

Potassium Fluoride-Mediated Deprotection of Fmoc-Amino Acid Esters: One-Pot Peptide Synthesis

Category

Peptide Chemistry

Key words

potassium fluoride

amino acid
deprotection

peptides

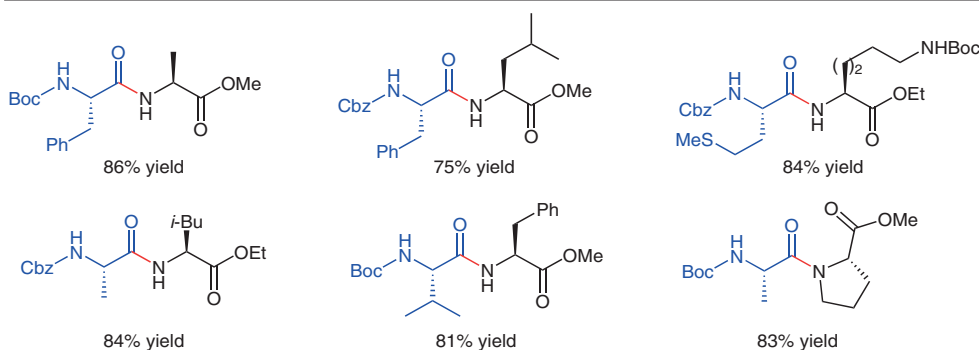
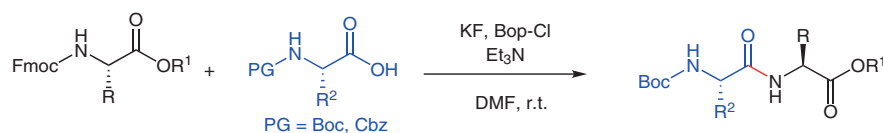
fluorenylmethyl
carbamates

amides

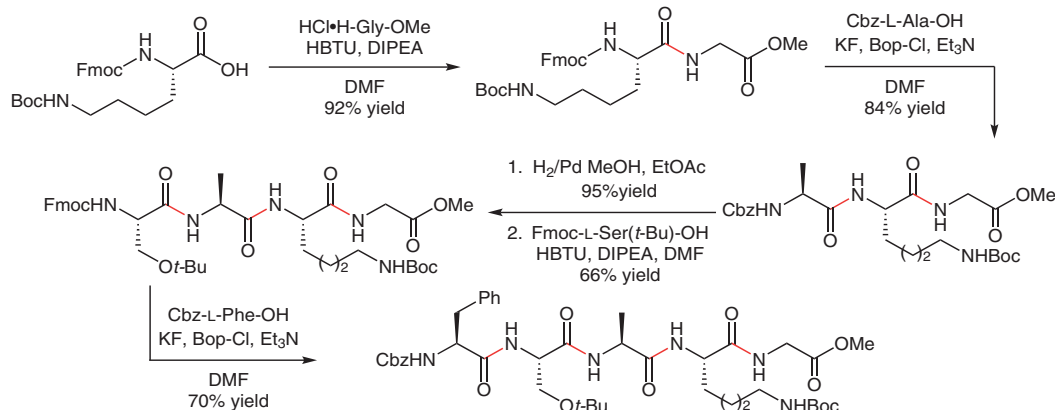
one-pot synthesis

Synfact
Classic

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Application of the method towards synthesis of pentapeptide



Significance: The development of step-economic and practical methods for the synthesis of peptides is an important and demanding aspect of peptide chemistry. In 2000, Li and Chou developed a one-pot method for peptide synthesis from Fmoc-amino acid esters and N-protected amino acids by using potassium fluoride, triethylamine, and bis(2-oxo-3-oxazolidinyl)phosphonic chloride (BOP-Cl) as reagents.

Comment: The one-pot peptide synthesis from Fmoc-amino acid esters and Boc- or Cbz-protected amino acids using KF, Et₃N, and Bop-Cl reagents proceeds smoothly to deliver the desired peptides in good yields and with high purity. This method is practically simple and can be applied in the synthesis of oligopeptides.