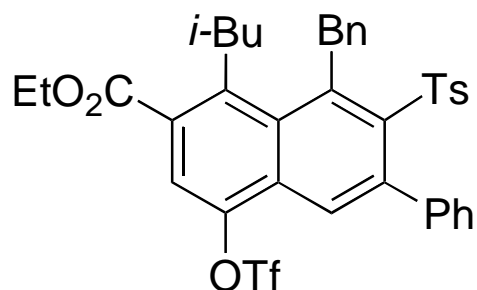


1. (6) Draw the complete structure of the molecule that is partly represented below by organic abbreviations. Show all bonds except for those from carbon to hydrogen.



2. (4) Draw structures for (1) the lithium enolate of acetone; (2) lithium diisopropylamide; (3) furan; (4) pyridine.

3. (6) State the pK_a of (1) acetic acid; (2) ammonia; (3) phenol; (4) acetone; (5) acetylene; (6) ethanol.

4. (10) Number the heavy atoms in the structures below, then make a list of bonds made and broken between heavy atoms. How would you classify the mechanism? (Note: you don't have to write the complete mechanism here - that will be part of a homework assignment.)

