



1 Explosives and other hazardous substances can be detected from a safe distance, e. g. on airports, stations or accident sites.

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2 Imaging standoff detection system for explosives.

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IMAGING STANDOFF DETECTION OF EXPLOSIVES

Optical detection techniques based on IR-laser spectroscopy represent a promising approach as most chemical compounds typically exhibit strong characteristic absorbance patterns in the mid-infrared spectral range. Fraunhofer IAF has developed an imaging standoff detection system based on a mid-IR external-cavity quantum cascade laser. Traces of almost all explosives such as TNT and PETN can be detected.

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Features

- Surface detection from distances up to 25 m
- Quantum cascade laser with a broad spectral tuning range
- IR camera for collection of backscattered radiation
- Eye safe laser system
- Sensitive to explosives and other hazardous substances
- Hyperspectral image analysis
- Low false alarm rate

Application

- Luggage control
- Defusing explosive charge
- Checkpoint control
- Process control