# Supplement

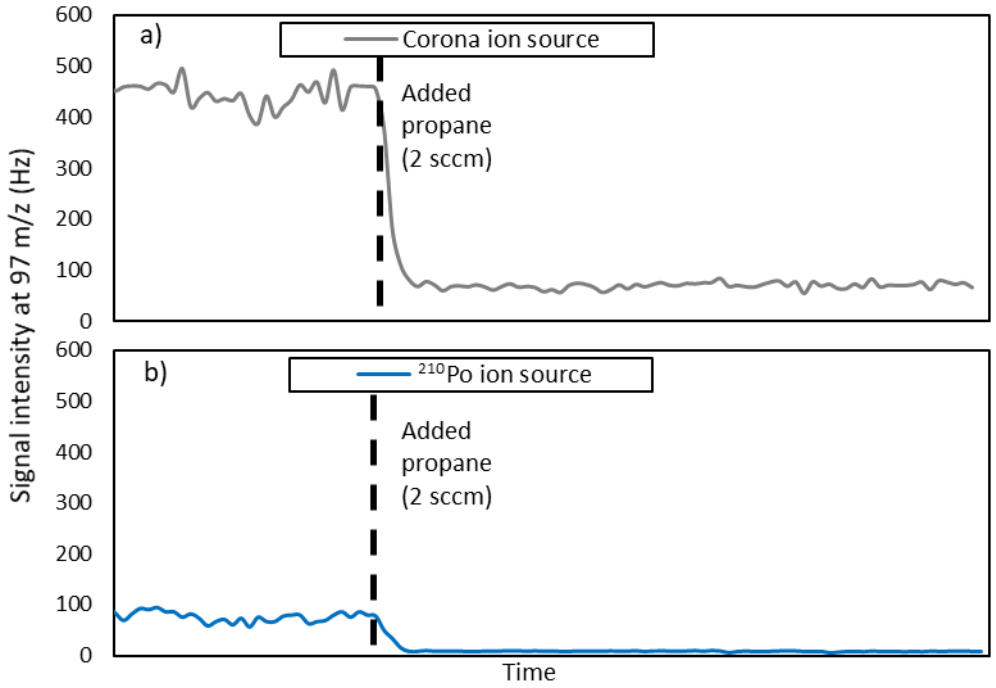


**Figure S1.** Signal intensity at 97 m/z when using a) corona and b) $^{210}Po$ as ion source. $SO_2$ flow rate was 5 sccm.

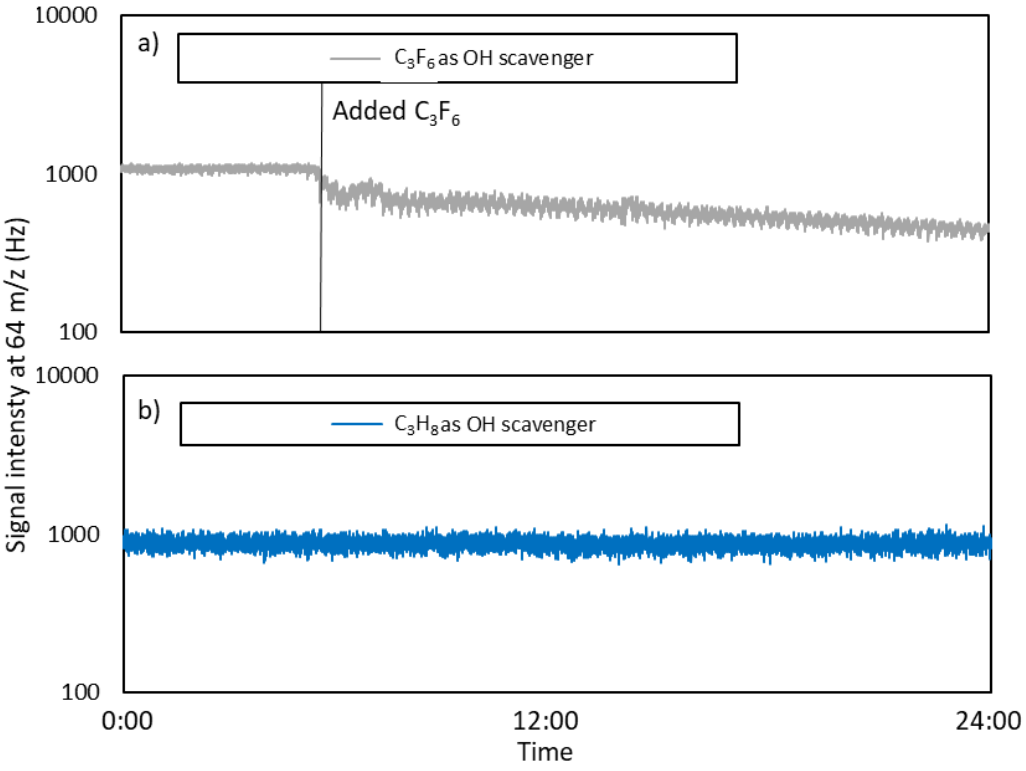


**Figure S2.** Signal intensity at 64 m/z when using a) $C_3F_6$ and b) $C_3H_8$ as OH scavenger.

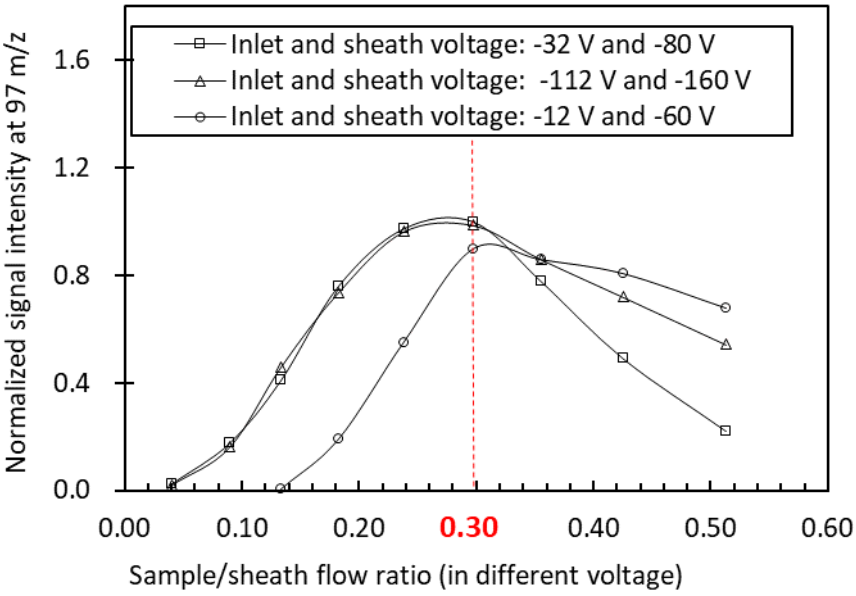


**Figure S3.** The normalized signal intensity at 97 m/z as a function of sample/sheath flow ratio at different voltages.

**Figure S4.** The map of ambient experiment location from the Google Earth (© Google Earth). The measurement site is labeled by red dot. The location is inside the Hong Kong Polytechnic University, around 50 m high above the ground and right next to the highway.