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Synthesis of Ionic Liquids: Tips to Produce Highly Pure Ionic Liquids and Obtain Good Yield

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Ionic liquids and their precursors in variation of cations side chains which are alkane, ether, disiloxane and trisiloxane have been successfully synthesized including 12 of them are novel compounds. They have been successfully characterized with ¹H-NMR, ²⁹Si-NMR, ¹³C-NMR, mass spectrometry, elemental analysis and FT-IR spectroscopy. The synthesis of ionic liquids is carried out by alkylation reaction and metathesis reaction. Even though these methods are conventional and straight forward, they were sometimes more difficult to carry out than reported. In addition, a common problem is that yields of the ionic liquid precursors may be very different from those reported in the literature. Therefore, this paper will comprehensively discuss techniques for the synthesis of ionic liquids precursors and ionic liquids in good yield and high purity.

Keywords: Ionic Liquids, Synthesis, Alkane, Ether, Siloxane.