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Title:	Studies on Stereoselective Synthesis of Functionalized Aliphatic Chains Containing Stereogenic Centers through the Pd(II)- Catalyzed C-H Activation
Authors:	Gopalakrishnan, B. (/jspui/browse?type=author&value=Gopalakrishnan%2C+B.)
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Abstract:	The transition metal-catalyzed C(sp ³)-H and C(sp ²)-H functionalization is emerging as one of the important synthetic transformations for the construction of C–C and C–X bonds (X = C, N, O, P, etc.). This thesis work aimed to synthesize functionalized aliphatic chains containing stereogenic centers through the Pd-catalyzed directing group-aided diastereoselective C(sp ³)-H functionalization/arylation strategy. Accordingly, the bidentate directing group 8-aminoquinoline-aided Pd(II)-catalyzed diastereoselective β -arylation of the prochiral secondary sp ³ C–H bonds of 2-phenylbutanamides and related aliphatic carboxamides was reported. Next, the diastereoselective sp ³ C–H arylation followed by ring opening of cyclopropanecarboxamides was reported. Further, bis-arylation of methyl sp ³ C–H bonds of racemic and optically pure 2-arylpropionamides and desymmetrization of symmetrical dicarboxylic acid systems via arylation of methylene sp ³ C–H bonds were reported.
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