

TODAY'S TOPICS

- strong inference
- main group organometallics
 - preparation
 - structure and bonding
 - reactivity

CHEMIST OF THE DAY



name?
institution
known for?

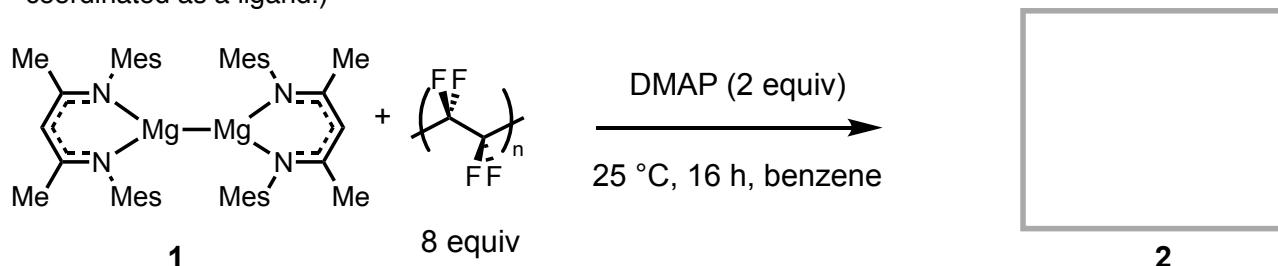
QUOTE OF THE DAY

"We keep moving forward, opening new doors and doing new things, because we're curious, and curiosity keeps leading us down new paths."

- Walt Disney

PROBLEMS OF THE DAY

- #1** Complex **1** reacts with excess poly(tetrafluoro)ethylene (PTFE) at room temperature in the presence of DMAP. One of the products from the reaction is a new Mg complex **2**. **Predict the structure of 2.** (Hint: DMAP is coordinated as a ligand.)



- #2** (A) The activity of *n*-BuLi decreases in a few hours after it is dissolved in THF. **Explain why.**

(B) What factors control regioselectivity of the process invoked in part (a)? How would you achieve the opposite outcome? **Explain your reasoning.**

- #3** *t*-BuLi exists in its monomeric form in THF at -78 °C. Known as one of the most reactive lithiating agents, *t*-BuLi can be rendered *even more reactive* by the addition of HMPA. It is hypothesized that a Separated Ion Pair (SIP) is generated in small quantities, which possesses higher reactivity than *t*-BuLi itself. **Please propose structures of structures 3 and 4.**

