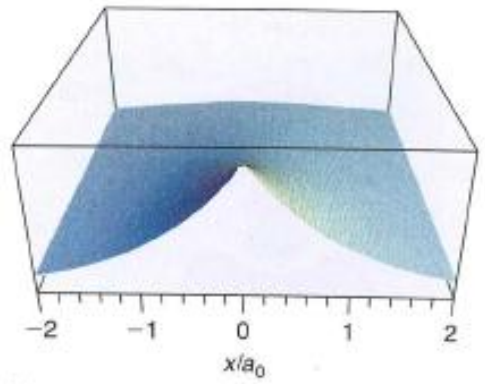
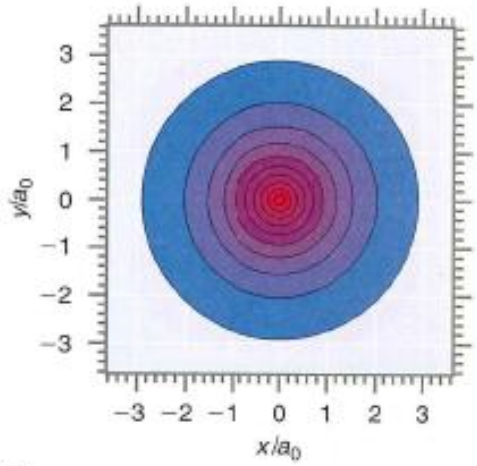


(a)



(b)

FIGURE 9.4

(a) 3D perspective and **(b)** contour plot of $\psi_{100}(r)$. Red and blue contours correspond to the most positive and least positive values of the wave function, respectively.

Colored version of figure on IX-12

Wavefunction

[1] Engel, Quantum Chemistry and Spectroscopy

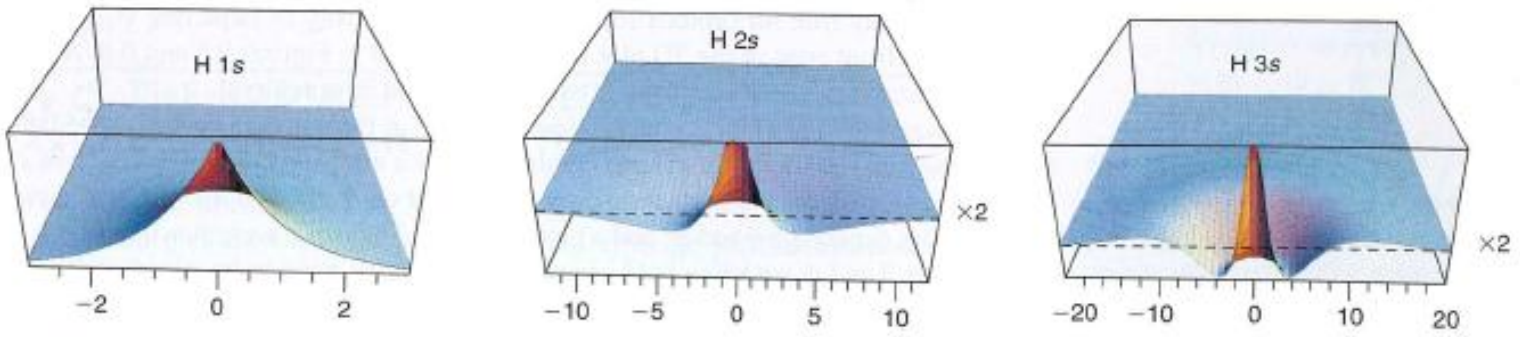


FIGURE 9.5

Three-dimensional perspective plots of the 1*s*, 2*s*, and 3*s* orbitals. The dashed lines indicate the zero of amplitude for the wave functions. The "×2" refers to the fact that the amplitude of the wave function has been multiplied by 2 to make the subsidiary maxima apparent. The horizontal axis shows radial distance in units of a_0.

