

Dipeptide Synthesis by Two-Component Organocatalysis

Category

Peptide Chemistry

Key words

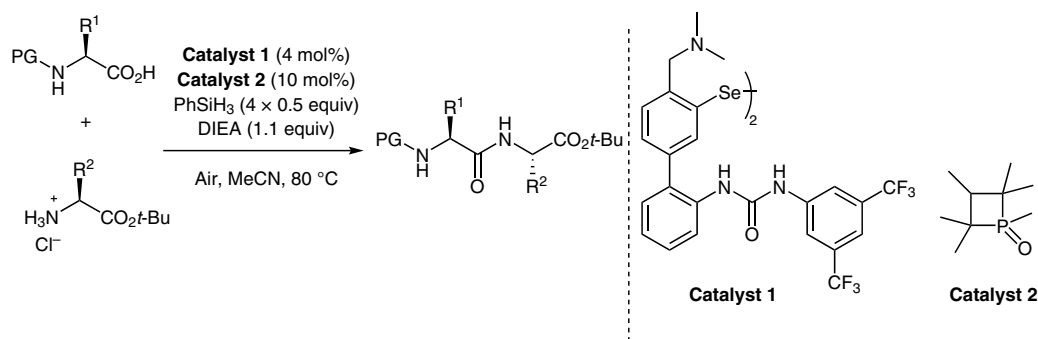
organocatalysis

redox catalysis

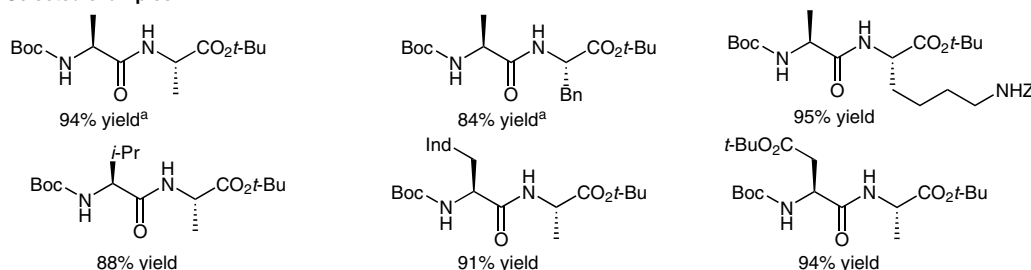
peptide bond formation

seleno esters

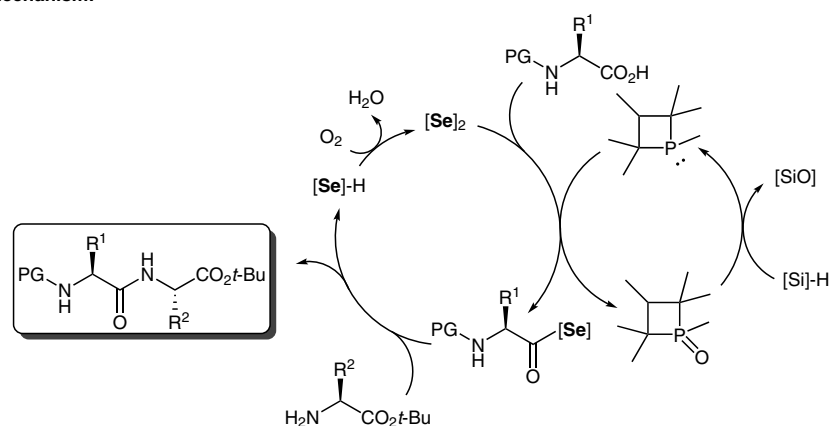


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of the
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Selected examples:

^a3 × 0.5 equiv of PhSiH₃ was used.

Proposed mechanism:



Significance: Catalytic peptide-bond formation is an important process in providing effective and economical systems for use in the industrial and pharmaceutical fields. The authors have developed a redox organocatalyst system for the formation of peptide bonds.

Comment: The two-component catalytic process provides versatility in dipeptide syntheses. The authors propose a mechanism consisting of a reductant-driven phosphine cycle and an oxidant-driven selenium cycle.