

Interstellar PAHs: from ground to space, expanding spectroscopic frontiers

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Recent progress in astrochemistry and in our understanding of the Molecular Universe has been driven by new detector technologies and advances in ground-, airborne- and space astronomy coupled to new, innovative approaches in molecular spectroscopy. The search for the complex carbon-based molecules (PAHs, Fullerenes, nanoparticles) thought to be responsible for the ubiquitous infrared emission bands (UIBs) and optical absorption bands (DIBs) that are observed in various regions of the interstellar medium of local- and extragalactic environments illustrates the progress in spectroscopy techniques that has been driven by astronomy. Recent progresses reached in this domain will be discussed together with the laboratory techniques that have been developed to measure the spectra of laboratory analogs of cosmic molecules in the UV-Visible-NIR range under experimental conditions that attempt to reproduce the interstellar conditions.