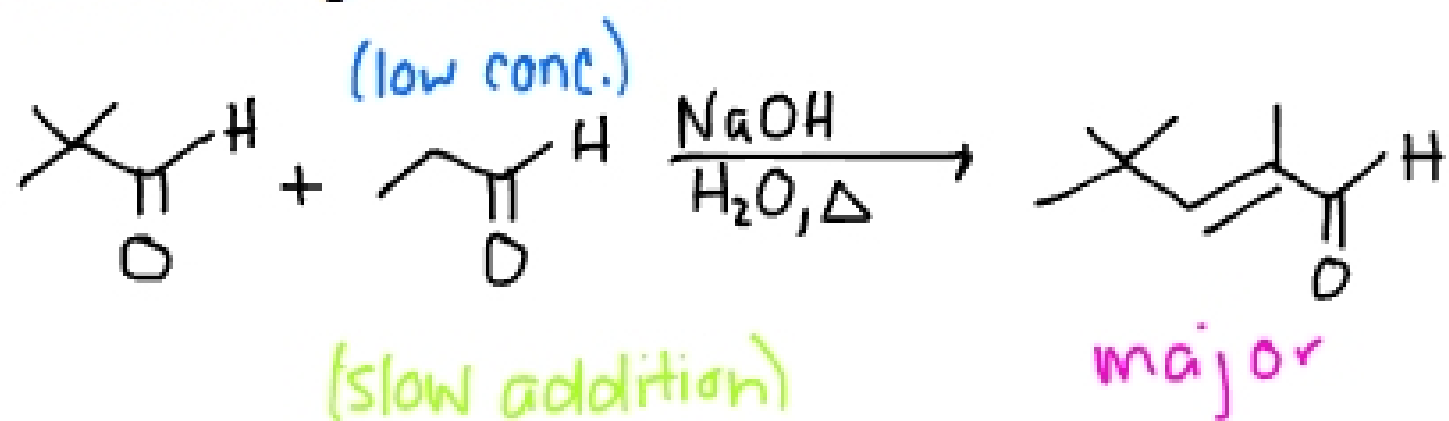


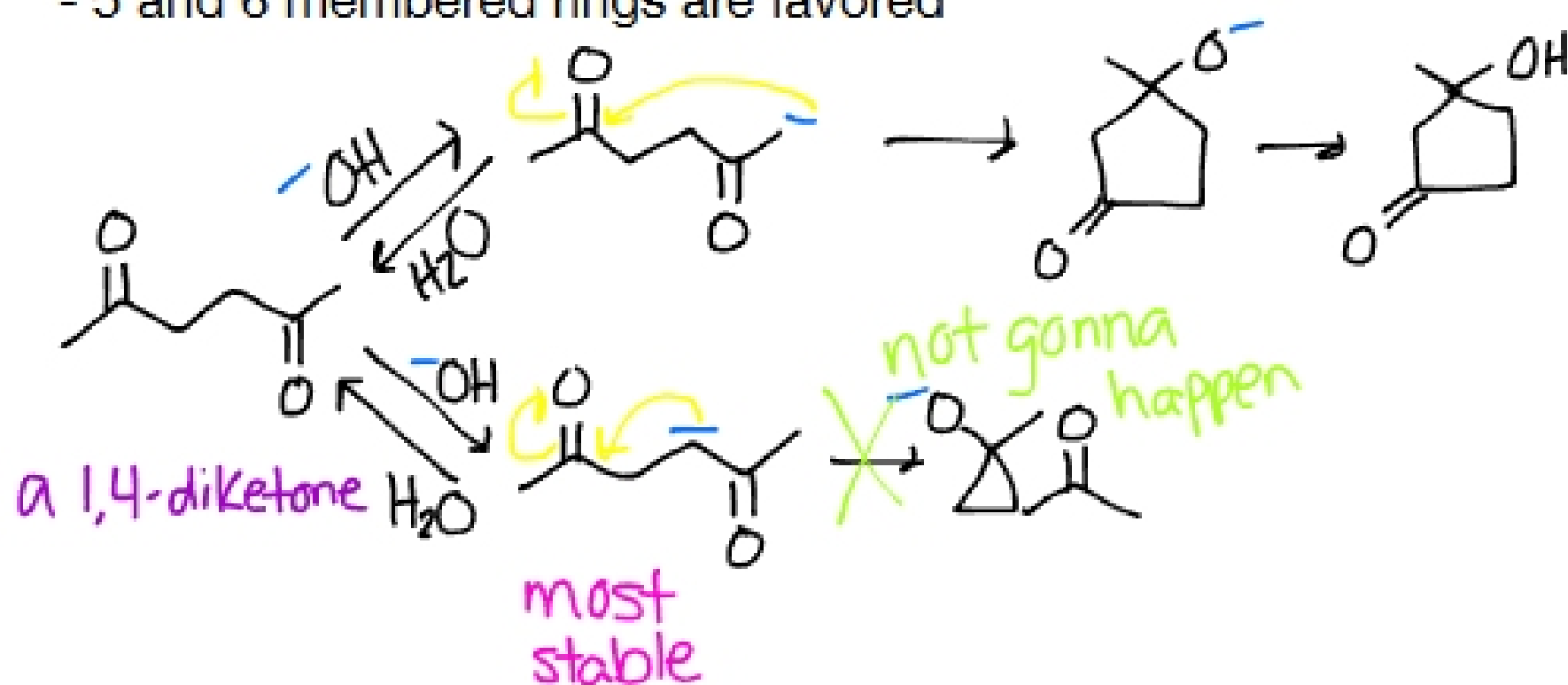
2b. α,β -systems with no enolizable Hs
 -ketones as nucleophiles

