

UV Photochemistry of cis-Pinonic Acid and of its Complexes with O₂ and H₂O in Cryogenic Matrices

Wednesday 17 September 2025 10:50 (20 minutes)

The UV photochemistry of cis-Pinonic Acid has been studied in cryogenic matrices, as well as that of these complexes with water and oxygen. This molecule, which is of interest in the atmosphere, is one of the products of the decomposition chain of alpha- and beta-pinenes into a tri-acid: MBTCA. This decomposition occurs through the successive or simultaneous action of hydration, ozonolysis, and solar irradiation. Understanding the role of water (and oxygen) coupled with solar irradiation during this aging process is particularly important to address isomerization or fragmentation processes. I will present the latest results obtained on this system, for which not even the infrared (IR) spectrum has been published.

Keywords

H-bond, water, cis-pinonic acid, UV photochemistry, atmosphere

This abstract is submitted for....

HBond 2025 conference

Primary author: Dr COUSSAN, Stephane (CNRS-Aix Marseille University)

Co-authors: Dr MASCETTI, Joëlle (CNRS - Bordeaux University); Prof. ROMANO, Rosana (CONICET, La Plata University); Dr SOBANSKA, Sophie (CNRS -Bordeaux University)

Presenter: Dr COUSSAN, Stephane (CNRS-Aix Marseille University)