



Henry Moseley

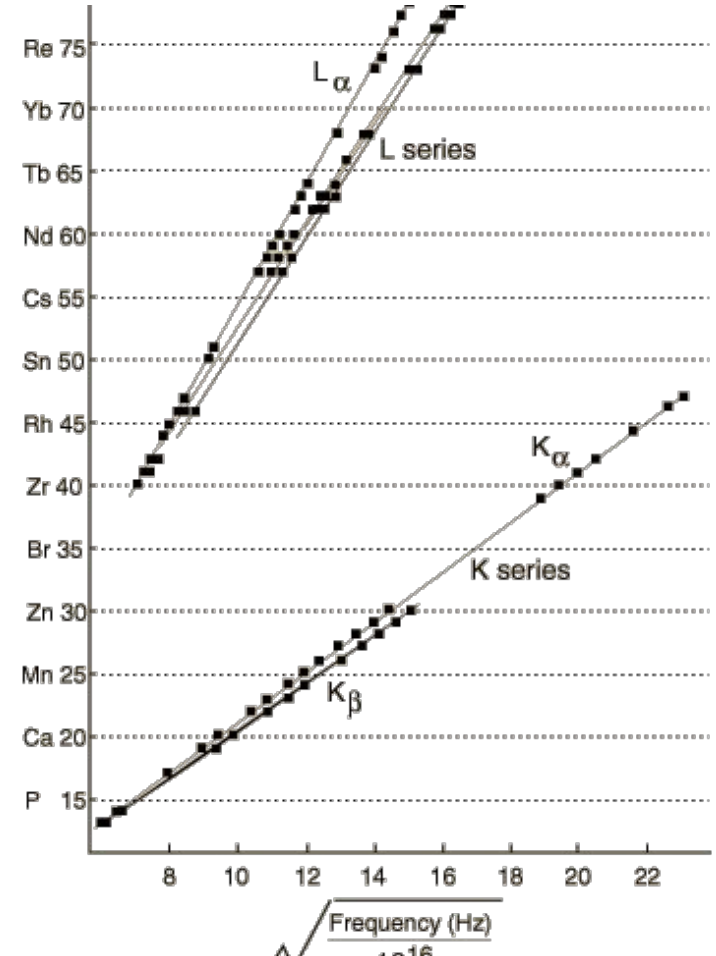
Brian Gibson
Period 5
8/17/18

Contributions to Atomic Theory

- Moseley demonstrated that elements' properties are determined by their atomic numbers [2]
- Established the link between atomic number and charge of atomic nucleus [2]
- Previously believed that atomic weight was the distinguishing factor between elements [2]

Moseley's Experiment

- Moseley made his breakthrough while conducting an experiment on the X-ray spectra of different elements
- He would fire X-rays at element samples and measure the wavelength of the X-rays that were given off as a result
- Found that the square root of the X-ray frequencies formed a perfect straight line when plotted against the elements' atomic numbers



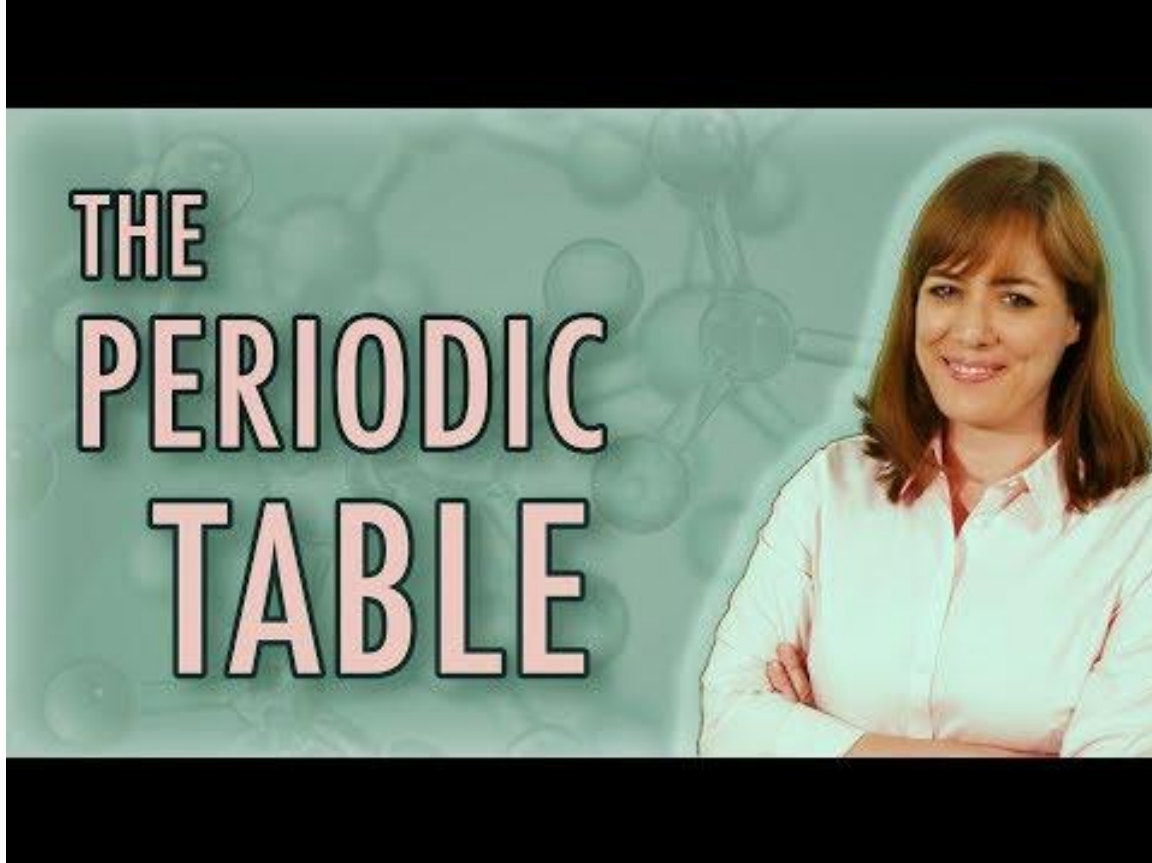
Meaning of Moseley's Experiment

- This phenomenon occurred because X-rays cause electrons to move to lower energy levels
- When they do this, they release energy in the form of X-rays
- The amount of energy released depends on the pull of the nucleus (how much positive charge)
- Experiment found a way to measure atomic number

Moseley's Periodic Table [4] (bottom): Grouped by atomic numbers

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History of the Periodic Table



Bibliography

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