

Workshop Program

Monday, February 6

11:00-11:15 Welcome

11:15-11:45 **Daniele Galli** (INAF-Arcetri)

Molecule formation in the early Universe

11:45-12:15 **Francesco Palla** (INAF-Arcetri)

H₂ in primordial star formation: the three-body reaction

12:15-12:45 **Savino Longo** (Dip. di Chimica, Università di Bari)

Non-equilibrium distributions in plasmas and their effect on chemical reactions

13:00 Lunch

15:00-15:30 **Carla Maria Coppola** (Dip. di Chimica, Università di Bari)

Molecular kinetics and cooling in the primordial Universe

15:30-16:00 **Vincenzo Aquilanti** (Dip. di Chimica, Università di Perugia)

Modelling low temperature reactivity from theory and experiment

16:00-16:30 **Raffaella Schneider** (INAF-Roma)

The important role of dust in the formation of the first low-mass stars

16:30-17:00 Coffee Break

17:00-17:30 **Franco A. Gianturco** (Dip. di Chimica, Università di Roma “La Sapienza”)

Lithium chemistry in the early universe: the role of reactions of Li and Li⁺ with H₂ from accurate quantum treatments of their dynamics

17:30-18:00 **Fabrizio Esposito** (IMIP/CNR Bari)

Rovibrationally resolved cross sections for atom-diatom and ion-diatom in hydrogen

20:00 Dinner

Tuesday, February 7

9:30-10:00 **Tommaso Grassi** (Dip. di Astronomia, Università di Padova)

Interstellar medium and cosmological simulations: chemistry, energy feedbacks and related issues

10:00-10:30 **Stefano Bovino** (Dip. di Chimica, Università di Roma “La Sapienza”)

He-containing ionic molecules: their role in early Universe evolution from accurate quantum dynamics

10:30-11:00 **Dario de Fazio** (CNR-Roma)

PES and exact dynamics for the HeH₂⁺ system

11:00-11:30 **Annarita Laricchiuta** (IMIP/CNR Bari)

Cross sections for elementary processes involving excited species

11:30-12:00 Discussion

13:00 Lunch