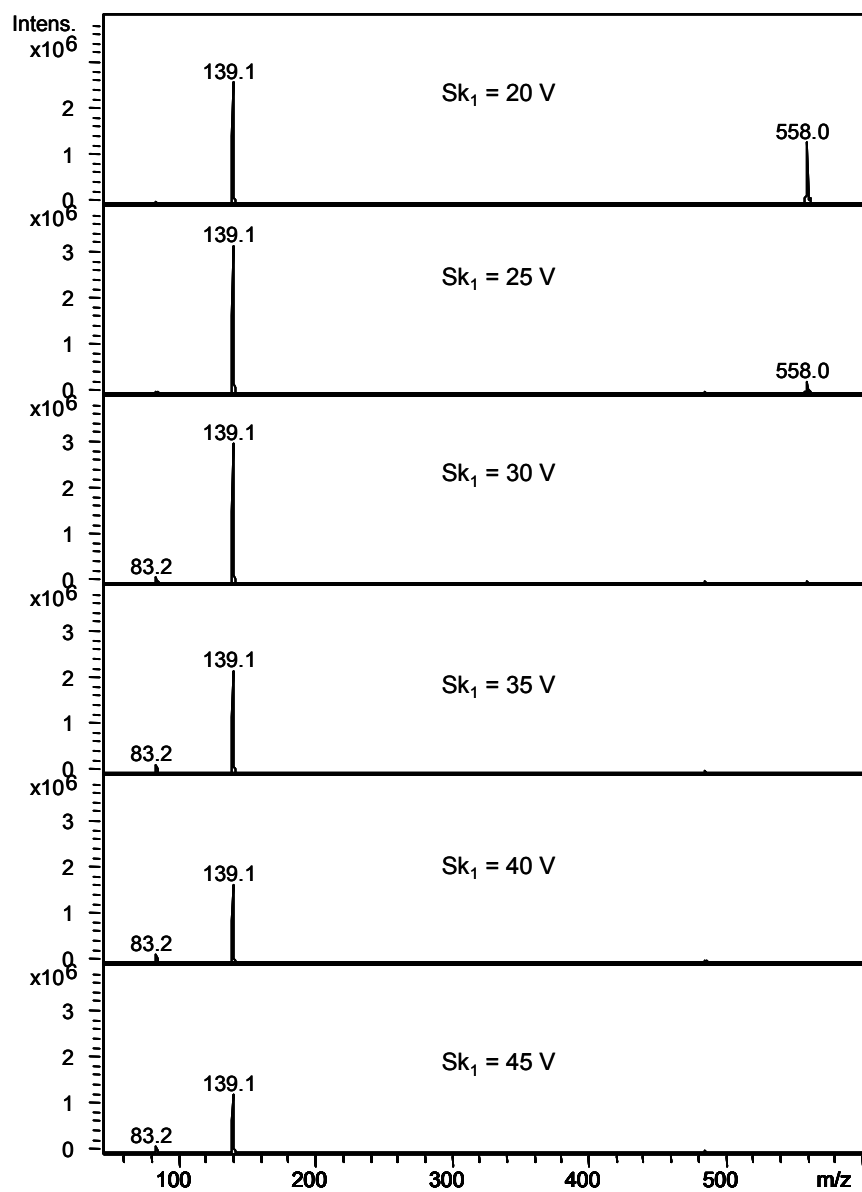
Supplementary Information Figure S1b: Effect of the skimmer 1 voltage (sk_1) on the ESI (–) mass spectra of [BuMeIm][Tf₂N] in acetonitrile–water solution.

Supplementary Information Figure S2: MS² spectra of BuMeIm⁺ ($m/z = 139.1$) of [BuMeIm][Tf₂N] solution in acetonitrile-water.

