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SOLID SURFACES AND THEIR RELEVANCE IN PREBIOTIC CHEMISTRY

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An important aspect in simulated experiments related to chemical evolution on Earth, is their relation with a geological scenario. In this framework a plausible simulated scenario that could be the resemblance of the primitive Earth, would require the contribution of solid surfaces.
Solid surfaces are important because enhance chemical reactions by different pathways. Among the most important solid surfaces in soils are silicates, carbonates, sulfides and clays. In this paper we analyzed the possible role of simple solids like alkali halide lattices and more complexes surfaces as clays. At this end, solid state physics and radiation chemistry can be very precise tools to study systems that simulate the evolution of organic compounds adsorbed in a solid surface and then exposed to high energy radiation. The results shows the creation of defects in the lattice and mechanism such as energy transfer play an important role in the reactions that are carried out in the solids exposed to a radiation field and these process may have relevance to chemical evolution studies.

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