



Symposium

The astrochemical observatory: focus on chiral molecules ***L'osservatorio astrochimico: obiettivo sulle molecole chirali***

Rome, March 22-23, 2018

**Biblioteca dell'Accademia Nazionale delle Scienze detta dei XL
Scuderie Vecchie di Villa Torlonia - Via L. Spallanzani, 1/A**

Thursday, March 22

- 14:00 Registration
- 14:15 **Welcome address**
E. CHIANCONE, *President Accademia Nazionale delle Scienze detta dei XL*
- 14:30 **Opening remarks**
V. AQUILANTI, *University of Perugia and Accademia dei XL*
- 14:45 **Anapolar interaction of aminoacids and sugars in nonuniform magnetic fields: could energetic stabilization of a preferred enantiomer take place in interstellar space?** P. LAZZERETTI, *University of Modena and Reggio Emilia*
- 15:25 **Chiral recognition in gas-phase molecular aggregates: the effect of halogen substitution** S. PICCIRILLO, *University of Rome-Tor Vergata*
- 15:50 **Microwave spectroscopy for chiral molecules: challenges for astrochemical observations** L. EVANGELISTI, *University of Bologna*
- 16:15 *Coffee break*
- 16:35 **PhotoElectron Circular Dichroism: a versatile probe for chirality**
S. TURCHINI, *Institute of Structure of Matter ISM-CNR*
- 17:00 **Low symmetry effect on the photoelectron dynamics of chiral molecules**
S. STRANGES, *Sapienza University of Rome*
- 17:25 **The double photoionization of propylene oxide** S. FALCINELLI, *University of Perugia*
- 17:50 **Accurate rotational spectroscopy for astrophysical investigations: the challenge of complex organic molecules and molecular complexes** S. MELANDRI, *University of Bologna*
- 19:00 *"Apericena"*



Friday 23 March

- 9:30 **Rotational spectroscopy and astrochemical observation: Some historical notes, recent advancements, and some contributions towards the observation of chiral and atropisomeric species** W. Caminati, *University of Bologna*
- 10:05 **Study of Near IR vibrational absorption and vibrational circular dichroism and of the role of mechanical and electrical anharmonicities** S. Abbate, G. Longhi, *University of Brescia*
- 10:30 **Spectroscopic signatures of bifunctional alkanes for search in the interstellar medium** A. Maris, *University of Bologna*
- 10:55 *Coffee break*
- 11:15 **Stereodynamical effects by anisotropic intermolecular forces** F. Pirani, *University of Perugia*
- 11:40 **Role of ions in astronomical environments** D. Ascenzi, *University of Trento*
- 12:05 **Spectroscopic Discrimination of Diastereomeric Complexes Involving an Axially Chiral Receptor** A. Filippi, M. Speranza, *Sapienza University of Rome*
- 12:30 **HF molecule as a tracer of column density in interstellar diffuse gas: the adsorption on dust grain surfaces** M. Satta, *Institute for the Study of Nanostructured Materials-CNR*
- 13:00 *Lunch*
- 14:00 **Astrochemical kinetics by crossed molecular beams** P. Casavecchia, *University of Perugia*
- 14:25 **Chiral selection in space: the role of cosmic dust** C. Cecchi Pestellini, *University of Palermo*
- 14:50 **Modeling of organic matter delivery from Space by sub-mm grains** S. Longo, *University of Bari*
- 15:15 **News from the Universe** P. De Bernardis, *Sapienza University of Rome, Accademia dei XL, Accademia dei Lincei*; G. Setti, *University of Bologna, Accademia dei XL, Accademia dei Lincei*; M. Tavani, *National Institute for Astrophysics - INAF, Accademia dei Lincei*



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15:35 **The project orXid, ORigin of CHiral Discrimination: A physico-chemical view** A. Lombardi, F. Palazzetti, *University of Perugia*; **Molecular Science and Technology @ Elettra: proposal of a new beamline** L. Avaldi, *Institute of Structure of Matter ISM-CNR*

16:05 -16:40 Additional communications and conclusions

Scientific and organizing committee

Vincenzo Aquilanti (University of Perugia, Uno dei XL, Linceo)

Andrea Lombardi (University of Perugia)

Federico Palazzetti (University of Perugia)

Please confirm your participation to the secretariat of the Accademia Nazionale delle Scienze detta dei XL
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