

**LECTURE 27**  
**MOLECULAR ORBITAL THEORY FOR DIATOMIC MOLECULES**

**I. Homonuclear Diatomic Molecules**

- A. Valence atomic orbitals
- B. Atomic orbital energies

**II. Energy level diagram for O<sub>2</sub> or F<sub>2</sub>**

- A. Order of  $\sigma$  MOs relative to  $\pi$  MOs