

Supplementary data

Figure S.1. (Upper panels): Sections of negative ion mass spectra of **2,4-D** and **DDE** recorded at thermal energy of incident electron indicating broad metastable anion peaks at fractional mass numbers. (Lower panels): Currents of mass-selected metastable anions formed by DEA to **2,4-D** and **DDE** as a function of incident electron energy. The intensity scale is the same to that shown in Figures 2 and 3.

Figure S.2. Integral intensity (normalized to the most intense signals at the $m/e = 35$ at $200\text{ }^{\circ}\text{C}$) of mass-selected anion currents formed by DEA to **2,4-D**, **DDT** and **DDE** as a function of the collision cell temperature. Solid lines represent the best exponential fit of experimental data prolonged toward low temperatures.

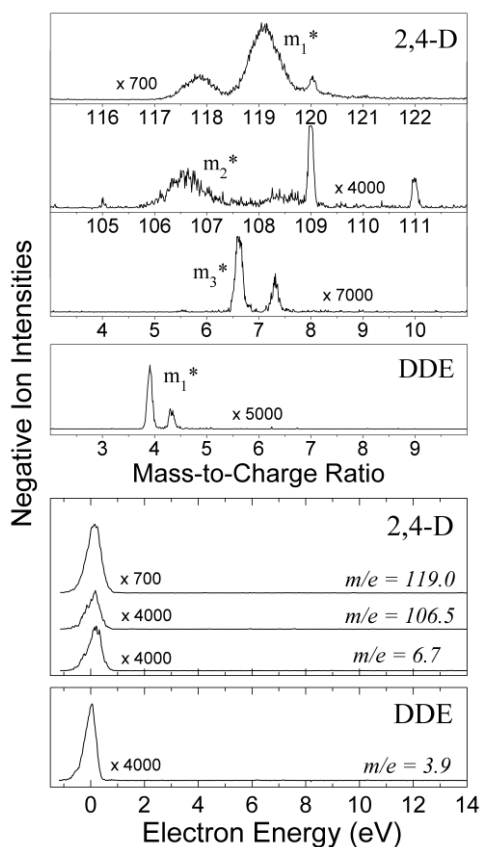


Figure S.1

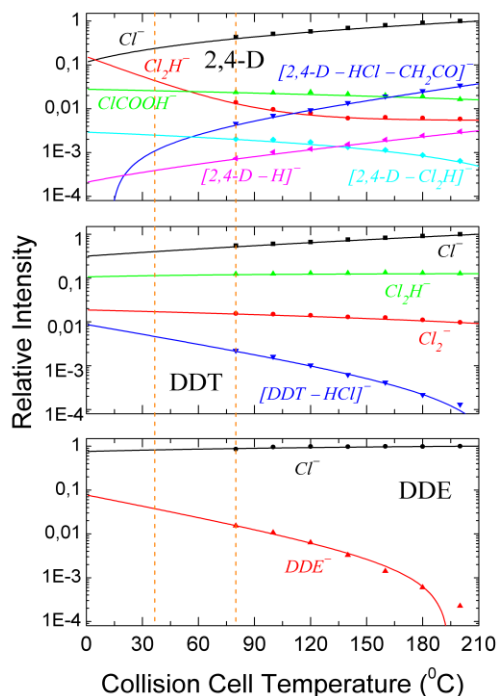


Figure S.2