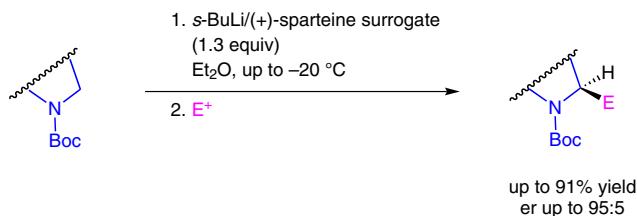
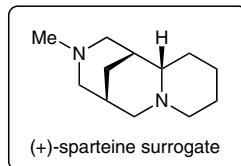


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Asymmetric Lithiation Trapping of N-Boc Heterocycles at Temperatures above –78 °C
Org. Lett. **2013**, *15*, 5424–5427.

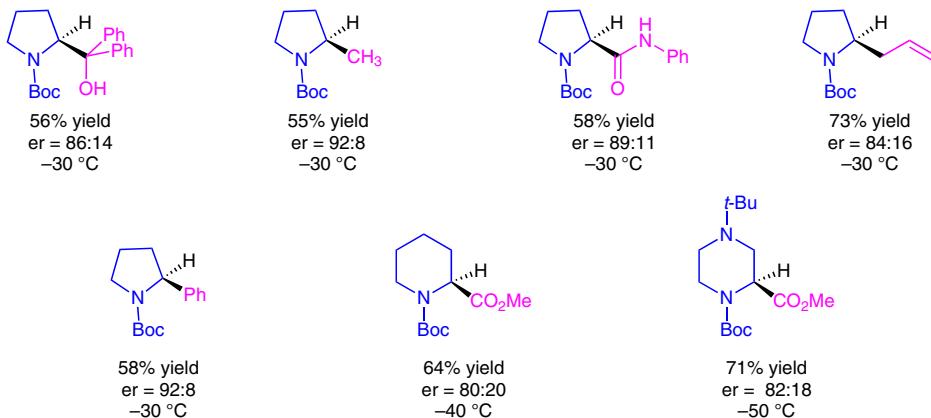
Asymmetric Lithiation Trapping of N-Boc Heterocycles



E^+ = PhCHO , MeO_2CCl , Ph_2CO , Me_2SO_4 , PhNCO , allyl bromide, PhBr



Selected examples:



Significance: The asymmetric lithiation trapping of various N-Boc heterocycles is disclosed, using $s\text{-BuLi}$ and chiral diamines such as $(-)\text{-sparteine}$ and $(+)\text{-sparteine surrogate}$ at temperatures above $-78\text{ }^\circ\text{C}$. The corresponding chiral heterocycles are obtained in high yields and with good enantiomeric ratios.

Comment: The experiments can be conveniently performed, since asymmetric lithiation trappings of, for example, N-Boc pyrrolidine may be conducted at $-30\text{ }^\circ\text{C}$, still furnishing the chiral heterocycles with a high enantiomeric ratio of about 9:1.