

MICROWAVE OBSERVATION OF THE O₂-CONTAINING COMPLEX, O₂-HCl

FRANK E MARSHALL, NICOLE MOON, THOMAS D. PERSINGER, RICHARD DAWES,
G. S. GRUBBS II, *Department of Chemistry, Missouri University of Science and Technology, Rolla, MO, USA.*

In the realm of small-molecule van der Waals interactions, there exists much experimental and theoretical data for most fundamental atmospheric components. For complexes containing O₂, however, there is actually very little experimental data. This is most likely due to the spin complications brought about by the ³Σ state of the molecule. In this talk, the authors will detail the first known measurement of the complex O₂-HCl along with experimental and theoretical analyses of the complex. Previously measured O₂-HF^a analysis have been used as a guide and this talk will outline similarities and differences in the two species.



^aS. Wu, G. Sedo, E. M. Grumstrup, and K. R. Leopold, *J. Chem. Phys.*, **127** (2007) 204315.