

# THERMOGRAVIMETRIC ANALYSIS- FOURIER TRANSFORM INFRARED (TGA-FTIR)

Combined with FTIR analysis of the vapour phase, this provides a very rich profile of the spectra of all the evolved products, as shown below for polyacrylonitrile in nitrogen, and can be deconvoluted to provide profiles with respect to temperature of the evolution of individual species. In the example below, the HCN yield from PAN and some fire retarded copolymers and nanocomposites, show the origin of the FR effect arises from the inhibition of the initial HCN chain stripping step.

