THE EMISSION SPECTRA OF THE $\tilde{A}$ STATE OF THE C_3-Xe VAN DER WAALS COMPLEX

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Emission bands of the C_3-Xe van der Waals complex near the 2_0^{2-}, 2_0^{2+}, and 2_0^{4-} bands of the $\tilde{A}-\tilde{X}$ system of C_3 have been recorded, but as yet definitive spectral assignments could not be made. Unlike those of the C_3-Ar and C_3-Kr complexes, the observed C_3-bending vibrational progressions of the Xe-complex could not be fitted to a simple dipole-induced dipole model potential[a]. Ab initio calculations of the Ar- and Xe-complexes have been carried out using the CCSD(T) method at the cc-pVQZ level. Tentative vibrational assignments of the Xe-complex based upon the ab initio calculation will be discussed.

[a] G. Zhang, B.-G. Lin, S.-M. Wen, and Y.-C. Hsu, *J. Chem. Phys.* **120**, 3189, 2004.