The present thesis, entitled as “Organocatalytic Asymmetric Synthesis of Imidazolidines, Pyrrolidines, Oxazolidines and Dihydroquinolones” have been divided into six chapters based on the results achieved from the experimental works performed during the entire course of the PhD research programme. Chapter 1 narrates a brief introduction and the literature review about asymmetric organocatalysis and reactive nature of different H-bonding catalysts including bifunctional thiourea and squaramide catalysts has been discussed. Also a detailed discussion about the hetero Michael cascade reactions, organocatalytic asymmetric Michael and Mannich reactions has been elaborated here. Chapter 2 demonstrates first highly diastereo- and enantioselective synthesis of 2,4-disubstituted imidazolidinines via a domino addition-aza-Michael reaction. Bifunctional squaramide catalysts were successfully employed in this reactions. Chapter 3 describes bifunctional squaramide mediated organocatalytic asymmetric cascade reaction for the construction of highly substituted pyrrolidines having stereogenic quaternary centre at 3-position. Chapter 4 reveals an unprecedented organocatalytic asymmetric synthesis of 2,5-disubstituted oxazolidines. Bifunctional squaramide catalyst derived from quinine amine furnished the oxazolidine derivatives with excellent enantio- and diastereoselectivities. Chapter 5 illustrates first organocatalytic asymmetric Michael reaction for the synthesis of biologically important 3,3-disubstituted-3,4-dihydro-2-quinolones. Cinchona alkaloid derived bifunctional amino-thiourea catalysts were found to be the best catalysts and the products were isolated in high enantio- and good diastereoselectivities. Chapter 6 delineates the first organocatalytic asymmetric Mannich reaction for the synthesis of optically active 3,3-disubstituted-3,4-dihydro-2-quinolones. This method is potent for the synthesis of biologically important 3,3-disubstituted-dihydro-2-quinolones. Cyclohexyldiamine derived bifunctional amino-thiourea catalyst was quite efficient to provide the products in high enantio- and good diastereoselectivities.