

Atomic Theory

People to Know



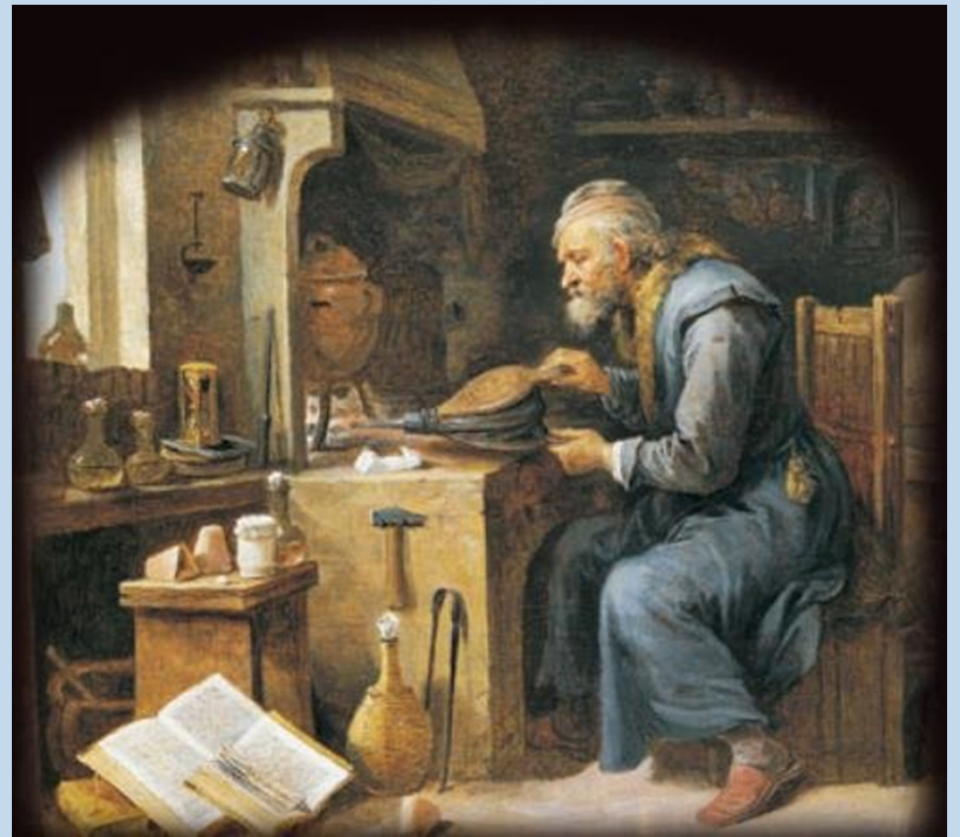
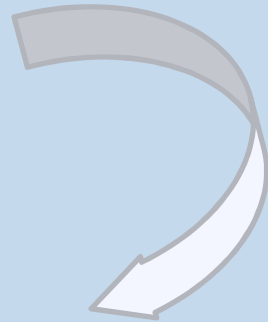
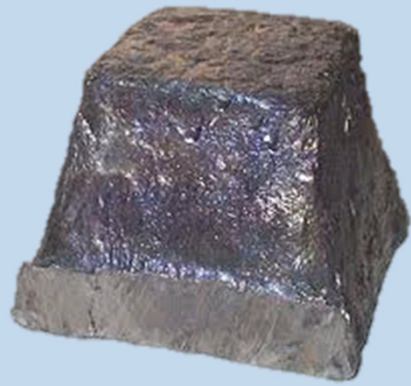
Aristotle

350 BC



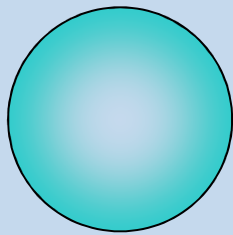
The Alchemists

(Middle Ages)

