THE ROTATIONAL SPECTRUM AND STRUCTURE OF THE CHLOROBENZENE-NEON VAN DER WAALS DIMER

INHEE PARK, JUNG JIN OH[a], *Departmentment of Chemistry, SookMyung Women's University , Seoul, Korea*; SEAN A. PEEBLES and ROBERT L. KUCZKOWSKI, *Departmentment of Chemistry, University of Michigan*.

The chlorobenzene-neon dimer has been studied by Fourier transform microwave spectroscopy. The rotational spectra of three isotopomers were assigned. The structure has the usual stacked configuration with the neon above the aromatic ring. The neon is shifted from above the nominal ring center towards the substituted carbon atom. The distance between this carbon atom and the neon is about 3.57Å which is about 0.07Å shorter than this distance in fluorobenzene-Ne and approximately 0.16Å shorter than in benzene-Ne. Possible interpretations of this pattern are discussed.

[a]email address : jjinoh@sookmyung.ac.kr