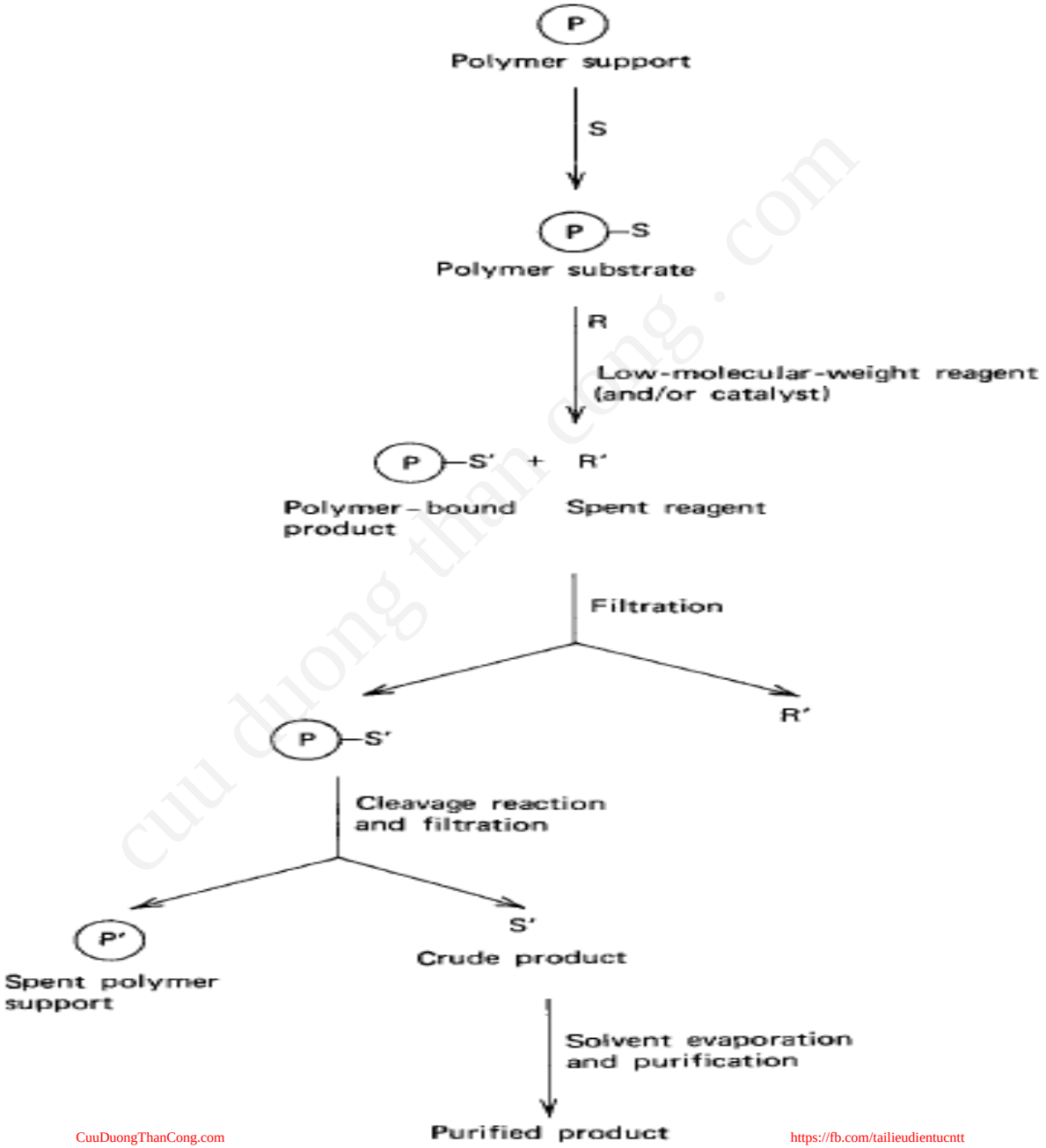
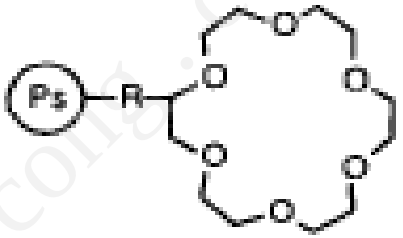
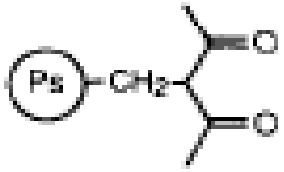
POLYMER SUBSTRATES

