

Electronic Supplementary Information for Molecular recognition of halogen-tagged aromatic VOCs at the air- silicon interface

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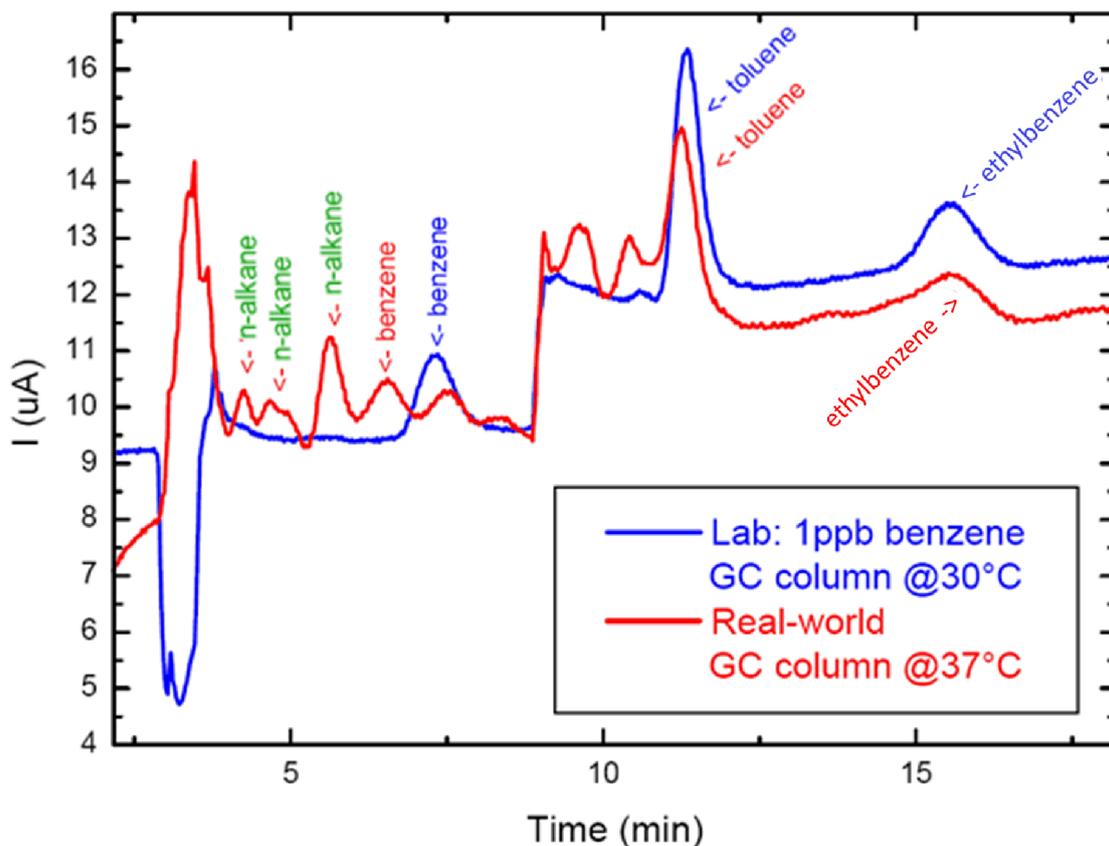


Figure S1. Real world (red trace) versus laboratory (blue trace) chromatograms of desorbed VOC pollutants.

The three peaks desorbed before benzene belongs to aliphatic hydrocarbons physisorbed in the QxCav cartridge. The concentration of aliphatic hydrocarbons in urban air is higher than that of the aromatic ones. Both measurements have been recorded with the apparatus described in references 2 and 5 and shown in Figure S2. The real world measurement is a typical trace recorded from urban air uptake in the crossroad of Via Zanardi in Bologna, Italy.



Figure S2. Prototype of the online benzene detection system.

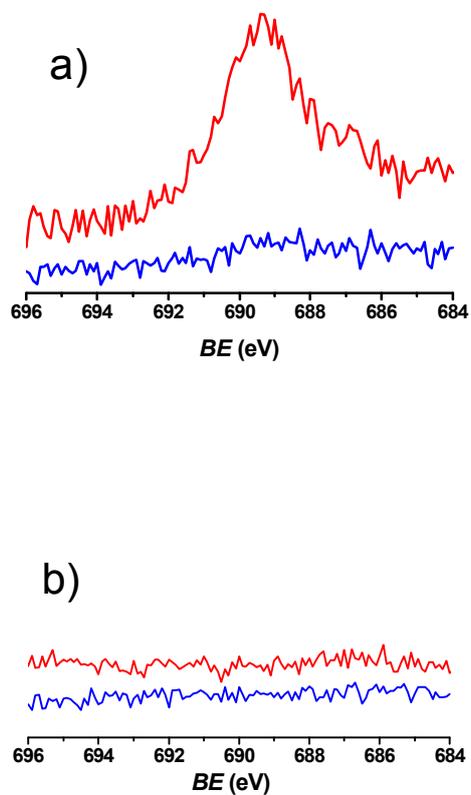


Figure. S3. F 1s region of XPS spectra of a) Si-1 and b) Si-2 before (blue traces) and after (red traces) the α,α,α -trifluorotoluene vapor exposure