



**From Interstellar Ices
to Polycyclic Aromatic Hydrocarbons
A Symposium to Honor Lou Allamandola's
Contributions to the Molecular Universe**

Monday, September 14

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| 8:00 AM | Welcome | Milam |
| 8:15 AM | Lou's Personal Odyssey in the Molecular Universe | Tielens |
| 9:15 AM | Some History, Some Fun, and a Look to the Future | Allamandola |
| 10:15 AM | Coffee Break (35 min) | |

Session 1: Ices - Spectroscopy, Energetic Processing **Chair: d'Hendecourt**

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| 10:50 AM | The Frosty History of Interstellar Ices | Chiar |
| 11:20 AM | Infrared spectroscopy of embedded high-mass YSOs in the Large Magellanic Cloud: Methanol and the 3.47 μm band | Shimonishi |
| 11:40 AM | From Observations to the Laboratory: Unravelling the Properties of Interstellar Ices | Fraser |
| 12:10 AM | Lunch Break (1 hr 20 min) | |
| 1:30 PM | Sublimation Studies at Submillimeter Wavelengths: A New Technique | Milam |
| 1:50 PM | Laboratory Studies of Astronomical Ices at the NASA Goddard Space Flight Center: Past Successes, Present Efforts, and Future Perspectives | Hudson |
| 2:20 PM | Ion Irradiation of H ₂ -Laden Porous Water Ice Films: Implications for Interstellar Ice | Mitchell |
| 2:40 PM | A laboratory study of oxygen and water ice sputtering by low energy ions | Muntean |
| 3:00 PM | Observations of Ices in Protostellar and Protoplanetary Environments: Toward the JWST and ELT Era | Boogert |
| 3:30 PM | Coffee Break (30 min) | |
| 4:00 PM | Laboratory Investigations of Titan's Stratospheric Ice Clouds | Anderson |
| 4:20 PM | Organic Molecules In Titan's Atmosphere From Cassini Infrared Spectroscopy | Nixon |
| 4:40 PM | The UV Signatures of Carbon in the Solar System | Hendrix |
| 5:00 PM | Poster Session | |

Tuesday, September 15

Session 2: Surface Chemistry **Chair: Tielens**

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| 8:00 AM | Grain Surface Chemistry Driven by Surface Mobility | Cuppen |
| 8:30 AM | Grain Surface Chemistry: What Happens Without Photons and Ions | Watanabe |
| 9:00 AM | The Role of Dust in Interstellar Chemistry | Herbst |

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| 9:30 AM | H ₂ Formation on PAHs: a High Temperature Pathway to Molecular Hydrogen | Cazaux |
| 10:00 AM | Interstellar Ice and the Composition of Hot Cores | Charnley |
| 10:30 AM | Coffee Break (30 min) | |
| 11:00 AM | Surface Hydrogenation/Deuteration of Benzene | Hama |
| 11:20 AM | Molecular hydrogen formation on graphene and PAHs | Vidali |
| 11:40 AM | Lunch Break (1 hr 20 min) | |

Session 3: PAHs in Ices

Chair: Gudipati

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| 1:00 PM | Review of PAHs in Ice: From the Lab to the Space | Gudipati |
| 1:30 PM | PAHs in the ices of Saturn's Satellites: Connections to the Solar Nebula and the Interstellar Medium | Cruikshank |
| 2:00 PM | Photochemistry of PAHs in Cosmic Water Ice | Cook |
| 2:30 PM | PAHs IR, NIR, FIR Rare-Gas Matrices vs. Ices | Mattioda |
| 3:00 PM | Coffee Break (30 min) | |
| 3:30 PM | Vacuum Ultraviolet Processing of Interstellar PAHs | Bouwman |
| 4:00 PM | VUV Photoabsorption Spectroscopy of Ices Containing PAHs | Dawes |
| 4:20 PM | The PAHs and Ices of Young Stellar Objects in the Magellanic Clouds | Meixner |
| 4:40 PM | Poster Session | |

