

## 11.2 Atomic Radius (Video)

This project was preformed to supply **Libretext Authors** with videos on General Chemistry topics which can be used to enhance their projects. Also, these videos are meant to act as a learning resource for **all General Chemistry students**.

### Video Topics

Atomic Radius is half the distance between neighboring atoms. A covalent radius is one half the distance between the nuclei of two atoms joined by a single covalent bond. An ionic radius is based on the distance between the nuclei of ions joined by an ionic bond in a crystalline solid. As  $Z_{\text{eff}}$  increases the atomic radius of an atom decreases because of the increased interaction between the nucleus and the outermost electrons.

Atomic radius decreases going across the periodic table to the right.

Why? Nuclear charge increases. Electrons with the same  $n$  value do not effectively shield each other so overall  $Z_{\text{eff}}$  increases.

Atomic radius increases going down a group because the as higher  $n$  values increases the distance between the nucleus and the outermost electrons also increase.

### Link to Video

**Atomic Radius:** <https://youtu.be/ZYKB8SNrGVY>



### Attribution

- Prof. Steven Farmer ([Sonoma State University](#))

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