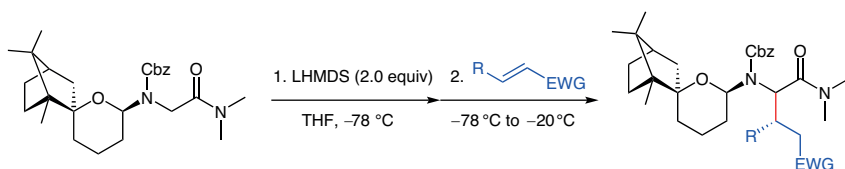
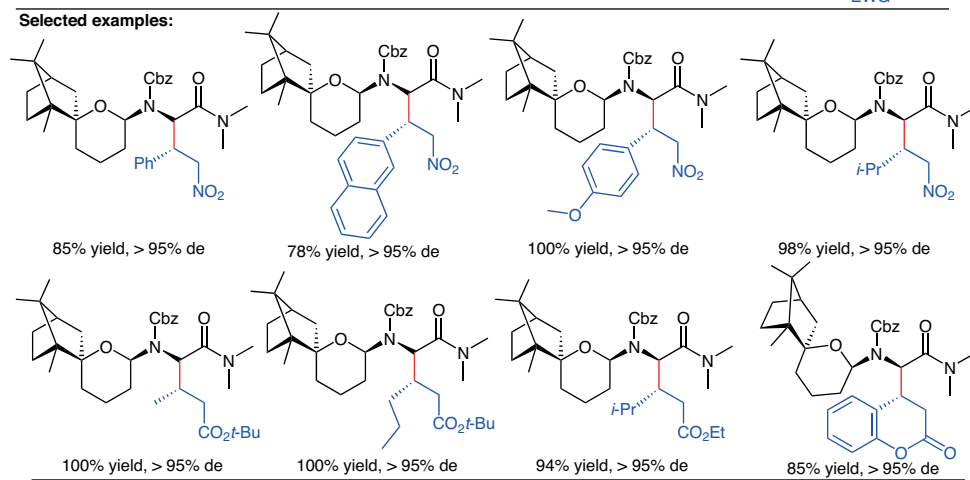


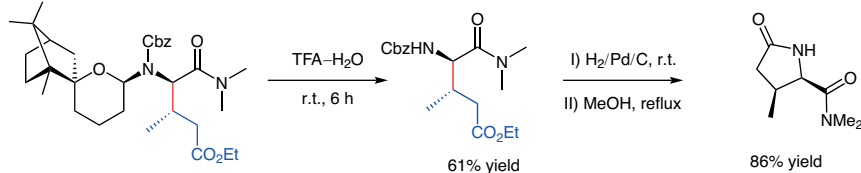
Stereoselective Michael Addition Reaction for Synthesis of Unnatural Amino Acids



Selected examples:



Synthesis of pyroglutamide:



Significance: Unnatural amino acids are vital building blocks for the synthesis of complex natural products, biologically active molecules, and peptides. In this context, the authors developed a stereoselective Michael addition reaction of camphor-derived tetrahydropyran (camTHP*)-desymmetrized glycinamide with nitro-olefins, α,β -unsaturated ketones, esters, and lactones for the synthesis of unnatural amino acids.

Comment: A series of unnatural amino acids were synthesized using the developed method. The reaction is highly stereoselective and the product unnatural amino acids were transformed for the synthesis of 3-substituted pyroglutamides.

Category

Peptide Chemistry

Key words

unnatural amino acids

Michael addition reaction

stereoselective synthesis

glycinamides

Synfact
Classic

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