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Remote Detection of Buried Explosives

New detection technology identifies explosive devices by sensing the energetic material they contain, independent of device configuration or packaging.

Current methods for detecting buried explosives include X-ray backscatter, ground penetrating radar (GPR), and metal detection. These methods attempt to identify buried explosives by detecting buried metal or density differences in the ground.

Purdue University researchers have developed a technology that identifies an explosive device by identifying the energetic material contained in the explosive device, regardless of the device configuration, emplacement, or packaging materials.

Advantages:

-Identifies explosive devices by the energetic material they contain

-Effective regardless of device configuration, emplacement, or packaging materials

Potential Applications:

-Department of Homeland Security

-Law enforcement

-Explosive identification

TRL: 3

Intellectual Property:

Provisional-Patent, 2009-04-23, United States | Utility Patent, 2010-04-23, United States | CON-Patent, 2011-09-25, United States | CON-Patent, 2013-05-23, United States

Keywords: explosive detection, energetic material identification, buried explosive detection, improvised explosive device, IED detection, bomb

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