Cr/Salen-Catalyzed Nazarov Cyclization of Dienones

**Significance:** Rawal and co-workers describe the highly enantioselective Cr/salen-catalyzed Nazarov cyclization of both activated and unactivated dienones, giving the desired hydrindenone products with three contiguous chiral centers in moderate to good yields and stereoselectivities.

**Comment:** This paper represents the first example of highly enantioselective Nazarov reactions of unactivated dienones. A one-point activation mode was proposed and a counter-clockwise conrotatory cyclization would release the R group into a less sterically congested environment.

**Selected examples:**
- **90% yield**
  - 90%96% ee
- **71% yield**
  - dr = 2.2:1
  - 92%/94% ee
- **69% yield**
  - dr = 5.5:1
  - 80%/80% ee
- **60% yield**
  - dr > 20:1
  - 90% ee
- **62% yield**
  - dr > 8:1
  - 80% ee

**Tandem Nazarov cyclization–azination reaction:**
- **69% yield**
  - 90% ee
  - dr = 6.3:1

**Proposed transition state:**