

ON PRINCIPLES OF CONSTRUCTION OF CHAIN POLYMERS. I. SYSTEM OF PENTA-FRAGMENTS

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Analysis of penta-fragments of proteins belonging to chain polymers is carried out in within the task of searching principles for construction of structure of chain polymers considered as perspective materials for bionical nanoelectronics. About 100 000 penta-fragments sorted into 512 types with different number of hydrogen bonds in the basic chain of protein were obtained on the basis of 537 files of proteins selected by means of the specially written programs. The obtained fragments are subdivided into cyclic and acyclic ones. In each such group two classes of penta-fragments are allocated, each class comprising two subclasses. Classification of penta-fragments is proposed which is valid for all types of chain polymers, including proteins based on the block supermatrix of 64 elements.

Keywords: chain polymers, proteins, penta-fragments, classification