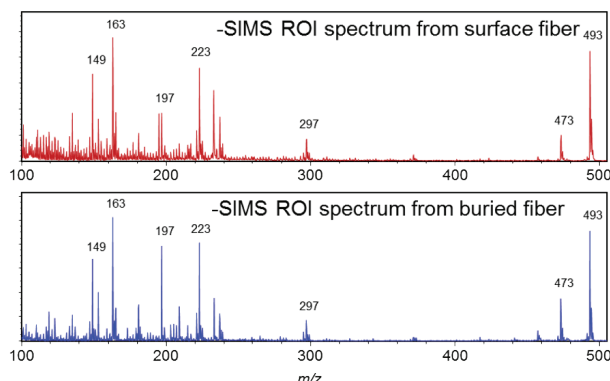
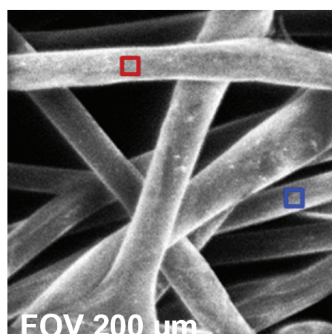


Upgrade for TOF-SIMS TRIFT V nanoTOF → nanoTOF II

PHI has released a performance upgrade package for the TOF-SIMS line of products to transform your first generation TRIFT V nanoTOF to the nanoTOF II platform while maintaining all the advantages of PHI's triple electrostatic analyzer (triple-ESA) mass spectrometer for analysis of rough and "real world" samples. The upgrade extends the lifetime and serviceability of your original TRIFT V nanoTOF instrument with new electronics, a 64-bit dual-screen workstation with Windows 10/11 compatibility, and modern software including *SmartSoft-TOF* and TOF-DR. The modern electronics and software together provide the capability for remote diagnostics, service and applications support. Performance enhancements include new detector electronics with reduced noise and improved stability, a new Data Acquisition system with greater capacity, the PHI LMIG which provides HR² mode analysis (high mass resolution + high lateral resolution at > 4x current density), and a direct upgrade path to the newly patented pulsed dual-beam charge neutralization system.

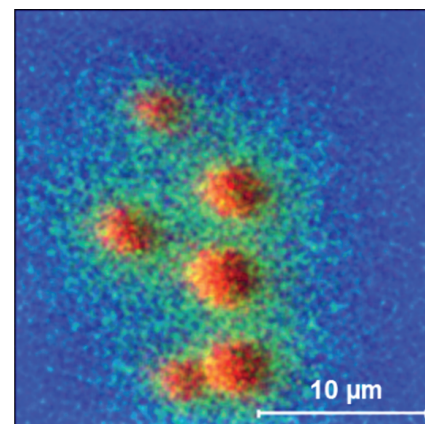
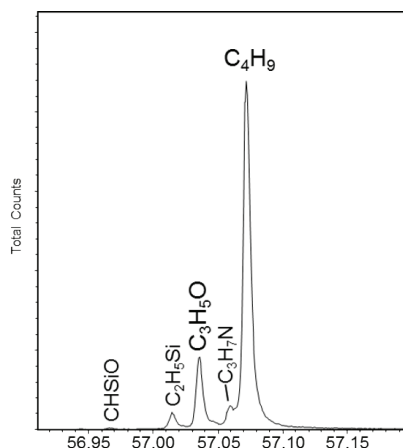


Superior Analyzer Performance

Over a large depth-of-field, noted in the gray-scale TIC image of non-woven fibers, the triple-ESA spectrometer technology is shown to have uniform sensitivity and mass spectral performance.

Enhanced Analysis Capability

The HR² mode imaging of the new PHI LMIG is exemplified in the analysis of micro droplets; 6 min. analysis, ≈300 nm spatial resolution, ≈10k mass resolution.



Low MW HC Oil, Aromatic HCs,
Substrate

Key Features of the Update Package

- Electronics to enhance stability, prolong service lifetime, and improve serviceability
- 64-bit Win 10/11 dual-screen workstation for remote diagnostics and service support
- Detector electronics for reduced noise and improved stability
- 912 Data Acquisition system with improved capacity
- PHI Bi-Cluster LMIG
 - HR² mode analysis (high mass resolution + high lateral resolution)
 - Improved ultimate spatial resolution (<70 nm)
 - Improved current density (>4x ions/pulse compared to older LMIG)
- Direct update path to the optional 06-360P Ar/O₂ Gas Gun
 - Newly patented “hands off” pulsed dual-beam charge neutralization
 - Capability for interleaved / interlaced Ar or O₂ sputter depth profiling