

Carbon in the Solar System

Organic molecules are ubiquitous throughout our Solar System and may have been partially inherited, formed early in the protosolar nebula or synthesized later in a given planetary body. Studying organics may provide important insights into *(i)* the conditions of formation of the Solar System (e.g.: temperature limit for presolar organics to resist to their incorporation in the solar nebula); *(ii)* organic synthesis through abiotic and biotic pathways; and *(iii)* the history of early life on Earth and perhaps elsewhere. Identifying the formation mechanisms of such ancient organics remains challenging, mostly because of the chemical transformations they experienced since their formation.

This session welcomes contributions dedicated to better constrain the mechanisms of synthesis and transformations of organic materials found in various objects of the Solar System, with a particular emphasis on small bodies and the early Earth and Mars. The presented works can be based on analytical data obtained on natural samples, experimental work, or numerical codes.