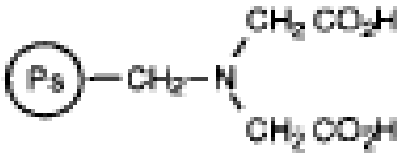


examples of polymer-supported

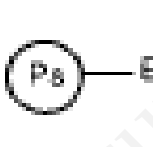
Polymeric catalysts : complexing groups

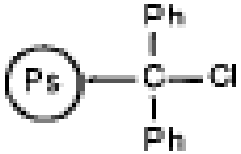






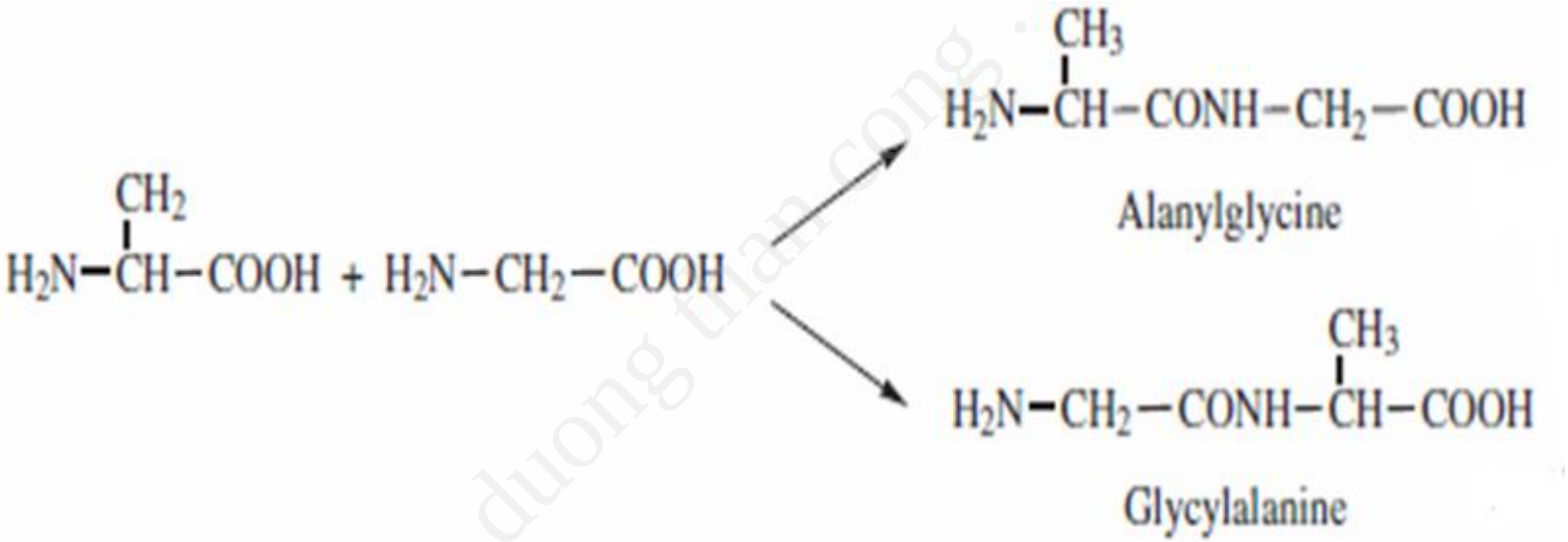
Polymeric protective groups





Merrifield synthesis

Solid-Phase Synthesis of Polypeptides



The amino group of the amino acid must be protected (often referred to as N-blocking or N-protecting) to prevent self condensation of that monomer during attachment to the support.

A variety of protecting groups were studied, including carbobenzoxy, p-toluene sulfonyl, triphenylmethyl, and t-butoxycarbonyl.

N-blocking

- t-butoxycarbonyl group (BOC)

