

Carbonaceous Solids as a Component of Interstellar Dust

SUN KWOK¹

¹*The University of Hong Kong*

The discovery of rapid synthesis of complex organic solids in the late stages of stellar evolution has led to a new realization that carbonaceous compounds can be a major significant component of interstellar dust. Signatures of aromatic and aliphatic solids are seen in interstellar clouds as well as the diffuse interstellar medium. Similar features are also seen in the integrated spectrum of galaxies. This has raised the possibilities that many of the unidentified astronomical phenomena such as the diffuse interstellar bands, the 2200 angstrom feature, the extended red emission, the 21 and 30 micron emission features, could also arise from complex organics.

In this talk, we discuss the possible chemical structures of these organic solids and the relationships between circumstellar and interstellar dust with the organics found in meteorites, asteroids, comets and planetary satellites.