



INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI  
SHORT ABSTRACT OF THESIS

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Programme of Study : Ph.D.

Thesis Title: Exploration of Multicomponent Reactions For The Constructions of Chromenes And Highly Substituted Benzene Derivatives

Name of Thesis Supervisor(s) : Prof. Abu. T. Khan (Supervisor)

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SHORT ABSTRACT

The thesis accomplished the synthesis of oxygen containing heterocycles, mainly chromene and flavone derivatives, which were fruitfully synthesized by using Multicomponent Reactions. It is evident from the literature that chromene and flavone derivatives are highly biologically active, and used in medicinal chemistry. It is believed that, our efficient synthetic methodologies will be extremely useful in future for the entrée of some new compounds and can be further studied for biological activities. In addition, an upgraded synthetic protocol were developed for the synthesis of 3,5-disubstituted-2,6-dicyanoaniline, which is enormously used in industries for numerous purposes. As, the product comprises different functional group that is acceptor-donor-acceptor group, it can be further transformed to a scaffold with different functional group and the moiety can be used for multipurpose. The summarized result of the thesis is schematically shown below.

