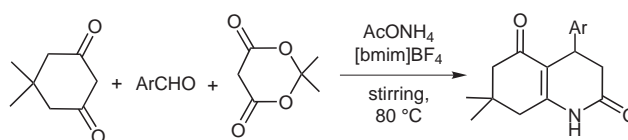
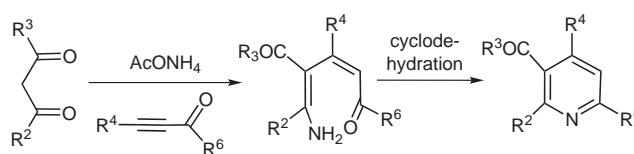


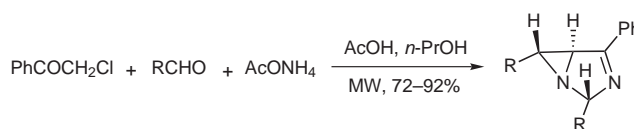
(B) 1,4-Dihydropyridines (1,4-DHP's) and Hantzsch esters are calcium-channel blockers and drugs against cardiovascular diseases.⁷ In a green approach 1,4-DHP derivatives were prepared by a multicomponent reaction of an aromatic aldehyde, a cyclic or acyclic 1,3-dicarbonyl compound, Meldrum's acid and NH_4OAc in ionic liquid.^{7b}



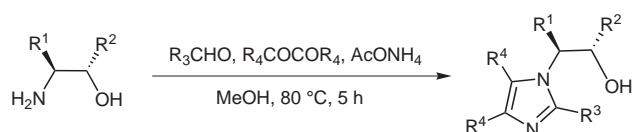
(C) Bagley and co-workers⁸ provided a route to polysubstituted pyridines with total regiocontrol via a one-pot reaction of an alkynone, a 1,3-diketo compound, and NH_4OAc without using acid catalysts and applied this strategy in the total synthesis of the acid-sensitive target dimethyl sulfomycinamate, which is a member of the sulfomycin family of thiopeptide antibiotics.



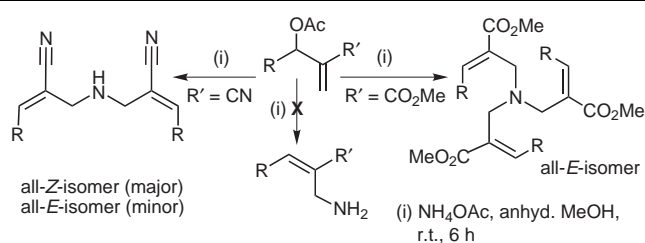
(D) A 1,3-diazabicyclo[3,1,0]hex-3-ene system was obtained in high yield and excellent diastereocontrol via a three-component one-pot synthesis involving phenacyl chloride, aldehyde, and NH_4OAc . The method provides an easy route to bridgehead aziridines, which are potential drug precursors.¹⁰



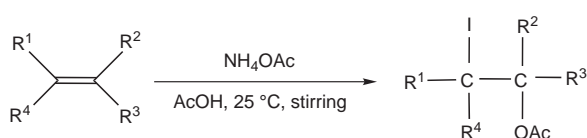
(E) Ammonium acetate has been utilized to prepare medicinally important enantiopure substituted imidazoles through a cyclocondensation reaction of 1,2-aminoalcohol with an aldehyde, a 1,2-dicarbonyl compound, and NH_4OAc . A study using different ammonia sources in this method established that NH_4OAc is superior to other sources like aqueous NH_3 and NH_4Cl in its efficiency and in the stereoselectivity of the reaction.^{11a}



(F) A reinvestigation reaction of NH_4OAc with acetyl derivatives of Baylis–Hillman adducts in dry methanol at room temperature resulted in the formation of 2° and 3° allylamines (in the case of acrylonitrile and acrylates, respectively) instead of 1° allylamines. This method provides a route to 2° and 3° allylamines and points out the role of ammonium acetate in product selectivity.^{14a}



(G) Ammonium acetate is employed to prepare synthetically important α -iodo acetates in a regioselective synthesis via the reaction of cyclic or acyclic alkenes with NH_4OAc and I_2 in acetic acid.^{14b}



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