

2023 Kavli - IAU Astrochemistry Symposium | Astrochemistry VIII - From the First Galaxies to the Formation of Habitable Worlds



THE
KAVLI
FOUNDATION



Monday, July 10, 2023 - Friday, July 14, 2023

Park Place Hotel, Traverse City, MI, USA

Scientific Programme

1) From the high-redshift Universe to local galaxies

- 1a) Atomic, and molecular tracers at $z > 6$
- 1b) Dust, atomic, and molecular tracers of peak star formation ($z \sim 2$)
- 1c) Molecular tracers of the central engine in AGNs
- 1d) Mapping molecular cloud chemistry on Galactic scales

2) The Milky Way: Chemical transformations with star formation and feedback

- 2a) Molecular tracers of the central engine
- 2b) Star formation in the Milky Way
- 2c) Chemical tracers of feedback (PDRs, winds, and outflows)
- 2d) General cloud chemistry (PAH detection in dark clouds)
- 2e) Development of molecular complexity
- 2f) Evolved stars

3) Planet Formation and Exoplanets

- 3a) Protostars and protostellar disk chemistry
- 3b) Protoplanetary disk chemistry
- 3c) Exoplanetary atmosphere composition and chemistry
- 3d) Linking formation to exoplanet characteristics

4) The Solar System Record

- 4a) Meteoritic composition and planet formation
- 4b) Cometary and Asteroid composition
- 4c) Giant planet and satellite composition

5) Grounding Information: Laboratory Astrophysics and Theory

- 5a) Gas phase chemistry
- 5b) Ices and molecular complexity
- 5c) New techniques in molecular spectroscopy
- 5d) Planetary and satellite atmospheres

6) Looking to the future (missions and facilities)