Supplementary on-line information:

Figure 1-1: Infrared spectra of CO:CO$_2$ ice mixture prior to (black line) and after the irradiation (red line) shown over several different wavelength ranges: (a) 500-4500 cm$^{-1}$, (b) 3450-3800 cm$^{-1}$, (c) 1950-2200 cm$^{-1}$, (d) 1800-1950 cm$^{-1}$, and (e) 900-1200 cm$^{-1}$. The absorption axis has been shifted for clarity.
Figure 1-2: Infrared spectra of $^{13}$CO:$^{18}$O:CO$_2$ ice mixture prior to (black line) and after the irradiation (red line) shown over several different wavelength ranges: (a) 500-4500 cm$^{-1}$, (b) 3450-3800 cm$^{-1}$, (c) 1950-2200 cm$^{-1}$, (d) 1800-1950 cm$^{-1}$, and (e) 900-1200 cm$^{-1}$. The absorption axis has been shifted for clarity.
Figure 1-3: Infrared spectra of CO$_2$:18CO$_2$ ice mixture prior to (black line) and after the irradiation (red line) shown over several different wavelength ranges: (a) 500-4500 cm$^{-1}$, (b) 3450-3800 cm$^{-1}$, (c) 1950-2200 cm$^{-1}$, (d) 1800-1950 cm$^{-1}$, and (e) 900-1200 cm$^{-1}$. The absorption axis has been shifted for clarity.
Figure 1-4: Infrared spectra of CO$_2$ ice mixture prior to (black line) and after the irradiation (red line) shown over several different wavelength ranges: (a) 500-4500 cm$^{-1}$, (b) 3450-3800 cm$^{-1}$, (c) 1950-2200 cm$^{-1}$, (d) 1800-1950 cm$^{-1}$, and (e) 900-1200 cm$^{-1}$. The absorption axis has been shifted for clarity.
Figure 1-5: Infrared spectra of CO\textsuperscript{18}O\textsubscript{2} ice mixture prior to (black line) and after the irradiation (red line) shown over several different wavelength ranges: (a) 500-4500 cm\textsuperscript{-1}, (b) 3450-3800 cm\textsuperscript{-1}, (c) 1950-2200 cm\textsuperscript{-1}, (d) 1800-1950 cm\textsuperscript{-1}, and (e) 900-1200 cm\textsuperscript{-1}. The absorption axis has been shifted for clarity.