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Sommario/riassunto

Critical infrastructures are targets for terrorism and deliver a valuable vector through which the proliferation of CBRN and explosive precursors can be detected. Recent technological breakthroughs, notably in the field of near infrared (NIR), mid infrared (MIR), Terahertz (THz) and Gigahertz (GHz) sources and detectors, have led to rugged commercial devices, capable of standoff sensing a range of these dangerous substances. However, at the same time criminal and terrorist organizations have also benefited from the availability of technologies to increase the threat they pose to the security of citizens and a concerted effort is needed to improve early detection measures to identify activities, such as the production of homemade explosives or CBRN that can be potentially dangerous to society. The key global technological bottleneck to be overcome is the current lack of integration and networking of mature detection technology into early warning systems for critical infrastructures. Thus, this book brings together complementary information connecting the research of leading teams working on critical Infrastructure protection with academic developers and industrial producers of state of the art sensors. .