

Applications of Ionic Liquids: (1) Electrolytes for Batteries, (2) Stabilizers for Metal Nanoparticles

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Recently, considerable interest has been manifested in the use of room temperature ionic liquids as battery electrolytes and green-solvent alternatives owing to their unique electrochemical and physical properties. Ionic liquids are liquids that are comprised entirely of ions like ionic melts which are produced by heating normal inorganic salts. At present the ionic liquids can be produced at temperatures as low as 177.15 K and appear to be undemanding, not extremely expensive, and relatively easily to manufacture. They generally feature good stability in air and water, a wide liquid range, and relatively favorable viscosity and density characteristics. Moreover, either the length of side chain of cation or the specifically designed anion can be easily controlled for various uses. These features facilitate applying ionic liquids to various industrial applications. The objective of this study is to evaluate the preliminary results related to some industrial applications of ionic liquids. : (1) electrolytes for batteries, (2) stabilizers for metal nanoparticles.