
Zeolite as Catalysts for the Synthesis of Amino Acids and Purines

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Abstract: This paper attempts to show that the catalytic properties of zeolitic material may play a role in the synthesis of simple biological molecules from gases commonly found in extraterrestrial atmospheres. Linde *X* and *Y* molecular sieves cation-exchanged by Ca^{2+} and Fe^{3+} have been heated in the presence of carbon monoxide and ammonia. Amino-acids and u.v. absorbing substances identified by paper chromatography have been extracted from the solid. HCN, the basic molecule involved in the synthesis of those substances has been detected in the gas phase. It is proposed, on the basis of i.r. results, that the amino-acids are hydrolysis products of an undefined polymer.

Clays and Clay Minerals; October 1972 v. 20; no. 5; p. 331-339; DOI: [10.1346/CCMN.1972.0200510](https://doi.org/10.1346/CCMN.1972.0200510)

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