



Slide 1

History Of the Atom pre-Rutherford

5th century BCE:

Leucippus and Democritus

- Matter is composed of indivisible building blocks, called *atomos* (meaning indivisible).
- Different types and combinations of these particles were responsible for the various forms of matter.

15th-18th centuries CE:

Galileo, Newton, Boyle, and Lavoisier

- Idea was revisited without any significant update.

Slide 2

History Of the Atom pre-Rutherford

19th century CE, 1st decade:
Dalton

- Atoms are indivisible.
- All atoms of a given element are identical.
- The atoms of different elements vary in mass and size.
- Atoms are indestructible. Chemical reactions may result in their rearrangement but not their creation or destruction.

Slide 3

History Of the Atom pre-Rutherford

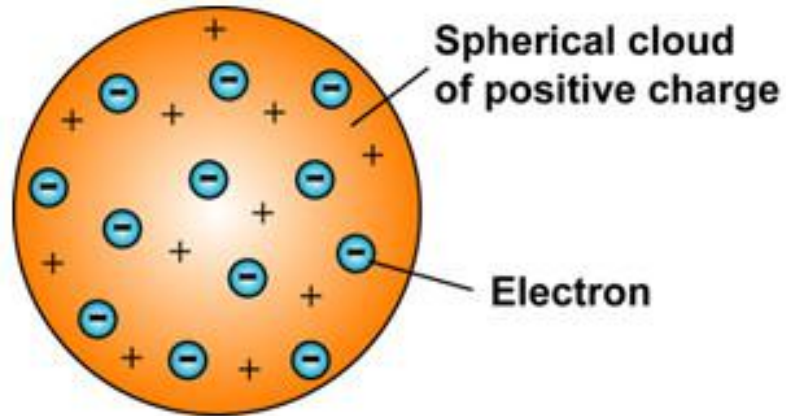
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History Of the Atom pre-Rutherford

20th century CE, 1st decade:
J.J. Thompson



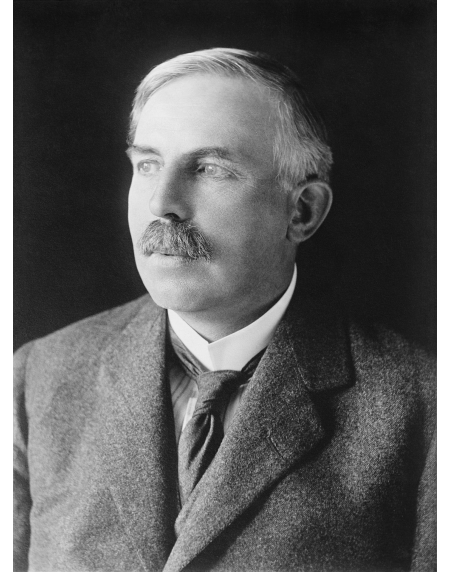
Slide 5

History Of the Atom

Rutherford

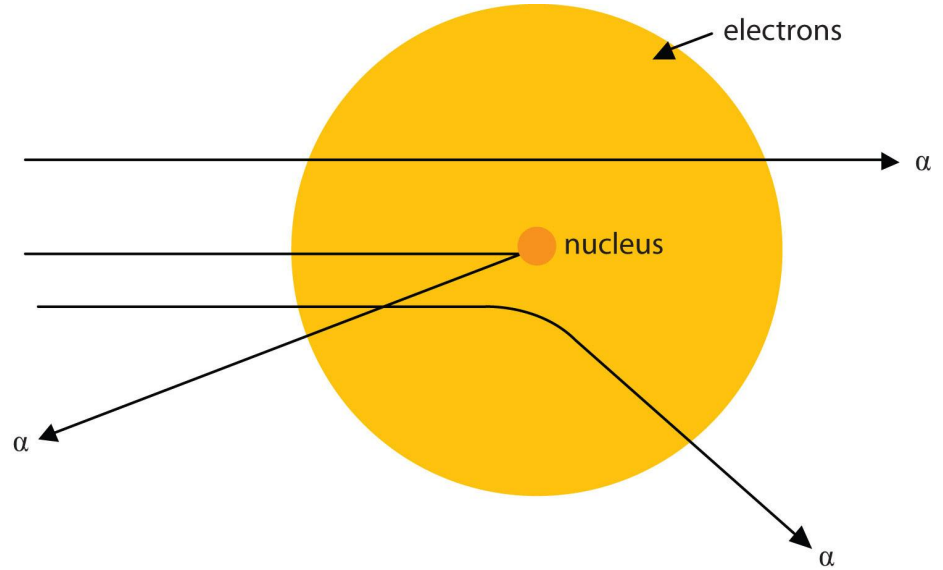
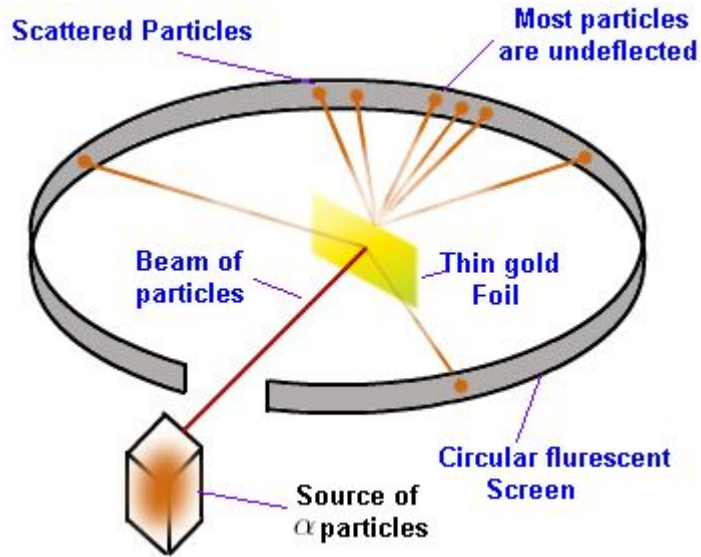
20th century CE, 2nd decade:
Ernest Rutherford