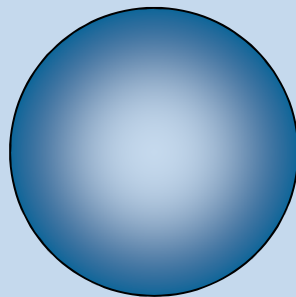


John Dalton

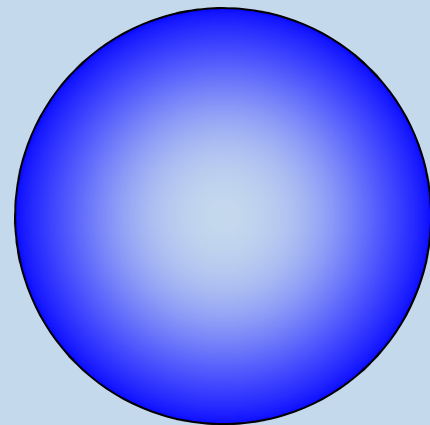
(early 1800's)



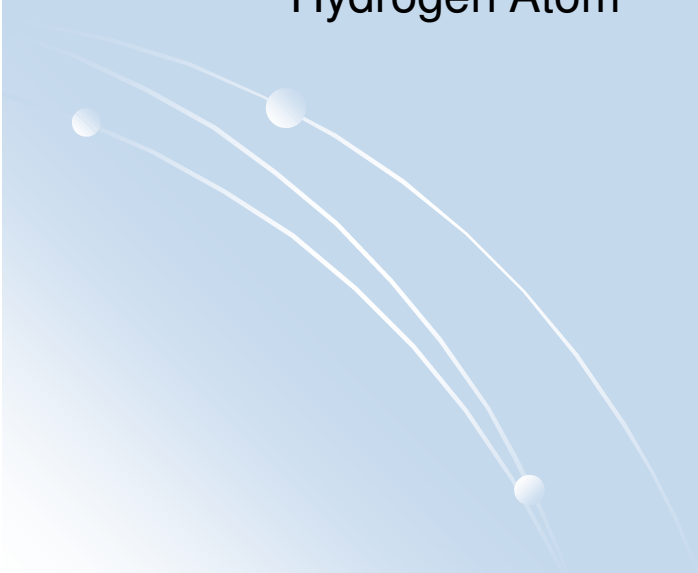
Hydrogen Atom



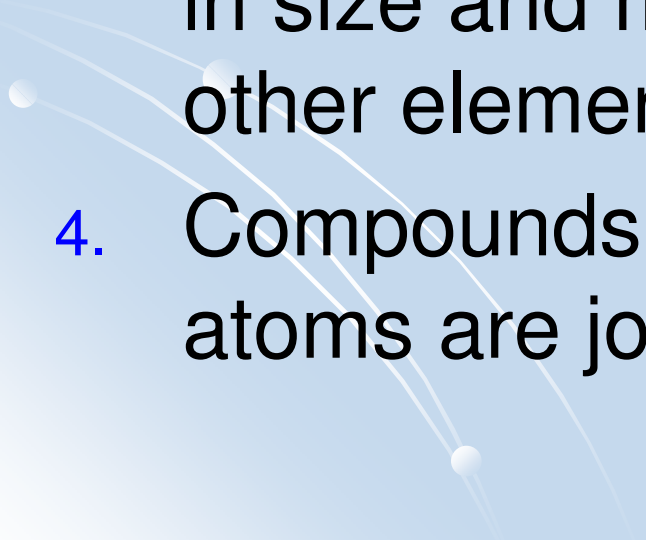
Lithium Atom



Oxygen Atom



Dalton's Atomic Theory

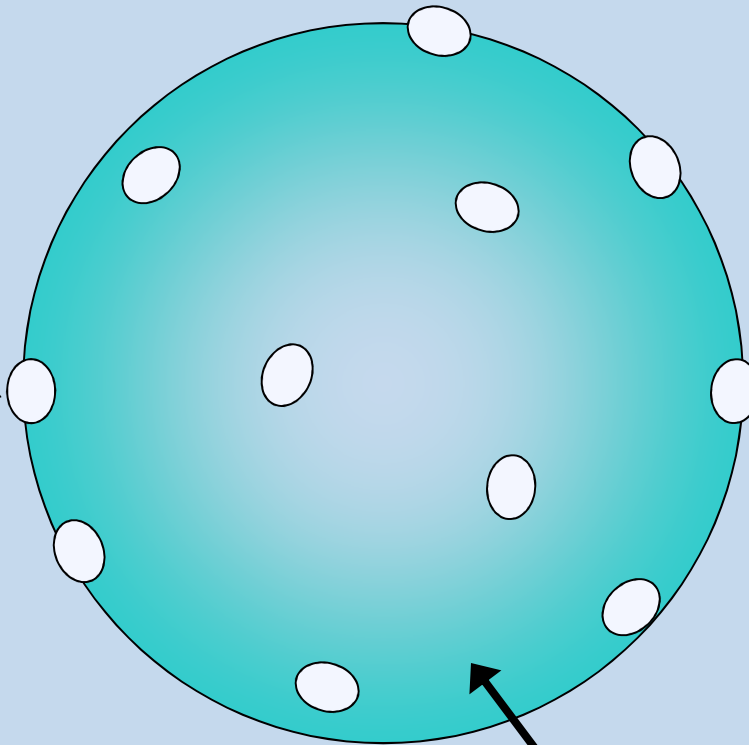
1. All matter is made of tiny atoms
 2. Atoms cannot be created, destroyed, or divided
 3. Atoms of the same element are identical in size and mass, and different from other elements
 4. Compounds are formed when different atoms are joined in specific ratios
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J.J. Thomson

