Due in class: Monday, Mar. 19th, 2007 at 12:05 pm.

1. Provide a mechanism for the following; show arrow pushing.

2. Provide a mechanism for the following; show arrow pushing.

3. Provide a mechanism for the following. No deuterium incorporation was observed in the absence of light. Show arrow pushing.

4. Provide a mechanism for the following; show arrow pushing.

5. Provide a mechanism for the following; show arrow pushing.

6. Provide a mechanism for the following; show arrow pushing and account for the observed stereoselectivity.

7. Provide a mechanism for the following; show arrow pushing.

8. For the reactions presented in question 7 , explain the difference in product distribution between the reactions employing $\mathrm{CCl}_{4}$ and $\mathrm{BrCCl}_{3}$.
