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Thermo-chemistry of hetero-atomic compounds: The heats of formation of some amino acids in aqua phase

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The values of free energies and the heats of combustion and formation in condensed and aqua phases of some amino acids of different structure and some peptides of the low molecular weight were analyzed on the topics of their interactions each to other and hydrolysis decomposition. The equation of such type as $\Delta H^\circ = i \pm f(N - g)$, in which ΔH° is the heat, i and f are stoichiometric coefficients, N is the number of valence electrons, from which a number of lone electron pairs (g) is excepted for, has been made. The obtained equation were used for the calculations of a new such parameters for four amino acids in water continuum.

Biography

Vitaly Ovchinnikov was awarded his PhD in 1989. He was recognized by the Cambridge Biographical Centre among the 100 Top scientists of year and 2000 Outstanding Intellectuals of the 21st Century in the year 2012. He has expertise in thermodynamics and thermo-chemistry, reactivity of hetero-atomic compounds in differed useful areas such as hydrocarbons, nitro compounds, carbohydrates and amino acids of different structure. He has over 250 scientific publications, 16 patents, 10 methodical textbooks for students of technical universities and presented over 30 reports on the various Russian Regional and International Conferences. He was a member of American Chemical Society and was awarded Honored Worker of a Science of Republic Tatarstan (in Russia). He is currently serving as a member of Editorial Boards of *American Journal of Physical Chemistry*, *Journal of Chemical Engineering* and a reviewer of *Journal Advances in Natural Science (Canada)*.

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