

MODEL OF TOPOLOGICAL CODING OF CHAIN POLYMERS FOR
BIONICAL NANO-ELECTRONICS. II. THE MOLECULAR VECTOR
MACHINE AND STRUCTURE OF THE CANONICAL SET OF PHYSICAL
OPERATORS

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The concept of the molecular vector machine (MVM) and the structure of the canonical set of physical operators are considered within the model of topological coding of chain polymers. It is shown that 20 vectors forming mathematical group can affect formation of a hydrogen bond between Q_iH and X_{i-4} atoms of the closed 4-link cycle of the chain polymer. The dodecahedron structure is proposed to specify the directions of the vectors. The canonical set of the physical operators reproducing the action of the vectors is considered as a group of irreducible representations composed by the vectors. Together they form elements of the MVM. The model is used for construction of the adequate structure of the canonical set of amino acids on the dodecahedron as element MBM of proteins.