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Military Applications Enabling Technologies Ripe for Development; Enabling Technologies Requiring Continued Research; THE IMPORTANCE AND IMPACT OF STANDARDS AND MODULARIZATION; SUMMARY; REFERENCES; 3 Opportunities in Information Processing ; INTRODUCTION; CURRENT TECHNOLOGICAL STATUS; Digital Technology; Analog Technology; PHOTONICS LEVERAGE; AREAS RIPE FOR PRODUCT DEVELOPMENT; Digital Interconnect Technology; Analog Technology; AREAS APPROPRIATE FOR SUSTAINED RESEARCH; Digital Interconnect Technology; Analog Technology; Materials and Algorithms; Digital Optical Devices; CONCLUSIONS REFERENCES 4 Opportunities in Storage and Display ; INTRODUCTION; OPTICAL STORAGE; Importance of Optical Storage; Storage Systems; Technology Elements; Media; Read/Write Head; Storage System Architecture; Competitive Environment; Key Enabling Technology Needs; Key Research Areas; OPTICAL DISPLAYS; Importance of Optical Displays; Display Status; Flat Panel Displays; Photonic Displays; Interactive Displays; Key Enabling Technology Needs; Key Research Areas; REFERENCES; 5 Opportunities in Sensor Technology ; INTRODUCTION; PHOTONIC SENSORS; FIBER SENSORS; SOLID-STATE IMAGING DEVICES ENABLING TECHNIQUES REFERENCES; 6 Policy Issues and Recommendations ; COMPETITIVENESS; Recommendations; EDUCATION IN PHOTONICS; SPECIALIZED EQUIPMENT FOR PHOTONICS RESEARCH AND DEVELOPMENT; Recommendation; SUGGESTIONS FOR A NATIONAL PHOTONICS PROJECT; REFERENCES; Appendixes; Appendix A Panel and Subcommittee Members ; Subcommittees; Appendix B Workshop and Other Outside Speakers ; Other Outside Speakers; Appendix C Selected Professional Societies, Journals, Review Articles, and Reports ; Selected U.S. Professional Societies Concerned with Photonics Selected Journals with Major Photonics Content
