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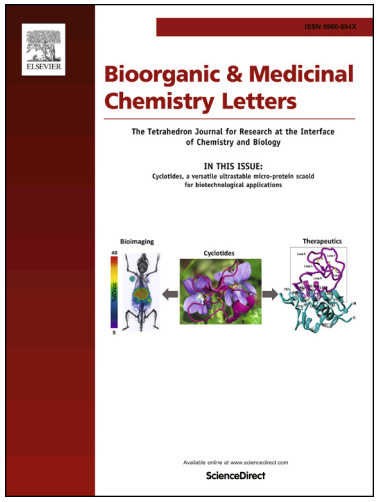

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Stereospecific synthesis of (*E*)-stilbene derivatives by palladium-catalyzed Suzuki-Miyaura cross-coupling reaction

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Abstract

A general procedure for the stereospecific synthesis of (*E*)-stilbene derivatives by palladium-catalyzed Suzuki-Miyaura cross-coupling reaction of (*E*)-2-phenylethenylboronic acid pinacol ester with aryl bromides was investigated. (*E*)-2-phenylethenylboronic acid pinacol ester was prepared by 9-BBN-catalyzed hydroboration of phenylacetylene with pinacolborane. This reagent undergoes facile palladium-catalyzed cross-coupling with a diverse set of aryl bromides to provide the corresponding (*E*)-stilbene derivatives in moderate to good yield. The use of the sterically bulky *t*-Bu_3PHBF_4 ligand was crucial to the successful coupling of electron-rich and electron-poor aryl bromides.