4.28 The surface energy for a crystallographic plane will depend on its packing density [i.e., the planar density (Section 3.11)]—that is, the higher the packing density, the greater the number of nearest-neighbor atoms, and the more atomic bonds in that plane that are satisfied, and, consequently, the lower the surface energy. From the solution to Problem 3.54, the planar densities for BCC (100) and (110) are $\dfrac{3}{16R^2}$ and $\dfrac{3}{8R^2\sqrt{2}}$, respectively—that is $\dfrac{0.19}{R^2}$ and $\dfrac{0.27}{R^2}$. Thus, since the planar density for (110) is greater, it will have the lower surface energy.