Area D: LDA-based Reactions at C5?

- There are technical challenges with these, because the LDA is very air- and moisture-sensitive.
- I have done POP experiments confirming that this absolutely works.





LDA = Lithium DiisopropyAmide



Pretty sensitive to being done correctly! Mistakes:

- 1. Significant starting material recovered.
- 2. Added extra LDA to cover, workaround.
- 3. MORE starting material recovered!
- 4. Pretty precise stoichiometry. EXCESS LDA HURTS!
- 5. It also hurts to have less Mel than LDA.
- 6. Want Mel > LDA
- 7. Surplus LDA reacts faster with the MeI than does the antipyrine anion.
- 8. Hypothetical solution:
- a. Use Mel ≥ LDA
- b. Avoid using much surplus of LDA.
- 9. 1.05 LDA, 1.2 Electrophile



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Questions:

- 1. Can R-I bigger than methyl work?
- 2. ethyl, propyl, butyl, etc. work?
- 3. Can R-Br work?
- 4. Can 2° alkyl groups work?
- 5. Temperature? Do we need to work at -78°? Or could 0° be OK?
- 6. Workup? What's a convenient workup procedure?
- 7. Solvent removal: how hot must the vacuum concentration be?
- 8. How to further purify? Can we do a digestion to clean things up?
- 9.. Are products oils or solids?
- 10. How about using carbonyls as electrophile>.



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