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Regioselective Ortho-Arylation and Alkenylation of N-Alkyl Benzamides with Boronic Acids via Ruthenium-Catalyzed C–H Bond Activation: An Easy Route to Fluorenones Synthesis


Ruthenium-Catalyzed ortho-Arylation and Alkenylation of N-Alkyl Benzamides

Significance: The authors report a highly regioselective ruthenium-catalyzed ortho-arylation and alkenylation of various N-alkyl benzamides with different (hetero)aromatic and alkenyl boronic acids in the presence of silver salts. The corresponding benzamides are obtained in good to very good yield.

Comment: Noteworthy, this methodology may be applied to the synthesis of fluorenones by treatment of the biarylic coupling products with trifluoroacetic anhydride and hydrogen chloride.

Selected examples:

- **64% yield**
- **74% yield**
- **87% yield**

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