



Delta R Detection

Ultraviolet Reflectivity-Based Explosive Detection System

Delta R Detection is a company developing an explosive detection system which instantly, reliably, and inexpensively detects the presence of TNT and other explosives simply by shining ultraviolet light on an object that may potentially have traces of explosives. University of Florida researchers recently discovered that explosives display a very recognizable fingerprint in the UV light range. This new explosive detection system allows automated detection of traces of explosives on luggage.

Technology

This technology utilizes differential reflectometry which casts light on a material and analyzes the reflected light the material produces in response. The wavelength of the emitted light varies depending on the chemical structure of the material. Once the UV light is shone upon a material, the material absorbs it at specific wavelengths that are different for each material—thus creating a fingerprint for each material. This technology provides reliable instantaneous results, eliminating false positives and does not require any operators, providing a much more affordable alternative to current detection methods.

Market Potential

Due to the increase in domestic and international terrorist threats, the demand for new and improved security measures has increased dramatically in the past few years. Several distinct markets have been identified where our technology has a potential application. They include trace detection of explosives for: 'check-in' and 'carry-on' luggage (airports and public buildings), people (walk-through scanners), high population density events (stadiums, public transportation terminals, etc), on-site investigation (portable scanners), Improvised Explosive Devices (IED), and land mine detection (military). The 'carry-on' luggage explosives detection market will be the initial focus with other possible applications to follow. This market is approximately \$275 million in sales in the U.S. alone.

Strategy

Delta R Detection initially plans to partner with Proxitronic Industries to produce the DR scanner and sell it to the Transportation Security Administration in the U.S. and throughout Europe. It expects to capture a significant market share of the explosive trace detection market within five years.



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Management Team

Thierry Dubroca, Ph.D. - CEO

Dr. Dubroca is a post-doctorate research associate at the University of Florida and has been involved with this technology since its beginning four years ago. He has extensive experience with optical methods as well as business ventures.

Rolf Hummel, Ph.D. - Co-Inventor

Dr. Hummel is Professor Emeritus at the University of Florida Department of Materials Science & Engineering where he has been conducting research for 40 years. He has been honored numerous times for his research and teaching. Hummel received his Ph.D. from the University of Stuttgart and the Max-Planck Institute for Metallurgical Research in Stuttgart, Germany. He holds five patents.

Paul Holloway, Ph.D. - Co-Inventor

Dr. Holloway is a professor in the Materials Science and Engineering Department at the University of Florida and the Director of MICROFABRITECH, an interdisciplinary materials research program at the University of Florida. He is internationally recognized for his work in quantitative surface analysis, vacuum science and semiconductor technology.

Max Lemaitre - Chief Technical Officer

Mr. Lemaitre is a graduate research assistant in Dr. Hummel's lab where he developed the first prototype for this technology. Lemaitre is currently working toward his Ph.D. while developing and building a commercial-grade explosives detection scanner prototype for security applications.

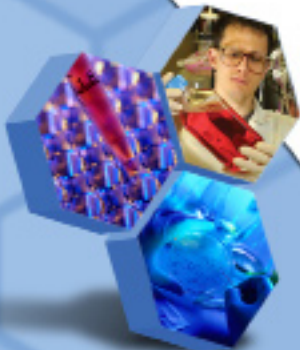
start-up opportunity

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