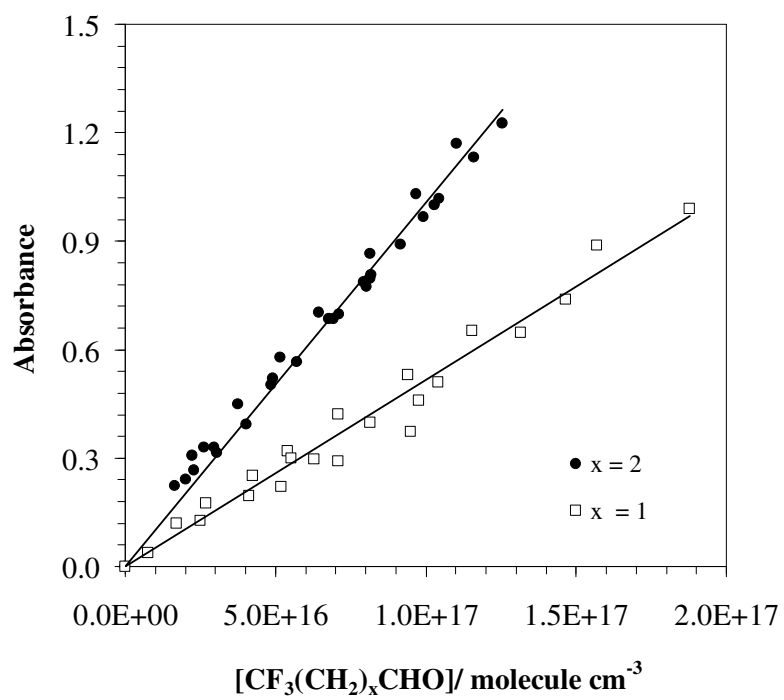
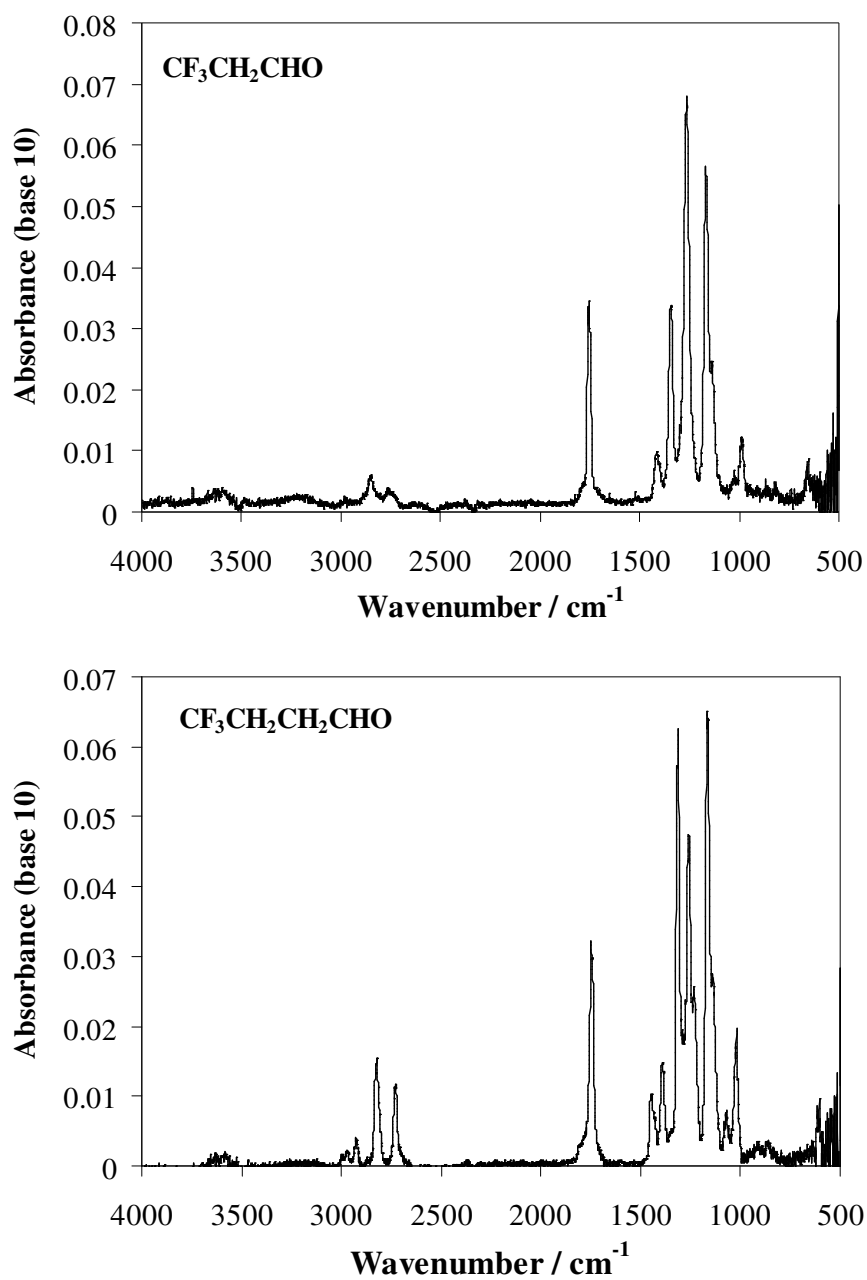


