Oxazolidinones for Asymmetric Synthesis

Oxazolidinones are versatile chiral auxiliaries that are easily recycled under mild conditions, thus enhancing their commercial potential. Aldrich offers these chiral auxiliaries in research and bulk quantities. A few applications are the synthesis of β-lactams, nonproteogenic α-amino acids, aranorosin antibiotics, indole-2-acetamide inhibitors, and halichomycin. Other recent applications are shown below.

Diastereoselective Michael Additions

\[
\text{COCl} + \text{NaNO}_2 \rightarrow \text{CONO}_2 + \text{NaCl}
\]

(73%)

95% de (>99% de after recrystallization)

98% (99% ee)

Pd(II)-Catalyzed Acetalization of Alkenes

\[
\text{PdCl}_2 \cdot \text{CuCl}, \text{O}_2, \text{MeOH}
\]

(76%)

95% de (97% recovery of chiral auxiliary)

99% ee

Cyclopropanations

\[
\text{CCH}_2 \cdot \text{CO} \rightarrow \text{CCH}_2 \cdot \text{CO}
\]

(89%)

95% de (quantitative recovery of chiral auxiliary)

(R)(+)-

Allylations

\[
\text{Me}_2 \cdot \text{SiO}_2 \cdot \text{N} \rightarrow \text{Me}_2 \cdot \text{Si}
\]

(87%)

97% de (quantitative recovery of chiral auxiliary)

Diels-Alder Reactions

\[
\text{LiOAc} \rightarrow \text{LiOH}
\]

(90%)

99% (99% ee)