

计算机科学

运用定态法研究电子在原子核势场中的配置与运动关系

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摘要:

研究量子理论中微观粒子系统对库仑电场势能的影响, 将作用于核与电子间的电磁场进行核心化和定态化处理, 并将原子的电磁作用分解, 分别研究壳层电场和磁场对电子的作用. 通过分析各种原子的壳层球半径、电子轨道偏角和电子的运动速度, 可知电子运动的“轨道”截面小于且偏离原子“赤道”平面, 并按原子的极相进行配置和运动. 计算主族元素中44种原子的基态能级表明, 所得结果与第一电离电势符合较好.

关键词: 基态能级 电子轨道偏角 极相式球截面

Relationship between Disposition and Motion of Electrons in Atomic Nucleus Potential Energy by Means of State-Fixed Method

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Abstract:

The author studied the influence of the micro particle system on the potential energy of Coulomb electric field under the quantum theory. The electromagnetic field between atomic nucleus and electrons was submitted to nucleation and steady\|state. Atomic electromagnetic field was resolved into the shell layer electric field and magnetic field, and their interaction relationships to electrons were studied respectively. Analyzing the radius of shell layers, electronic orbits deviation angle and the velocity of electrons of various atoms shows that "orbit" cross section of electrons is obviously smaller and deviates from its atomic "equatorial" plane, indicating the disposition and motion of the polar phase of atoms. The ground state levels of atoms of 44 main group element were calculated, and the results are in accordance with the first ionization potentials.

Keywords: ground state level electronic orbits deviation angle polar phase style of the spherical section

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