Abstract

Specialized commercial software packages have been developed and used in the world, which make it possible to obtain data on the thermophysical properties for certain classes of substances and materials. The experience of the practical use of such programs revealed their significant shortcomings. They do not provide access to the tables of primary experimental data, do not allow to select models for their processing, the models used are not physically sound, which does not allow extrapolation of data, there is no real possibility to predict properties, etc. In Russia, this direction has not yet received a noticeable spread. The Institute of Computational Technologies of the Siberian Branch of the Russian Academy of Sciences in cooperation with the Institute of Thermal Physics of the Siberian Branch of the Russian Academy of Sciences have developed the Information Computing System http://tick2.ict.sbras.ru/, which will allow to combine the advantages of existing codes and eliminate the above disadvantages. The created resource will become an important tool for the development of theories of substance properties and phase transformations.
References


Index Terms

Computer Science Information Sciences

Keywords

web-based data processing, data analysis, semantic model, properties of substances, phase transformations.