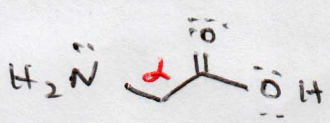
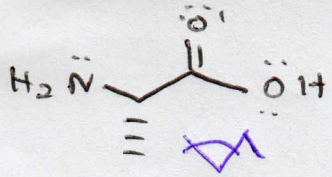
6/4/12 α-amino acids



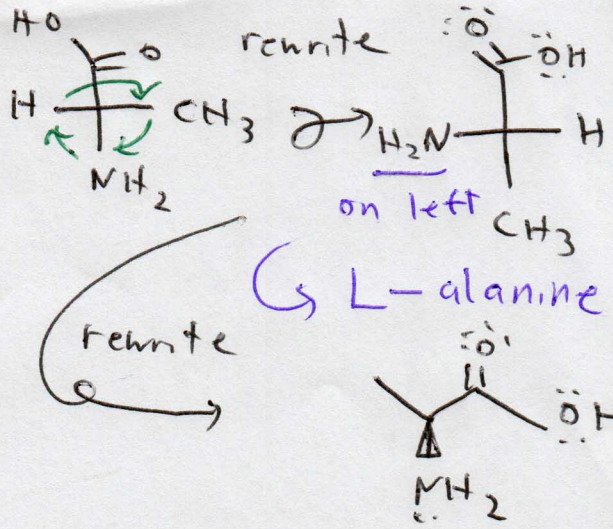
glycine

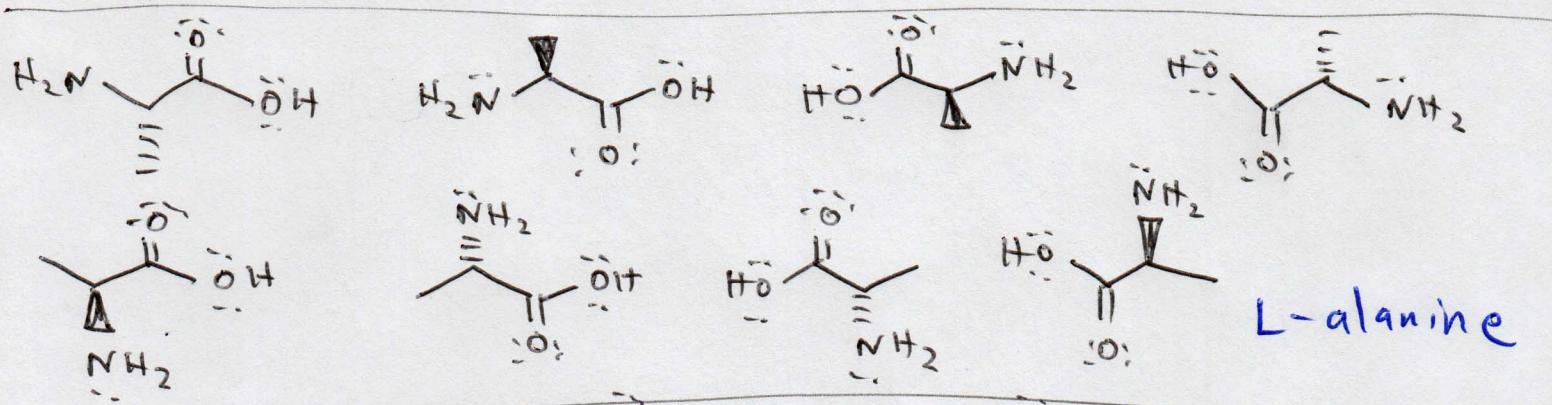
Gly (G)



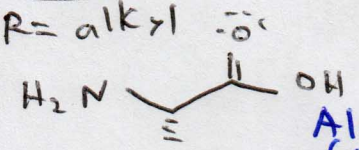
L-alanine

* Convention for amino acid Fischer projections: acid @ top; R side chain @ bottom

