When a sample of nuclei that have a nuclear spin (e.g., $^1\text{H}$, $^{13}\text{C}$) and, therefore, can exist in more than one spin state is placed in an external magnetic field and irradiated with electromagnetic radiation at precession frequency, some nuclei absorb energy from the radiation and change the spin state. This phenomenon, which is the basis of NMR spectroscopy, is known as resonance.

**Contributors**

- [Gamini Gunawardena](https://chempal.utahvalley.edu) from the OChemPal site ([Utah Valley University](https://www.utahvalley.edu))