(1897)



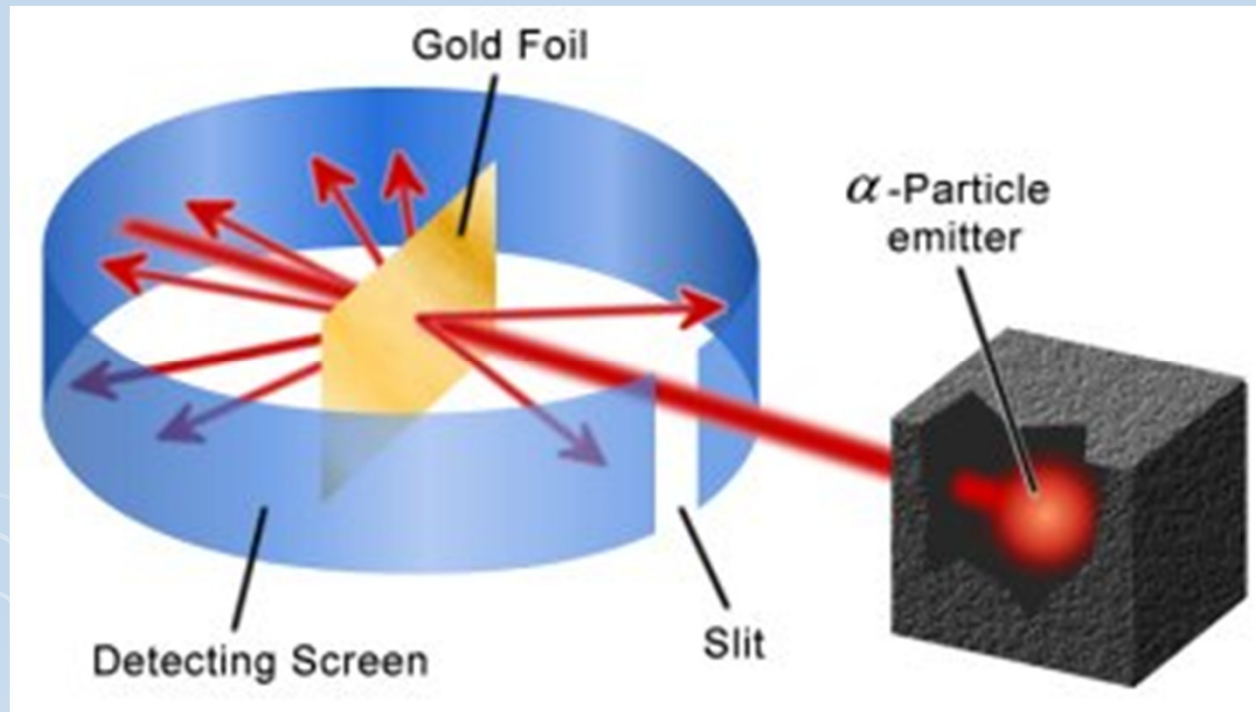
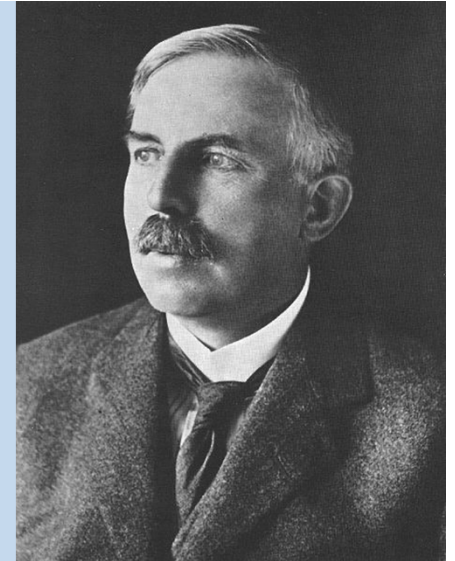
Embedded
electrons
(-)