Colored version of figure on IX-13 [From [1]]

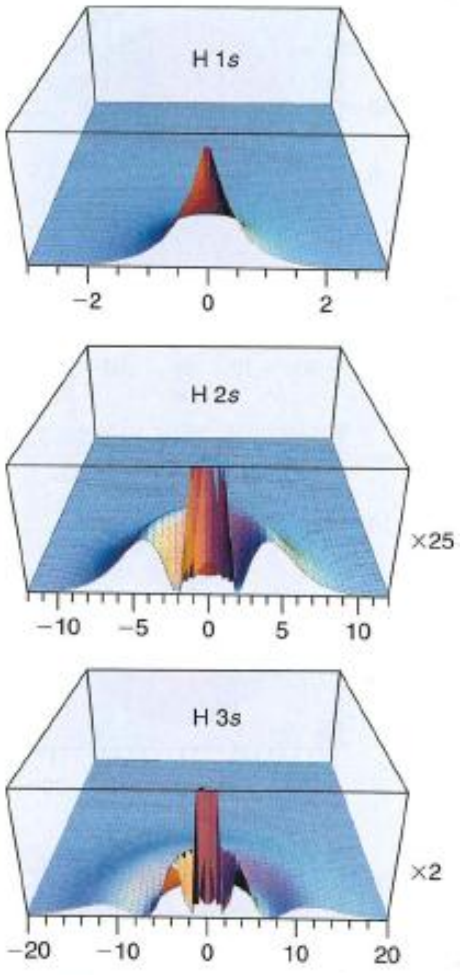
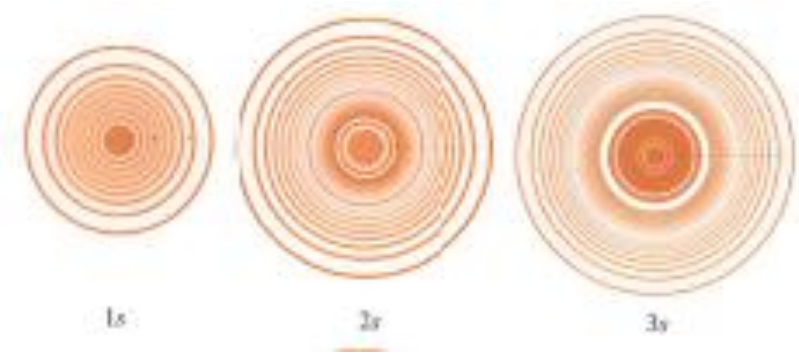


FIGURE 9.8

3D perspective plots of the square of the wave functions for the orbitals indicated. The numbers on the axes are in units of a_0. The "×25" refers to the fact that the amplitude of the wave function has been multiplied by 25 to make the subsidiary maxima apparent.

Colored version of figure on IX-15 [From [1]]

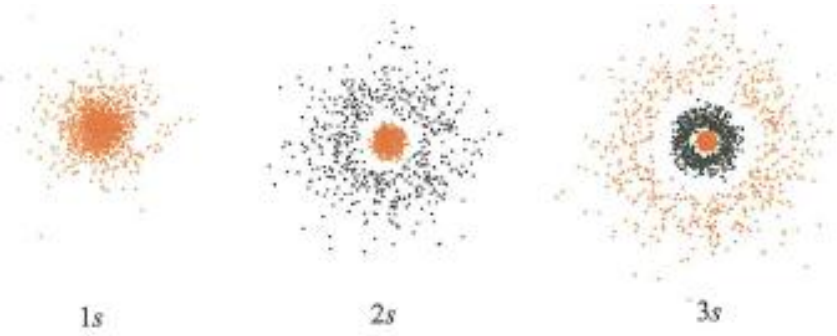
Wavefunction squared



Figures on IX-16

Wavefunction squared
(probability density)
Contour plots

Using dots (density of dots is proportional to probility)



[2] McQuarrie, “Quantum Chemistry”

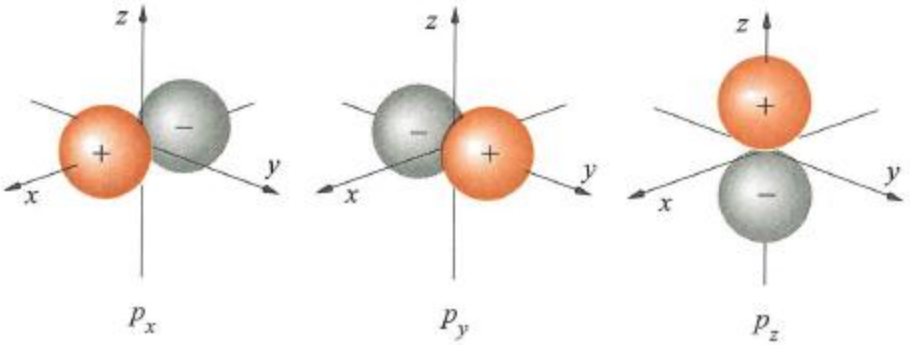


Figure on IX-22 [From [2]]

p orbitals (real angular functions)

