

Dust particles interactions with interstellar molecules

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Interstellar clouds contain gas and dust. The latter may be composed of grains characterized by different sizes, shapes, chemical composition and crystalline structures as extinction law differs usually from object to object. Grains may also play an important role in producing some interstellar molecules. It seems interesting to relate different extinction curves to column density ratios of known, simple radicals, such as CH, CH⁺ and CN. Such an analysis was performed for a pretty big sample of reddened OB stars observed through single interstellar clouds. High resolution spectra allow precise measurements of the interstellar spectra features. It is evident that differences in extinction curves lead to varying strength ratios of molecular features. The same concerns also diffuse interstellar bands – believed to be carried by more complex molecules.