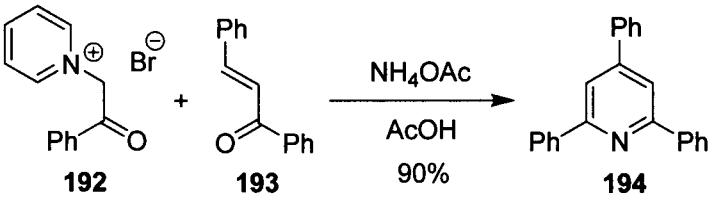
Bohlmann–Rahtz method has also been applied in the solution-phase synthesis of a library of functionalized pyridine scaffold[131] as well as the preparation of a 2,3′;6′3″-terpyridine scaffold as an α-helix mimetic.[132]

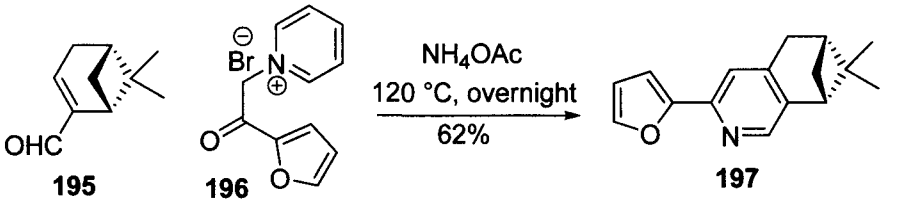
Kröhnke pyridine synthesis

Kröhnke annulation involves the condensation reaction of an α-pyridinium methyl ketone salt such as phenacylpyridinium bromide **191** to an enones such as benzalacetophenone **193** to afford 2,4,6-triphenylpyridine **194** in 90% yield.[133] Kröhnke found that glacial acetic acid and ammonium acetate were the ideal conditions to promote the desired Michael addition.

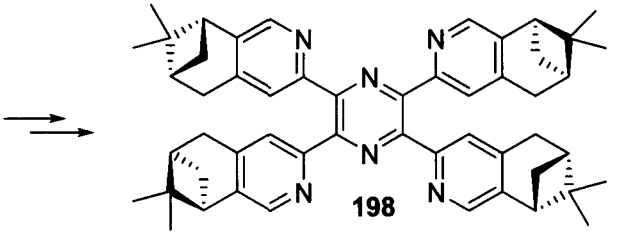


192 **193** **194**

The Kröhnke synthesis was used as the key step in the preparation of several highly conjugated, chiral bridging ligands such as **198**.[134,135]



195 **196** **197**



198

2,4,6-Tri-substituted pyridine derivatives **201** were prepared by Katritzky et al. using α-benzotriazolyl ketones **199** and α,β-unsaturated ketones **200** in the presence of ammonium acetate in refluxing acetic acid in good yields.[136] Fused 2,3,4,6-tetrasubstituted pyridines **203** were also formed from the appropriate fused bicyclic ketone substrates **202**.[137]