5.04 Principles of Inorganic Chemistry II
Fall 2008

Chemistry 5.04 (F08)
Problem Set 1 addendum

Due Friday, 19 September

1. Assign point groups to the following molecules. Sketch the molecule and the symmetry elements present in each.
   a. ethane (staggered)
   b. ethane (eclipsed)
   c. cyclohexane (chair)
   d. cyclohexane (boat)
   e. adamantane
   f. ferrocene (staggered)
   g. ferrocene (eclipsed)
   h. P_4
   i. S_8

2. Draw a molecule (not found in the texts or lecture notes) that exemplifies each of the following point groups. Please use molecules that actually exist.
   a. C_{2h}
   b. D_{8h}
   c. D_{2d}
   d. C_S
   e. C_{6v}