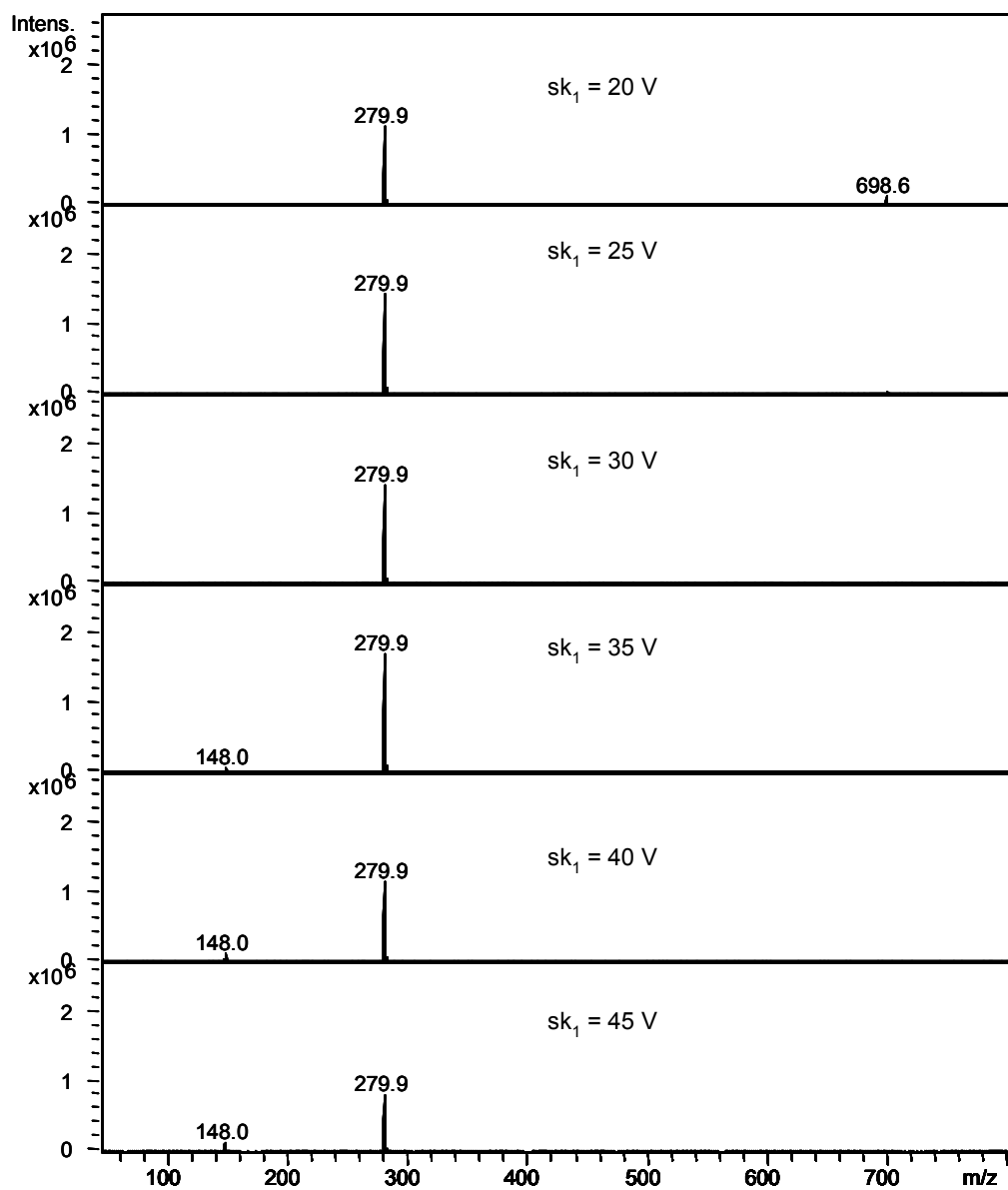
Supplementary Information Figure S3: MS² spectra of Tf₂N[–] ($m/z = 279.7$) of [BuMeIm][Tf₂N] solution in acetonitrile-water.

Supplementary Information Figure S4: ESI (–) mass spectra of [BuMeIm]Cl in acetonitrile-water solution.

