

## **Chemical complexity in planet-forming disks**

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Complex organic molecules have recently been detected in planet-forming disks around young stars. These detections were only enabled by the superior sensitivity of the Atacama Large Millimeter/submillimeter Array (ALMA) and show that the precursors of prebiotic material in forming planetary systems are accessible with remote sensing. This project will follow on from these exciting detections by exploring, using detailed models, the chemistry of complex organic molecules in the comet-forming regions of protoplanetary disks. Results from models will be compared with upcoming data yet to be released from the (now perished) Rosetta mission and new data from ALMA on the abundance and distribution of complex molecules in nearby disks. This project would be suitable for a PhD candidate interested in astrochemistry, astrobiology, and planetary system formation, and who is seeking a computationally-focussed PhD project in a high-impact research area. The candidate will join a small research group active in astrochemical modelling and ALMA observations.