

**Due April 15, 1999**

1. 17.12 (problem, Atkins)
2. 17.21 (Additional problems, Atkins)
3. Which molecule do you expect to have the lowest IP? The highest? ethylene, butadiene, allyl radical.
4. Sketch the proton NMR spectrum of dimethyl ether. State any assumptions that you made.
5. Predict the appearance of the ESR spectrum of the allyl radical.