

ON PRINCIPLES OF CONSTRUCTION OF CHAIN POLYMERS. III. MINOR
ELEMENTS AND GENERAL SPATIAL STRUCTURE OF PENTA-
FRAGMENTS ON THE BOOLEAN HYPERCUBE B^4

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The analysis of minor elements found in the sample of 100 thousand of penta-fragments of proteins (Karasev V. A., Biotekhnosphere, 2009, №5) in amount of about 1,2 % is carried out. It is shown that, unlike the basic penta-fragments, minor elements fall into other eight subclasses. The found minor elements are, basically, the types of fragments forming a small number of hydrogen bonds in the secondary structure. The basis for classification of minor penta-fragments of proteins and other chain polymers is the block matrix of 64 elements. The spatial structure of all subclasses of penta-fragments is proposed including 8 core and 8 minor elements which represents a system of boolean hypercubes B^6 located in the vertexes of four-dimensional hypercube B^4 .

Keywords: bionical nanoelectronics, chain polymers, proteins, secondary structure, penta-fragments, spatial structure, boolean hypercubes B^6 and B^4 .