Stereoselective Synthesis of syn-Homoallylic Alcohols

Significance: The authors established a new synthetic method for the synthesis of syn-homoallylic alcohols from terminal alkynes and aldehydes. As this transformation utilizes easily accessible starting materials, this practical method should find many applications.

Comment: A cationic rhodium(I) catalyst turns 2-silyl-1-alkenyloboronates, which can be easily prepared from a terminal alkyne, into the corresponding allyloboronate, that directly undergoes nucleophilic addition to an aldehyde to afford the corresponding syn-homoallylic alcohol in excellent stereoselectivity.

**Selected examples:**

1. **Cl**
   - 96% yield
   - syn/anti > 98:2

2. **i-Pr**
   - 95% yield
   - syn/anti > 98:2

3. **OTBS**
   - 96% yield
   - syn/anti > 98:2

4. **Et**
   - 99% yield
   - syn/anti > 98:2

5. **Et**
   - 80% yield
   - syn/anti > 98:2

6. **Et**
   - 79% yield
   - syn/anti > 98:2