

ON PRINCIPLES OF CONSTRUCTION OF CHAIN POLYMERS. II. SPATIAL
STRUCTURE OF SYSTEM OF PENTA-FRAGMENTS AND ALGORITHMS OF
FORMATION OF SECONDARY STRUCTURES

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On the basis of the data obtained earlier (Karasev, *Biotechnosphere*, 2009, №5,) the spatial structure of penta-fragments of proteins is proposed. It is represented by a system of eight structures, isomorphic to the boolean hypercubes B^6 , placed in the vertexes of the cube B^3 and interconnected by one-bit transitions. The typical α -helix is considered to illustrate the possibility of application of the proposed system for construction of the algorithms leading to formation of the secondary structure of proteins and other types of chain polymers.

Keywords: bionical nanoelectronics, chain polymers, proteins, secondary structure, penta-fragments, spatial structure, system of boolean hypercubes.