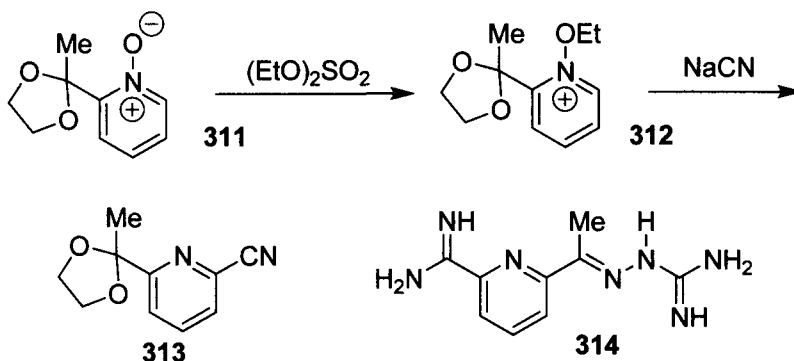
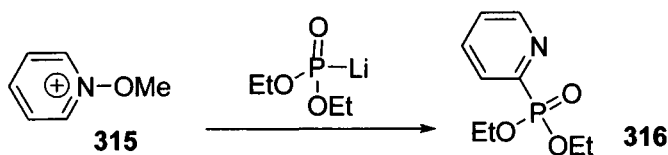


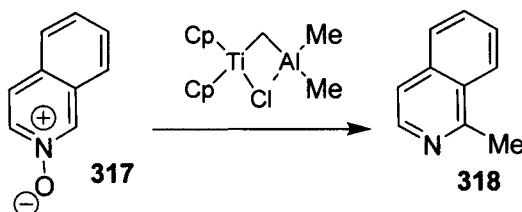
When the *N*-alkoxy-pyridinyl compound is subjected to cyanide, it undergoes the Reissert–Henze reaction²⁰³ to afford the 2-cyano-derivative with loss of the alkoxy group. Ethylation of *N*-oxide **311** with diethylsulfate afforded intermediate **312**, which was treated with cyanide to afford the corresponding cyano-pyridine **313**, an intermediate used in the synthesis of *S*-adenosylmethionine decarboxylase inhibitor **314**.²⁰⁴



Later on, trimethylsilylcyanide²⁰⁵ and diethyl phosphorocyanidate (DEPC)²⁰⁶ were also found to activate the *N*-oxide in the above the Reissert–Henze reaction. In addition, lithium diethylphosphite was used as the nucleophile other than cyanide as shown in the transformation of *N*-methoxy pyridine **315** into the diethylphosphonate **316**.²⁰⁷



In addition, the *N*-oxide **317** was treated with the Tebbe reagent to yield the corresponding 2-methyl-isoquinoline derivative **318**.²⁰⁸



Recently, the first asymmetric Boekelheide rearrangement was reported using (*R*)-Mosher's acyl chloride [(*R*)-(-)- α -methoxy- α -(trifluoromethyl) phenylacetyl chloride, (*R*)-(-)-MTPA-Cl] as the activator.²⁰⁹