Thematic Section: Theoretical and Computational Chemistry.	Full Paper
Subsection: The theory of the Structure of Matter.	Registration Code of Publication: 12-30-4-25
Publication is available for discussion in the framework of the on-line Internet conference "Butlerov readings".	
	http://butlerov.com/readings/

Thematic course: Computer modelling of atoms. Part 2.

Modelling of atoms and cations with two valent electrons

© Aleksey A. Potapov,*+ and Aleksey I. Demidyuk

Institute for System Dynamics and Control Theory. Lermontova St., 134. Irkutsk, 664033, Russia. Phone: +7 (3952) 42-71-00. E-mail: aleksey.potapov.icc@gmail.com

*Supervising author; *Corresponding author

Contributed: April 23, 2012.

Keywords: atom of helium, helium-like atoms, model, electronic structure, theory.

Abstract

The model of helium-like structures, representing the system of two elliptic orbits connected among themselves with the general focus in position of a kernel of atom is offered. The model description is given. We have commputed the key parametres of helium and the atoms of group II of the Mendeleyev table in the basic and excited condition. Computational experiment was designed and implemented.