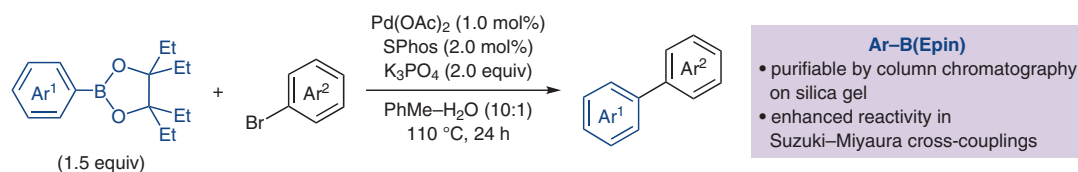


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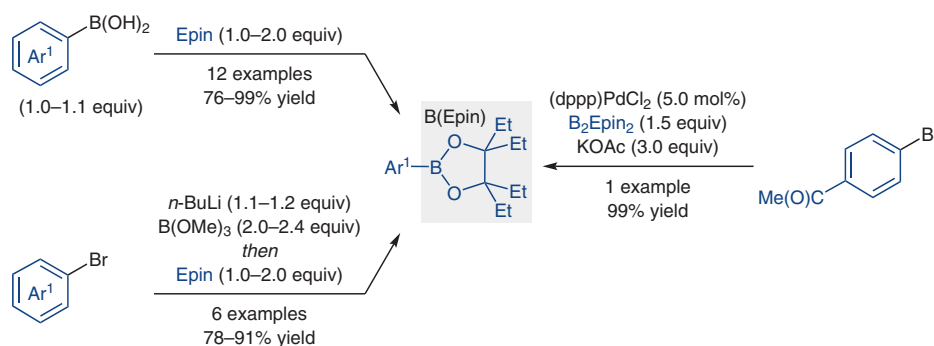
Aryl Boronic Esters Are Stable on Silica Gel and Reactive under Suzuki–Miyaura Coupling Conditions

Org. Lett. 2022, 24, 3510–3514, DOI: 10.1021/acs.orglett.2c01174.

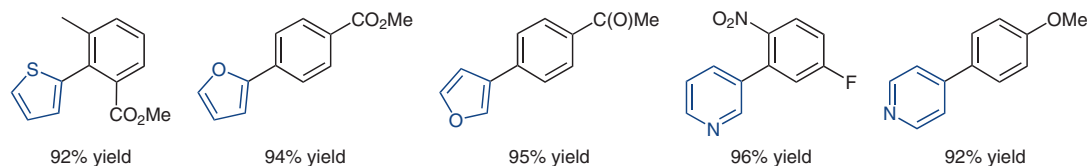
Take Et instead of Me: Preparation and Application of a Novel Class of Stable Arylboronic Esters



Preparation of Ar–B(Epin):



Selected examples:



Significance: The synthesis and application of arylboronic 1,1,2,2-tetraethylethylene glycol esters, Ar–B(Epin), is disclosed. These aryl boronates are readily accessible via dehydrative esterification of boronic acids, metalation of aryl bromides or Miyaura borylation. Substitution of the methyl units of the pinacol esters Ar–Bpin by ethyl groups leads to higher stability, and the corresponding arylboronic esters Ar–B(Epin) are easily purified by column chromatography on silica gel.

Comment: The novel arylboronic esters show enhanced reactivity in Suzuki–Miyaura cross-couplings, providing the coupling products in excellent yields. These organoboron compounds represent a viable alternative to the commonly used aryl boronic acids or pinacol esters.

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Category

Metals in Synthesis

Key words

aryl boronic esters

Suzuki–Miyaura cross-coupling

1,1,2,2-tetraethylene glycol (Epin)

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