

B05r **Astrochemistry with ALMA**

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Astrochemistry is a fascinating area of science in the ALMA era. The most characteristic feature of ALMA is high identification capability of atoms and molecules, which cannot be achieved by observations in any other wavelengths. Thanks to its unprecedented sensitivity and angular resolution, ALMA is unveiling chemical compositions of various types of astronomical sources including molecular clouds, star-forming regions, proto-planetary disks, evolved stars, solar-system objects, and external galaxies, even in its early science stage. All these observations will be important building blocks for a thorough understanding of chemical evolution in the universe. They will also provide useful and novel information on physical conditions and kinematics in each source.

In this talk, I would like to introduce some highlights of astrochemical studies in the early science operation of ALMA. It will include chemical evolution of low-mass protostars, chemistry of high-mass star forming regions and IRDCs, identification of complex organic molecules, and extragalactic chemistry. On the basis of these splendid successes, I forecast future trends of astrochemistry in the full operation of ALMA.