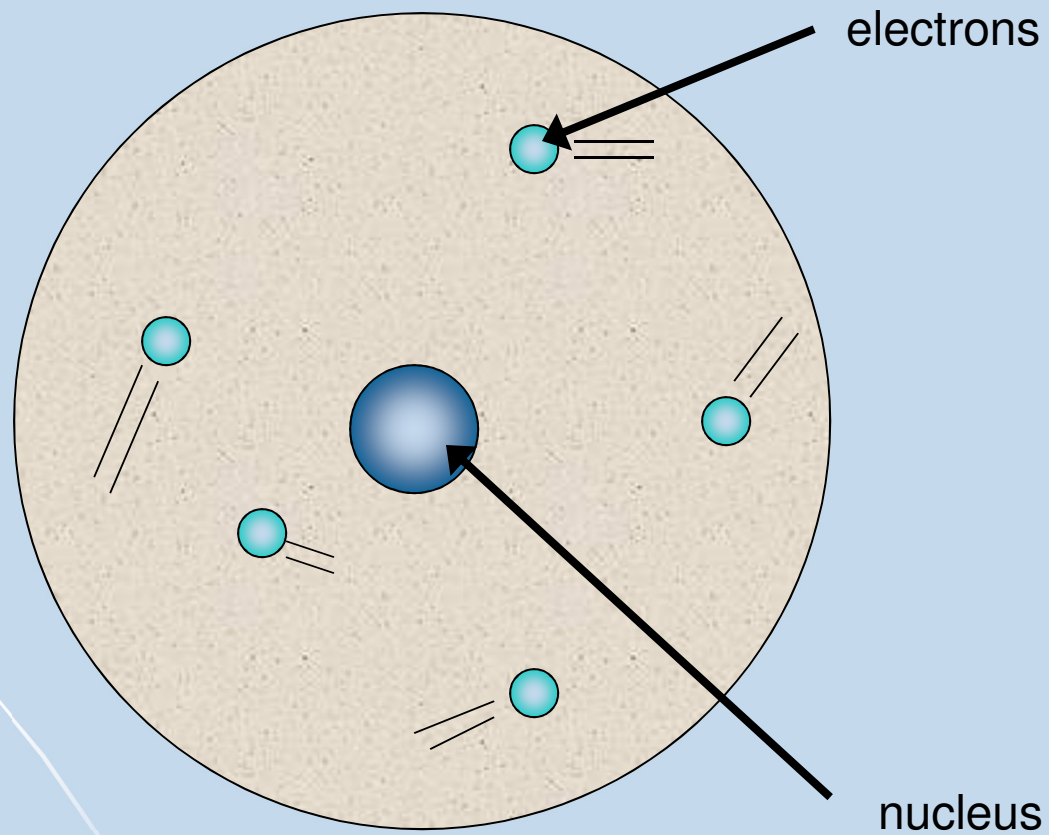
Atom (+)

Ernest Rutherford

(1911)

