

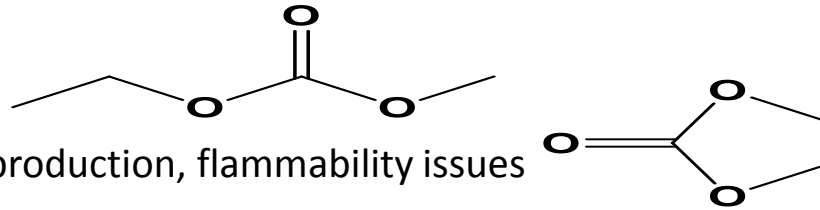
Single droplet analysis of Li+ battery electrolyte w/fire retardants via IBF.

Dr. G. S. Groenewold, et al, Idaho National Lab. Drew Sauter nanoLiter LLC, 702-882-5413

- Coin cells: dependent on Li⁺ transport in carbonate electrolyte – weakly coordinating solvents

- EMC
- EC

- Breakdown can lead to H₂ production, flammability issues

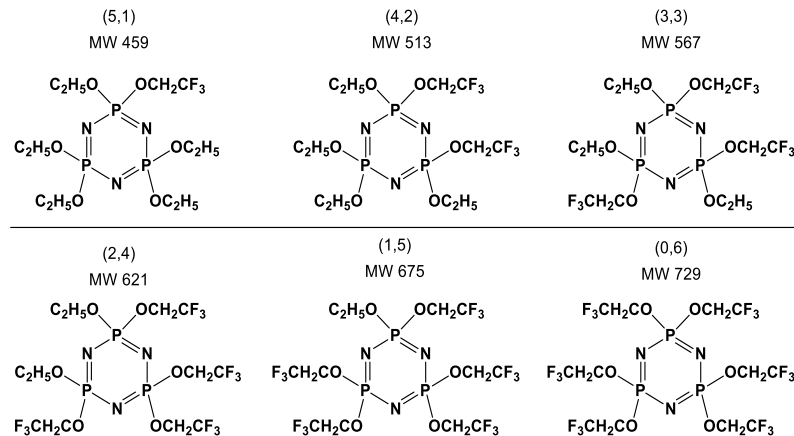


100% Shot into MS !

ESI
MS,
MS,
IMS

Li⁺ ion battery fire retardants

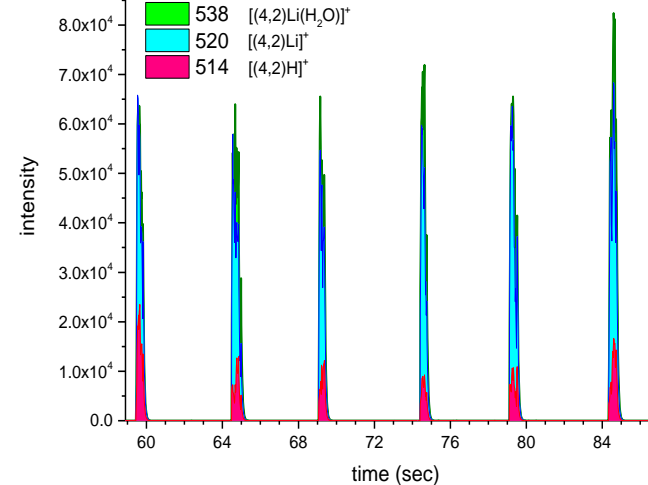
(Ethoxy)_x(2,2,2-trifluoroethoxy)_yphosphazene cyclotrimers
(x,y) short hand nomenclature



Droplets Into ESI!

!

Extracted ion chromatograms, 100 nL droplets



HR MS of nanoLiter droplets

