

Figure S1. Time of flight mass spectra of (*R*)-1-phenyl-2,2,2-trifluoroethanol and the R enantiomer of 2-butylamine mixture measured at recorded at $v = 37599 \text{ cm}^{-1}\text{a}$), $v = 37645 \text{ cm}^{-1}\text{ b}$), $v = 37755 \text{ cm}^{-1}\text{ c}$) and $v = 37777 \text{ cm}^{-1}$.



Figure S2. Time of flight mass spectra of (*R*) -1-phenyl-2,2,2-trifluoroethanol and the S enantiomer of 2-butylamine mixture measured at recorded at $v = 37612 \text{ cm}^{-1}\text{a}$), $v = 37628 \text{ cm}^{-1}\text{ b}$), $v = 37757 \text{ cm}^{-1}\text{ c}$) and $v = 37779 \text{ cm}^{-1}$.