



Development of Optical Techniques for Surface Cleanliness and Identification



Objective

The development of optical techniques, which by reflection of light from a surface, can determine the level of contamination to very low levels as well as identify surface contaminants by the spectral signature. Several systems are under investigation including; Optically Stimulated Electron Emission, portable Fourier Transfer Infrared (FTIR) spectrophotometer, Near Infrared (NIR) spectroscopy and Ultraviolet (UV) fluorescence.

Why Needed

For bonding of surfaces, cleanliness verification of surfaces and optics and other applications, the contaminant levels and species must be known. This is true for laboratory and production line environments. Typically, solvents are used to wash a surface and laboratory analysis performed. This can not be used on large areas, and is both time consuming, and inefficient. Portable, optical systems are quicker, reproducible, and quantitative.

Point of Contact

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Sponsor

Reusable Solid Rocket Motor Project