

Review Paper: Role of Ionic Liquids in Organic Synthesis

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Abstract: *Ionic liquids (ILs) have emerged as versatile and sustainable solvents in organic synthesis due to their unique properties such as low volatility, high thermal stability, and tunable physicochemical characteristics. This review provides an overview of the recent advancements and applications of ILs as solvents in various organic synthesis methodologies, including catalysis, extraction, and reactions under mild conditions. The versatility of ILs in promoting green chemistry practices and their potential to revolutionize traditional synthetic processes are discussed, along with challenges and future prospects in this rapidly evolving field.*

Keywords: Ionic liquids, organic synthesis, sustainable solvents, green chemistry, low volatility, high thermal stability