

When an electron is removed from an atom, the mass [key word: negligible] and the overall charge [key word: more protons than electrons].

An orange coloured light is emitted when an electric current is passed through a glass tube containing neon gas causes the electrons in the neon atoms are being continually excited from their stable state to higher energy levels and hence are unstable. As the excited electrons return to lower energy levels, they emit photons of specific wavelengths. Since different atoms have different possible energy levels, any energy level transition is unique. These wavelengths correspond to different wavelengths of radiation, some of which are in the visible light range, hence the orange colour.