Abstract

Studies towards the synthesis of 6*H*-chromenes, polyaromatics and biaryls by Pd and Cu catalyzed cross coupling reactions

The thesis entitled "***Studies towards the synthesis of 6H-chromenes, polyaromatics and biaryls by Pd and Cu catalyzed cross coupling reactions***" has been organized in five chapters.

Chapter 1 delivers an abrupt view on the wide applications of palladium and copper catalyzed coupling reactions to construct different organic structures in recent time.

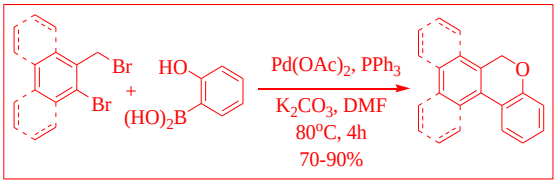
Chapter 2 describes a palladium catalyzed protocol to synthesize substituted benzo[c]chromenes. This approach is cascade in nature and consists of Suzuki cross coupling and intramolecular substitution.

Chapter 3 illustrates the synthesis of 3,3-dimethyl indanones and analogues by palladium mediated Heck reaction. The key step for this transformation is intramolecular and oxidative in nature.

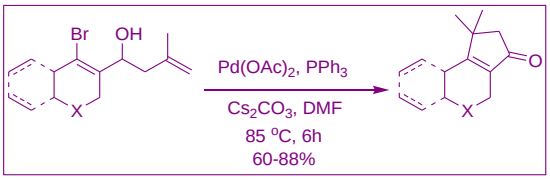
Chapter 4 depicts a one pot technique to develop phenanthrenequinone skeletons and derivatives. It includes palladium catalyzed Suzuki cross coupling and copper catalyzed cross dehydrogenative coupling.

Chapter 5 elucidates the study of a newly developed heterogeneous catalyst and its applications on cross coupling reaction to produce a series of biaryls.

Chapter 6 summarizes the pivotal findings of the present inspections.



Chapter 2



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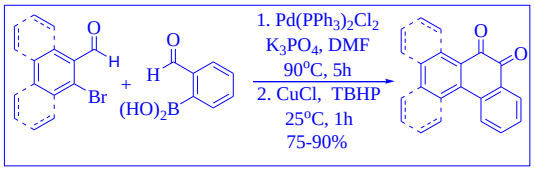

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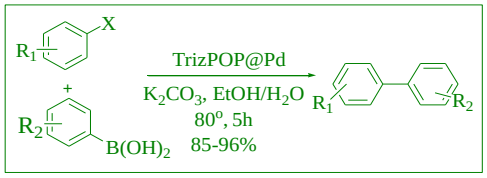

Chapter 5

***Keywords*:** *Palladium catalyst, cascade reaction, chromene, 1-indanone, phenanthrenequinones, cross dehydrogenative coupling, copper catalyst, biaryls*