iii. Slow reagent addition



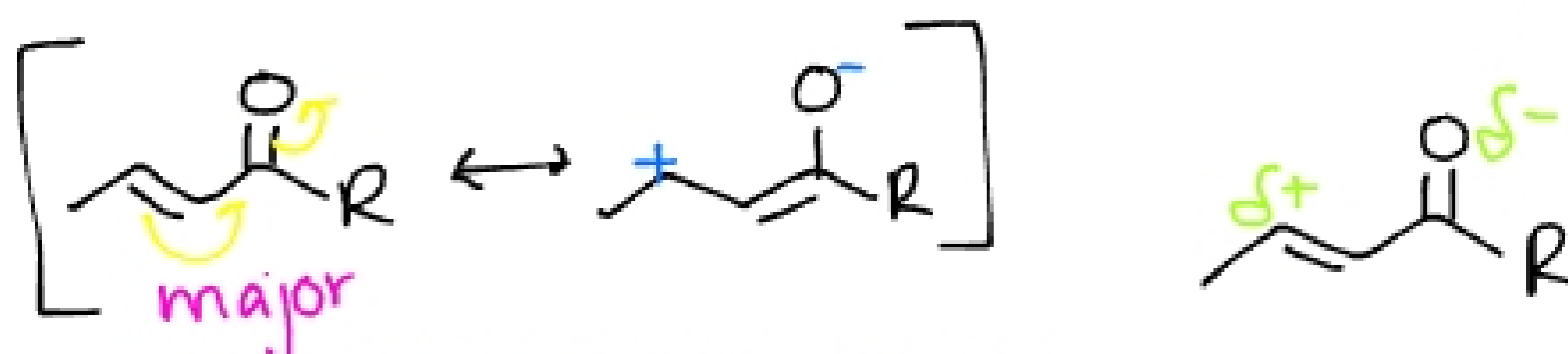
3. Intramolecular aldol reactions (18-7)

