

Abiogenic synthesis of biologically important and optically active molecules adsorption on carbon in the early Archean

© Vladimir M. Zhmakin

*Public Joint-Stock Company Southwestgeology. Geologists Settlement, 307207. Oktyabrsky District.
Kursk Region. Phone: +7 (47142) 2-13-92. E-mail: v.zhmakin@mail.ru*

Keywords: archaean, the atmosphere, carbon, adsorption, synthesis of optically active, amino acids, ribose.

Abstract

Reasons for appearance of optically active organic molecules in nature have not been ascertained up to the present, but clarification of conditions on the Earth during the period of their appearance can contribute to this. H_2 and gases, containing H_2 , were oxidized by CO_2 with selection of carbon and H_2O or CH_2O and $CHO(OH)$ in volcanic gas and in the early atmosphere. During adsorption by carbon of CH_2O dissolved in water there might take place synthesis only of R (rectus, in Latin) ribose, and with NH_3 and $CHO(OH)$ synthesis of glycine and only of S (sinister) serine, and on its bases of other S amino acids. Adsorption on the carbon provided in complex of basic properties of organic molecules.