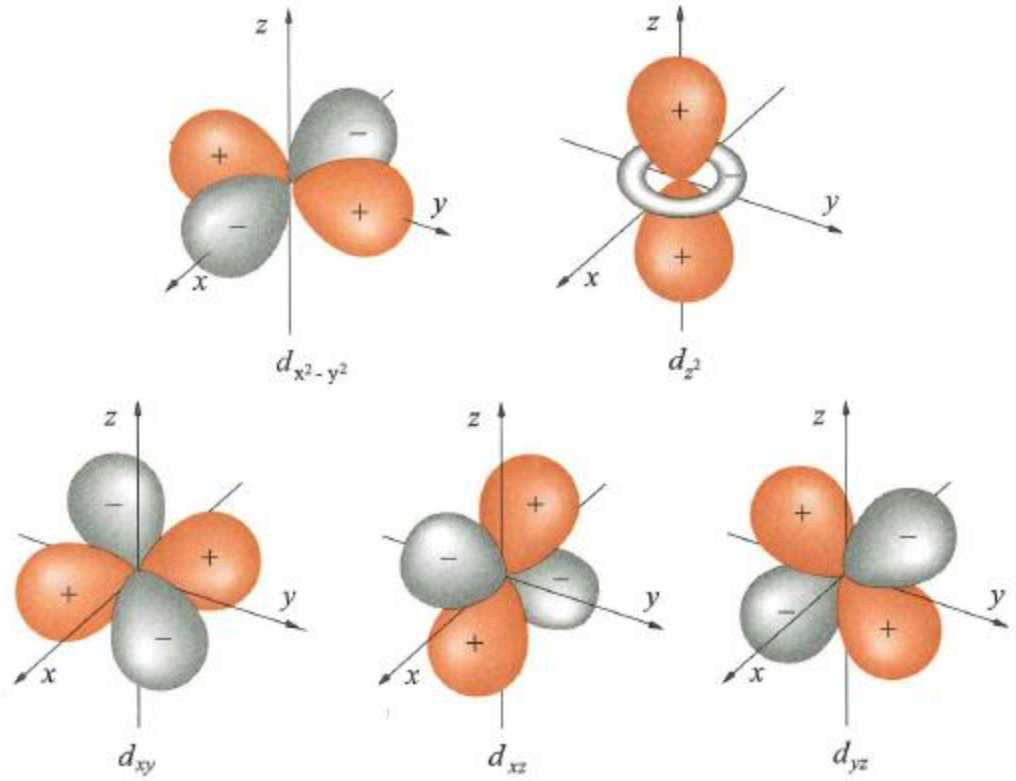
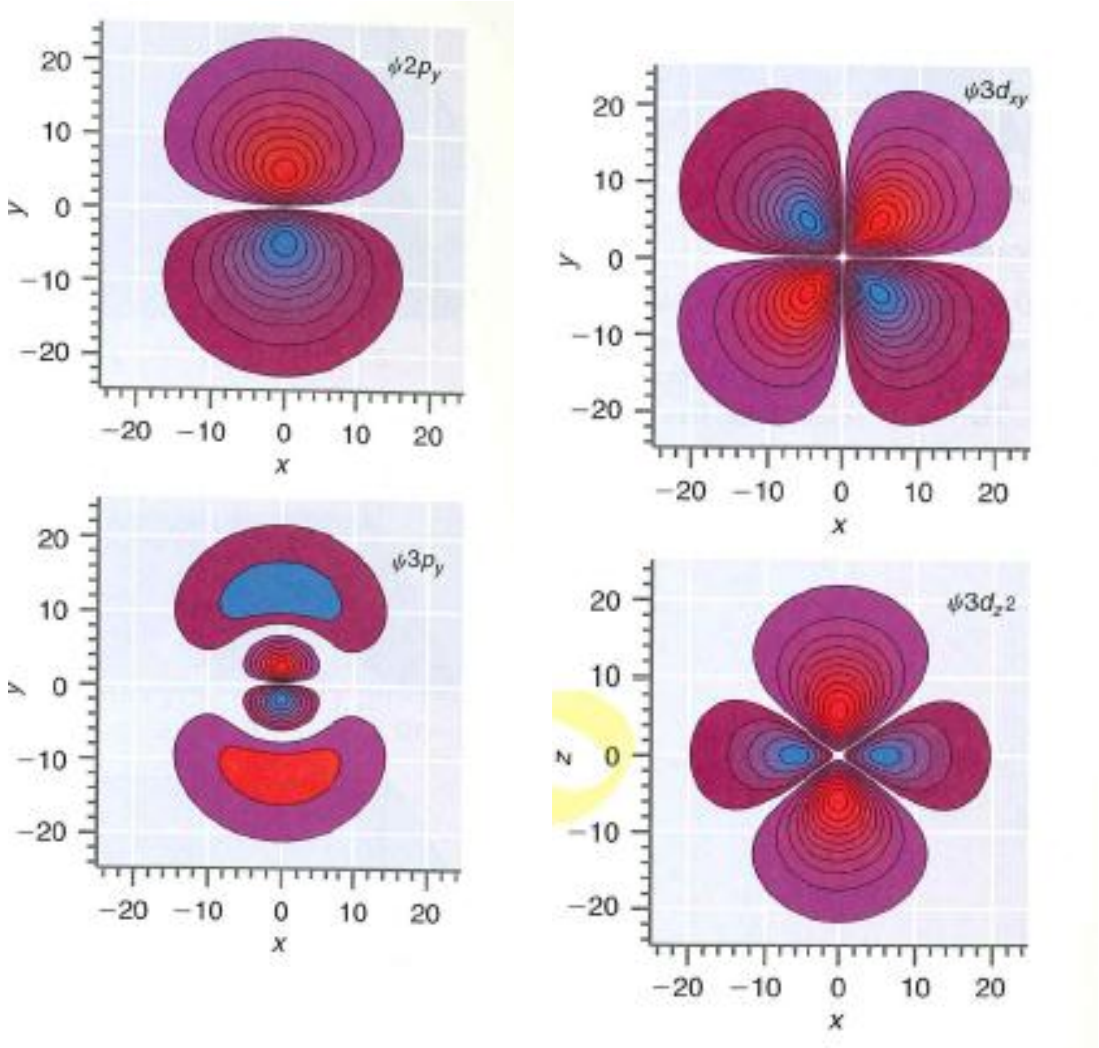


