

PHOTOCHEMISTRY OF MATRIX-ISOLATED VINYL ACETATE

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Vinyl acetate ($C_4H_6O_2$) was isolated in matrices of nitrogen, argon, and krypton. The ultraviolet irradiation ($\lambda < 250$ nm) of the matrix results in the formation of a number of products including carbon dioxide, carbon monoxide and ketene (CH_2CO). Irradiation of the vinyl- $^{13}C_2$ labeled compound yields a mixture of labeled and unlabeled CH_2CO , CO_2 and CO , indicating that these products arise from the acetyl and the vinyloxy moieties. The product $^{12}C/^{13}C$ ratios vary with matrix ($N_2 > Ar > Kr$). The photolysis efficiency is reduced when the parent compound is deuterated.