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Title:	Regio- and stereoselective Pd-catalyzed direct arylation of unactivated sp ³ C(3)-H bonds of tetrahydrofuran and 1,4-benzodioxane systems
Authors:	Parella, R. (/jspui/browse?type=author&value=Parella%2C+R.) Babu, S.A. (/jspui/browse?type=author&value=Babu%2C+S.A.)
Keywords:	Tetrahydrofurans Hydrocarbons Aromatic compounds Arylation
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Abstract:	An auxiliary-enabled Pd-catalyzed highly regio- and stereoselective sp ³ C-H activation and the direct arylation of the C3-position of oxygen heterocycles, such as tetrahydrofuran and 1,4-benzodioxane systems, are reported. An efficient stereoselective construction of cis 2,3-disubstituted tetrahydrofuran derivatives (analogues of norlignans) and cis 2,3-disubstituted 1,4-benzodioxane derivatives (analogues of neolignans) is described. The direct C(sp ³)-H arylation of the C3-position of (R)- or (S)- tetrahydrofuran-2-carboxamides furnished the corresponding (2R,3R) and (2S,3S) C3-arylated THF scaffolds as major compounds with very high regio- and diastereoselectivities. The stereochemistry of the products obtained in this work were unambiguously assigned on the basis of the X-ray structure analyses of representative compounds 3b, 3e, 4p, and 7. © 2015 American Chemical Society.
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