

LECTURE 1 ATOMIC THEORY OF MATTER

I. People in History

- A. Aristotle
- B. Democritus
- C. Continuum Model
 - 1. Robert Boyle
 - 2. Joseph Priestly
 - 3. Antoine Lavoisier
 - 4. Joseph Proust
 - 5. John Dalton; Atomic Theory of Matter

II. Scanning Tunneling Microscopy

III. End of the 19th Century

- A. Major Advances
 - 1. Newtonian mechanics
 - 2. Thermodynamics
 - 3. Statistical Mechanics
 - 4. Classical Electromagnetism
- B. Non-“Classical” Observations
 - 1. Discovery of electron and nucleus
 - 2. Photoelectric effect

IV. Discovery of the Electron