Synthesis of a single isomers of oxime ethers through Suzuki coupling

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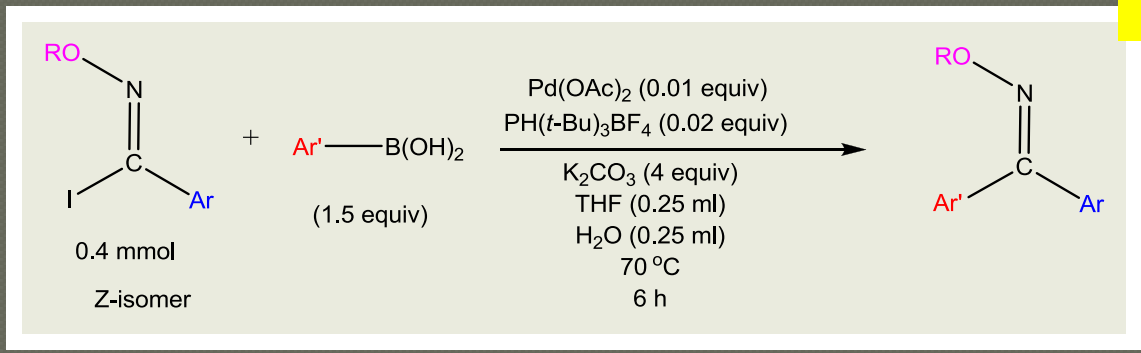
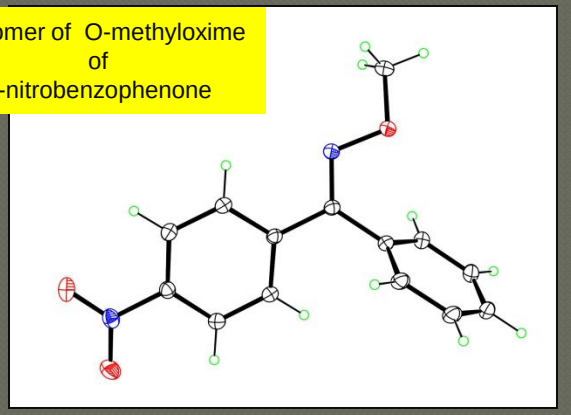
Suzuki coupling reactions of *N*-alkoxyimidoyl iodides have been developed to given excellent yields of single isomers of oxime ethers. The synthesis of a single isomer of an oxime ether is not possible through common condensation reactions which makes both isomers.



Z-isomer of O-methyloxime of 4-nitrobenzophenone



The Suzuki coupling reaction proceeds with retention of configuration. This allows for complete targeting of the desired E or Z isomer of the product. If the ring substituent is included in the Ar of the imidoyl iodide, the E isomer of the product will be made. If the substituent is included in the Ar' of the boron coupling partner, the Z isomer of the product will be synthesized.

E-isomer of O-methyloxime of 4-nitrobenzophenone