

Chemistry in Protoplanetary-Disk Forming Regions -Importance of Molecular Science-

*Sakai Nami¹

1. RIKEN

Planet formation is a natural consequence of the star formation process, and there is an incredible variety of planetary systems, which are significantly different from the Solar System. Recent ALMA observations have revealed chemistry in planet-forming regions, protoplanetary disks. Various complex organic molecules are found in the disk forming regions, and their abundances vary significantly among objects. This indicates that the Solar System may not have been common in terms of its initial chemistry, which invokes the discussion on the rarity of our existence. To tackle this question, various approaches especially from molecular science field are required. I will introduce such efforts along with recent observational/experimental studies.

Keywords: Protoplanetary disks, Molecules, Observations