

Download Atomic And Quantum Theory In Chemistry

Atomic Structure: The Quantum Mechanical Model. According to quantum theory, it's impossible to know the exact position and momentum of an electron at the same time. This is known as the Uncertainty Principle. The quantum mechanical model of the atom uses complex shapes of orbitals (sometimes called electron clouds),...Quantum Theory advances. Being negatively charged, electrons are attracted to the positive protons in the nucleus of an atom, and will normally occupy the orbital, or path, within an atom that is closest to the nucleus if it is available. This state, which has low potential energy, is called the ground state. Atomic and Subatomic Particles. The notion that the building blocks of matter are invisibly tiny particles called atoms is usually traced back to the Greek philosophers Leucippus of Miletus and Democritus of Abdera in the 5th Century BC. The English chemist John Dalton developed the atomic philosophy of the Greeks into a true scientific theory in the early years of the 19th Century. Definition of orbital as region of high probability for finding electron, and how quantum numbers are used to describe the orbitals. Compares Bohr model orbits and quantum mechanical model of atom.