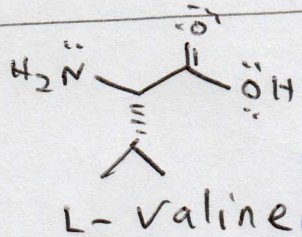




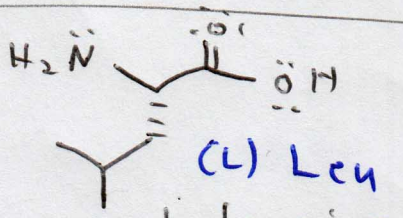
R= alkyl



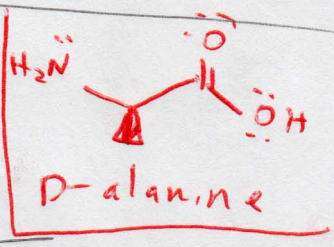
L-alanine Ala (A)



L-valine (V) Val



(L) Leu L-leucine



D-alanine

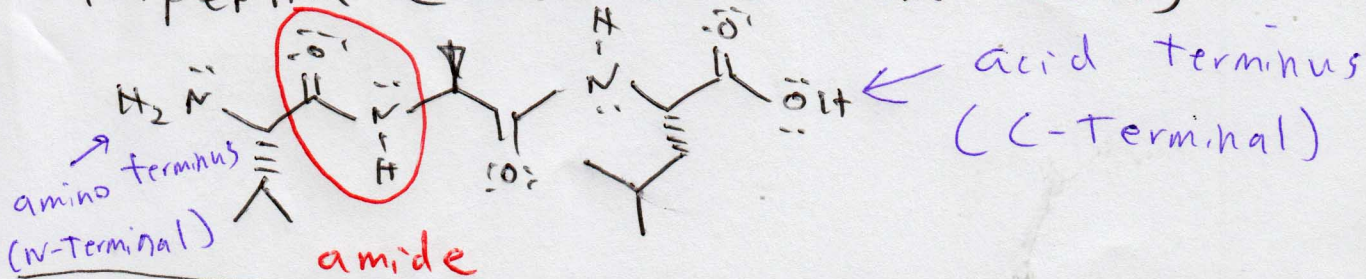
polypeptide ≡ amino acid polymer ≡ protein

sequence - order (and kind) of amino acids in a polypeptide

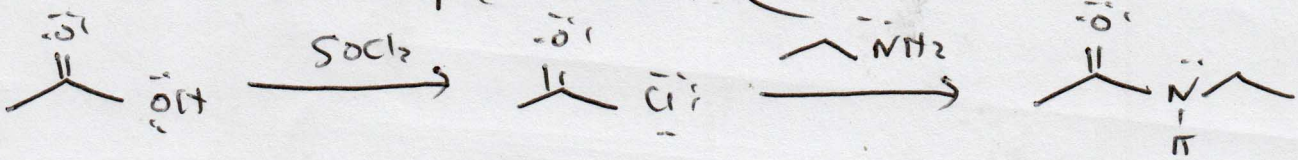
amino ⟶ acid

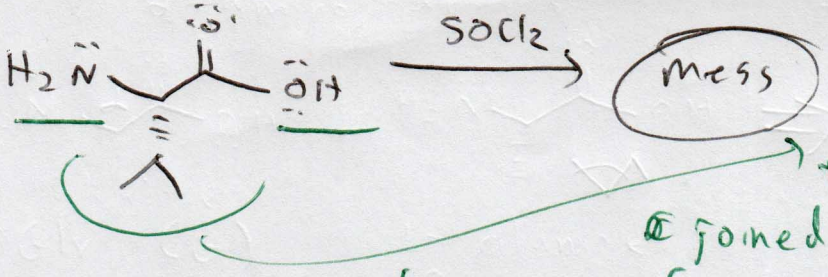
~~atoms~~ example valine-alanine-leucine (Val-Ala-Leu) (VAL)

tripeptide (contains 3 amino acids)

