

Carbon dust, from the ISM to the Solar System

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The spectral signatures of interstellar medium dust grains reveal a great diversity of allotropes. Astronomical observations give access to the molecular functionalities of these solids, setting constraints on the composition of organic solids and molecules in the cycling of matter in the Galaxy. Some of these grains and molecules can be reproduced in the laboratory. Other signatures still await for more precise identification of their carriers phases. Laboratory analogues help in constraining their physico-chemical composition and evolution under the harsh galactical radiation environments. This talk will particularly focus on dust materials from the far space environments, from diffuse ISM to protoplanetary disks. We'll present some commonalities and differences between materials found in the Solar System, protoplanetary disks and Interstellar dust.

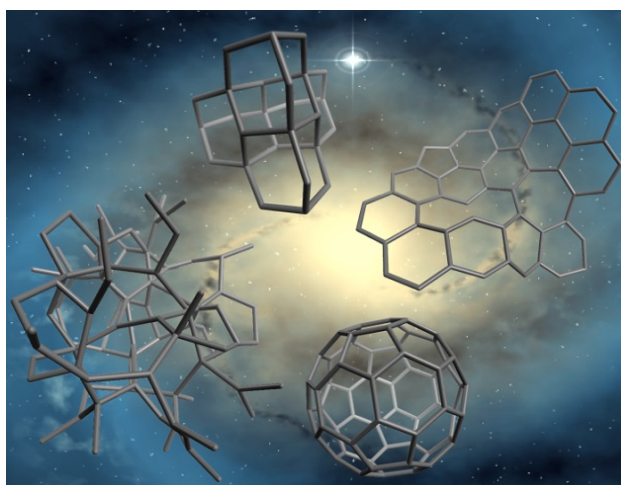


Figure 1. Interstellar carbon allotropes (from Dartois et al. 2019).

References

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