- 5 and 6 membered rings are favored



VI. Properties of alpha, beta-unsaturated carbonyls (18-8)

1. Enones are more stable than the saturated species (bc of resonance)



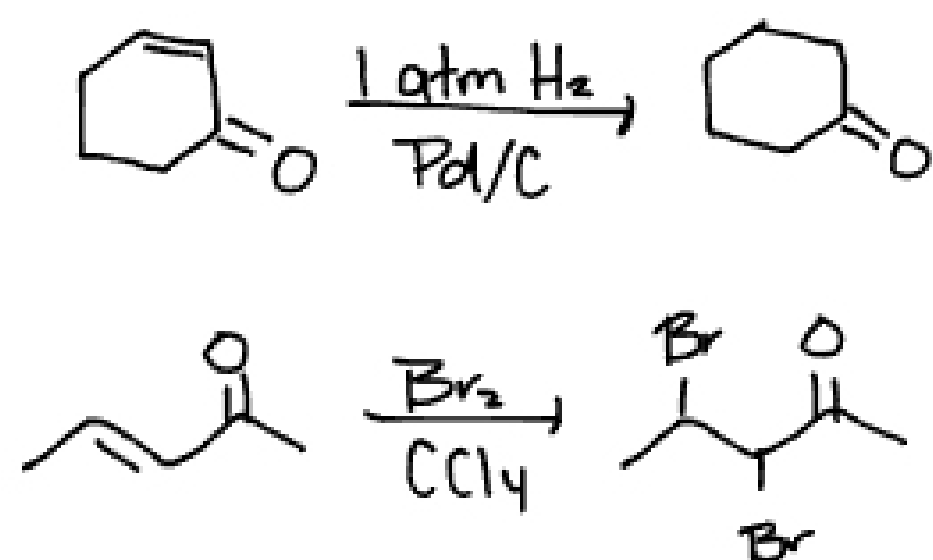
-suggests electrophile beta-carbon

A. Non-conjugated enones will "walk" into conjugation



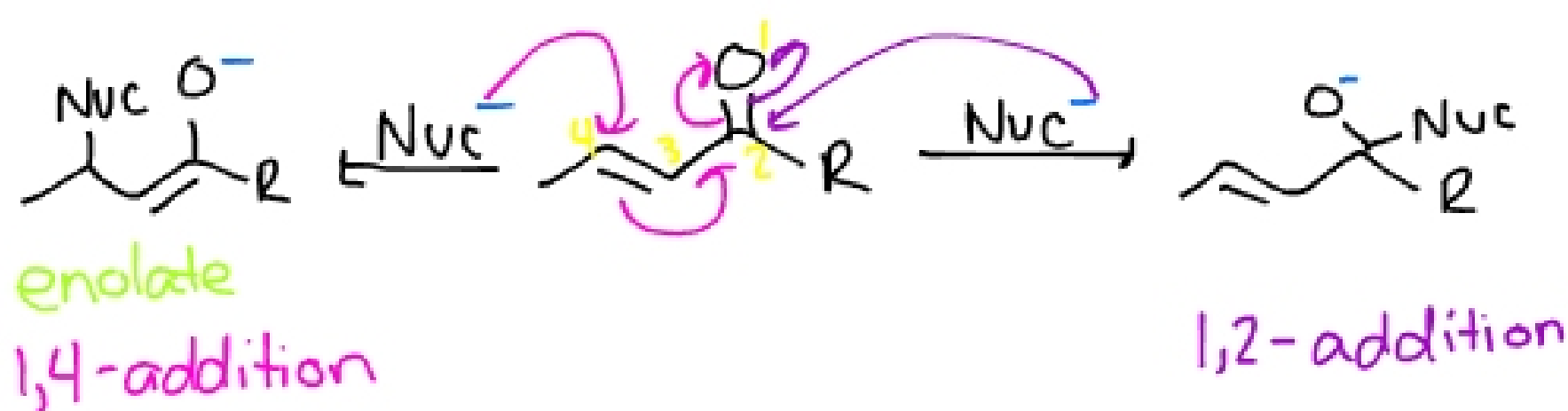


2. Enones undergo typical reactions of alkenes and carbonyls



3. Conjugate additions (18-9)

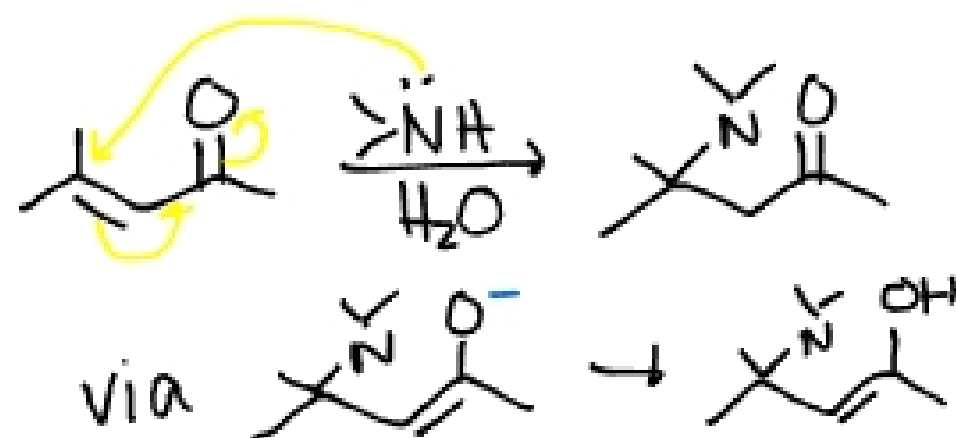
A. Nucleophilic addition to an enone



B. "Weak" nucleophiles will add 1,4

-thermodynamic control, makes most stable species

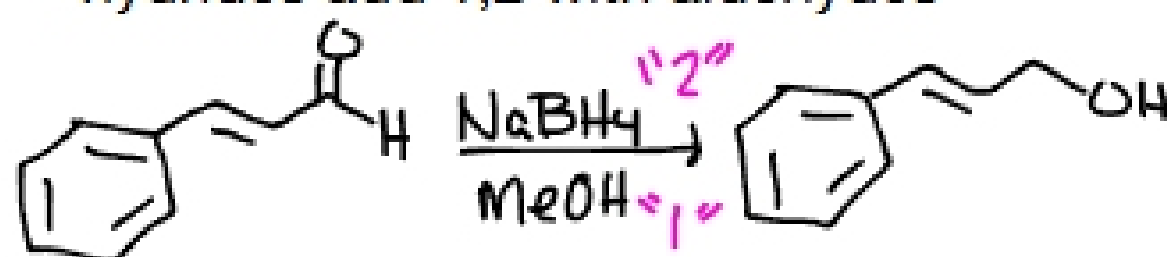
-amines, alcohols, CN, enolates, alkoxides....