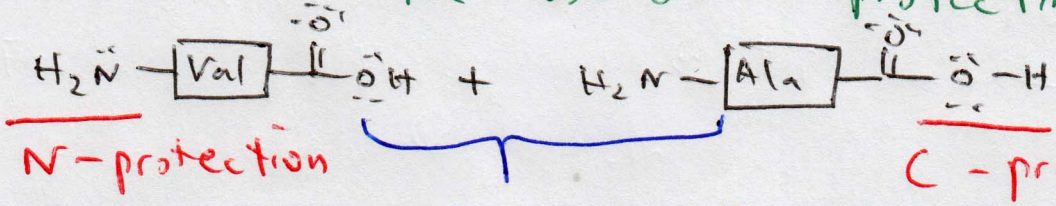


To make a simple amide





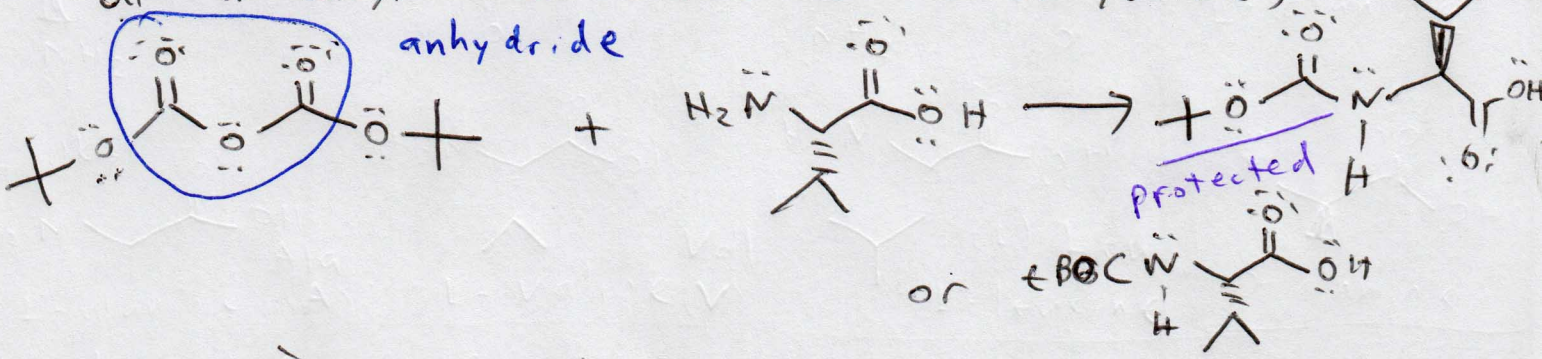
Amino acids are difunctional. As such, they cannot be easily joined together without the use of protecting groups.



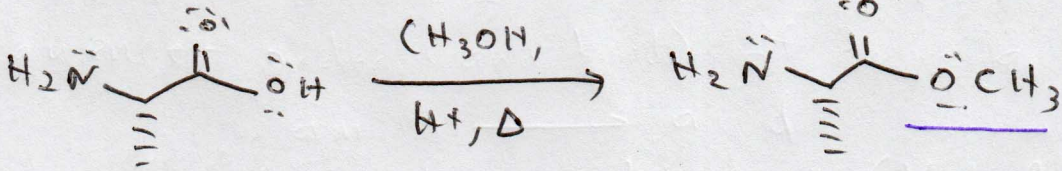
By protecting the N-terminus of one amino acid & the C-terminus of the other, two amino acids can be joined in a specific way.

N-protection

di-Ter-butyl dicarbonate (BOC anhydride)

