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Nota di contenuto	""Front Matter""; ""Preface""; ""Acknowledgment of Reviewers""; ""Contents""; ""Summary""; ""1 Background and Motivation""; ""2 Lightweighting Airborne Vehicles""; ""3 Lightweighting Maritime Vehicles""; ""4 Lightweighting Land-Based Vehicles""; ""5 Cross-cutting Issues and Challenges""; ""6 Findings and Recommendations""; ""Appendixes""; ""Appendix A: Committee Biographies""; ""Appendix B: Presentations to the Committee""; ""Appendix C: Acronyms and Abbreviations""
Sommario/riassunto	"Lightweighting is a concept well known to structural designers and engineers in all applications areas, from laptops to bicycles to automobiles to buildings and airplanes. Reducing the weight of structures can provide many advantages, including increased energy efficiency, better design, improved usability, and better coupling with new, multifunctional features. While lightweighting is a challenge in commercial structures, the special demands of military vehicles for survivability, maneuverability and transportability significantly stress the already complex process. Application of lightweighting technology

to military aircraft, vessels, and vehicles assesses the current state of lightweighting implementation in land, sea, and air vehicles and recommends ways to improve the use of lightweight materials and solutions. This book considers both lightweight materials and lightweight design; the availability of lightweight materials from domestic manufacturers; and the performance of lightweight materials and their manufacturing technologies. It also considers the 'trade space'--that is, the effect that use of lightweight materials or technologies can have on the performance and function of all vehicle systems and components. This book also discusses manufacturing capabilities and affordable manufacturing technology to facilitate lightweighting ... [and] will be of interest to the military, manufacturers and designers of military equipment, and decision makers"--  
Publisher's description.

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