Wednesday, September 16

Session 4: Identification, Observation, and Models of PAHs

Chair: Hudgins

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| 8:00 AM | The Impact of the PAH Hypothesis on Astrophysics | d'Hendecourt |
| 8:30 AM | From PAHs to Carbonaceous Solids | Henning |
| 9:00 AM | The Infrared Bands of Polycyclic Aromatic Hydrocarbons and the Realm of Anharmonicity | Petrignani |
| 9:20 AM | Snapshots from the PAHs Studies at ISMO | Brechignac |
| 9:40 AM | Coffee Break (20 min) | |
| 10:00 AM | PAH Clusters and the Interstellar Infrared Emission Bands | Ricca |
| 10:30 AM | Computing Anharmonic Vibrational Spectra for Polycyclic Aromatic Hydrocarbons: Naphthalene, Anthracene, and Tetracene | Candian |
| 10:50 AM | PAH Database Fitting Techniques; A Paradigm Shift? | Boersma |
| 11:20 AM | The Carriers of the Unidentified Infrared Emission Features: Clues from Polycyclic Aromatic Hydrocarbons with Aliphatic Sidegroups | Li |
| 11:50 AM | Lunch Break (1 hr 40 min) | |
| 1:30 PM | The PAH universe | Peeters |
| 2:00 PM | Shape and Size of Astronomical PAHs: Insight from Modelling and Observations | Candian |
| 2:30 PM | Tracing Charge Amongst the 10-20 μm PAH Emission Bands | Shannon |
| 2:50 PM | The Survey of Near-Infrared Diffuse Interstellar Bands | Hamano |
| 3:10 PM | Coffee Break (15 min) | |
| 3:30 PM | The Role of Cosmic Fullerenes | Cami |
| 3:45 PM | Free Time | |

6:00 PM Dinner Cruise

Thursday, September 17

Session 5: Astrobiology

Chair: **Elsila**

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| 8:00 AM | The Formation of Complex Organic Compounds in Astrophysical Ices and their Implications for Astrobiology | Sandford |
| 8:30 AM | Complex Organic Ice Chemistry: From Interstellar Ices to Nascent Planets | Öberg |
| 9:00 AM | Follow the Evolution of Organic Matter Using Laboratory Experiments: From Volatile Organics to Organic Residues | Danger |
| 9:30 AM | Laboratory Studies of Organics in Ices and Relevance to Meteorites | Gerakines |
| 10:00 AM | Quantum Chemical Predictions of Vibrational and Electronic Spectra of Astrophysical Ice Analogs: The Reaction of C ⁺ With Ice and Beyond | Woon |
| 10:30 AM | Coffee Break (30 min) | |
| 11:00 AM | Detection of Aldehydes and Sugars in Laboratory Simulated Astrophysical Ices: Astrochemical and Prebiotic Significance | d'Hendecourt |
| 11:20 AM | Toward Peptide Bond Formation in Ice Analogs | Forstel |
| 11:40 AM | Modelling Complex Organic Molecules in Dense Regions: Eley-Rideal and Complex Induced Reaction | Ruaud |
| 12:00 PM | Lunch Break and Travel to GSFC (2 hr) | |
| 2:00 PM | Tours at GSFC | |

Posters

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| Photoinduced Radical Reactions on Astrochemical Ice Analogs | Cooke |
| Astrochemistry Simulated in Electron-Irradiated CO ₂ /NH ₃ Ices | Esmaili |
| Probing the Composition of Primitive Solar System Materials with a Compact Laser Mass Spectrometer | Getty |
| Experimental Studying Aqueous Alteration of Polycyclic Aromatic Hydrocarbons – First results | Giese |
| The UV Signatures of Carbon in the Solar System | Hendrix |
| Evidences of the Potential Identification of Polycyclic Aromatic Hydrocarbons of the Helicene Class as Carriers of the Diffuse Interstellar Bands | Oña-Ruales |
| Spatial Studies of the PAH Characteristics: How Subtle Variations Reveal Sub-Populations with Different Molecular Structure and Charge | Peeters |

Invited talks are 25 minutes long with an additional 5 minutes for questions and contributed talks are 15 minutes long with an additional 5 minutes for questions.