

Atomic volume estimation of the heavy actinoids

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To study the properties of actinoids, their similarity to another rare-earth group of homologues, lanthanides, is often used, in which the 4f shell is filled and the characteristics of which are well known. For example, a comparison of the dependence of the atomic ionization potentials of lanthanides and actinides on the atomic number, performed in special quasi-classical coordinates, allowed us to identify the main patterns of these dependencies and approximate them with simple polynomials [1].

The purpose of this work is to estimate unknown atomic volumes of heavy actinoids using a similar quasi-classical approach.

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