Supplementary Information  
Figure 1S



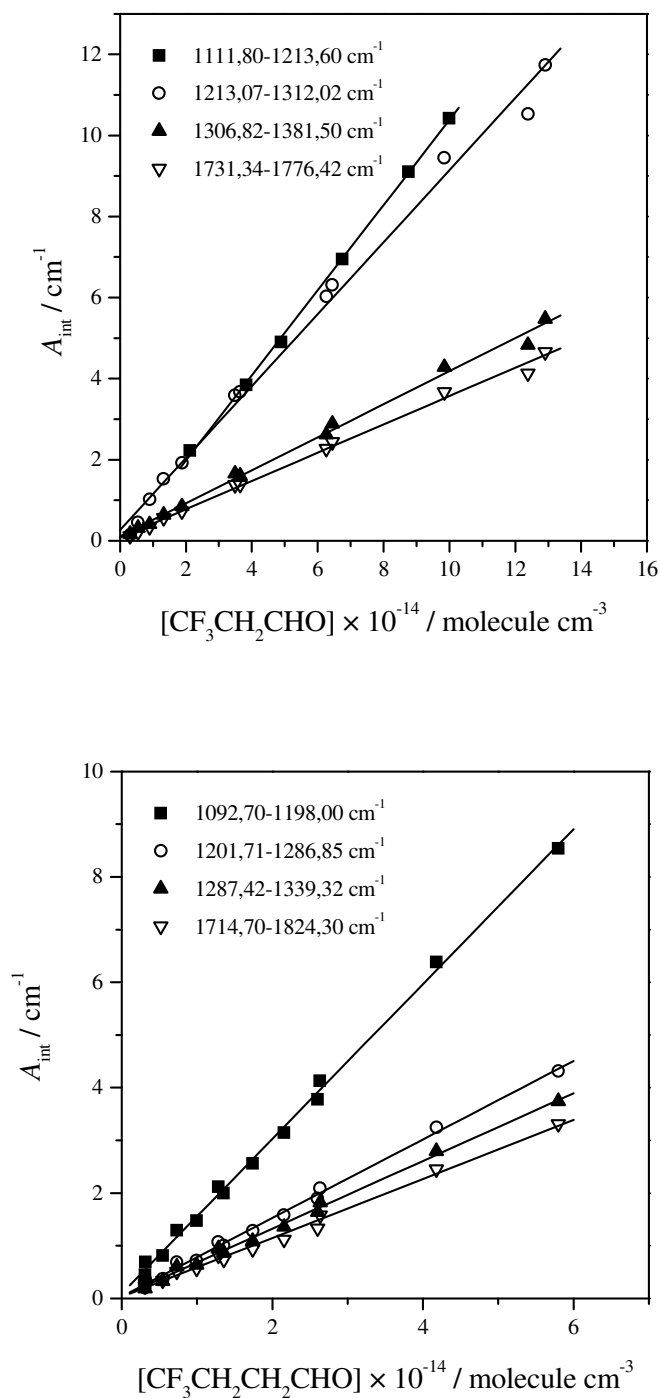
**Fig. 1S.** Beer-Lambert plots of CF<sub>3</sub>(CH<sub>2</sub>)<sub>x</sub>CHO at 185 nm and T = 298 K.

Figure 2S



**Fig 2S.** Infrared spectrum of a diluted mixture of  $\text{CF}_3\text{CH}_2\text{CHO}$  and  $\text{CF}_3\text{CH}_2\text{CH}_2\text{CHO}$  recorded during a kinetic experiment.

Figure 3S



**Fig 3S.** Plots of the Beer-Lambert law obtained in the calibration of the integrated absorption cross sections,  $S_{\text{int}}$ , for  $\text{CF}_3\text{CH}_2\text{CHO}$  and  $\text{CF}_3\text{CH}_2\text{CH}_2\text{CHO}$ .