

Study Question 6: Practice with Condensations and Friends

For each reaction, draw a mechanism (Be sure to show lone pairs on atoms "in action" and of course, arrows. Also show at least a sampling of important resonance forms). In the process of drawing the mechanism, you should be able to figure out the missing structures. These are in (rough) order of increasing difficulty, so you should probably work them in order. Very similar steps are used in each example. Remember:

- Aldehydes and ketones undergo nucleophilic addition to their carbonyls.
- Esters, amides, other carbonyl functional groups with a good leaving group undergo nucleophilic substitution at their carbonyls.
- Both aldol and Claisen condensations proceed via enolates.

