**Thesis abstract**: The thesis entitled "Development of Acid-Catalyzed C–C and C– N Bond Forming Methodologies by Utilizing Fluorinated Alcohols as Solvents" is a comprehensive exploration into the development of innovative synthetic pathways toward the construction of C–C/C–N bonds, which are essential in creating complex organic molecules. By employing fluorinated alcohols as solvents, these works seek to diminish the dependence on metal catalysts, thereby fostering more sustainable and cost-efficient synthetic methodologies.