

CONFERENCE PROGRAM

MONDAY 13-09-2021

14:45	M. Saitta	Step by Step Streecker Amino Acid Synthesis from Ab Initio Prebiotic Chemistry
15:00	M. Bouvier	The chemical nature of Orion protostars: Are ORANGES different from PEACHES?
15:15	A. Belloche	Questioning the spatial origin of complex organic molecules in young protostars with the CALYPSO survey
15:30	COFFEE BREAK	
16:30	L. Chahine	Organic Chemistry in The Proto-Solar Analogue OMC-2 FIR 4: Environment Matters
16:45	R. Le Gal	Impact of C/O on the chemistry of PDRs and protoplanetary disks
17:00	M. van Gelder	Modeling accretion shocks at the disk-envelope interface: sulfur chemistry
17:15	M. Ali-Dib	A correlation between the chemistry and eccentricity of hot TNOs
20:00	SOCIAL DINNER	

FRIDAY 17-09-2021 MOLECULAR COMPLEXITY

Time	Speaker	Title
09:30	F. Vazart	Gas-phase Formation of Acetaldehyde: Review and New Theoretical Computations
09:45	D. Gonzalez	Insights On the Gas-Phase OH+CH ₃ NH ₂ Reaction: Experimental Rate Coefficients at Interstellar Temperatures (21.7-177.5 K)
10:00	E. Valenca Ferreira de Aragao	Kinetics Studies of The Cyanoacetylene and Atomic Oxygen Reaction
10:15	J. Zamponi	A Hot Gravitationally Unstable Disk as The Origin of The Class 0 Hot Corino IRAS 16293-2422 B
10:30	COFFEE BREAK	
11:30	N. Tanha	The effects of episodic accretion on the chemistry of the protostellar discs and envelopes
11:45	S. Mercimek	Chemical Inventory of Class I Protostars: A Bridge Between Protostellar Cores and Protoplanetary Disks
12:00	A. Waggoner	X-ray Flare Driven Chemical Evolution in Planet Forming Regions
12:15	C. Law	Chemical Substructures at 10 au Scales in Protoplanetary Disks: Results from the Molecules with ALMA at Planet-forming Scales (MAPS) Large Program
12:30	V. M. Rivilla	Prebiotic precursors of nucleic acids, proteins, and sugars in Solar-like protostars
12:45	LOC	Closing remarks

11:00	ARRIVAL & REGISTRATION	
13:15	Welcome	
13:30	LOC	Opening talk

INTERSTELLAR ICES

Time	Speaker	Title
14:00	<i>M. McCoustra</i>	Experimental and Computational Laboratory Astrochemistry - A Personal View
14:30	A. Germain	Application of the Tight Binding GFN-xTB2 Method to Model Large Interstellar Amorphous Icy Grains
14:45	L. Tinacci	A New Approach to Compute Accurate Binding Energy Distribution of Complex Organic Molecules at Ice Interstellar Grain Models: the Case of NH ₃
15:00	S. Vogt-Geisse	A New Platform for Generating, Storing and Accessing High Quality Quantum Chemical Data of Molecular Binding Energies on Interstellar Icy Grain Surfaces
15:15	S. Ferrero	The Energy Dissipation Process of Hydrogenation Reactions of Atomic Nitrogen on Water Ice Surfaces
15:30	COFFEE BREAK	
16:30	G. Perotti	Ice and gas: linking infrared and millimeter observations towards solar-type protostars
16:45	F. Kruczkiewicz	Ammonia Snow Lines and Ammonium Salts Desorption
17:00	M. A. Corazzi	Thermal Desorption of Astrophysical Relevant Ice Mixtures of Acetaldehyde and Acetonitrile from Olivine Dust
17:15	L. Chu	Observations of Interstellar Ices in Pre-Solar Environments

TUESDAY 14-09-2021

INTERSTELLAR ICES

Time	Speaker	Title
09:00	<i>A. Booger</i>	Ices in Solar-type Star Forming Regions
09:30	F. Duvenay	!COM Formation from Radical Chemistry: a Mechanistic Study from Cryogenic Matrix Coupled with IR and EPR Spectroscopies

