**Conclusions**

- Capillary ionization methods are currently operated in the gas phase, i.e., require vaporization of the neutral analyte before ionization occurs.
- For direct cAPPI (no dopants present) kinetic control is achieved. Thus complex mixtures with highly reactive neutrals present can be accurately analyzed. This is of particular interest to applications in atmospheric/environmental chemistry.
- The same arguments apply for cAPECI due to the high reactivity of superoxide.
- cAPPI in positive mode using point electrode configurations is fully compatible with cAPPI – this method benefits strongly from a dedicated ion activation stage (within domains 4-6), since the reagent ions are fully thermally equilibrated ($[H^+\cdot D]_\infty$) clusters.

**References**


