THE PERTURBATION OF C₃ BY THE RARE GAS ATOM STUDIED BY THE SPECTROSCOPY OF THE C₃ – AR/KR COMPLEX

GUIQIU ZHANG, INSTITUTE OF ATOMIC AND MOLECULAR SCIENCES, ACADEMIA SINICA, P. O. BOX 23-166, TAIPEI 107, TAIWAN, R. O. C. AND DEPARTMENT OF CHEMISTRY, XAN DONG TEACHER'S UNIVERSITY, PEOPLE REPUBLIC OF CHINA; <u>YEN-CHU HSU</u>, INSTITUTE OF ATOMIC AND MOLECULAR SCIENCES, ACADEMIA SINICA, P. O. BOX 23-166, TAIPEI 107, TAIWAN, R. O. C. AND DEPARTMENT OF CHEMISTRY, NATIONAL TAIWAN UNIVERSITY, TAIPEI, TAIWAN, R. O. C.

The ground electronic state of the C_3Kr van der Waals complex has been studied by the wavelength-resolved emission from the \tilde{A} state. The vibrational levels of the C_3Kr complex have been compared with those of the C_3Ar to ensure the spectral assignments of these two complexes. The perturbation of the C_3 bending vibration (both in-plane and out-of-plane bending motion) by the rare gas atom has been observed; the vibrational amplitude of the C_3 bending motion of the complex becomes more restricted than the monomer.