## R41a ALMA Astrochemical Observations of an Infrared-Luminous Merger

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Astrochemistry is a useful tool to study the environment surrounding the molecular clouds such as UV radiation field from starburst, X-rays from active galactic nuclei, cosmic-rays, and shocks. It means that we can study feedback mechanisms on star formation from astrochemistry in galaxies. Now with ALMA, spatial resolution and sensitivity required for extragalacitc astrochemistry is available. From our understanding of astrochemistry in the Galaxy, some species are known to trace photon-dominated regions, while others are abundant in star-forming regions. Yet, it is unknown how the abundances of those tracers change with the intensities of starburst due to the lack of enough sample of galaxies. NGC 3256 is an infrared-luminous galaxy with starburst induced by merging of two galaxies, and is an ideal target to fill in the gap of our understanding the relationship between the star formation rate and astrochemistry. It led us to conduct a ALMA molecular line survey in 3-mm and 1.3-mm bands in NGC 3256. A comparison within NGC 3256 shows locations of enhanced shock tracers where the interaction of two galaxies are suggested. Compared with other galaxies, the chemistry in NGC 3256 is similar to the one in a local starburst galaxy NGC 253, and different from ones in compact and extreme luminous galactic nuclei Arp 220. Connections with the chemistry and physical conditions, star formation efficiency will be discussed in this talk.