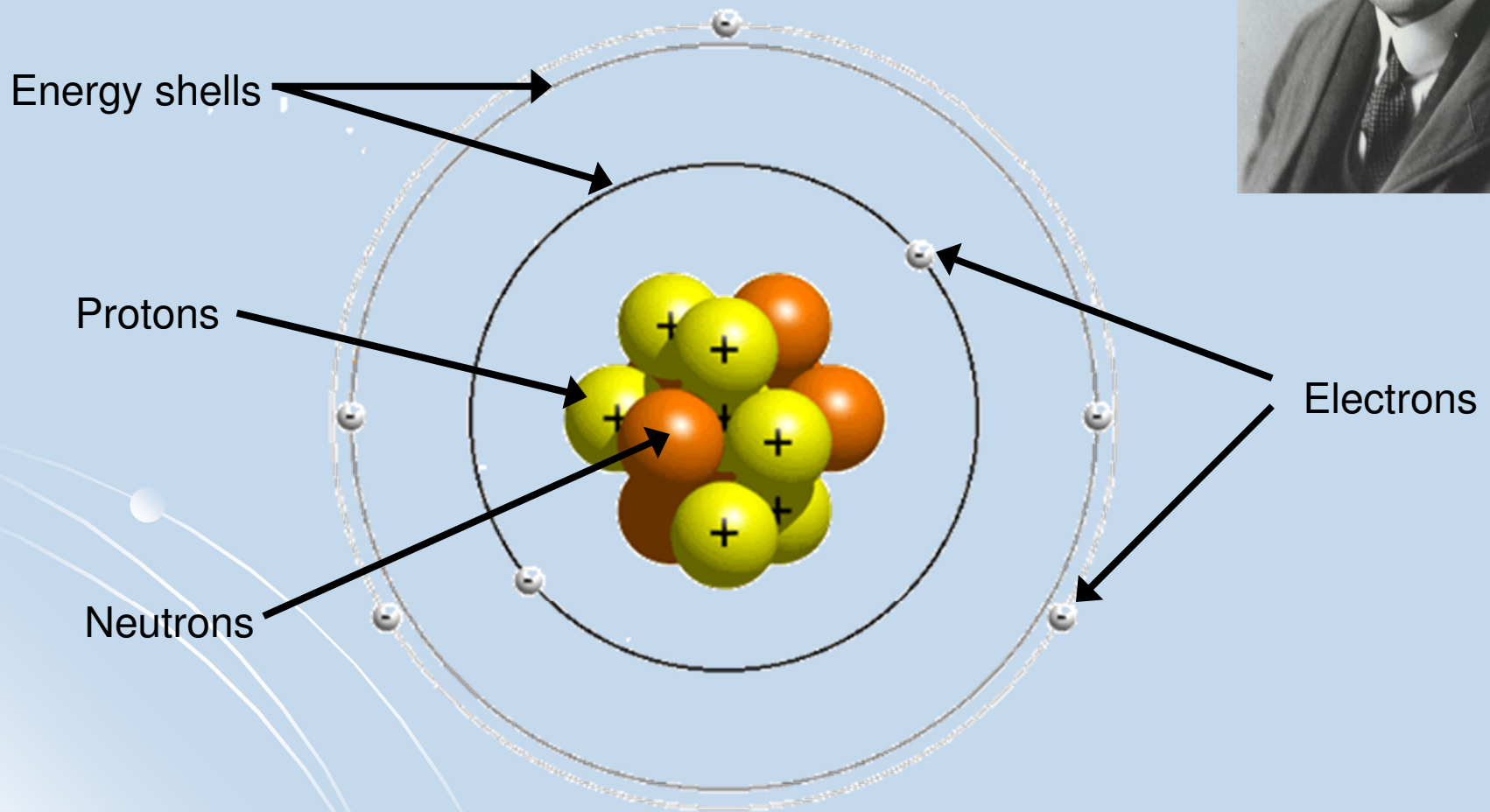
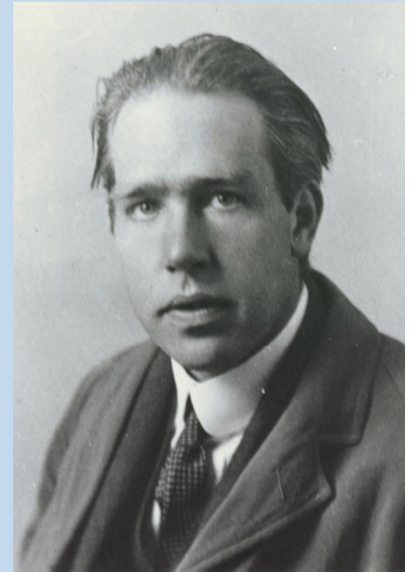


Rutherford's Model



Niels Bohr

(1913)



Modern Atomic Theory

- Protons and neutrons have the same mass, each about 1800 times heavier than an electron
- The nucleus is ...
 - Always positive, because of the protons
 - About 0.0001 the width of an atom
 - Inescapable
- Electrons are not spheres, but more like clouds