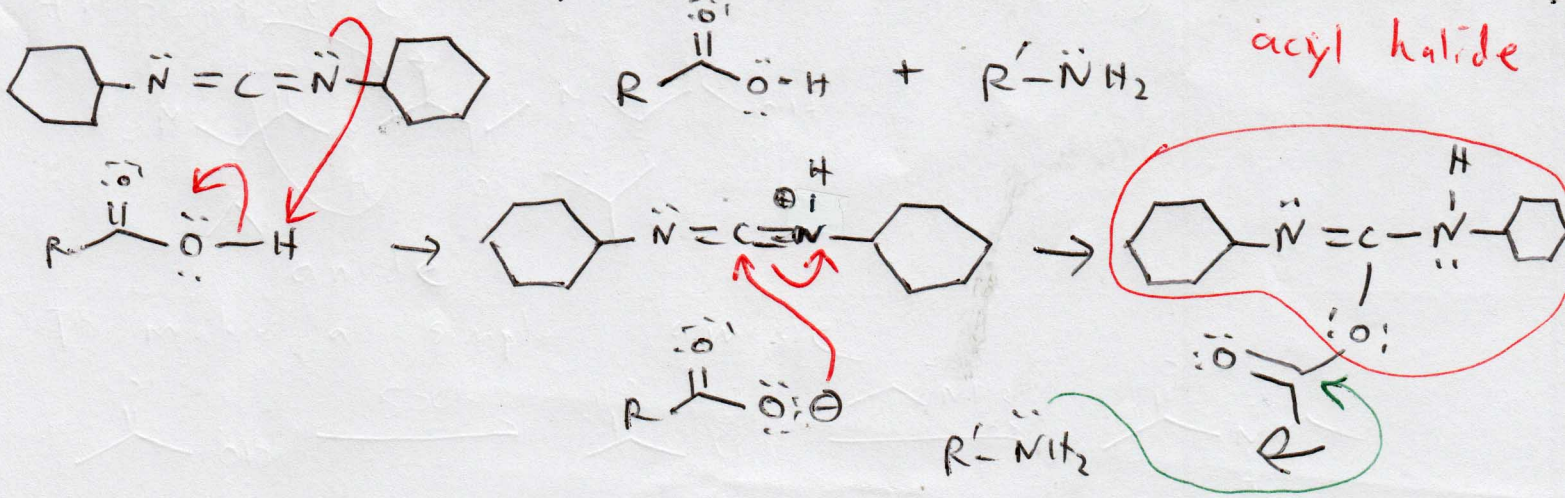


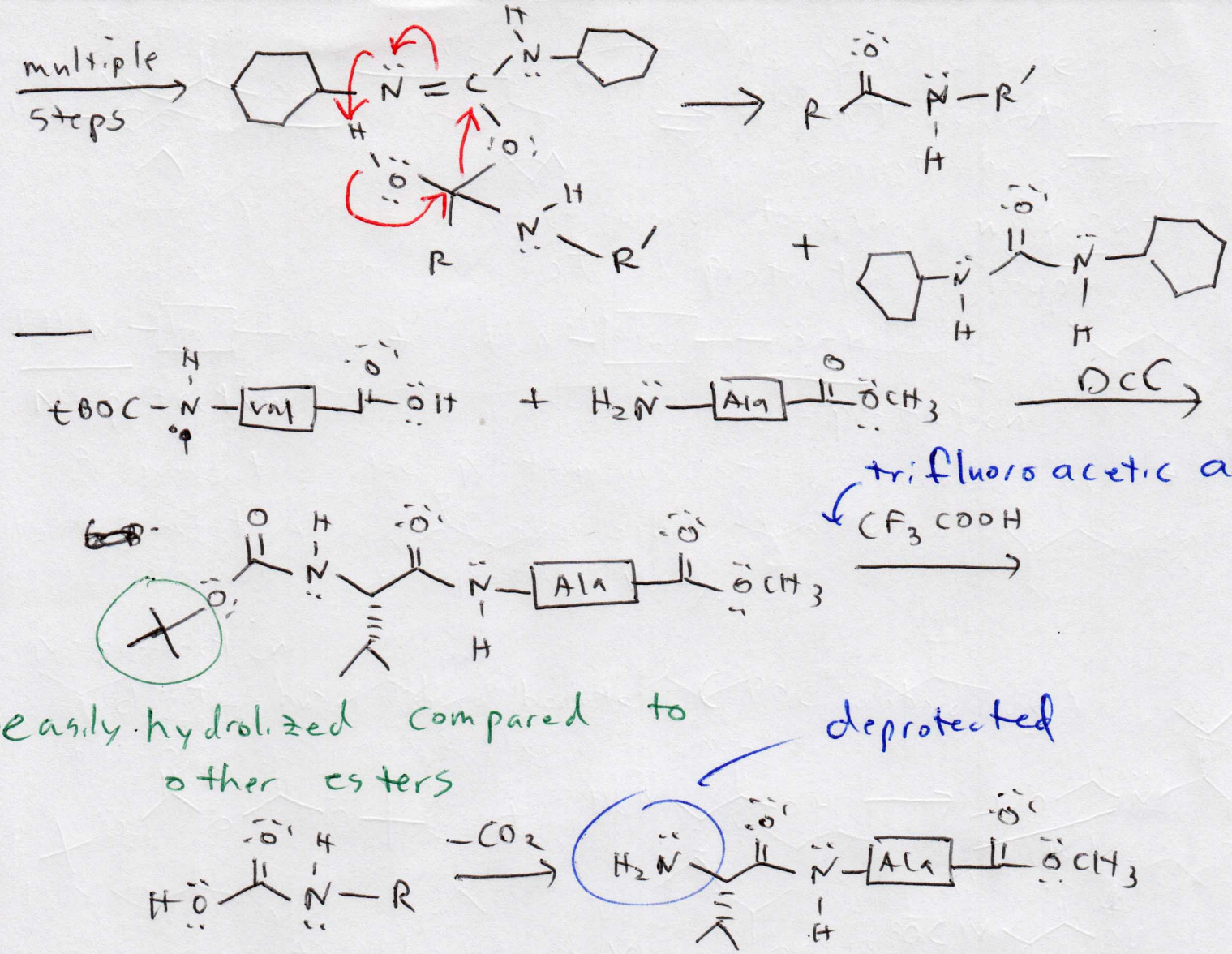
C-protection → ester



