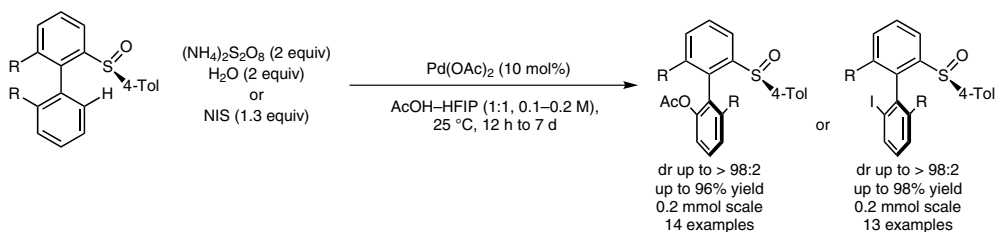


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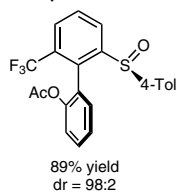
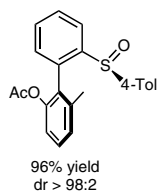
Synthesis of Axially Chiral Biaryls through Sulfoxide-Directed Asymmetric Mild C–H Activation and Dynamic Kinetic Resolution

Angew. Chem. Int. Ed. **2014**, *53*, 13871–13875.

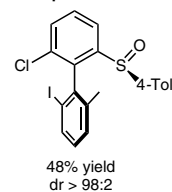
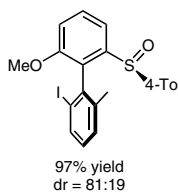
Axially Chiral Biaryl Compounds via Dynamic Kinetic Resolution



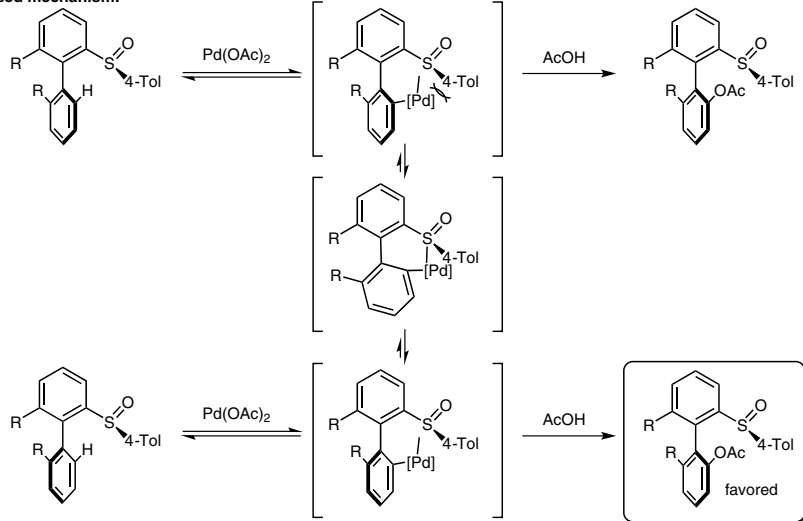
Selected acetoxyated examples:



Selected iodinated examples:



Proposed mechanism:



Significance: Axially chiral biaryl motifs are privileged structures as ligands for transition-metal catalysis. The authors present a dynamic kinetic resolution of racemic biaryls with a palladium catalyst using point chirality of a sulfoxide directing group.

Comment: Although some substrates were slow to react (up to 7 days), good yields and stereoselectivities were observed. Treatment of the products with *t*-BuLi at -90 °C led to an axially stable aryllithium species, which was trapped with CO_2 .

SYNFACTS Contributors: Mark Lautens, Zafar Qureshi
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Category

Metal-Catalyzed
Asymmetric
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Stereoselective
Reactions

Key words

palladium

chiral sulfoxides

atropisomers