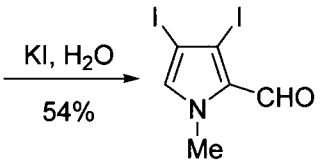
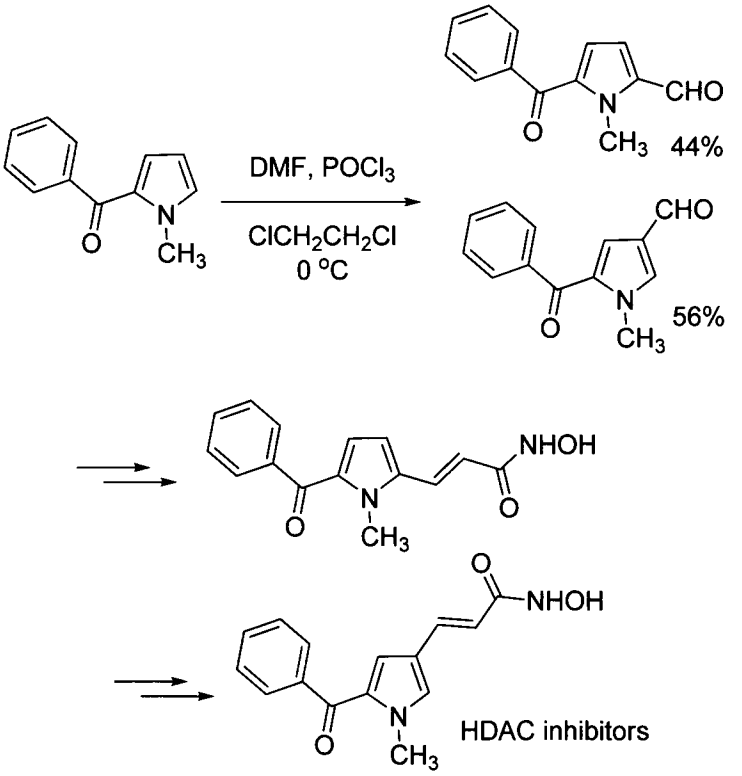


As in the example shown below, the Vilsmeier–Haack reaction was performed on 2-benzoyl-1-methyl-1*H*-pyrrole to afford the C2 formylation product in 44% yield and the C3 ketone affords the C2 formylation product in 44% yield in 56% yield.[20] The two pyrrolyl aldehydes, in turn, were converted into the corresponding hydroxamates, which are a new class of histone deacetylase (HDAC) inhibitors.



A similar tactic was employed in transforming methyl pyrrole-2-carboxylate into hepatitis C virus (HCV) helicase inhibitors.[21]