

DIFFUSE BANDS IN INTERSTELLAR
SPECTRA AND FULLERENES

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The problem of carriers of a number of Diffuse Bands in interstellar spectra is a long-standing astrophysical problem. The discovery of C_{60} molecule and other molecules of such type - fullerenes lead to a spectacular progress in our understanding of the origin of such features in astrophysical spectra.

In this lecture, the discovery of fullerenes and its applications to the interpretation of astrophysical spectra will be discussed. The existence of fullerenes and its derivatives in the space, their formation in the outflows of mass losing stars and in different interstellar processes and their presence in the meteorites will be discussed as well.

We will discuss also the investigation of spectra of molecules including carbon chains-polyynes and its presence and identification in interstellar space.