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| 1. Record Nr. | UNINA9910966000303321 |
| Titolo | Assessment of millimeter-wave and terahertz technology for detection and identification of concealed explosive and weapons / / Committee on Assessment of Security Technologies for Transportation, National Materials Advisory Board, Division on Engineering and Physical Sciences, National Research Council of the National Academies |
| Pubbl/distr/stampa | Washington, D.C., : National Academies Press, c2007 |
| ISBN | 9786610844289 9780309179911 0309179912 9781280844287 1280844280 9780309668491 0309668492 |
| Edizione | [1st ed.] |
| Descrizione fisica | 1 online resource (88 p.) |
| Disciplina | 387 |
| Soggetti | Aeronautics, Commercial - Security measures Explosives - Detection Millimeter wave devices Imaging systems |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references. |
| Nota di contenuto | ""Front Matter""; ""Preface""; ""Acknowledgment of Reviewers""; ""Contents""; ""Figures and Tables""; ""In Memoriam""; ""Executive Summary""; ""1 Introduction""; ""2 Basic Operation of Systems and Phenomenology""; ""3 Component Technology""; ""4 System Concepts""; ""5 Implementation Strategy for the Deployment of Millimeter-Wavelength/Terahertz Technologies for Aviation Security""; ""6 Conclusions and Recommendations""; ""Appendices""; ""Appendix A Acronyms""; ""Appendix B Committee Biographies"" |
| Sommario/riassunto | The security of the U.S. commercial aviation system has been a growing concern since the 1970's when the hijacking of aircraft became a |

serious problem. Over that period, federal aviation officials have been searching for more effective ways for non-invasive screening of passengers, luggage, and cargo to detect concealed explosives and weapons. To assist in this effort, the Transportation Security Administration (TSA) asked the NRC for a study of emerging screening technologies. This report--the third of four--focuses on currently maturing millimeter-wavelength/terahertz imaging and spectroscopy technologies that offer promise in meeting aviation security requirements. The report provides a description of the basic operation of these imaging systems, an assessment of their component technologies, an analysis of various system concepts, and an implementation strategy for deployment of millimeter-wavelength/terahertz technology screening systems.
