



Elimination of Matrix Effects in Aerosol Mass Spectrometry



ornl Aerosol
Mass Spec Group

 Bust The Dust

• Purpose:

- Matrix effects severely limit the capabilities of the aerosol mass spectrometry technique for providing accurate particle composition information.
- These effects are charge transfer induced and can be eliminated by separation of the vaporization and ionization processes.
- We are exploring thermal vaporization techniques combined with electron impact, chemical and glow discharge techniques to permit accurate qualitative and quantitative analysis of individual and ensembles of airborne particles.
- The goal of this technique is sensitive detection of chemical, explosive and biothreats.

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