Effect of Oxidizer and Alkali Metal Salts on Decomposition of Ionic Liquid of Low Concentration

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N^1,N^1,N^2,N^2-tetramethylethane-1,2-diamine based ionic salts(TMEDA), N^1,N^1,N^1,N^2,N^2,N^2-hexamethylethane-1,2-diaminium dicyanamide(HMEDA-$(DCA)_2$) was prepared following the well-known chemical reaction scheme. The chemical structure of the HMEDA-$(DCA)_2$ was confirmed using ^{13}C NMR spectrum and elemental analysis. The ignition delay of 40 wt% HMEDA-$(DCA)_2$ solution was controlled to 20-100 msec dramatically using alkali metal salts, Li(CH_3COO), Mg(CH_3COO) and Ca(CH_3COO) as a co-catalyst when white fume nitric acid was utilized as an oxidizer and also the oxidizer of low toxicity such as hydrogen peroxide was utilized.