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Author: Prof.Dr. BRIJ TEWARI
University of Guyana, Guyana

POSSIBLE ROLE OF SPACE AND PRIMITIVE EARTH ENVIRONMENT IN CHEMICAL EVOLUTION AND ORIGINS OF LIFE

Abstract

For the generation of life bi-organic compounds are essential. It has been matter of debate from long time that major sources of organic compounds used for the generation of terrestrial biosphere was of terrestrial origin or of extra – terrestrial origin. According to First Channel the endogenous hypothesis for origins of life may have been available on primitive earth. This hypothesis is supported by well known Miller – Urey electric discharge experiment. According to Second Channel exogenous, hypothesis of origin of life, comets and asteroids are significant contributor to the inventory of water and organic compounds on the surface of early earth and thus may play an important role in the origin of life. This hypothesis is supported by initial work of Chyba and other eminent scientist. According to Third Channel which is mid way between first and second channels, primitive atmosphere of earth are planetary / commentary atmosphere plays an equal role in origins of life. This hypothesis is mainly supported by renounced scientist K. Kobayashi and co-workers. In the current work copper and zinc ferrocyanides are synthesized and characterized by elemental and spectra studies. Adsorptive interactions of p-anisidine and aniline on above synthesized metal ferrocyanides were studied at neutral pH (7.0 0.01) and room temperature 29 1°C. Maximum uptake of both anilines was observed at neutral pH. The adsorption data follow languir adsorption isotherm in general at neutral pH range. A p-anisidine was found to better adsorbed on both adsorbent in comparison to aniline, this may be due to its higher basicity. Result of present study suggests the importance of metal ferrocyanides and metal ions in stabilization of anilines during process of chemical evolution on primitive earth. Present study support terrestrial hypothesis of origins of life. Details will be presented.