THE INFRARED SPECTRA OF THE FORMATE ANION AND OF t-HOCO TRAPPED IN SOLID NEON

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The formate anion, HCO_2^-, has been trapped in solid neon by the codeposition of either a Ne:HCOOH or a Ne:H_2:CO_2 sample with a beam of neon atoms that have been excited in a microwave discharge. Prominent infrared absorptions not only of the formate anion but also of t-HOCO appear in both systems. Detailed isotopic substitution studies and the results of *ab initio* and density functional calculations support both identifications.