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Computer simulation of the electronic structure of hydrogen atom and hydrogen-like structures

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Abstract

The structure of hydrogen atom and hydrogen-like atoms (united by the term one-electron structures) is analyzed by a modeling method, including physical, mathematical (the model description) and computer. The basis of the proposed approach is Retherford-Bohr planetary model. Proceeding from the available experimental data on ionization potential of one-electron cations of atoms, polarization and optical spectrum of hydrogen atom, legitimacy of planetary model for all one-electron structures is shown.