ABSTRACT

Chapter-1:- General introduction.

This chapter is introductory in nature dealing with 1H-Indazole, 2H-Indazole and Oxadiazole derivatives, their general methods for synthesis, characterization and reaction that leads to modified and highly functionalized compounds, their applications in various fields of interest. At the end of chapter suitable references are listed.

Chapter-2:- Synthesis of 1-H Indazole.

The chapter two is deals with theoretical and experimental part of the synthesis leading to indazole derivatives. It mainly includes Introduction, experimental synthesis, result and discussion with spectral data. This chapter contains synthesis of Indazole derivatives not only conventional method but also modern method like microwave irradiation. At the end of chapter suitable references are listed.

Chapter-3:- Synthesis of 3-(Substituted Phenyl [1,3,4]oxadiazol-2-yl)-1H-indazole.

Chapter three is deals with theoretical introduction, experimental details, results and discussion with characterization data. It related to the synthesis of Indazole bearing simple Oxadiazole by using two synthetic strategies. At the end of chapter suitable references are listed.

Chapter-4:- Synthesis of 3-[(Substituted Fluoro-phenyl)-[1,3,4]oxadiazol-2-yl]-1H-indazole.

Chapter four is about the synthesis of Fluorinated oxadiazole derivatives. It is divided as introduction part, synthetic part and discussion on spectral data like ¹H NMR, ¹³C NMR, IR, and Mass and also on the results. At the end of chapter suitable references are listed.

X = 2-F; 3-F; 4-F; 2,4-di-F etc.

Chapter-5:- Synthesis of 3-(Substituted Phenyl-[1,2,4]triazolo[3,4-b][1,3,4]thiadiazol-6-yl)-1H-indazole.

Chapter five is about the synthesis of 3-(Substituted Phenyl-[1,2,4]triazolo[3,4-b][1,3,4]thiadiazol-6-yl)-1H-indazole. This chapter is deals with theoretical introduction, experimental details, results and discussion with characterization data. At the end of chapter suitable references are listed.

Chapter-6:- Synthesis of 3-(Substituted Phenyl - [1,2,4]triazolo[3,4-b][1,3,4]thiadiazol-3-yl)-1H-indazole.

Chapter six is about the synthesis of 3-(Substituted Phenyl - [1,2,4]triazolo[3,4-b][1,3,4]thiadiazol-3-yl)-1H-indazole. It is divided as introduction part, synthetic part and discussion on spectral data like ¹H NMR, ¹³C NMR, IR, and Mass and also on the results. At the end of chapter suitable references are listed.

Chapter-7:- Synthesis of Substituted hexahydro-2H-indazole and Substituted tetrahydro-indazol-3-one.

In this chapter we were introduce the synthesis of 2-Substituted-7-(Substituted-benzylidene)- Substituted-3,3a,4,5,6,7-hexahydro-2H-indazole and 2-Phenyl-Substituted phenyl-1,2,4,5-tetrahydro-indazol-3-one. This chapter is deals with theoretical introduction, experimental details, results and discussion with characterization data. At the end of chapter suitable references are listed.

$$R_3$$
 R_2

Chapter-8:- Biological activity.

Chapter Eight is regarding the application part of synthesized molecules like biological activity.

At the end of chapter suitable references are listed.