

Abstract Submitted
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Element No.155 - an Equal Member of the Periodic Table of Elements ALBERT KHAZAN, IMET — Properties of the elements of the Periodic Table of Elements were studied on the basis of experimental and theoretical data with use of the parameters of a suggested element No.155. The dependency “atomic mass - number in the Table” showed that the calculated equations of the intervals of elements No.1-54, No.55-118, and No.119-155 have a very high probability of 0.99-1.0, as well as the calculated line of the trend in No.1-118. Additionally, the other dependencies were studied for the intervals No.1-155 and No.1-104 ($R^2=0.9997$; 0.999): the nucleus’ radius – the number of the nucleons; the electrons’ critical energy – the number of the protons; the nucleus’ coupling energy – the mass number; the number of the neutrons – the nucleus’ charge; the ionization potential of the atom – the nucleus’ charge. The region of the ultimate high coupling energy of the nuclei in the Table (behind which the nuclei become instable) was calculated with use of the parameters of element No.155. The obtained results manifest: element No.155 should be considered as an equal member of the Periodic Table (Khazan A. Upper Limit in Mendeleev’s Periodic Table – Element No.155. Svenska fysikarkivet, Stockholm, 2010).

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