Answer on Question #75280 – Chemistry – Organic Chemistry

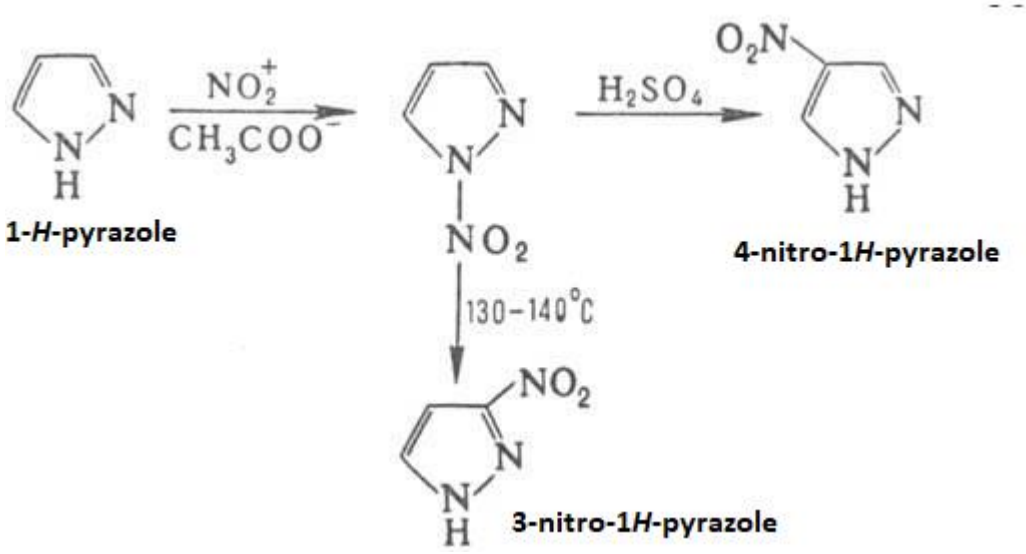
Task:

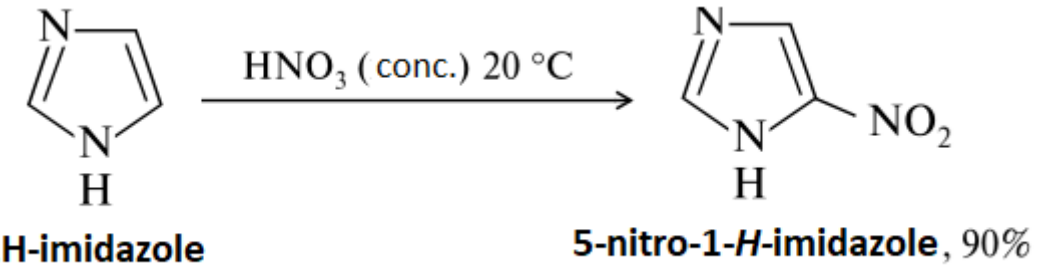
Predict the product of following reactions:
1) Nitration of azole
2) Friedel-crafts acylation of pyridine
3) Reduction of pyrrole with zinc and ethanoic acid

Solution:

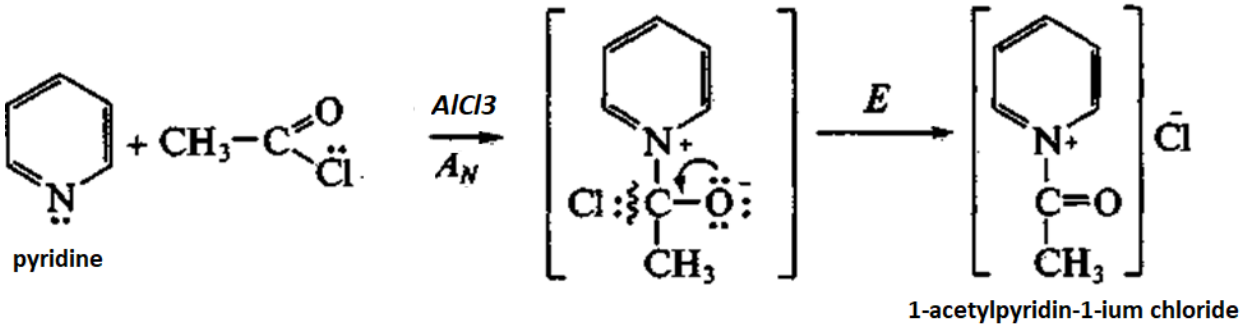
1) **Azoles** are a class of five-membered heterocyclic compounds containing a nitrogen atom and at least one other non-carbon atom (i.e. nitrogen, sulfur, or oxygen) as part of the ring.

   For example:





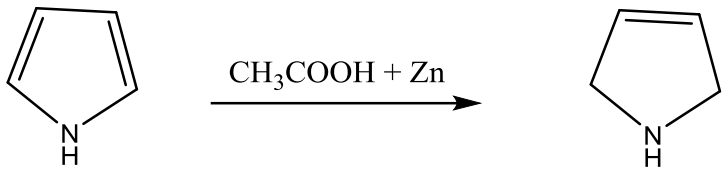
2) Friedel-crafts acylation of pyridine:



pyridine

1-acetylpyridin-1-ium chloride

3) Reduction of pyrrole with zinc and ethanoic acid:



1*H*-pyrrole

2,5-dihydro-1*H*-pyrrole