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FUNCTIONALIZATION *VIA* C-H ACTIVATION – A GREEN CONCEPT

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Abstract. During the past decade the metal catalyzed direct functionalization of C-H bond has received tremendous interest in organic synthesis as this process eliminates the prefunctionalization step and thus reduces the number of steps and improves atom economy avoiding loss of functional groups as in usual cross coupling. Usually a hetero-atom containing unit is used in the presence of a transition metal for activation of the C-H bond followed by functionalization. Hence C-H functionalization is primarily based on green concepts.

Recently our group has demonstrated functionalization of C-H bonds in various heterocycles with useful moieties *via* C-H bond activation. These include nitration of *(E)*-azoarenes.,[1] acylation of azoarenes.,[2] remote C-4 etherification of 8-aminoquinoline amides.,[3] Cu(OAc)2 promoted *ortho*- C (sp2)−H amidation of 8-aminoquinoline benzamide with acyl azide tandem *ortho*-C-H amination.,[4] Ipso C-I cyanation of iodoarenes.,[5] and olefination of 8-aminoquinoline benzamide. These topics will be discussed.

References

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