2-(t-butoxycarbonyloxyimino)-2-phenylacetonitrile

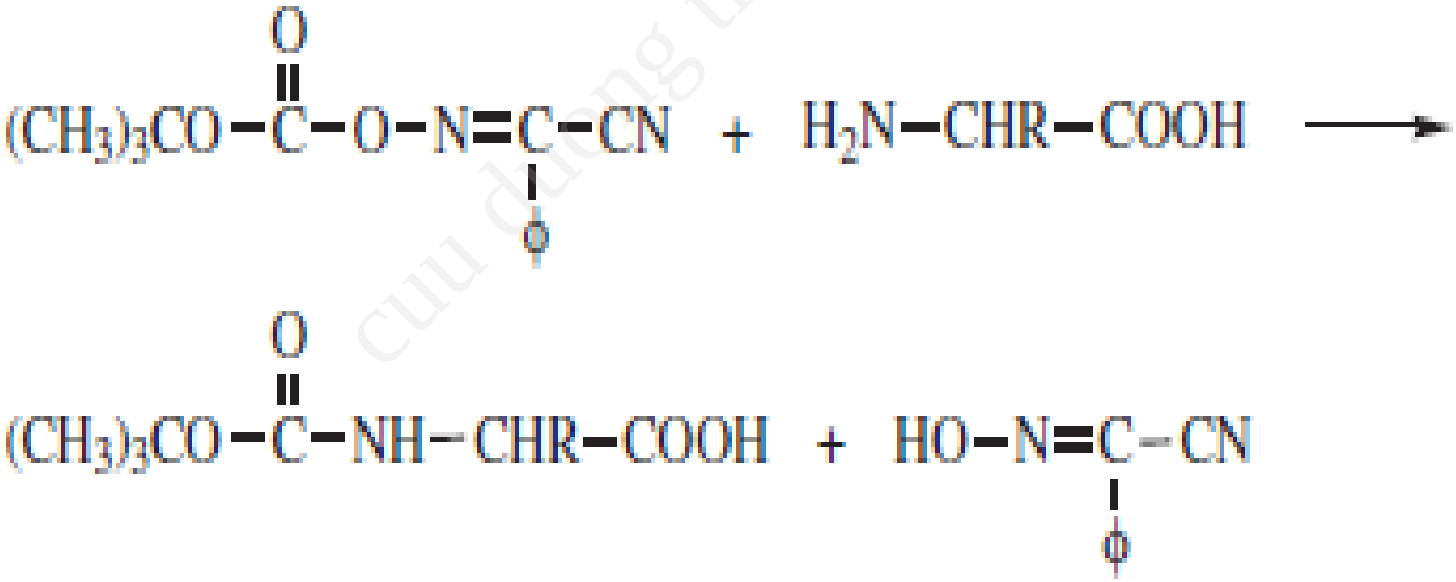
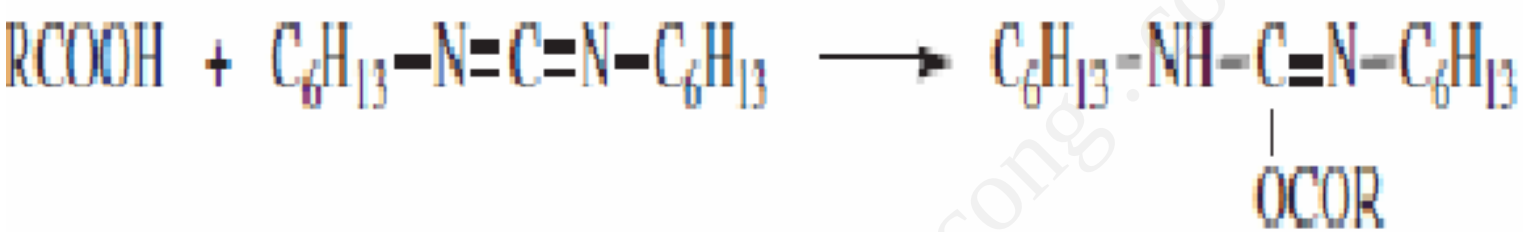
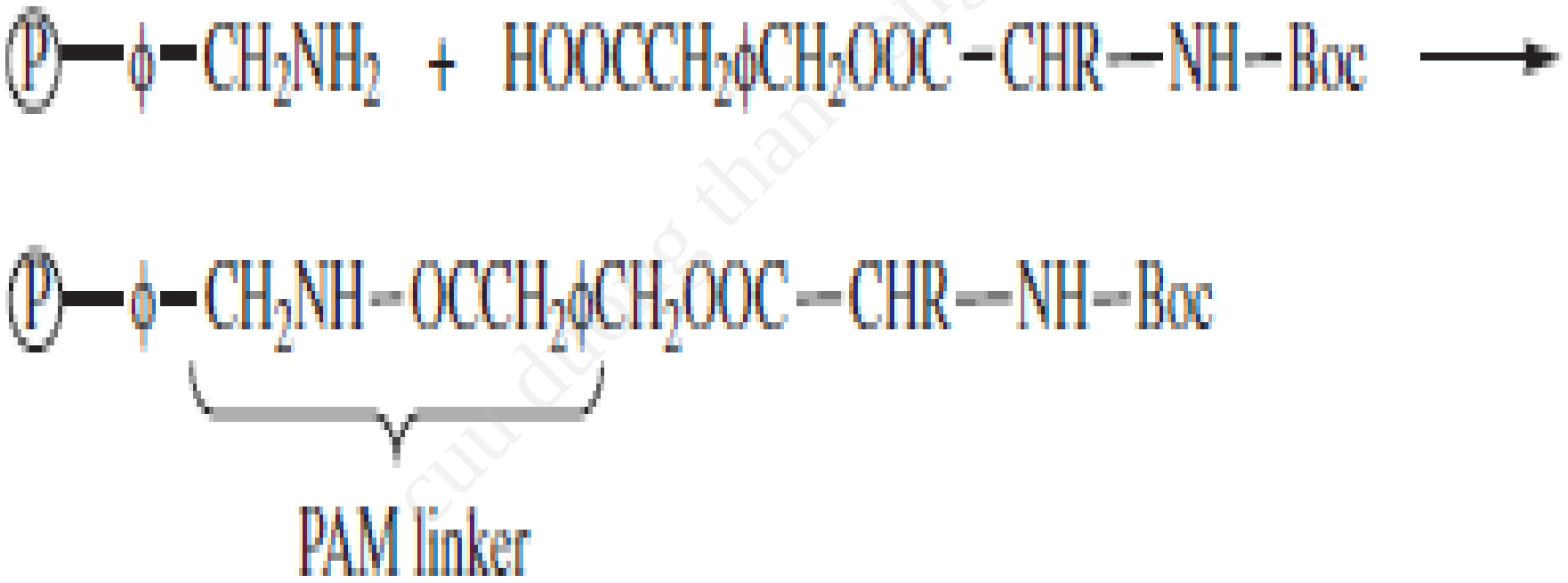


