Extraction of Actinides by Tertiary Amines in Room Temperature Ionic Liquids: Evidence for Anion Exchange as a Major Process at High Acidity and Impact of Acid Nature

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ELECTRONIC SUPPLEMENTARY INFORMATION
1. NMR measurements

The mineral acids was DCl (35\(^\%\)). The internal standard used in 1H NMR was trisodium citrate dehydrate (Sigma--Aldrich, 99 \%) chosen because its protons are well separated from those of the studied IL cations. The standard used in 19F NMR was sodium trifluoroacetate (Alfa Aesar, 98 \%). 1-methyl-3-octylimidazolium chloride had a purity >97 \% (Aldrich) for the T1 measurements.

![Fig. S-1: NMR data on C\textsubscript{8}mim\textsuperscript{+} (closed circle) and Tf\textsubscript{2}N\textsuperscript{-} (empty diamond)](image-url)
## 2. Titration data

**Table 1:** Acid uptake by pure IL

<table>
<thead>
<tr>
<th>Acid</th>
<th>C$_4$mimTf$_2$N</th>
<th>C$_6$mimTf$_2$N</th>
<th>C$_8$mimTf$_2$N</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCl</td>
<td>No solubilization</td>
<td>No solubilization</td>
<td>No solubilization</td>
</tr>
<tr>
<td>HNO$_3$</td>
<td>6% solubilization</td>
<td>6% solubilization</td>
<td>5% solubilization</td>
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