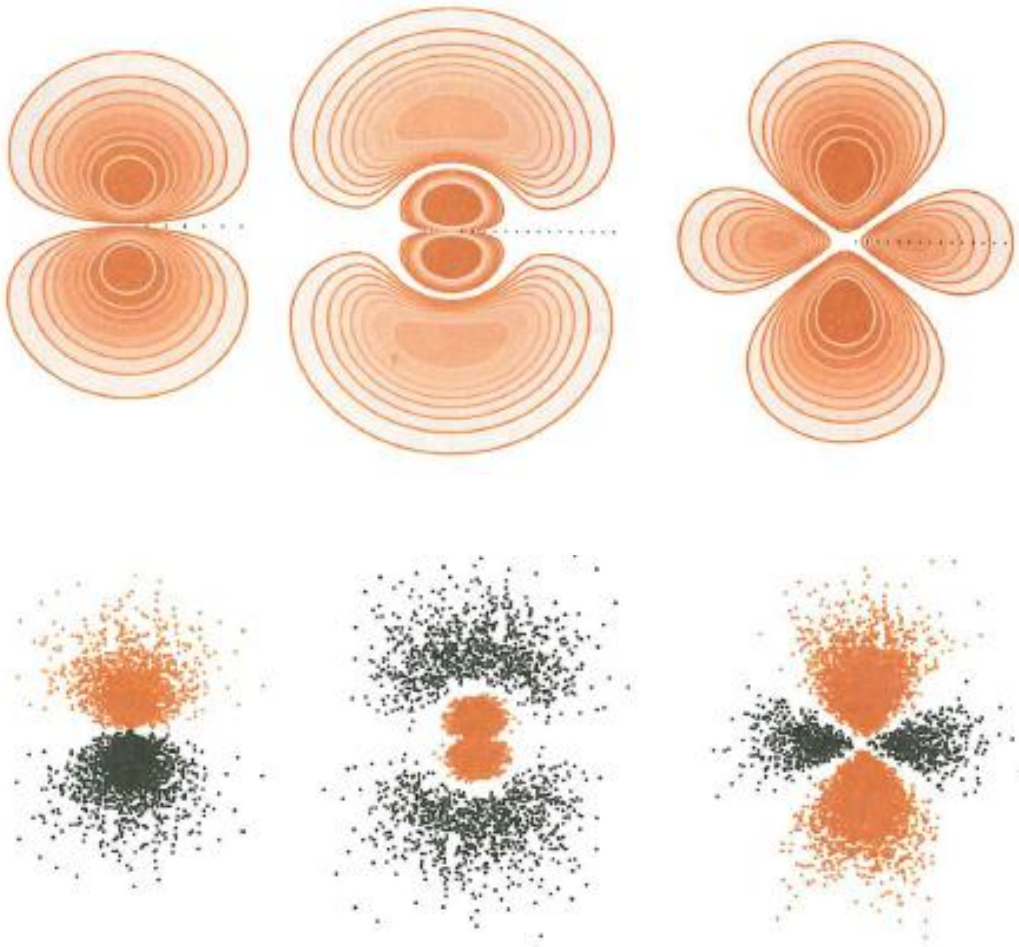
Figure on IX-24 [From [2]]

d orbitals (real angular functions)

