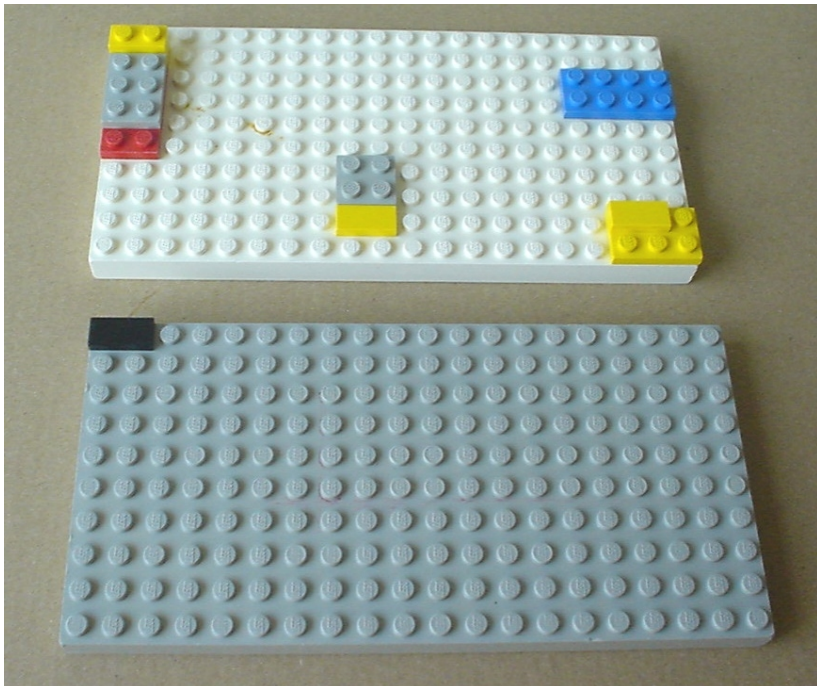


# Simulating Biochemical Processes

Back in 1953, **Stanley Miller** made his seminal experiment on the chemical origins of carbon life. He put together water, methane, ammonia, and hydrogen in a closed system of glass flasks under heat, stirring and lightning. As a consequence, larger amounts of several different amino acids built.

This finding fit well in **primordial soup** theories which claim the origin of life on Earth through gradual chemical evolution of molecules that contain carbon. In the meantime it has become clear that the building of interesting complexes happens mainly at boundary layers. Some biochemists use the term **primordial pizza** to emphasize the importance of processes at such boundaries.



**Sedimentation of LEGO bricks at boundary layers:  
in top on an older (and more reactive) plate; below on a younger plate**

Side remark: In the research field of “Artificial Life” simple models with magnets have been investigated to understand the building of elementary complexes.