
PREFACE

N-Nitroso compounds and their derivatives occur in a wide range of foods, natural products, fluids, rubber additives, agricultural chemicals, tobacco, detergents, rust solvents, plastics, leather products, textiles, cosmetics, and drugs. They are occasionally used as solvents or synthetic intermediates in organic chemistry and act as a directing group for inert C-H bond activation to give *ortho*-functionalized aniline compounds. *N*-Nitrosamines undergo reduction, oxidation, cyclization, rearrangement, denitrosation, photochemical reaction, etc.

In this context, the thesis entitled “**Synthesis and Applications of *N*-Nitrosamines and *N*-Nitrosamides in Different Organic Transformations**” discuss about the synthesis and applications of *N*-Nitrosamines and *N*-Nitrosamides. **Chapter 1** provides a general introduction to different nitroso compounds and their synthetic applications. **Chapter 2** describes the synthesis of glycouronamides via transamidation approach using *N*-nitrosamide intermediates under mild conditions at room temperature. **Chapter 3** describes an efficient and practical method for the denitrosation of *N*-nitrosamines using ethanethiol with PTSA (*p*-toluenesulfonic acid) *via* trans-nitrosation strategy. **Chapter 4** describes the synthesis of *N*-nitroso sulfonamides from sulfonamides and tert-butyl nitrite (TBN) and their synthetic applications in nitroso transfer reactions under mild reaction conditions. **Chapter 5** describes the stereoselective synthesis of *O*-glycosides from 2-amino thioglycosides using *N*-nitroso group as directing group. The reaction was activated by using NIS/TfOH system in dichloromethane at -10 °C Finally, the **Chapter 6** Provides summarize and conclude the total thesis work.