Figures on IX-26 [From [1]]



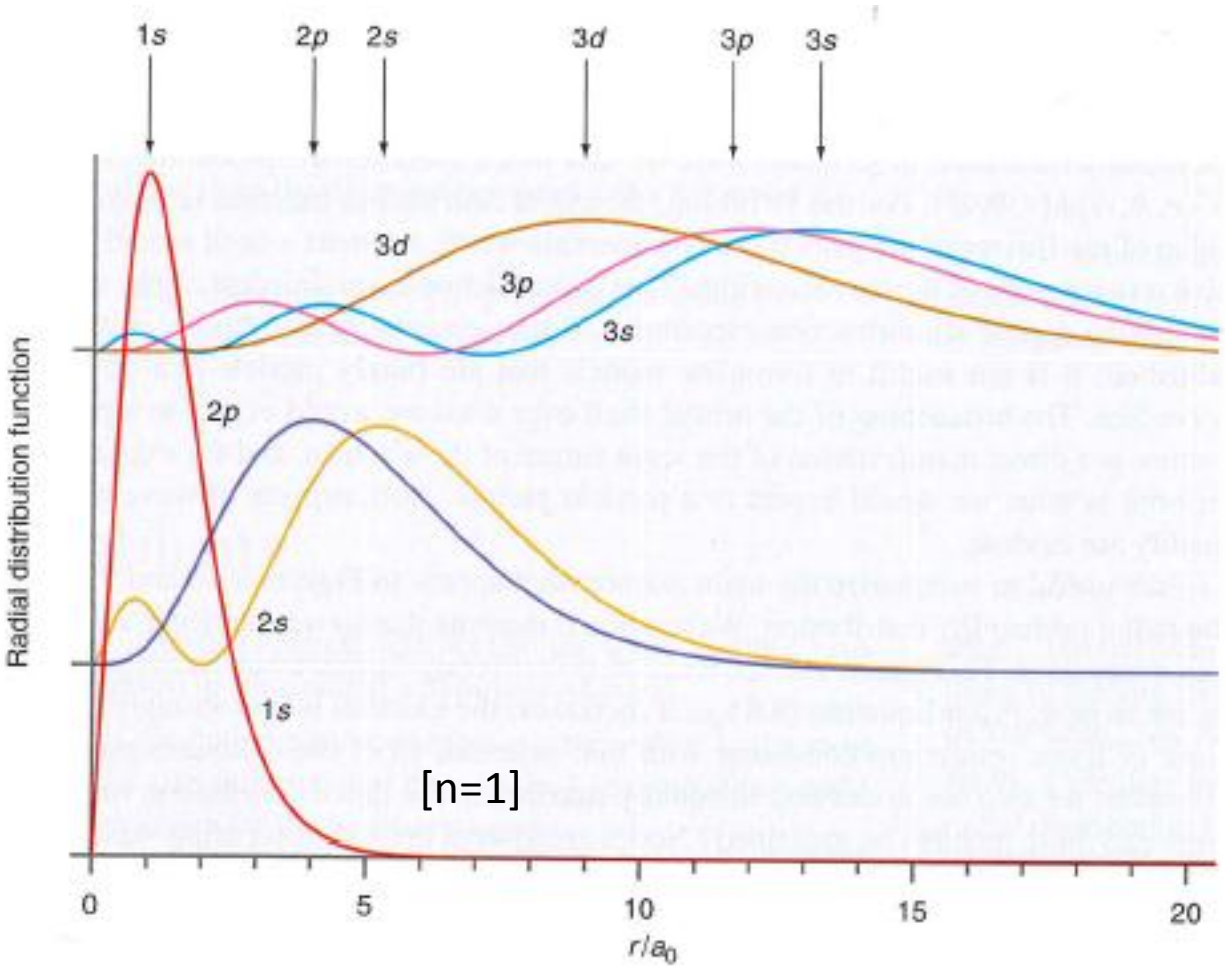
Wavefunctions



Figures on IX-27 [From [2]]

Wavefunction squared (probability density) for (210), (310), (320)

P(r) = Radial probability distribution function [From [1]]



[n=3] (x-axis shifted upward for clarity)

[n=2] (x-axis shifted upward for clarity)