1. Record Nr. UNINA9910855390603321

Autore	Mori Koichi
Titolo	Beamed-mobility Engineering : Wireless-power Beaming to Aircrafts, Spacecrafts and Rockets / / edited by Koichi Mori, Yasuhisa Oda, Takahashi Masayuki, Kohei Shimamura
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	9789819946181 9819946182
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (260 pages)
Collana	Springer Tracts in Electrical and Electronics Engineering, , 2731-4219
Altri autori (Persone)	OdaYasuhisa MasayukiTakahashi ShimamuraKohei
Disciplina	629.11
Soggetti	Electric power production Electrical engineering Aerospace engineering Astronautics Lasers Electrical Power Engineering Electrical and Electronic Engineering Aerospace Technology and Astronautics Laser Technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Microwave rockets -- Chapter 2. Laser rockets -- Chapter 3. Space debris removal -- Chapter 4. Wireless power transfer to aircrafts -- Chapter 5. Experimental study of microwave breakdown induced by gyrotron -- Chapter 6. Modeling and Theoretical Studies on Beamed-induced plasma -- Chapter 7. Laser-supported detonation wave -- Chapter 8. High-power beam source and beam transmission -- Chapter 9. Retrodirective wireless optical energy transmission using optical phase conjugation. .
Sommario/riassunto	This book describes the technologies of wireless power beaming to the aerospace crafts, such as the drone, flying car, aircraft, spacecraft, and

rocket. Using a highly directional electromagnetic wave beam, energy is remotely supplied to mobility that moves at high speed without waste, and it is efficiently converted into the driving force of mobility. This technology will be indispensable for the full electrification of mobility in the future. This book specializes in aerospace mobility, where weight and other constraints are strict, and was written by researchers in different disciplines such as rocket engineering, plasma engineering, laser engineering, and communications and control engineering. Beamed-mobility forms a new area of integrated engineering. The new combination of optics and mechanical engineering creates a world where mobility is free to supply the energy needed for propulsion, wherever and wherever it goes. It is expected to become the core technology of mobility, energy, infrastructure, and services of the future society that extends to outer space. This book is good reference for the graduate students, researcher, and engineer in the field of aerospace, electrical, and mechanical engineering.