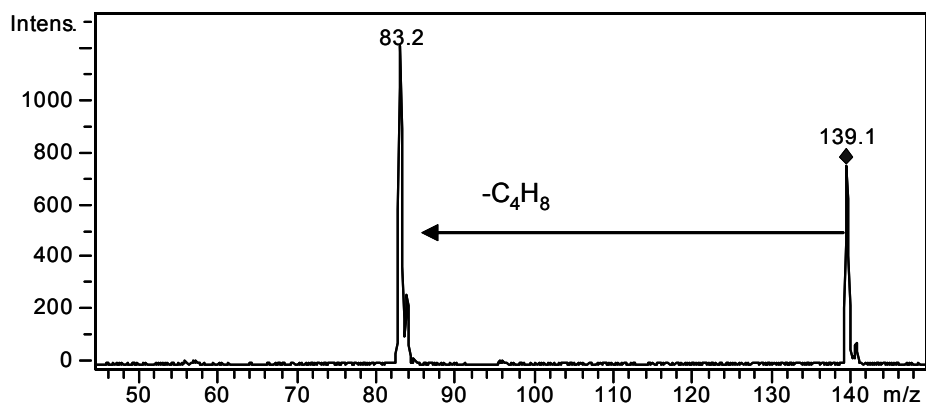
Skimmer 1 voltage = –45V. M = [BuMeIm]Cl.



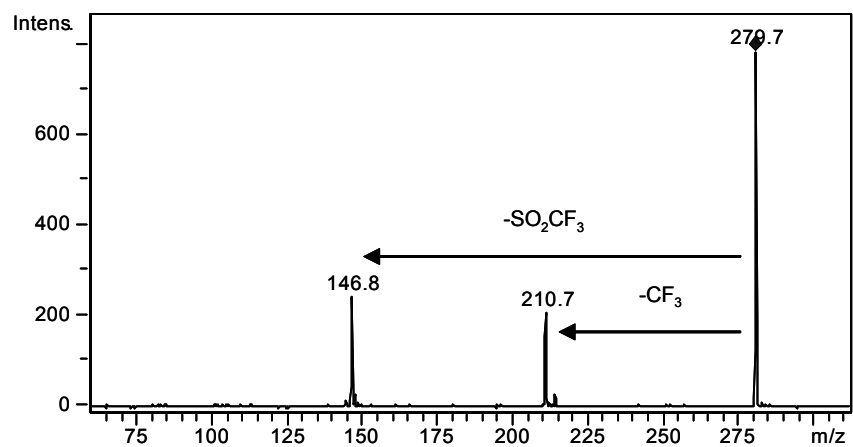
Supplementary Information Figure S1a



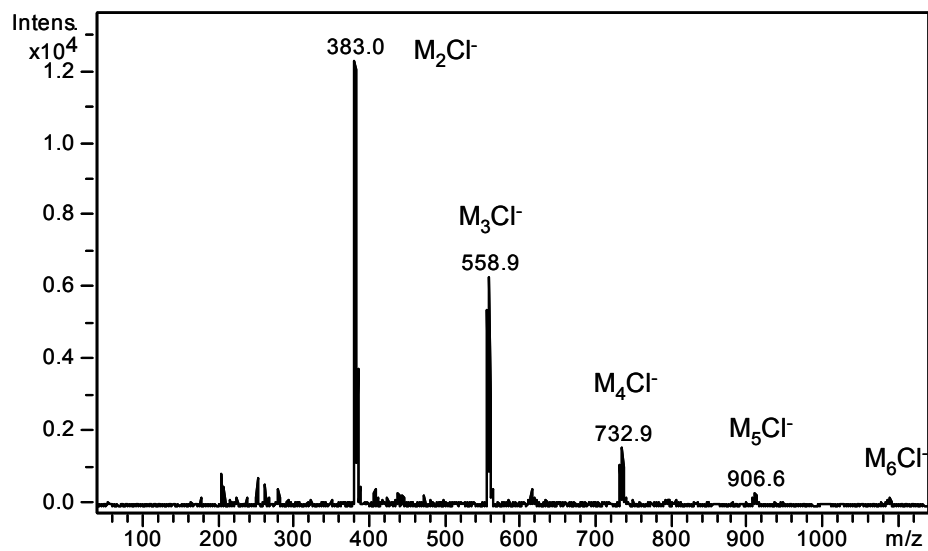
Supplementary Information Figure S1b



Supplementary Information Figure S2



Supplementary Information Figure S3



Supplementary Information Figure S4