Category
Peptide Chemistry

Key words
magnesium oxide
amino acids
hydroxamates
hydroxylamine hydrochloride
Fmoc acid chlorides

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Direct Synthesis of Fmoc Protected Amino Acid Hydroxamates from Acid Chlorides Mediated by Magnesium Oxide
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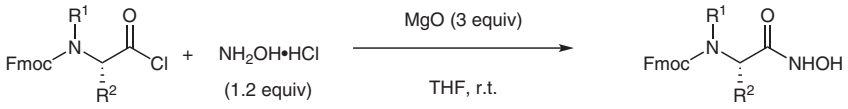
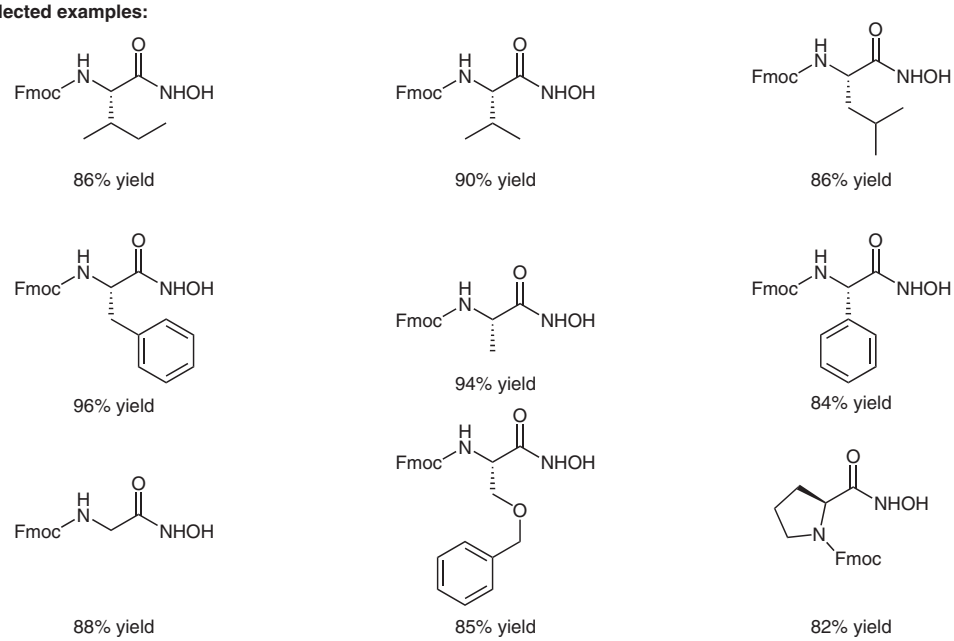
MgO-Mediated Synthesis of Fmoc-Protected Amino Acid Hydroxamates



Selected examples:



Significance: Amino acid hydroxamates are important motifs for the synthesis of peptide hydroxamates. Peptide hydroxamates gained great attention due to their efficient biological activities as antibacterial, anticancer, antiasthmatic, psychotropic, and insecticidal agents. In 2003, an efficient method for the synthesis of Fmoc-protected amino acid hydroxamates by the reaction of Fmoc-protected amino acid chlorides with hydroxylamine with the help of magnesium oxide was developed.

Comment: A series of Fmoc-protected amino acid hydroxamates were synthesized in high yields by the reaction of Fmoc-protected amino acid chlorides with hydroxylamine with the help of magnesium oxide. This protocol is highly efficient and practically very simple.

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