A Silyl Carbamate Linker for Solid-State Peptide Synthesis in the Reverse Direction

Significance: Silicon-containing solid supports play an inherent role in solid-state peptide synthesis. Consequently, chemists are in search of elegant and practical supports for peptide synthesis. In 2001, Lipshutz and Shin developed a novel and easily accessible silyl carbamate linker for peptide synthesis.

Comment: Polystyrene-bound silyl carbamates of amino acid esters were synthesized by treatment of amino acid esters with gaseous CO₂ in dichloromethane, with subsequent trapping of the polymer-bound silyl chloride. The resulting polystyrene-bound silyl carbamates of amino acid esters can be used in solid-state syntheses of polypeptides, building from the carboxy terminus.

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