09:45	J. Enrique-Romero	Radical-Radical chemistry on amorphous icy surfaces
10:00	G. Molpierrez	Neural-Network Assisted Study of H ₂ adsorption on solid CO
10:15	S. Panalonne	H ₂ and HCO ⁻ formation on interstellar grains and the fate of reaction energy
10:30	COFFEE BREAK	
11:30	A. Deghanfar-Witzel	Interstellar icy mantle formation in molecular clouds
11:45	M. De Simone	Tracking Ice Mande History in Solar-type Protostars

MOLECULAR COMPLEXITY

12:00	<i>J. Cernicharo</i>	QJ0107E: Q-band Ultrasensitive Inspection Journey to the Obscure TMC-1 Environment
12:30	LUNCH	
14:30	C. Zhou	Molecular complexity in the cold ISM: Influence of the environment
14:45	L. Jimenez-Serra	Formation, Abundance Distribution and Evolution of Complex Organic Molecules in Starless/Pre-stellar Cores
15:00	G. Sabatini	The first survey of ortho-H ₂ D ⁺ in high-mass star-forming regions
15:15	X. He	Destruction routes of interstellar molecules: collisions of He ⁺ with CH ₃ OH
15:30	COFFEE BREAK	
16:30	S. Demes	Collisional excitation of H ₃ O ⁺ by H ₂ : towards better understanding of interstellar water chemistry
16:45	V. Richardson	Gas-Phase Reactivity of [C ₂ NH ₃] ⁺ Ions of Relevance to the Ionosphere of Titan
17:00	L. Tythoniec	Which molecule traces what? Chemical diagnostics of protostellar sources revealed with ALMA
17:15	L. Mancini	Probing the Chemistry of P-Bearing Molecules in Interstellar and other Extraterrestrial Environments
17:30	E. Piacentino	Modeling of the chemical evolution of PO _x and HPO _x (x=2,3) on icy grains

WEDNESDAY 15-09-2021

MOLECULAR FRACTIONATION

Time	Speaker	Title
09:00	<i>N. Balucani</i>	Gas-phase chemistry in the interstellar medium: there is still much to learn
09:30	<i>P. Caselli</i>	Molecular fractionation in star- and planet-forming regions

10:00	L. Evans	Nitrogen Fractionation Towards the Protocluster OMC-2 FIR4
10:15	L. Colzi	Carbon Isotopic Fractionation in Molecular Clouds
10:30	COFFEE BREAK	
11:30	A. Lopez-Sepulcre	Protostellar shocks as factories of formamide (NH ₂ CHO), a key prebiotic precursor
11:45	P. Nazari	Complex Organic Molecules from Low- To High-Mass Protostars
12:00	A. Schuzer	Molecules in Protostellar Jets: Lessons from CepE-mm
12:15	P. R. Rivera-Ortiz	A numerical study of CO kinematics in the CepE-mm Molecular Outflow

THURSDAY 16-09-2021

COMETARY ICES

Time	Speaker	Title
09:00	<i>S. Tachibana</i>	What do pristine Solar System materials tell us about the origin and early evolution of the Solar System?
09:30	<i>D. Bockelée-Morvan</i>	The composition of cometary ices

10:00	E. Bianchi	The astrochemical link between Sun-like protostars and Solar System comets
10:15	L. Podio	The Chemistry of Planet-Forming Disks with ALMA-DOT: towards a comparison with comets to unveil the origin of the Solar System
10:30	COFFEE BREAK	
11:30	<i>R. Martin-Domenech</i>	Experimental simulations of Complex Organic Molecule formation in the ISM (with a little help from theory)
12:00	R. Santalucia	Reactivity of Gaseous HCN at Amorphous and Crystalline Mg ₂ SiO ₄ Surfaces as Laboratory Models of Interstellar Dust Grains
12:15	O. El Samroui	Role of specific silica surface sites in the promotion of peptides formation
12:30	LUNCH	
14:30	B. Maré	Urea in Astrophysical Environments: IR Spectra and Destruction Cross Sections for Energetic Processing