- Worked with JJ Thomson on the discovery of electron.
- Coined the terms alpha and beta rays.
- Discovered alpha particles are helium nuclei.
- Discovered radioactivity has a half-life.
- Discovered in radioactive decay new atoms are formed (Nobel Prize).
- Worked with Geiger on scintillation screens, which became the basis for the Geiger counter.

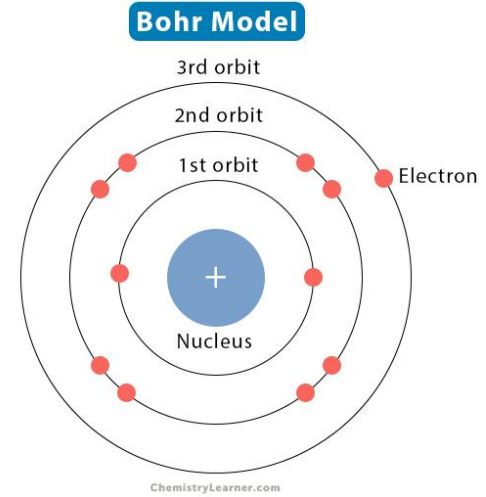
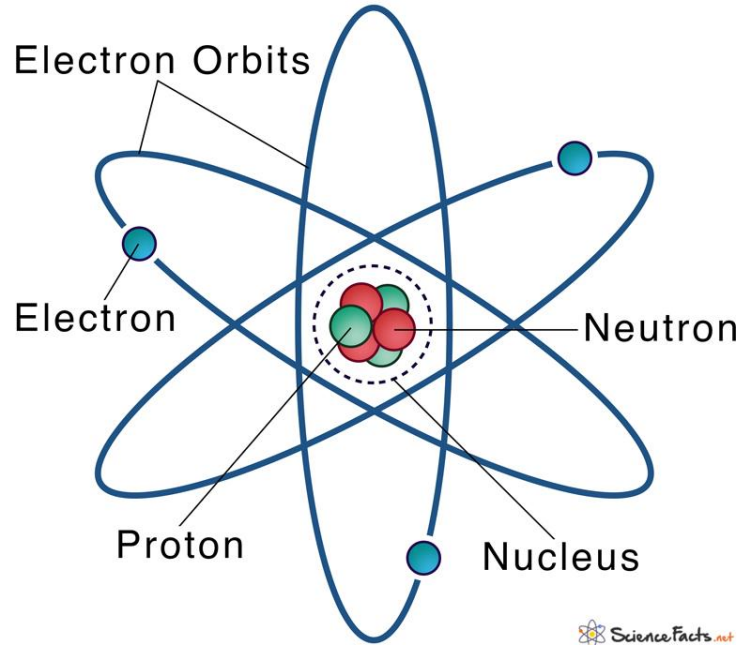


But he is not famous because of these.

Rutherford Gold Foil Experiment



Atom



Slide 8

Why doesn't the electron spiral into the nucleus?