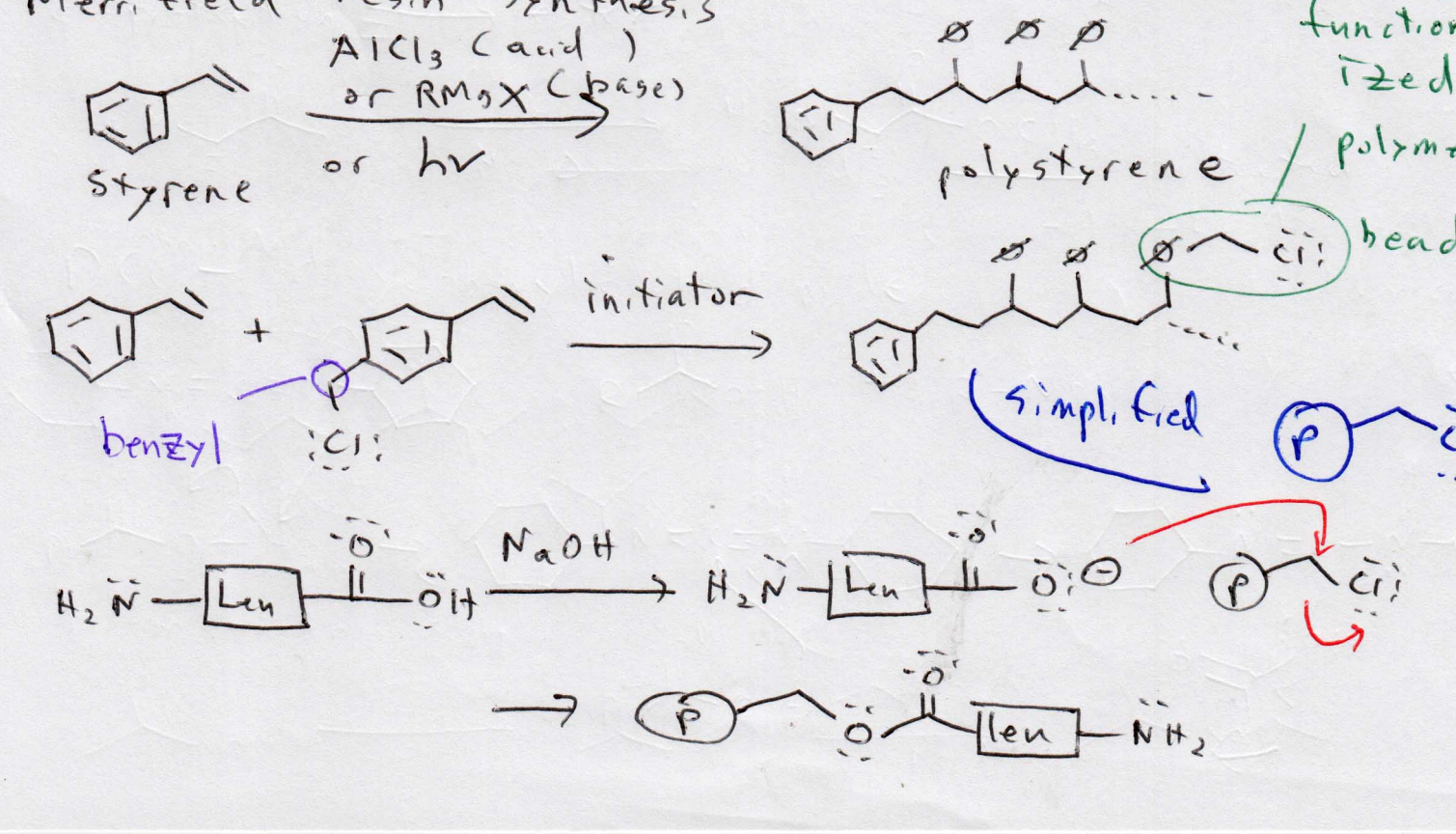
DCC – dicydohexyl carbodiimide

