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Solvents and Ionic Liquids used in green synthesis

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Abstract: *Ionic liquids have become very popular in recent years because they are eco-friendly and useful as solvents. This paper explains their properties and how they are used in green chemistry. Ionic liquids have special features like very low vapour pressure, a wide liquid range, and adjustable properties, which make them suitable for many purposes. They are also better for the environment because they do not evaporate easily, are generally non-toxic, and can be reused. These qualities help support sustainable chemical practices. The paper also covers their various uses, such as in catalysis, extraction, energy storage, and making new materials. By reviewing recent progress and real examples, this paper gives a clear overview of how ionic liquids are influencing green chemistry and helping move toward a more sustainable future. Traditional reaction media, especially volatile organic solvents (VOS), cause a lot of air pollution and make separation and recycling difficult. Because of growing environmental concerns, scientists are now searching for safer, eco-friendly alternatives. Ionic liquids (ILs) have become strong candidates for "green" solvents because they have extremely low vapor pressure and high thermal stability. These properties make them easier to contain, reuse, and recover after reactions.*

Keywords: Sustainability, used for green synthesis, importance of green chemistry, Ionic liquids

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