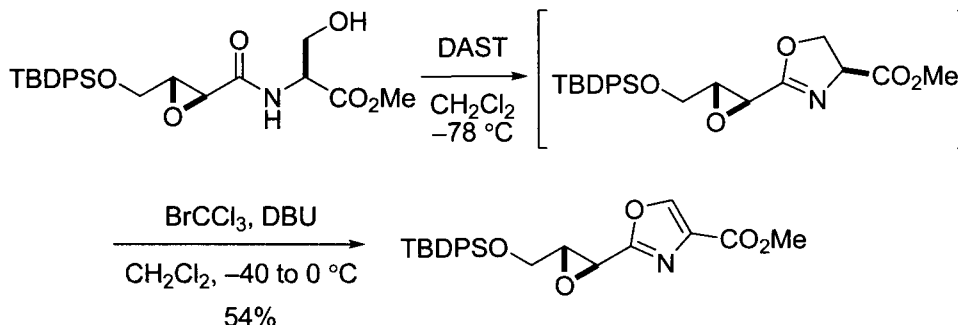
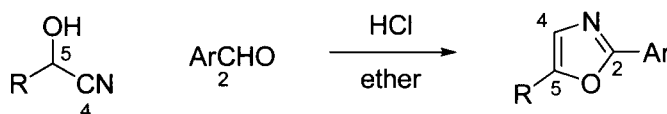


Following cyclization with DAST, *in situ* oxidation with DBU and BrCCl_3 provides the 2,4-substituted oxazole in decent yield. Notably, if desired, the intermediate oxazoline can be isolated in stereochemically pure form.

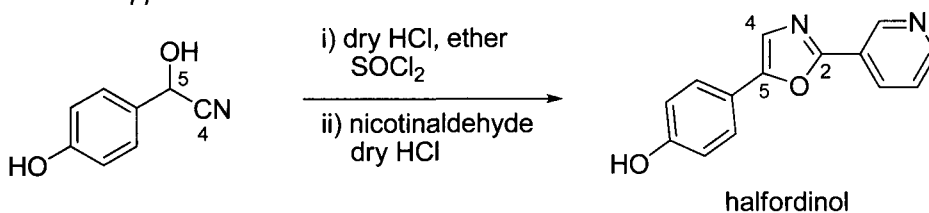


Fisher oxazole synthesis

The Fisher Oxazole Synthesis



Onaka's Application



The condensation of an aromatic aldehyde with an aldehyde cyanohydrin under anhydrous acidic conditions provides oxazoles. The convergent synthesis couples the C2 substituent contained in the aromatic aldehyde and the C5 substituent in the cyanohydrin (C4 must necessarily remain unsubstituted). Through a modified procedure, Onaka prepared the alkaloid halfordinol in one step,²⁶ utilizing the Fisher oxazole synthesis.

Japp oxazole synthesis

The Japp oxazole synthesis is the coupling of 1,2-diketones with ammonia and an aromatic aldehyde. The diketone contributes the C4 and C5 substituents, and the aromatic aldehyde contributes the C2 substituent. The synthesis also proceeds when reacting an α -ketoimine with a benzylic halide