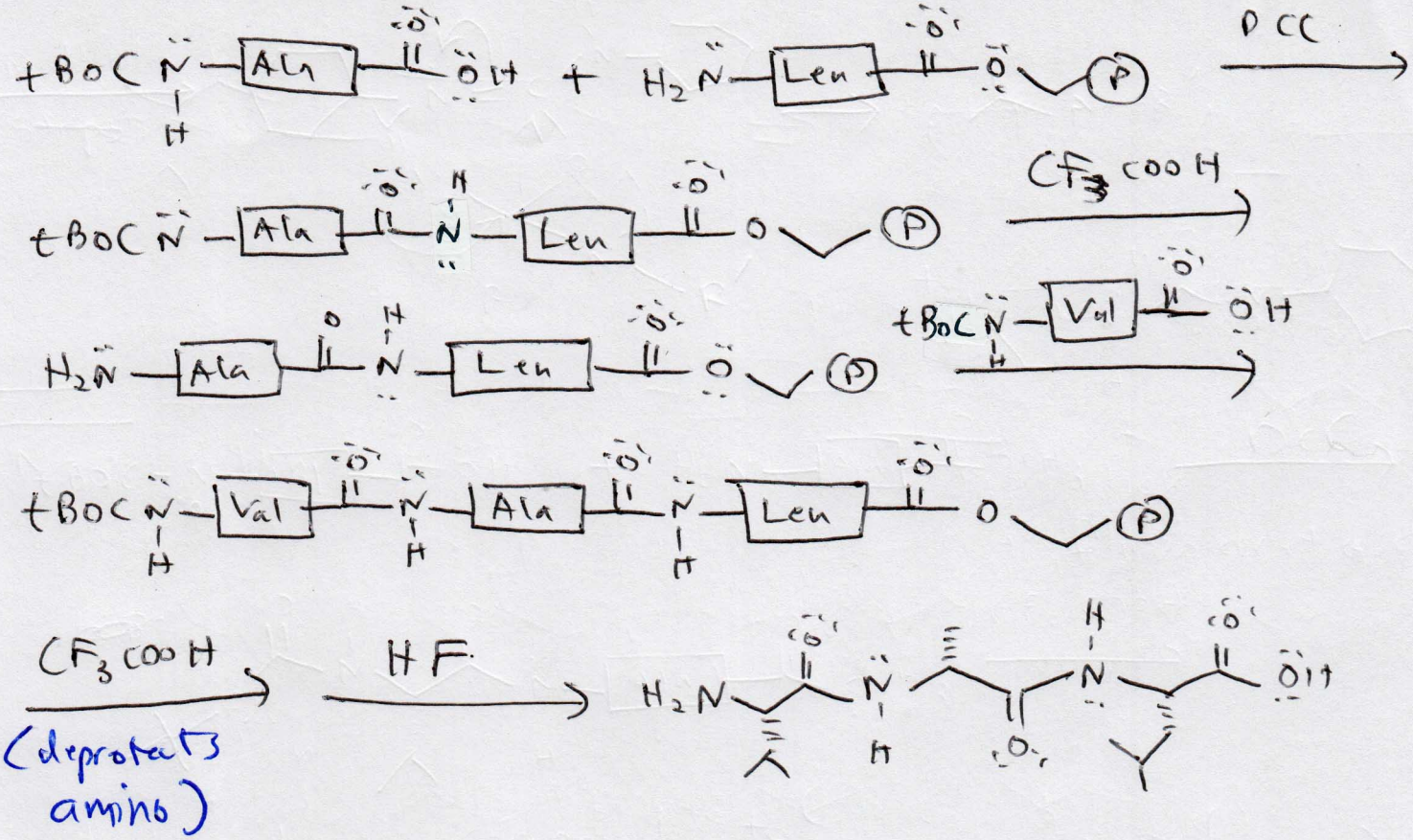
acts like an acyl halide





Merrifield resin synthesis





(deprotects amino)