

Abstract Submitted  
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**Upper Limit of Mendeleev's Periodic Table of Elements – Element No.155** ALBERT KHAZAN — The most important problem for the scientists, who are working on the theory of Mendeleev's Periodic Table, is how to determine the real number of elements in it. One of the mainstream methods applied to resolving this problem suggests a calculation for the stability limits of the electronic shells of atoms. In this way, one sets up a number of elements for a period of the Table, and then calculates (as a sequence) the respective atomic masses for the elements. A second mainstream way is synthesis of new elements in nuclear reactions, with identification of the obtained products among which a new element may be found (meanwhile the element may unnecessary be the last). 10 new elements were obtained in this way during the last 25 years. In contrast, the basis of my calculation were neither calculations for the stability limits of the atomic shells nor synthesis of new elements, but a study of chemical processes which allowed, through the mathematical apparatus, to formulate a new law of Hyperbolas in the Periodic Table, and led to the last element No.155 whose atomic mass is 411.66 (details in: Khazan A. Progress in Physics, 2007, v.1, 38; v.2, 83, 104; 2008, v.3, 56; 2009, v.2, 19, L12).

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