

# **Aliphatics and aromatics in solar system bodies**

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Aliphatic and aromatic hydrocarbon materials are seen in many solar system bodies, including asteroids, comets, satellites, meteorites, and interplanetary dust particles. They reveal their presence through the 3.3 micrometer aromatic C-H stretch spectral feature and the 3.4 micrometer aliphatic C-H stretch feature. We explore the nature of these materials with special attention paid to their chemical structures (e.g., the aliphatic fraction or the ratio of aliphatic C atoms to aromatic C atoms). We also examine the link of the aliphatic / aromatic materials seen in the solar system to that of the interstellar medium and carbon stars at their late stages of evolution.