SUPPLEMENTARY MATERIAL

Flowing atmospheric pressure afterglow as ion source coupled to a differential mobility analyzer for volatile organic compounds detection

Marcos Bouza[1†], Jaime Orejas[2†], Silvia López-Vidal[3], Jorge Pisonero[2], Nerea Bordel[2*], Rosario Pereiro[1*] and Alfredo Sanz-Medel[1].

[1] Department of Physical and Analytical Chemistry, Faculty of Chemistry, University of Oviedo, 33006 Oviedo, Spain.

[2] Department of Physics, Faculty of Science, University of Oviedo, 33007 Oviedo, Spain.

[3] RAMEM, 28027, Madrid, Spain.

The supplementary material contains three Figures. Fig. S1 represents the 2D plot for the evolution of mobility spectra when the electrical current applied to the discharge is changed. Fig. S2 shows the evolution when the helium flow rate is changed and Fig. S3 collects the reactant ions obtained when the measurements were carried out in negative mode.

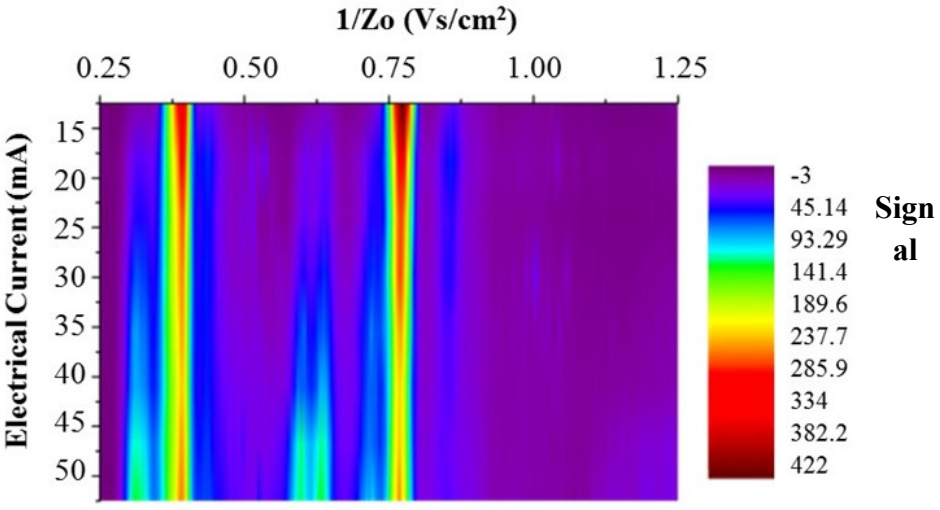

Figure S1. Ion mobility spectra for the optimization of the electrical current applied to the FAPA. 2D representation 1/Zo ($V \cdot s \cdot cm^{-2}$) vs electrical current applied (mA) and the color code represents the detected signal.

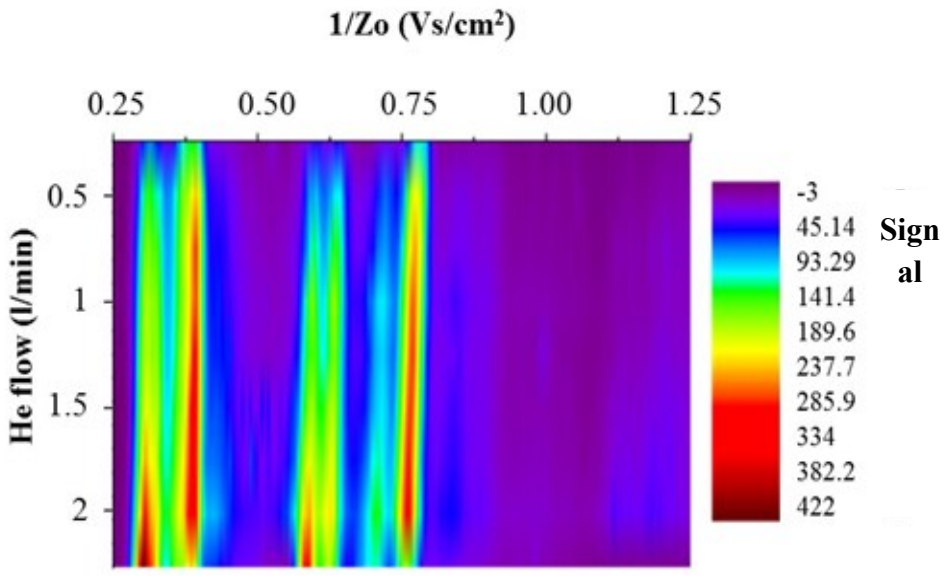

Figure S2. Ion mobility spectra for the optimization of FAPA He flow ($L \cdot min^{-1}$). 2D representation 1/Zo ($V \cdot s \cdot cm^{-2}$) vs He flow ($L \cdot min^{-1}$) for the plasma sustain and the color code represents the detected signal.

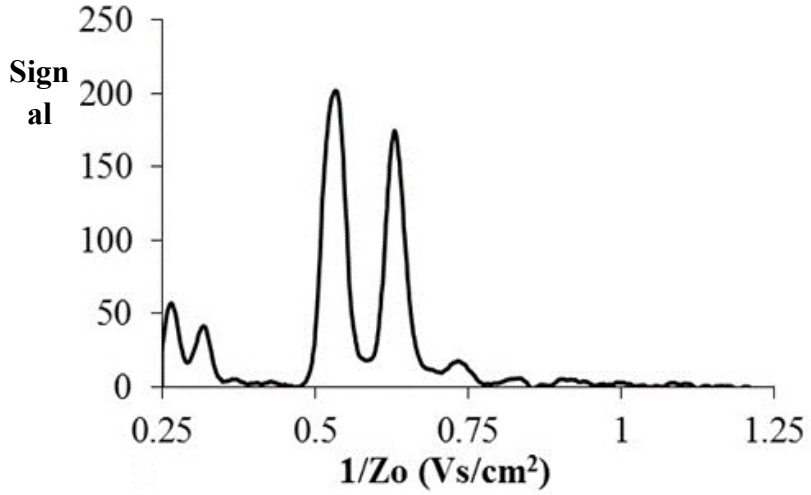

Figure S3. Negative mode reactant ions spectrum at the optimal coupling conditions (Table 1).