Fig. 9-3 Solid-phase synthesis of polypeptide.

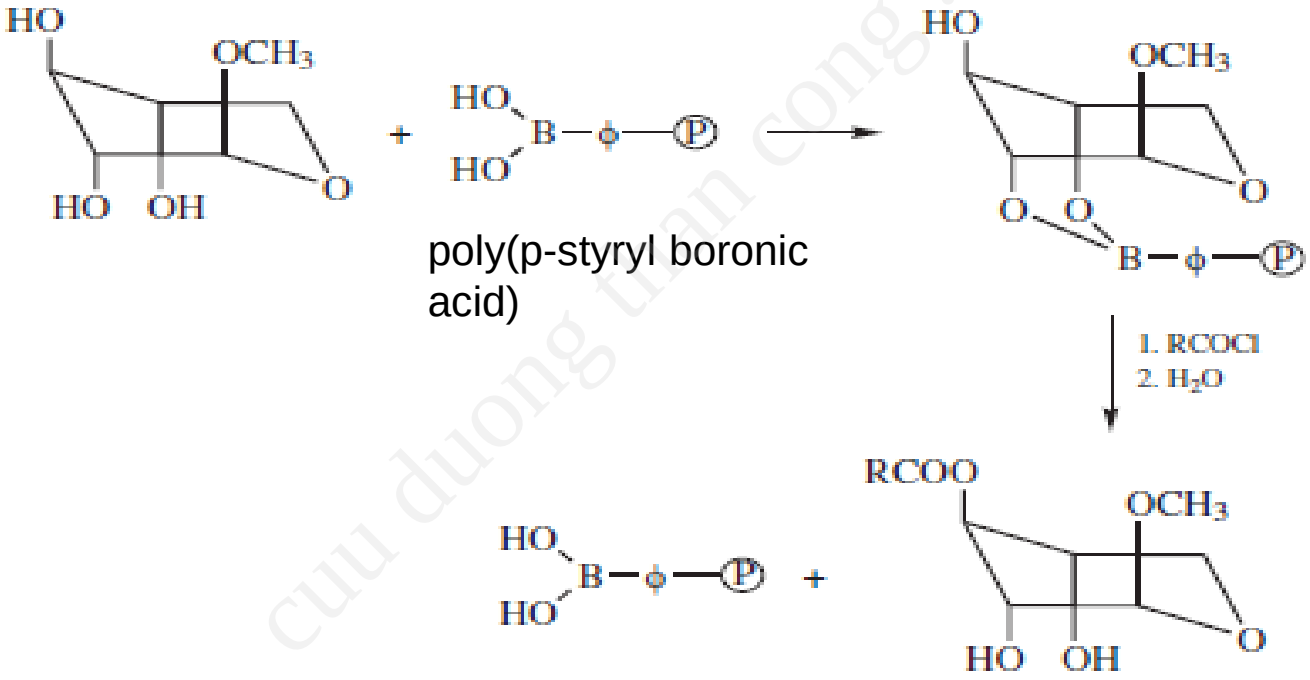
Activator : Dicyclohexylcarbodiimide (DCC)



A much more stable means of anchoring the first amino acid residue to the support is accomplished by using a phenylacetamidomethyl (PAM) group



selective acylation



C-alkylation and C-acylation