Combustion 1
Bond Energy

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1 Atomic Radii

We often treat individual atoms as spherical entities. While it isn't strictly true, this simplification provides motivation for studying chemical reactions using the notion of distance.

Recall that a sphere is uniquely defined by the length of its radius, the line segment from its center to any point on its boundary (see Figure 1).

Definition 1.1. When we treat an atom as a sphere, its *atomic radius* is the radius of that sphere.

We already know that certain atoms have different "sizes." The concept of atomic radii makes this precise: different elements—and even different atoms of the same element—have different atomic radii.

References

[Mar] MarinaVladivostok. File:sphere and ball.png.

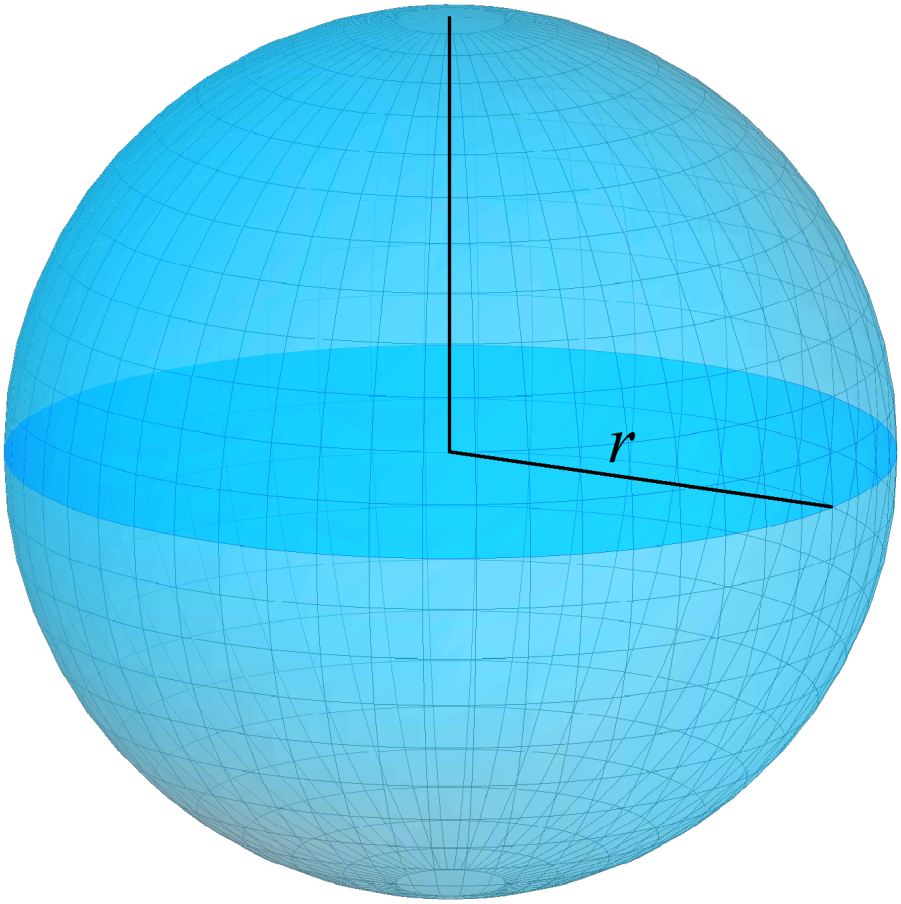

Figure 1: Two radii of a sphere are shown. Note that they have the same length. [Mar]