Highly α-Regioselective 1,4-Addition of Chalcones with Prenyl Bromide

**Significance:** An efficient method for the introduction of a prenyl group onto the β-position of chalcones by zinc-mediated conjugate addition in the presence of tin(IV) chloride (SnCl₄) is reported. The corresponding products are obtained in high yields and excellent α/γ-selectivities.

**Comment:** The reaction has proven to be highly α-regioselective in a 1,4-manner. Moreover, the α-regioselectivity of these additions is higher than that of the corresponding addition of allylic barium, lithium, and copper reagents.

**Selected examples:**

- **66% yield**
  - α/γ > 99:1

- **69% yield**
  - α/γ = 98:2

- **52% yield**
  - α/γ > 99:1

- **51% yield**
  - α/γ = 93:7

- **82% yield**
  - α/γ = 100:0

- **87% yield**
  - α/γ = 100:0

- **63% yield**
  - α/γ = 100:0

- **38% yield**
  - α/γ = 100:0

- **40% yield**
  - α/γ > 99:1