Gold(I)-Catalyzed Stereoselective Synthesis of Deoxyglycosides

**Significance:** Deoxyhexose structures can be found in a wide range of natural products. The authors have developed an α-stereoselective catalytic synthesis of deoxyglycosides from glycals by using Au(I)/AgOTf.

**Comment:** The reaction can be applied to a broad range of glycals and alcohols to give α-deoxyglycosides in high yields and with excellent selectivity. The utility of the reaction was demonstrated by the synthesis of oligosaccharides through the coupling reaction followed by deprotection.

**Selected examples:**

- 89% yield
- 76% yield
- 78% yield
- 79% yield
- 85% yield

**Proposed mechanism:**

[Chemical structures and reactions depicted graphically]