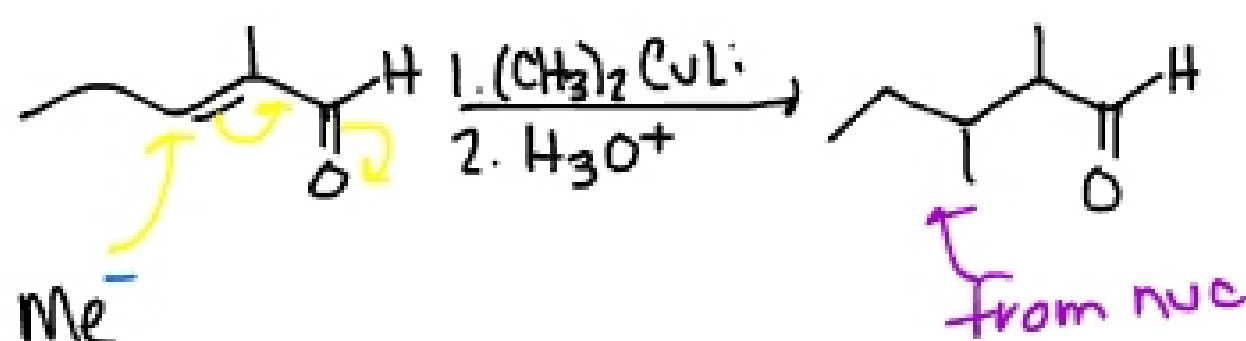
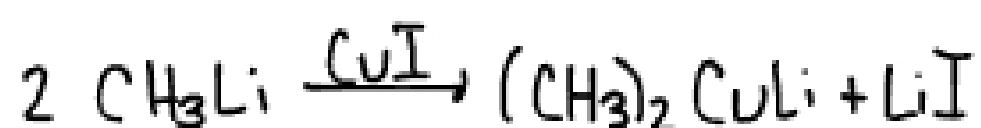
- C. "Strong" nucleophiles add 1,2 (18-10)
 -organolithiums (RMgX add both)
 -kinetic control, usually form unstable products



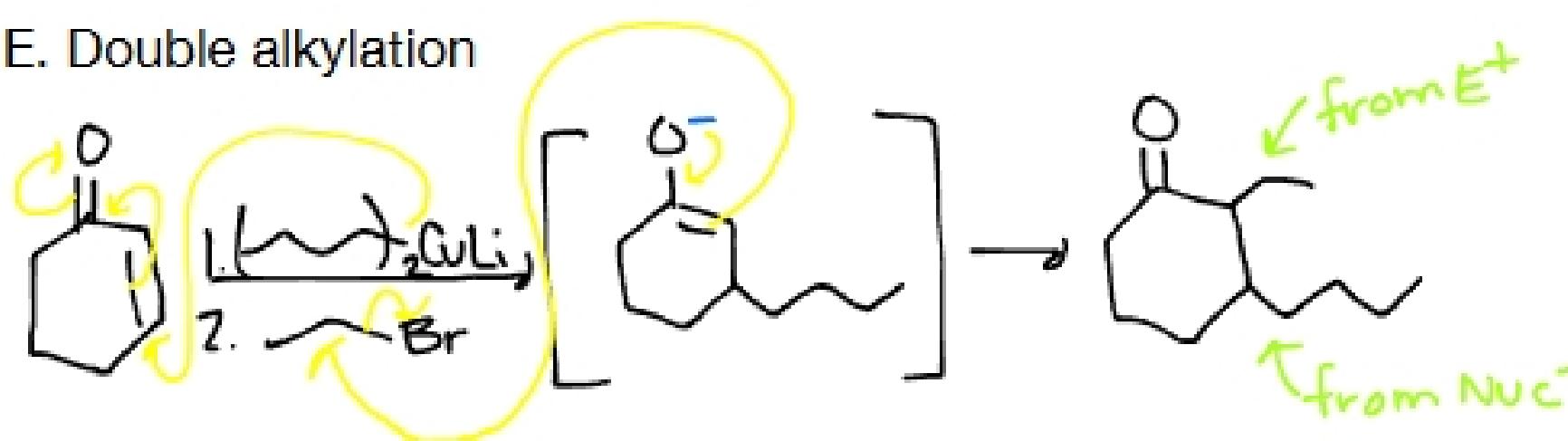
-hydrides add 1,2 with aldehydes



D. Organocuprates add R⁻ 1,4



E. Double alkylation



4. The Michael Addition (18-11)
 -Enolate addition to enones (1,4)
 -forms 1,5-dicarbonyl compounds

