

Nucleus Deformation Induced Effects in the Electron System of Multiply Charged Helium Like Ions

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The contributions of the nuclear movement and deformation in the ground state electron energy, as well as the mass corrections and the mass polarization of Helium like ion were studied. The Helium like ions included in the research are all stable isotopes of elements with atomic numbers $Z = 2 - 118$, and the nuclides of all existing isotopes. The calculations were carried out by establishing the staggering relationships between the mass excesses of the nuclei depending on the number Z and N , respectively, of protons and neutrons on the one hand and the parameters characterizing the electron system on the other.