THE INFRARED SPECTRUM OF $NN^{\cdots}CO^{+}$ TRAPPED IN SOLID NEON

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When a mixture of N_2 and CO in a large excess of neon is codeposited at 4.3 K with a beam of neon atoms that have been excited in a microwave discharge, the infrared spectrum of the resulting deposit includes absorptions which are contributed by the NN- and CO-stretching fundamentals of the cation complex. Detailed studies of the absorption pattern obtained in experiments using isotopically substituted N_2 and CO support this assignment. Intensity anomalies observed when ^{13}CO is present are attributed to Fermi resonance between the NN-stretching fundamental and a combination band involving the ^{13}CO-stretching vibration and a totally symmetric low frequency fundamental.